STORMWATER POLLUTION AND PREVENTION PLAN (SWPPP)

Sweetland Wind Farm Substation
Hand County, South Dakota
(Latitude: 44.4144, Longitude: -98.8032)

Prepared for:
Sweetland Wind Farm, LLC
Andrew Young
5775 Flatiron Parkway, Suite 120
Boulder, CO 80301 303.562.5263
Andrew@scoutcleanenergy.com

Prepared by:
Apex Companies, LLC
Dan Delahunty CPESC
4150 Darley Ave #1
Boulder, CO 80305
720.215.4726
dan.delahunty@apexcos.com

Original Preparation Date:
January 2021

Estimated Project Dates:
Start: 04/01/2021
End: 05/01/2021

Permit Tracking Number:
TBD

Contents

SWPPP Appendices

Appendix A – Site Maps

- Figure 1 – Drainage Map
- Figure 2 – Site Location Map, Grading & SWPPP Plans

Appendix B – Copy of 2018 Construction General Permit

Appendix C – Notice of Intent (NOI)

Appendix D – Blank Forms

- Contractor Authorization Form
- Training Forms
- Onsite Training Log
- Offsite Training Log
- Inspection Form
- Corrective Action Form
- Grading and Stabilization Activities Log
- Transfer of Coverage Form
- Reauthorization Form
- Notice of Termination (NOT) Form

Appendix E –Soils Data

Appendix F– SWPPP Amendments (Store Here)

Appendix G – Completed Delegation, Subcontractor Certification and Training Forms (Store Here)

Appendix H – Completed Inspection, Corrective Action and Grading Forms (Store Here)

Acronym/Abbreviation List

BMP(s)	Best Management Practice(s)
CGP	Construction Stormwater General Permit
CPESC	Certified Professional in Erosion and Sediment Control
CWA	Clean Water Act
EPA	United States Environmental Protection Agency
HUC	Hydraulic Unit Code
IPaC	Information for Planning and Conservation
NHD	National Hydrography Dataset
NHPA	National Historic Preservation Act
NOI	Notice of Intent
NOT	Notice of Termination
NPDES	National Pollutant Discharge Elimination System
NRCS	National Resource Conservation Service
O&M	Operations and Maintenance
PLS	Pure Live Seed
RCRA	Resource Conservation and Recovery Act
RUSLE	Revised Universal Soil Loss Equation
SCL	Sediment Control Log
SPCC	Spill Prevention, Control, and Countermeasure
SDDENR	South Dakota Department of Environment and Natural Resources
SDDOT	South Dakota Department of Transportation
SWPPP	Stormwater Pollution Prevention Plan
URL	Uniform Resource Locator
USFWS	United States Fish and Wildlife Service
USDA	United States Department of Agricultural
WBD	Watershed Boundary Dataset

STORMWATER POLLUTION PLAN SIGNATORY CERTIFICATION

A principal executive officer or ranking elected official must sign the Stormwater Pollution Prevention Plan (SWPPP or Plan), reports required by the Stormwater Permit, or any document the Stormwater Permit requires be maintained.

The SWPPP will be initially certified to verify that the information compiled in the document is true, accurate, and complete. This certification is to be completed, signed by a responsible corporate officer or a designated employee, and retained as part of the Plan record.

Signature authority for reports can be delegated if such authorization is made in writing.

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, 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.

Andrew Young
Authorized Signatory
Sweetland Wind Farm, LLC

3/5/2021
Date

SWPPP MODIFICATIONS

Modifications to this SWPPP will be made as required or at the request of the United States Environmental Protection Agency (EPA) or the South Dakota Department of Environment and Natural Resources (SDDENR). This SWPPP can be modified at any time that it is judged appropriate to meet the stormwater pollution control objectives. Typically, modifications are made:

- When there is a change in construction plans, stormwater control measures, or pollution prevention measures make changes to your construction plans, stormwater control measures.
- When there is a change in the project schedule.
- When conditions occur or develop which can be reasonably expected to significantly impact stormwater discharges from the construction site.
- When there is a change to the nature of pollutants discharged in stormwater.

Modifications will generally be made within 7 days after the occurrence or completion of the action giving rise to the revision. Changes will be incorporated by appropriately dated addendum, additions, changes or attachments to Appendix G.

Modifications are inserted into this Plan with the appropriate revision date and revision number noted on the top of the page. Revisions are tracked on the following table. Additional copies should be made, if needed.

Rev. #	Description of the Amendment	Date of Amendment	Amendment Prepared by [Name(s) and Title]

COMPLIANCE ACTION CHECKLIST

Pre-Construction

- ☐ Finalize Civil Engineering Drawings.
- ☐ Target Stormwater BMPs to Specific Locations. Update BMPs list (Section 2.4 & 3) and add BMPs to Site Figures (Appendix A)
- ☐ Perform RUSLE soil loss calculations
- ☐ Sign this SWPPP (Page vi)
- ☐ Delegate SWPPP Authority (Section 1.3.1)
- ☐ Place a hardcopy of SWPPP onsite
- ☐ Post Sign notifying Public at a safe, accessible location (Section 1.3.3)

During Construction

- ☐ Perform Site Preparation Activities (Section 2.4.1)
- ☐ Implement and Maintain Sediment and Erosion Controls (Sections 2 and 3)
- ☐ Inspections: Monthly and (select one below)
  - ☐ Once Every 7 calendar days (Section 5.1)
  - ☐ Once every 14 calendar days and with 24 hours of precipitation that exceed 0.25" or snowmelt that generates runoff (Section 5.1)
- ☐ Visual Stormwater Monitoring (Section 5.2)
- ☐ Corrective Action Documentation (Section 5.3), *if necessary*
- ☐ Notification of Spills (Section 4.3), *if necessary*
- ☐ Provide temporary or permanent stabilization to areas if work is complete or stopped for more than 14 days. (Section 3.9)

Post Construction

- ☐ Monthly Inspections Until Notice of Termination (NOT) is Submitted (Section 6)
- ☐ Meet Final Stabilization Requirements (Section 6.1)
- ☐ Submit NOT (Section 6.2)
- ☐ Retain copy of SWPPP for 3 year following submittal of NOT

INTRODUCTION

This Stormwater Pollution Prevention Plan (SWPPP) was developed to manage and minimize pollutant runoff, in stormwater, from construction activities at the Sweetland Substation (site) located in Hand County, South Dakota. In the State of South Dakota, the South Dakota Department of Environment and Natural Resources (SDDENR) oversees environmental regulations. The SWPPP was prepared in accordance with the National Pollution Discharge Elimination System (NPDES) and the State's 2018 Construction General Permit (CGP), effective date March 23, 2018. A copy of the CGP application is provided in Appendix B.

The activities for this permit are described in Section 2.0 for construction of a 3.75 acre substation. The Sweetland Substation is a part of a larger common plan of development for the Sweetland Wind Farm. Construction activities encompass the substation pad, and support activities. This SWPPP covers construction activities planned as of the revision date on page ix.

Permit documentation will be retained on-site and made available to EPA, SDDENR or the local jurisdiction upon request. Permit documentation includes the permit coverage letter, if issued (Appendix B), this SWPPP, and completed forms. The Plan will be amended whenever there is a significant change in construction, operation, or maintenance that may affect the discharge of significant quantities of pollutants to surface water. The Owner must keep this SWPPP on file for three years after submittal of the notice of termination (NOT). SDDENR has specific NOT requirements which are presented in Section 5.2 of this document.

1. PROJECT INFORMATION

1.1 Project Information

The Sweetland Substation is in Hand County, in east central South Dakota. Access to the project is directly east from the intersection of County Road 9 and 205th Street. A site location map is presented in Appendix A, Figure 2. The approximate central location of the project site is located at:

Latitude/Longitude: 44.4144, -98.8032

1.2 Project Contact Information

Operator: Sweetland Wind Farm, LLC.
5775 Flatiron Parkway, Suite 120
Boulder, CO 80301

Stormwater Team Members:

Operator

_____

_____

_____

SWPPP Preparer
Apex Companies, LLC
Dan Delahunty
CPESC
(303) 808-5866
dan.delahunty@apexcos.com

Stormwater Inspector

_____

_____

_____

Contractor 24-Hour Emergency Contact

_____

_____

_____

Contractor

Company: _____

Person: _____

Phone: _____

Email: _____

Responsibility: _____

Subcontractor

Company: _____

Person: _____

Phone: _____

Email: _____

Responsibility: _____

1.3 Operator Responsibilities

The Operator is responsible for ensuring that all activities on the site comply with the requirements of this SWPPP and the CGP to minimize sediment and discharge of contaminated and non-contaminated stormwater from the site.

1.3.1 Duly Authorized Representative

The Operator must identify and authorize a person(s) knowledgeable and experienced in the application of erosion and sediment control best management practices (BMPs), to oversee the implementation of the this SWPPP, and the installation, inspection, and maintenance of erosion prevention and sediment control BMPs throughout the project lifecycle. All Duly Authorized Representatives, as well as the SWPPP Team for the Project are listed in Section 1.2 of this SWPPP

1.3.2 Contractor and Subcontractor Notification

Prior to the commencement of earth-disturbing activities or pollutant-generating activities, whichever occurs first, the Operator must ensure that the following personnel understand the requirements of this permit and their specific responsibilities with respect to those requirements:

- Personnel who are responsible for the design, installation, maintenance, and/or repair of stormwater controls (including pollution prevention measures) and
- Personnel responsible for the application and storage of treatment chemicals (if applicable);
- Personnel responsible for conducting inspections; and
- Personnel responsible for corrective actions.

All contractors identified in this plan should sign a copy of the Contractor Authorization Form included in Appendix D of this SWPPP. Signed forms should be stored in Appendix I.

1.3.3 Public Notification

The Operator must post a sign or other notice conspicuously at a safe, publicly accessible location in close proximity to the project site. The notice must be located so that it is visible from the public road that is nearest to the active part of the construction site, and it must use a font large enough to be readily viewed from a public right-of-way. At a minimum, the notice must include:

- The NPDES Permit tracking number;
- Contact name and phone number for obtaining additional project information;

1.3.4 Training

Operator must ensure that such personnel understand any requirements of the permit that may be affected by the work they are subcontracted to perform. Training Logs are presented in Appendix D of this SWPPP. Prior to start of construction, the following personnel must understand the requirements of this permit and their specific responsibilities:

- Personnel responsible for general construction and day-to-day operations of the Project;
- Personnel responsible for design, installation, maintenance, and/or repair of stormwater and pollution prevention control measures;

- Personnel responsible for the application and storage of treatment chemicals (if applicable);
- Personnel responsible for conduction inspections (Section 5.1);
- Personnel responsible for taking corrective actions (Section 5.3); and
- Any new personnel, as hired.

At a minimum, personnel must be trained to understand the following if related to the scope of their job duties (e.g., only personnel responsible for conducting inspections need to understand how to conduct inspections):

- The permit deadlines associated with installation, maintenance, and removal of stormwater controls and with stabilization;
- The location of all stormwater controls on the site required by this permit, and how they are to be maintained;
- The proper procedures to follow with respect to the permit's pollution prevention requirements; and
- When and how to conduct inspections, record applicable findings, and take corrective actions.

Documentation for training shall be retained in Appendix I of this SWPPP. Forms for both onsite and offsite training are provided.

2. PROJECT DESCRIPTION

2.1 Project Description

Construction activity will include access road construction east from the intersection of County Road 9 and 205th Street, and earthwork for substation construction. Approximately 3.75 acres will be disturbed for construction of the substation and associated access road.

Work will be phased to minimize disturbance areas. Grubbing, clearing, stockpiling of topsoil and grading of the substation foundation will occur at the beginning of construction and serve as the temporary workspace and staging area for construction crews. Areas or stockpiles estimated to be left idle for more than 14-days will be temporary stabilized until they are incorporated into the landscape or hauled off site.

2.2 Site Description

The project area is unpopulated rangeland, at altitudes of approximately 1,500 feet above sea level. Site slopes range from 6 to 8 percent, with slopes near or greater than 10% close to drainage features. The United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) defines the area as Farmland of Statewide Importance. This area is considered suitable for production of food, feed, fiber forage, and oil seed crops.

The average annual precipitation in this area is from 18 to 25 inches. Most of the rainfall occurs as high intensity thunderstorms from midspring to mid-autumn. This area does receive winter precipitation in the form of snow. The average annual temperature is 43 to 50 degrees Fahrenheit. The freeze-free period averages about 143 days and ranges from 130 to 155 days.

2.2.1 Site Soils

Soils information is included on the table below. Information was generated using Web Soil Survey 3.2; Soil Survey available through the USDA NRCS. The entire soils report is included in Appendix F.

Site Soils

Soil Type	% of Site	Soil Drainage	Hydrologic Soil Group	K Factor	Suitability for Natural Roads	Off Road Erosion	Wind Erosion
Glenham Loam, rolling *(3% - 20% slopes*	98.2%	Well Drained	C	0.37	Moderately suited	Moderate	6
Betts-Java loams, steep *(15% - 35% sloes)*	1.8%	Well Drained	C	0.37	Poorly suited	Moderate	4L

K-Factor is the susceptibility of a soil to sheet and rill erosion by water.

2.2.2 Discharge Information

Discharge information is included on the tables below. This information was obtained using the United States Geologic Service (USGS) National Hydrography Dataset (NHD) and Watershed Boundary Dataset (WBD) online Hydrography Viewer. A Drainage map on Figure 1 is included in Appendix A.

Receiving Waters

	Sweetland Substation
Slope Direction	North
Primary Receiving Water	Unnamed Ephemeral Stream
Hydraulic Unit Code (Reach Code)	Upper Silver Creek (101600061304)
Closest Distance to Receiving Water	300 feet
Project Area (Ac)[1]	3.75
First Named Water	Silver Creek
Distance to First Named Water	4.65 miles

At the time of completion of this SWPPP, the first named surface waters that receive stormwater directly from the site was not listed as impaired. This was confirmed through review of the 2020 South Dakota Integrated Report for Surface Water Quality Assessment pursuant to Sections 305(b), 303(d), and 314 of the Federal Water Pollution Control Act.

2.3 Construction Activities

The following is a list of construction activities. Stormwater and pollution prevention controls associated with each activity, project schedules, best management practices, and sequencing are presented in the following table and Sections 3 and 4. During the construction period, the controls and associated BMPs shall be maintained or upgraded, when needed, for unexpected storm events, and to ensure that sediment latent water and other pollutants do not leave the site.

1. Site Preparation
2. Construction Implementation
    a. Staging Area Establishment
    b. Substation Pad Construction
3. Final Stabilization

2.3.1 Project Schedule

Activity[1]	**Start Date**	**End Date**
Overall Project	*2/18/2021*	*3/19/2021*
Site Preparation	2/18/2021	2/25/2021
Construction Implementation	2/25/2021	3/12/2021
Stabilization	3/12/2021	3/19/2021

1 Project Schedule may change based on field conditions or unknown factors.

2.3.2 Project Sediment and Erosion Control Selection

The following erosion and sediment controls have been selected for this project. These are the minimum for anticipated soil conditions. Associated sediment and erosion control BMPs are described in Section 3, and in additional detail in Appendix A Figure 2 of this SWPPP. During the construction phase, these BMPs shall be maintained and upgraded, when needed for various activities.

Activity	Associated Sediment and Erosion Control
Staging Area	Phasing, Natural Buffers, Perimeter Controls, Minimize Dust, Soil Compaction, Site Stabilization and Pollution Prevention.
Excavator Paths	Phasing, Natural Buffers, Direct Stormwater to Vegetated Areas, Perimeter Controls, Minimize Dust, Soil Compaction, Constructed Stormwater Conveyance Channels, Inlet Protection, Disturbance of Steep Slopes, and Site Stabilization.
Substation	Phasing, Natural Buffers, Perimeter Controls, Stockpiled Sediment or Soil, Minimize Dust, Topsoil Preservation, Soil Compaction, Site Stabilization, and Pollution Prevention.

2.4 Stormwater Control Sequencing

Stormwater controls and their respective sequencing and implementation plans, applicable to each construction activity, are bulleted in the following paragraphs. A more detailed description of the control or BMP, installation schedule and maintenance of the control can be found in the referenced section.

2.4.1 Site Preparation

- Stage erosion prevention and sediment control materials. (Section 3.1)
- Flag area(s) of disturbance and sensitive areas. (Section 3.2)
- Install perimeter erosion and sediment controls prior to soil disturbance. Operator may install silt fence, straw wattles or other controls based upon field conditions. (Section 3.4)
- The project ingress and egress are located along a two track right-of-way for 205th Street, with County Road 9 immediately west of the site, and the nearest paved road from the area of soil disturbance. A stabilized construction entrance, such as a temporary Vehicle Tracking Control (VTC) will be installed to manage sediment track-out during construction. If sediment is tracked onto paved public roads the Operator must remove sediment when noticed and shall evaluate the need for a stabilized construction entrance and install, if deemed necessary. (Section 3.5)

2.4.2 Construction Implementation

- Limit vehicle and equipment traffic to defined area of disturbance to maintain vegetative buffer (Section 3.2), conserve topsoil (Section 3.9) and limit compaction. (Section 3.10)

- Phase earthwork to minimize the duration that any disturbed soil is exposed. Soil may be left exposed only in areas that are actively worked upon within a 14-day period. (Section 3.12).
- If an area will not be actively worked on within 14-days, the exposed soils must be provided temporary or permanent stabilization. Options include plastic sheeting, mulch, erosion control blankets and/or seeding. (Section 3.12)
- Generation of dust shall be controlled using water application. (Section 3.7) Section 3.14.3 of this SWPPP shall be modified if using dust palliatives such as calcium chloride.
- Repair all silt fences, straw wattles, or other BMPs as needed to maintain working order. Maintenance actives should be done to maintain continued effectiveness of stormwater controls.
- Store hazardous materials (e.g. paints, solvents, petroleum, and concrete), in a secure location, out of potential contact with stormwater. If the material container will be in contact with stormwater, it must be air-tight and stored within secondary containment or in a doubled walled container. (Section 4.6)

Staging Area

- Strip and segregate topsoil; apply topsoil in a soil stockpile upslope of the disturbance area to minimize run-on from upslope areas, if applicable.
    - Provide perimeter control and stabilize topsoil and subgrade stockpiles with seed and mulch. (Section 3.12)
- Stabilize staging area with gravel surface, if applicable. (Section 3.12)
- Establish BMPS for Pollution Prevention within the staging area and for mobile units.
    - Vehicle and equipment fueling, maintenance and washing areas and BMPS (Sections 4.4 & 4.5).
    - Storage of fuels, chemicals, building products, trash (lids required), hazardous waste, and sanitary waste, and fertilizers. (Section 4.6 & 4.8)

Excavator Paths

- Maintain existing surface drainage and runoff patterns along access roads and excavator paths. . (Section 3.11)
- The use of natural drainage and infiltration of runoff into vegetated areas may be an effective sediment control for the excavator path; however, perimeter controls may need to be installed if erosive conditions favorable to sediment transport exist or is sensitive areas such as steep slopes, waterways, or wetlands are present. (Section 3.3)
- Operator shall attempt to maintain a 50-vegetative buffer from drainage channels. When crossing drainage features, the drainage feature's channel and banks shall be stabilized. Crossing BMPs shall take into account both sediment loading and erosion due to high velocity discharges into the drainage feature.
- If topsoil is removed/scraped, make every effort to immediately sequence permanent covers, such as road base, or install perimeter controls. (Section 3.4)

Batch Plants

- Batch plants are not anticipated or applicable for the project.

Substation Construction

- Install perimeter control on downslope side of area to be cleared and grubbed. (Section 3.4)
- Strip and segregate topsoil; apply topsoil in a soil stockpile around the upslope perimeter of the work area to minimize run-on from upslope areas. (Section 3.4)
- Excavate subsoil and stockpile soil between the topsoil stockpile and the excavation.
    - Temporarily cover stockpiles for water and wind erosion. (Section 3.6)
    - Stockpile erosion and sediment controls include sloping, run-on control/perimeter control (if necessary), stabilization and dust control. (Section 3.4)
- If dewatering of stormwater in excavations is necessary, obtain the required approval and discharge in a manner that minimizes erosion. (Section 3.8)

2.4.3 Implement Final Stabilization

- Adhere to the required stabilization timeline. (Section 3.12)
- Permanently stabilize stockpiles and disturbed areas not part of the permanent site footprint, by re-grading to match pre-construction conditions and/or apply seed and mulch. In areas where vegetation is used to achieve final stabilization, adhere to the required stabilization timeline. (Section 3.12)
- In areas to be vegetated, roughen compacted soil (Section 3.10) and apply topsoil (as necessary) prior to seeding. Verify seed mixture with property owner and local NRCS office. A copy of seed mix recommendations can be found in Appendix A Figure(s) 3. Mulch shall be applied per Section 3.12
- In areas with non-vegetated final stabilization, install surfaces per design specifications.
- Remove and cleanup the site and maintain temporary BMPs which may remain until final stabilization is complete. BMPs to remain typically include both perimeter controls and run-on controls (where implemented), until vegetation density requirements are met for final stabilization.

2.4.4 After Construction

- Remove all remaining temporary erosion and sediment control once vegetation density has met the requirements defined in Section 5. Restore any areas that were disturbed during removal of BMPs.
- Submit NOT when construction activity is complete, and areas of disturbance have met final stabilization requirements. (Section 6)

3. EROSION AND SEDIMENT CONTROLS

The Operator must install all stormwater controls in accordance with good engineering practices, including applicable design specifications.

3.1 Phasing

Phasing Control #1: Scheduling

- Sequencing of construction to reduce the amount and duration of soil exposed to erosion by wind, rain, runoff and vehicle tracking.

Phasing Control #2: Materials on Hand

- Quantities of erosion prevention and sediment control materials can be kept on the project site to be used for emergency situations such as unexpected heavy rains. Having these materials on-site reduces the time needed to implement BMPs when inspections indicate that existing BMPs are not meeting the Construction SWPPP requirements.

3.2 Natural Buffers

Buffer Compliance

Are there any surface waters within 50 feet the project's earth disturbances?
☐ YES ☒ NO

The Operator must minimize the amount of soil exposed (are of disturbance) during construction activities.

Natural Buffers Control: Preserving Natural Vegetation Purpose

- Operator shall define the area of construction / area of soil disturbance with flagging prior to start of construction. Vehicles and equipment shall use common ingress and egress and stay within the area of construction to minimize the area of disturbance and preserve topsoil.

Installation

- Flagging defining the area of soil disturbance will be installed on day 1 prior to conducting earth disturbing activities.

Maintenance Requirements

- Replace damaged or visibility reduced flagging immediately.

3.3 Direct Stormwater to Vegetated Areas

Direct stormwater to vegetated areas and maximize stormwater infiltration and filtering to reduce pollutant discharge.

3.4 Perimeter Controls

Perimeter controls are BMPs designed to keep sediment onsite and direct run-on away from the project. Selection of perimeter control BMPs depends on field conditions and inspector discretion. Options include silt fence, and fiber rolls installed down slope of area of work. A silt trap shall be installed on the perimeter, due to the disturbed area. In areas along the access roads, where drainage patterns and grades have not changed, it is likely appropriate for stormwater to infiltrate into adjacent vegetated land.

Perimeter Control # 1: Silt Fence

- Silt fence shall be constructed of appropriate materials and installed in an appropriate manner to trap sediment prior to leaving the site. Proper installation includes, burying the bottom of the filter fabric, spacing of posts and installation of splices per manufacturers recommendations.
- Silt fences should be installed perpendicular to the flow direction and parallel to the slope contour. Ends of silt fence should be pointed upslope or in a j hook to prevent bypass.
- Silt fences should only be used in smaller watersheds where contributing areas are typically less than ¼ acre of drainage per 100 feet of standard silt fence.

Perimeter Control # 2: Sediment Control Logs

- Sediment Control Logs (SCLs) are temporary erosion and sediment control barriers consisting of straw or rubber that is wrapped in biodegradable tubular plastic or coconut fibers. Install in areas to reduce velocity and spread the flow of rill and sheet runoff.
- SCL should be staked into the ground and installed perpendicular to the flow direction and parallel to the slope contour. Ends of wattle should be pointed upslope to prevent bypass.
- SCL should only be used in smaller watersheds where contributing areas are typically less than ¼ acre of drainage per 100 feet of standard silt fence.

Perimeter Control # 3: Silt Trap

- Sediment traps are temporary erosion and sediment controls used to detain sediment-laden runoff constructed of a trench, t-posts, and silt fencing. Install in areas outlets of diversion channels, or to break up the natural drainage into smaller sections, i.e. along a long run of perimeter control with upslope disturbances.

Installation

- Perimeter control will be installed on day 1 of the project, prior to conducting soil disturbing activities.

Maintenance Requirements

- Sediment must be removed before it has accumulated to on-half of the above-ground height of the perimeter control.

3.5 Sediment Track-Out

Off-site vehicle tracking of sediment shall be minimized or swept up if it occurs. Based on site conditions, a stabilized construction entrance may be installed to reduce the amount of mud and sediment on vehicles tires before vehicles enter a public road. County Road 9 is directly adjacent the area of work; therefore, the Operator may elect sweeping. Contractor may select a rock or manufactured tracking pad for the stabilized construction entrance. Typical rock stabilized construction entrances are constructed as follows.

- The surface material shall be 4"-8" quarry spalls, but smaller crushed rock, such as base course, may be appropriate in some situations.
- Typically, a separation geotextile shall be placed under the rock to prevent fine sediment from pumping up into the rock pad.
- The length of the pad will vary based on equipment and speeds. Typical stabilized construction entrance lengths are 50 to 100 feet.

Installation

- Prior to the start of construction. The Operator shall evaluate if a construction entrance is needed based upon:
    - If construction entrance is within 1,000 feet of a paved public road;
    - The number of trips anticipated; and
    - Current and anticipated field conditions.

Maintenance Requirements

- Maintain entrance in a condition that will prevent tracking or flow of mud or sediment onto a public road.
- Remove any sediment that has been tracked onto public roads at the end of the day.

3.6 Stockpiled Sediment or Soil

Stockpiles are a common source of transported sediment and other pollutants. Topsoil and subsoil will be placed in separate stockpiles and away from general grading and earthwork activities. Place stockpiles in a manner to route run-on stormwater away from the project. All stockpiles shall be located greater than 50 feet away from waterbodies.

Temporary stockpiles shall be surrounded by silt fence or other effective controls to minimize sediment runoff.

Stockpile Control #1: Slopes

- Operator shall slope based on OSHA requirements. Where feasible Operator shall use flatter slopes to minimize erosion.

Stockpile Control # 2: Run-on Control

- Operator may install silt fence or fiber roll up slope of topsoil stockpile to protect stockpile from erosion during construction and/or prior to final stabilization.

- Silt fence or straw wattles shall be installed around all stockpiles under the following conditions: 1) stockpile is not located within existing silt fences or other sediment controls and 2) stockpile is more than 8 feet tall with 3:1 or greater slopes.
- Silt fence or fiber rolls shall be placed 3 to 5 feet from the toe of the stockpile.
- See Section 3.3 of this SWPPP for perimeter controls.

Stockpile Control # 3: Stabilization

- Stockpiles shall be stabilized in accordance with Section 3.14 of this SWPPP.

Stockpile Control # 4: Dust Control

- Operator shall minimize dust in accordance with Section 3.6 of this SWPPP.

Installation

- Soil Stockpiles will be installed during clearing and grading operations.

Maintenance Requirements

- If erosion is observed on the stockpile, or sediment is transported away from the stockpiles, by dust or in stormwater, the Operator shall perform maintenance on stockpile BMPs. Maintenance may include, regrading of stockpile, temporary or permanent stabilization, dust control, or improvement/ removal of sedimentation from perimeter controls.

3.7 Minimize Dust

The Operator must minimize the generation of dust. Dust will be controlled through appropriate application of water and stabilization of exposed surfaces. Potential sources of dust include disturbed soil and stockpiles.

Dust Control # 1: Dust Control

- Apply water to exposed soils as for dust control in sufficient volumes to limit dust generation; however, water must not leave the site as surface runoff.

Dust Control # 2: Stabilize Soils

- Stabilize disturbed soils in accordance with Section 3.14 of this SWPPP.

Installation

- Apply water as needed based on soil dryness and wind conditions.

Maintenance Requirements

- Respray exposed soils as necessary to keep dust to a minimum.

3.8 Minimize the Disturbance of Steep Slopes

It is not anticipated that steep slopes (3:1 or greater) will be disturbed by the Operator. If disturbance of steep slope(s) is required, the Operator shall minimize the disturbances by phasing in accordance

with Section 3.1 of this SWPPP. If it is not possible to avoid disturbance of steep slopes than Operator shall:

- Divert concentrated or channelized flows of stormwater away from and around areas of disturbance on steep slopes;
- Use specialized erosion and sediment controls for steep slopes, such as temporary and permanent seeding with soil binders, erosion control blankets, surface roughening, reducing the continuous slope length with terracing or diversions, gradient terraces, interceptor dikes and swales, grass-lined channels, pipe slope drains, subsurface drains, level spreaders, check dams, seep berms, and triangular silt dikes; and
- Use stabilization practices designed for installation on steep slopes.

3.9 Topsoil

Operator must preserve native topsoil, unless infeasible. Preserving topsoil allows for reapplication in areas of the site where disturbed soils are not amendable to revegetation. Minimizing the area of disturbance will also preserve topsoil and existing vegetation.

Topsoil Control # 1: Preserve Topsoil

- Topsoil will be stockpiled per Section 3.6 of this SWPPP.
- Operator shall define the area of construction / area of soil disturbance with flagging prior to start of construction. Vehicles and equipment shall use common ingress and egress and stay within the area of construction to minimize the area of disturbance and preserve topsoil.

Topsoil Control # 2: Preserving Natural Vegetation Purpose

- Preserving natural vegetation purpose shall be conducted in accordance with Section 3.2 of this SWPPP.

Installation

- Topsoil stockpile shall be installed during grading and stripping of topsoil.

Maintenance Requirements

- Maintain stockpiles per Section 3.6 of this SWPPP.

3.10 Soil Compaction

Operator must minimize soil compaction in areas where final vegetative stabilization will occur. Compacted soil reduces the viability of vegetation reestablishment following construction. Operator will restrict vehicle use to the areas of disturbance and will minimize vehicle and equipment use on areas where final vegetation is the stabilization method. Areas where soil has been compacted and not for use during operation will be roughened, when feasible.

Soil Compaction Control: Surface Roughening

- Areas that are compacted will be roughened. Surface roughening consists of creating horizontal depressions by operating a tiller or other suitable equipment on the contour or by leaving slopes in a roughened condition by not fine grading them.

Installation

- Surface Roughening, if required, will be conducted prior to stabilization and vegetation.

Maintenance Requirements

- Inspect soil for compacted areas prior to vegetation.

3.11 Constructed Stormwater Conveyance Channels

Operator must use erosion control and velocity dissipation device within and along length of any stormwater conveyance channel and at any outlet to slow down runoff and minimize erosion. Potential velocity dissipation devices include:

Velocity Dissipation #1: Check Dams

- Temporary structures placed in drainage channels to limit the erosion of stormwater by reducing flow velocity. Check dams are typically constructed from rock, gravel bags, sand bags, or sediment control logs (low flow only).

Installation

- Place check dams at regularly spaced intervals along the drainage swale or ditch.
- Each section of the check dam should be keyed in to reduce the potential for washout or undermining.

Maintenance Requirements

- Replace missing rocks or torn bags.
- Remove accumulated sediment as needed to maintain BMP effectiveness, typically before sediment depth upstream of the check dam is within ½ of the crest height.

3.12 Site Stabilization

3.12.1 Stabilization Timelines

Operator must initiate soil stabilization measures, temporary or permanent, within 14 calendar days whenever earth-disturbing activities have ceased on any portion of the site. Earth-disturbing activities

have ceased when clearing, grading, and excavation within any area of the site that will not include permanent structures will not resume (i.e., the land will be idle) for a period of 14 or more calendar days, even if such activities will resume in the future. In circumstances where unplanned or unanticipated delays in construction due to unforeseen circumstances are experienced and beyond control (e.g., weather conditions rendering the site unsuitable for the continuation of construction work), the requirement to immediately initiate stabilization is triggered as soon as it is known with reasonable certainty, and always when work will be stopped for 14 or more additional calendar days. A description of why the delay occurred will be included in SWPPP inspection records.

3.12.2 Initiation of Stabilization

The following activities constitute the initiation of stabilization:

- prepping the soil for vegetative or non-vegetative stabilization;
- applying mulch or other non-vegetative product to the exposed area;
- seeding or planting the exposed area;
- starting any of the activities above on a portion of the area to be stabilized, but not on the entire area; and
- finalizing arrangements to have vegetative stabilization or installation of application of non-vegetative measures.

3.12.3 Stabilization Best Management Practices

Temperate Site Stabilization Practice #1: Plastic Covering

☐ Vegetative ☒ Non-Vegetative
☒ Temporary ☐ Permanent

Apply plastic covering, as needed, for immediate, short term protection to slopes.

- Whenever plastic is used to protect slopes, water collection measures must be installed at the base of the slope. These measures include plastic-covered berms, channels, and pipes used to covey clean rainwater away from bare soil and disturbed areas.

Installation

- Install as necessary based on predicted weather.

Maintenance Requirements

- Plastic sheeting shall be replaced or re-installed if damaged. If erosion caused by runoff from plastic sheeting is observed, Operator shall install or upgrade perimeter control measures and sheeting conveyance to minimize sediment transport.

Temperate Site Stabilization Practice #2: Temporary and Permanent Seeding

☒ Vegetative ☐ Non-Vegetative
☒ Temporary ☒ Permanent

Permanent stabilization by seeding must be implemented to meet the definition of "final stabilization" described in section 5.1.

- If soil is compacted, apply surface roughening as described in Section 3.7.
- Apply mulch as described in Practice #3.
- The seeding rate will be determined to establish a pure live seed (PLS) rate of 26 lbs/ac on the site. When conditions are less than ideal (poor seedbed preparation, poor seeding equipment, unreliable seed placement, or broadcast application) the seeding rates should be increased to 52 PLS or doubled. SDDOT Type G Permanent Seed Mixture will be applied to the project and as agreed upon with the landowner. Seed mix and rates can be referenced in Appendix A Figure(s) 3.
- BMPs for temporary and permanent seeding are included in Appendix G of this SWPPP.
- Seed mixtures need to be specified and may be needed to match native species or for private land as specified by the Owner and NRCS. **ALWAYS VERIFY SEED MIXES WITH LAND OWNER(S) PRIOR TO APPLICATION**. Upon selection of seed mixture, the Operator shall update this SWPPP by placing a copy of the seed mixture in Appendix H.

Installation

- Seeding dates should be based on soil moisture and probability of rainfall.
- This SWPPP assumes that vegetative stabilization, including seeding, will occur following completion of earthwork activities.
- If stabilization is conducted during the dry season, and Operator determines that seeding is not practicable until a later date, all activities necessary to initially seed or plan shall be conducted, and Appendix F of this SWPPP shall be modified to include a schedule for completion of seeding and documentation for the circumstances that prevented the Operator from meeting the above stabilization timeline.

Maintenance Requirements

- Any seeded areas that fail to establish "final stabilization" as described above, shall be reseeded. If reseeding is ineffective, an alternate method, such as sodding, mulching, or nets/blankets, shall be used.
- After adequate cover is achieved, any areas that experience erosion shall be reseeded and protected by mulch. If the erosion problem is drainage related, the problem shall be fixed, and the eroded area reseeded and protected by mulch.
- Seeded areas shall be supplied with adequate moisture, but not watered to the extent that causes runoff.

Temperate Site Stabilization Practice #3: Mulching

☐ Vegetative ☒ Non-Vegetative
☒ Temporary ☒ Permanent

The purpose of mulching soils is to provide immediate temporary protection from erosion. Mulch also enhances plant establishment by conserving moisture, holding fertilizer, seed, and topsoil in place, and moderating soil temperatures.

- For slopes flatter than or equal to 4:1, a mulch cover (hydro mulch, bonded fiber matrix, or clean weed free mulch) should be applied to areas of permanent seeding (or temporary stockpile

stabilization for less than 30 days) to provide erosion protection until permanent vegetation is established.

- Mulch should be applied at a rate of 2 tons per acre or per manufactures recommendations.
- BMPs for mulching are included in Appendix G of this SWPPP.

Installation

- A protective cover such as mulch or an erosion control blanket shall be applied following completion of earthwork activities and in compliance with the stabilization timeline established at the beginning of this section.

Maintenance Requirements

- The thickness of the cover must be maintained.
- Any areas that experience erosion shall be re-mulched and/or protected with a net or blanket. If the erosion problem is drainage related, then the problem shall be fixed and the eroded area re-mulched.

3.13 Dewatering Practices

Dewatering activities are not anticipated for this site. **If dewatering activities are anticipated, then additional information outlined in Section 3.21 of the CGP must be collected and submitted to SDDENR.**

Standard dewatering practices are as follows. Excavation de-watering water shall be discharged into a controlled conveyance system and discharge to a large flat vegetated area for filtration/infiltration or drain along existing drainage patterns. Energy dissipation should be applied to the end of hose/conveyance discharge location to minimize scours.

Only clean non-turbid de-watering water, free of floating solids or foams shall be discharged. A temporary sump and rock base should be used where a pump is installed to dewater an area of accumulated water. The pump intake shall be elevated to draw water from the top of the water to limit sediment intake. If discharge is turbid, dewatering bags or other adequate BMP is needed to capture sediment.

Contaminated dewatering water from construction equipment operation shall be handled separately from stormwater. Operator shall use an oil water separator or suitable filtration that is designed to remove oil, grease, and other products if dewatering water is found to contain these materials.

If the source water is groundwater, the discharged water shall not leave the site.

Dewatering Practice: Outlet Protection

- Provide energy dissipation (riprap with geotextile underneath or geotextile rock sock) at the discharge location to minimize scouring.
- BMPs for dewatering are included in Appendix G of this SWPPP.

Installation

- Outlet protection shall be provided prior to starting dewatering operations.

Maintenance Requirements

- If water discharged during dewatering is turbid or contains contaminants stop dewatering immediately
- Adjust outlet projection if erosion is observed near the discharge location.

3.14 Other Stormwater Controls

If properly installed and maintained, the stormwater controls listed above should minimize potential discharges of sediment in stormwater from the construction activities.

If these controls are not adequate a corrective action report shall be completed as defined in Section 4.13 of this SWPPP, this SWPPP plan modified and additional stormwater controls added to this section.

The description should include:

- General description of the problem this control is designed to address;
- Details or specification of the BMP/stormwater control practice;
- Approximate installation date; and
- Maintenance requirements for the BMP/stormwater control practice.

4. POLLUTION PREVENTION STANDARDS

4.1 Allowable Non-Stormwater Discharges

Non-storm water discharges shall be eliminated or reduced to the extent feasible, except for those necessary for the completion of certain construction activities. A list of allowable non-stormwater discharges includes:

Type of Allowable Non-Stormwater Discharge	Likely to be Present at the Site?
Discharges from emergency fire-fighting activities	☐ YES ☒ NO
Fire hydrant flushing	☐ YES ☒ NO
Landscape irrigation	☐ YES ☒ NO
Waters used to wash vehicles and equipment (no soaps, solvents, detergents)	☒ YES ☐ NO
Water used to control dust	☒ YES ☐ NO
Potable water including uncontaminated water line flushing	☐ YES ☒ NO
Routine external building wash down	☐ YES ☒ NO
Pavement wash waters	☐ YES ☒ NO
Uncontaminated air conditioning or compressor condensate	☐ YES ☒ NO
Uncontaminated, non-turbid discharges of ground water or spring water	☐ YES ☒ NO
Foundation or footing drains	☐ YES ☒ NO
Construction dewatering water	☒ YES ☐ NO

4.2 Potential Sources of Pollution

The Operator is required to install and maintain effective pollution prevention measures to prevent the discharge of pollutants. The Operator must maintain all pollution prevention controls. Prohibited discharges and pollutants associated with anticipated site activities are described below. Pollution prevention standards nor pollutant-generating activities are described in the following subsections.

Prohibited Discharges

The following are prohibited from discharging from the construction site:

- Wastewater from washout of concrete, unless managed by an appropriate control as described in Part 3.20 of the CGP;
- Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials, unless managed by an appropriate control as described in Part 3.20 of the CGP;
- Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance;
- Soaps, solvents, or detergents used in vehicle and equipment washing;
- Toxic or hazardous substances from a spill or other release; and
- Waste, garbage, floatable debris, construction debris and sanitary waste.

Construction Site Pollutants

Pollutant-Generating Activity	**Pollutants or Pollutant Constituents** (that could be discharged if exposed to stormwater)	**Location on Site** (or reference SWPPP site map where this is shown)
Earth Disturbance	Sediment	Disturbed Areas
Equipment, Vehicles, Painting, Maintenance	Gasoline	Vehicle/Equipment fueling and leaks
	Diesel Fuel	Vehicle/Equipment leaks, sitewide operations
	Hydraulic Oils/Fluids	
	Paint	
	Grease	
	Antifreeze	
Sanitary Waste Restrooms	Sanitary Waste	Portable
Final Vegetation	Fertilizers	Stabilized Areas

4.3 Spill Prevention and Response

Inadvertent spills should be cleaned up immediately upon discovery, and the materials should be disposed of in accordance with local, state and federal requirements. Vehicles and equipment shall be property maintained to prevent leaks. The Operator should have spill kits available on site for rapid deployment to contain and cleanup spills.

In the event of a spill notify the project manager immediately. The project manager will:

- Immediately notify SDDENR at 605-773-3296 during regular office hours (8 a.m. to 5 p.m. Central Standard Time).
- To report a release after hours, on weekends or holidays call South Dakota Emergency Management at 605-773-3231.
- Local authorities shall also be contacted to determine local reporting requirements for the release.

When SDDENR is contacted, the project manager should be prepared to provide the following information (to the best of their knowledge):

- the name, address, and telephone number of the person or persons in charge of the facility, as well as of the owner and/or operator of the facility;
- the name and address of the facility (latitude and longitude in lieu of physical address if applicable);
- the date, time, location, and duration of the discharge;
- the source and cause of discharge;
- a description of the discharge, including its chemical composition;

- the estimated volume of the discharge; and
- any actions taken to mitigate immediate damage from the discharge.

A written report of the unauthorized release of any regulated substance, including quantity discharged and the location of the discharge shall be sent to DDENR within 14 days of the discharge. More information on spill reporting is available at:

https://denr.sd.gov/des/gw/Spills/Spills.aspx

4.4 Fueling and Maintenance of Equipment or Vehicles

The Operator must provide an effective means of eliminating discharge of spilled or leaked chemicals, including fuel, from the areas where fueling or maintenance of equipment or vehicle activities take place. Any fuel tank or fuel truck stored on the project site shall be protected by secondary containment. It is anticipated that fuel will be stored in double walled truck bed fuel tanks and an operator shall be present at all times during fueling operations.

Good housekeeping Practice: Mobile Fueling of Vehicles and Heavy Equipment

The Operator shall implement good housekeeping measures for fueling by:

- Ensure adequate supplies are always available to handle spills, leaks, and disposal of used liquids.
- Use drip pans and absorbents under and around leaky vehicles.
- Dispose of or recycle oil and oily wastes in accordance with other federal, state, tribal, or local requirements.
- Clean up spills or contaminated surfaces immediately, using dry clean up measures where possible, and eliminate the source of the spill to prevent a discharge or a furtherance of an ongoing discharge.
- Do not clean surfaces by hosing the area down.

Installation

- During fueling operations and when equipment is onsite

Maintenance Requirements

- Inspect fueling equipment for leaks prior to fueling.
- Maintain equipment to prevent leaks

4.5 Washing of Equipment and Vehicles

Washing of vehicles and equipment shall be avoided. Wash vehicles and equipment only with water (without detergents). Washing components consists of using high powered sprayers to clean off accumulated earthen materials. Washing should take place within area of work. Existing BMPs and infiltration will likely control associated runoff. If existing BMPs are overloaded or not functional, maintenance or additional perimeter controls (such as a lined sediment trap and capture and disposal of wash water) may be needed at the discretion of the inspector.

4.6 Storage, Handling, and Disposal of Construction Products and Wastes

Operator must minimize the exposure to stormwater of any of the products, materials, or waste specified below that are present at the site. These requirements do not apply to those products, materials or waste that are not of source of stormwater contamination or that are designed to be exposed to stormwater.

In storage areas, Operator shall provide either (1) cover (e.g., plastic sheeting or temporary roofs) to prevent these products from contacting rainwater, or (2) a similarly effective means designed to prevent the discharge of pollutants from these areas.

4.6.1 Building Products

Example building products include asphalt sealants, copper flashing, roofing materials, adhesives, concrete admixtures. If these products are used for this project, store properly as described above.

4.6.2 Pesticides, Herbicides, Insecticides, Fertilizers, and Landscape Materials

Properly store pesticides, herbicides, insecticides, fertilizers, and landscape materials as described above. Comply with all application and disposal requirements included on the registered pesticide, herbicide, insecticide, and fertilizer label.

4.6.3 Diesel Fuel, Oil, Hydraulic Fluids, Other Petroleum Products, and Chemicals

Diesel fuel, oil, hydraulic fluids, other petroleum products, and other chemicals should be kept in water-tight containers and properly stored as described above. Ensure adequate supplies are available at all times to handle spills, leaks, and disposal of used liquids. Provide secondary containment (e.g. spill berms, decks, spill containment pallets), as needed. Clean up spills or contaminated surfaces immediately, using dry clean up measures where possible, and eliminate the source of the spill to prevent a discharge or a furtherance of an ongoing discharge.

Report all spills or releases as described in Section 4.3 of this SWPPP.

4.6.4 Hazardous or Toxic Waste

Separate hazardous or toxic waste from construction and domestic waste.

Store waste in sealed containers, which are constructed of suitable materials to prevent leakage and corrosion, and which are labeled in accordance with applicable Resource Conservation and Recovery Act (RCRA) requirements and all other applicable federal, state, tribal, or local requirements.

Store all containers that will be stored outside within appropriately sized secondary containment (e.g., spill berms, decks, spill containment pallets) to prevent spills from being discharged or provide a similarly effective means designed to prevent the discharge of pollutants from these areas (e.g., storing chemicals in covered area or having a spill kit available on site.

Dispose of hazardous or toxic waste in accordance with the manufacturer's recommended method of disposal and in compliance with federal, state, tribal, and local requirements.

Clean up spills immediately, using dry clean-up methods where possible, and dispose of used materials properly. Do not clean surfaces or spills by hosing the area down. Eliminate the source of the spill to prevent a discharge or a furtherance of an ongoing discharge.

Report all spills or releases as described in Section 4.3 of this SWPPP.

4.6.5 Construction and Domestic Waste

Construction and domestic waste includes packaging materials, scrap construction materials, masonry products, timber, pipe and electrical cuttings, plastics, Styrofoam, concrete, and other trash or building materials. Provide waste containers (e.g., dumpster, trash receptacle, trash bags) of sufficient size and number to contain construction and domestic wastes. In addition, Operator must:

- Provide waste containers (e.g., dumpster, trash receptacle) of sufficient size and number to contain construction and domestic wastes;
- Keep waste container lids closed when not in use and close lids at the end of the business day for those containers that are actively used throughout the day. For waste containers that do not have lids, provide either:
- Cover (e.g., a tarp, plastic sheeting, temporary roof) to minimize exposure of wastes to precipitation, or
- A similarly effective means designed to minimize the discharge of pollutants (e.g., secondary containment);
- On work days, clean up and dispose of waste in designated waste containers; and
- Clean up immediately if containers overflow.

4.6.6 Sanitary Waste

Position portable toilets, if used, so that they are secure and will not be tipped or knocked over.

4.7 Washing of Applicators and Containers used for Paint, Concrete or Other

Washing of applicators and containers used for paint, concrete or other construction materials is anticipated for this project. Operator shall:

- Direct wash water into a leak-proof container or leak-proof and lined pit designed so that no overflows can occur due to inadequate sizing or precipitation;
- Handle washout or cleanout wastes as follows:
    - Do not dump liquid wastes in storm sewers or waters of the U.S.;
    - Dispose of liquid wastes at an approved facility;
    - Remove and dispose of hardened concrete waste at an approved facility.
- Locate any washout or cleanout activities as far away as possible from waters of the U.S. and stormwater inlets or conveyances, and, to the extent feasible, designate areas to be used for these activities and conduct such activities only in these areas.

4.8 Fertilizers

If used onsite, Operator shall minimize discharges of fertilizers containing nitrogen or phosphorus by meeting the following requirements:

- Apply at a rate and in amounts consistent with manufacturer's specifications, or document departures from the manufacturer specifications where appropriate in Appendix G of the SWPPP;
- Apply at the appropriate time of year for the location, and preferably timed to coincide as closely as possible to the period of maximum vegetation germination and growth;
- Avoid applying before heavy rains that could cause excess nutrients to be discharged;
- Never apply to frozen ground;
- Never apply to stormwater conveyance channels with flowing water; and
- Follow all other federal, state, tribal, and local requirements regarding fertilizer application.

4.9 Concrete Washout

If used onsite, Operator shall obtain all necessary permits. Operator shall minimize discharges of concrete washout water by meeting the following requirements:

- Line concrete washout pits with an impermeable line (16 mil minimum thickness) or use a prefabricated concrete washout device.
- Locate concrete washout pits away from storm drains and natural surface waters; and
- Remove concrete waste in the washout area, as needed to maintain BMP function (typically when filled to two thirds of its capacity).

4.10 Temporary Batch Plant

Temporary batch plant is not anticipated or applicable for the project. If used onsite, Operator shall obtain all necessary permits.

INSPECTIONS, MONITORING AND CORRECTIVE ACTIONS

4.11 Inspections

Personnel Responsible for Inspections

The Operator may designate a qualified employee, subcontractor or other party to conduct inspections. (Section 1.3.1)

4.11.1 Inspection Schedule

Inspections will follow the inspection schedule, defined in Part 4.2.2 of the CGP. Inspection shall be conducted every fourteen (14) calendar days. and within 24 hours of the occurrence of a storm event of 0.25 inches or greater. To determine if a storm event of 0.25 inches or greater, the Operator must either keep a properly maintained rain gauge onsite or obtain the storm event information from a weather station listed below. For any day of rainfall during normal business hours that measures 0.25 inches or greater, the total rainfall measured for that day must be recorded.

- Inspections are only required during the project's normal working hours.
- "Within 24 hours of the occurrence of a storm event" means that the Operator is required to conduct an inspection within 24 hours once a storm event has produced 0.25 inches, even if the storm event is still continuing. Thus, if the Operator has elected to inspect bi-weekly in accordance with Part 4.2.2 of the CGP and there is a storm event at the site that continues for multiple days, and each day of the storm produces 0.25 inches or more of rain, the Operator is required to conduct an inspection within 24 hours of the first day of the storm and within 24 hours after the end of the storm.

Rain Gauge Location (if applicable)

The nearest online weather station can be found at the following website:

https://www.wunderground.com/weather/us/sd/wessington

Reductions in Inspection Frequency

Once all activities necessary to initially seed or plant the area to be stabilized have been completed per Section 3.12 of this SWPPP, the Operator may reduce the frequency of inspections to once per month after the first month.

Monthly inspections must be conducted until final vegetative stabilization, defined in Section 5.1 of this SWPPP has been completed and until the NOT has been filed with the EPA and SDDENR.

4.11.2 Inspection Areas

The inspector is not required to inspect areas that, at the time of the inspection, are considered unsafe to the inspection personnel.

The site inspection must include the following:

- All areas that have been cleared, graded, or excavated and that have not yet completed stabilization consistent with Section 3.12 of this SWPPP.

- All stormwater controls (including pollution prevention measures) installed at the site to comply with this permit;
- Stockpiles, chemical and fuel storage, fertilizer and pesticide storage, material, waste, borrow, or equipment storage and maintenance areas that are covered by this permit;
- All areas where stormwater typically flows within the site, including drainageways designed to divert, convey, and/or treat stormwater;
- All points of discharge from the site;
- Any and all dewatering activities; and
- All locations where stabilization measures have been implemented.

4.11.3 Requirements for Inspections

During the site inspection, inspector must at a minimum:

- Check whether all erosion and sediment controls and pollution prevention controls are installed, appear to be operational, and are working as intended to minimize pollutant discharges. Determine if any controls need to be replaced, repaired, or maintained;
- Check for the presence of conditions that could lead to spills, leaks, or other accumulations of pollutants on the site;
- Identify any locations where new or modified stormwater controls are necessary to meet the requirements of Section 3 this SWPPP;
- At points of discharge and, if applicable, the banks of any surface waters flowing within the property boundaries or immediately adjacent to the property, check for signs of visible erosion and sedimentation (i.e., sediment deposits) that have occurred and are attributable to discharge from the project's construction activities;
- Identify any and all incidents of noncompliance;
- If discharge is identified at the time of inspection, identify all discharge points, observe and document the visual quality of the discharge. See Section 2 of this SWPPP.
- Based on the results of the inspection, initiate corrective action under Section 4.13 of this SWPPP.

4.11.4 Inspection Documentation

Inspection report forms are presented in Appendix D. The following requirements apply to the inspection documentation:

- Each inspection report must be signed by the personnel responsible for inspections, which is defined above;
- A current, copy of all inspection reports must be maintained at the site or at an easily accessible location, so that it can be made available at the time of an onsite inspection or upon request by EPA; and
- All inspection reports completed for this Part must be retained in Appendix J of this SWPPP for at least 3 years from the date that this permit coverage expires or is terminated.

4.12 Monitoring

If a discharge is occurring during the inspection, the inspector is required to:

- Identify all points of the property from which there is a discharge;
- Observe and document the visual quality of the discharge, and take note of the characteristics of the stormwater discharge, including color, odor, floating, settled, or suspended solids, foam, oil sheen, and other obvious indicators of stormwater pollutants; and
- Document whether the stormwater controls are operating effectively and describe any such controls that are clearly not operating as intended or need maintenance.

Document monitoring on the site inspection form.

4.13 Corrective Action

The Operator is responsible for implementing corrective actions. Corrective actions are actions to:

- Repair, modify, or replace any stormwater control used at the site;
- Clean up and properly dispose of spills, releases, or other deposits; or
- Address and properly manage a permit violation.

4.13.1 Corrective Action Timeline

The Operator must immediately take all reasonable steps to minimize or prevent the discharge of pollutants until a permanent solution is installed and made operational, including cleaning up any contaminated surfaces so that the material will not discharge in subsequent storm events.

If a required stormwater control was never installed, installed incorrectly, or is not effective the contractor must install a new or modified control and make it operational, or complete the repair, by no later than 7 calendar days from the time of discovery. If it is infeasible to complete the installation or repair within 7 calendar days, the Operator must document in why it is infeasible to complete the installation or repair within the 7 calendar day timeframe and document the schedule for installing the stormwater control(s) and making it operational as soon as practicable after the 7-day timeframe.

Where the corrective actions result in changes to any of the stormwater controls or procedures documented in this SWPPP, the SWPPP must be modified accordingly within 7 calendar days of completing corrective action work and an amendment noted in Appendix G of this SWPPP.

4.13.2 Corrective Action Documentation

Corrective action report forms are presented in Appendix D of this SWPPP. Completed forms should be kept in Appendix J. The following requirements apply to corrective action documentation:

- Within 24 hours of discovering the occurrence of one of the triggering conditions in the "corrective action timeline" and CGP Part 3.19 the Operator must complete a report of the following:
- Which condition was identified at the site;
- The nature of the condition identified; and
- The date and time of the condition identified and how it was identified.

- Within 7 calendar days of discovering the occurrence of one of the triggering conditions the contractor must complete a report of the following:
- Any follow-up actions taken to review the design, installation, and maintenance of stormwater controls, including the dates such actions occurred;
- A summary of stormwater control modifications taken or to be taken, including a schedule of activities necessary to implement changes, and the date the modifications are completed or expected to be completed; and
- Notice of whether SWPPP modifications are required as a result of the condition identified or corrective action.
- Each corrective action report must be signed by the personnel responsible for inspections, which is defined above;
- A current, copy of all corrective reports must be maintained at the site or at an easily accessible location, so that it can be made available at the time of an onsite inspection or upon request by EPA; and
- All corrective reports completed for this Part must be retained for at least 3 years from the date that this permit coverage expires or is terminated.

5. POST CONSTRUCTION REQUIREMENTS

Once the construction is complete and areas of disturbance have met the below final stabilization requirements, the Owner may close the permit by submitting a NOT. Procedures for post construction closure are discussed in the following sections

5.1 Final Stabilization

Final stabilization is defined in the following sections.

5.1.1 Standard Criteria

Final stabilization is met if:

- Establish uniform, perennial vegetation (i.e., evenly distributed, without large bare areas) that provides 70 percent or more of the cover that is provided by vegetation native to local undisturbed areas; and/or
- Implement permanent non-vegetative stabilization measure to provide effective cover.

5.1.2 Final Stabilization for temperate areas

Final stabilization is met for temperate areas in if:

- The seeded or planted area must within 3 years provide established vegetation that covers 70 percent of native background vegetative cover for all unpaved areas and areas not covered by permanent structures (i.e. 70% of native cover of 50% = 35% final cover); and
- Non-vegetative erosion controls that provide cover years without active maintenance have been selected, designed and installed.

5.2 Notice of Termination (NOT)

Permittee must notify SDDENR that construction activities are complete and final by submittal of a NOT. Completion of the NOT form (Appendix D) must be submitted to:

SD Department of Environment and Natural Resources

Surface Water Quality Program

523 East Capitol Avenue

Pierre, South Dakota 57501

stormwater@state.sd.us

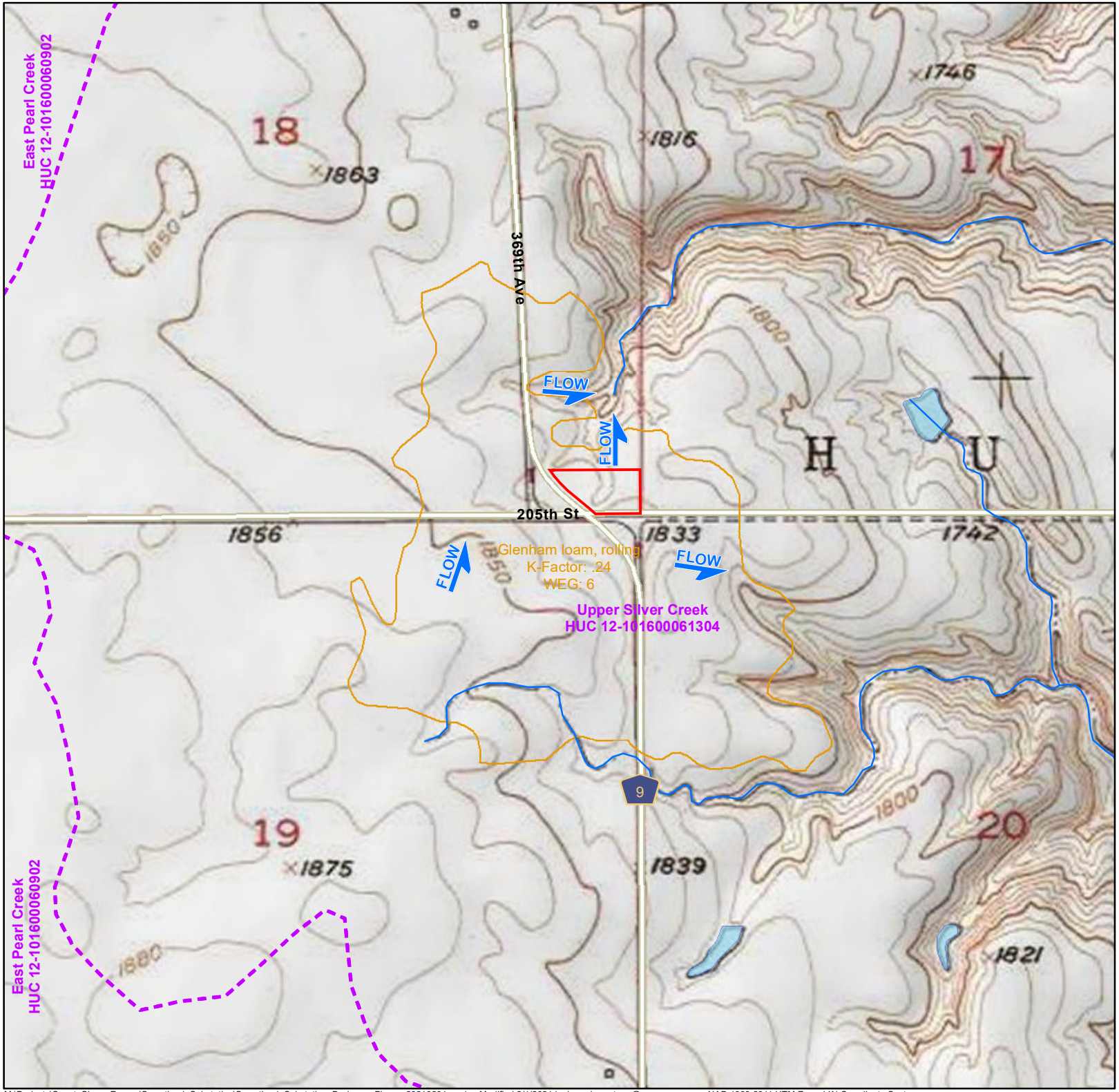
The following information will be required for submitting the NOT.

- NPDES permit tracking number provided by EPA when you received coverage under this Permit (See Appendix C);
- Operator contact information;
- Name of project and address (or a description of location if no street address is
- available); and
- NOT certification.

Appendix A – Site Maps

The following Site Maps are included in this Appendix:

- Figure 1 – Drainage Map
- Figure 2 – Site Location Map, Grading & SWPPP Plan



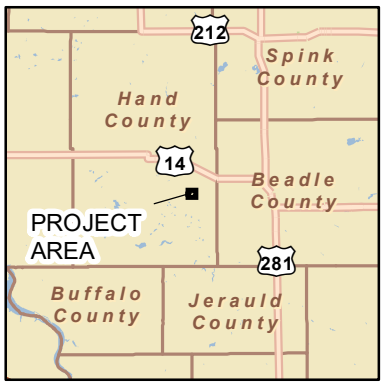
SCOUT CLEAN ENERGY

Sweetland Substation Drainage Figure

Legend

- Property Boundary
- Soil Unit
- HUC 12 Unit
- Lake/Pond
- Stream

NOTES:
The project area is made up of un-populated rangeland, and is considered suitable for production of food, feed, fiber forage and oil seed crops.



0 375 750
Feet
N

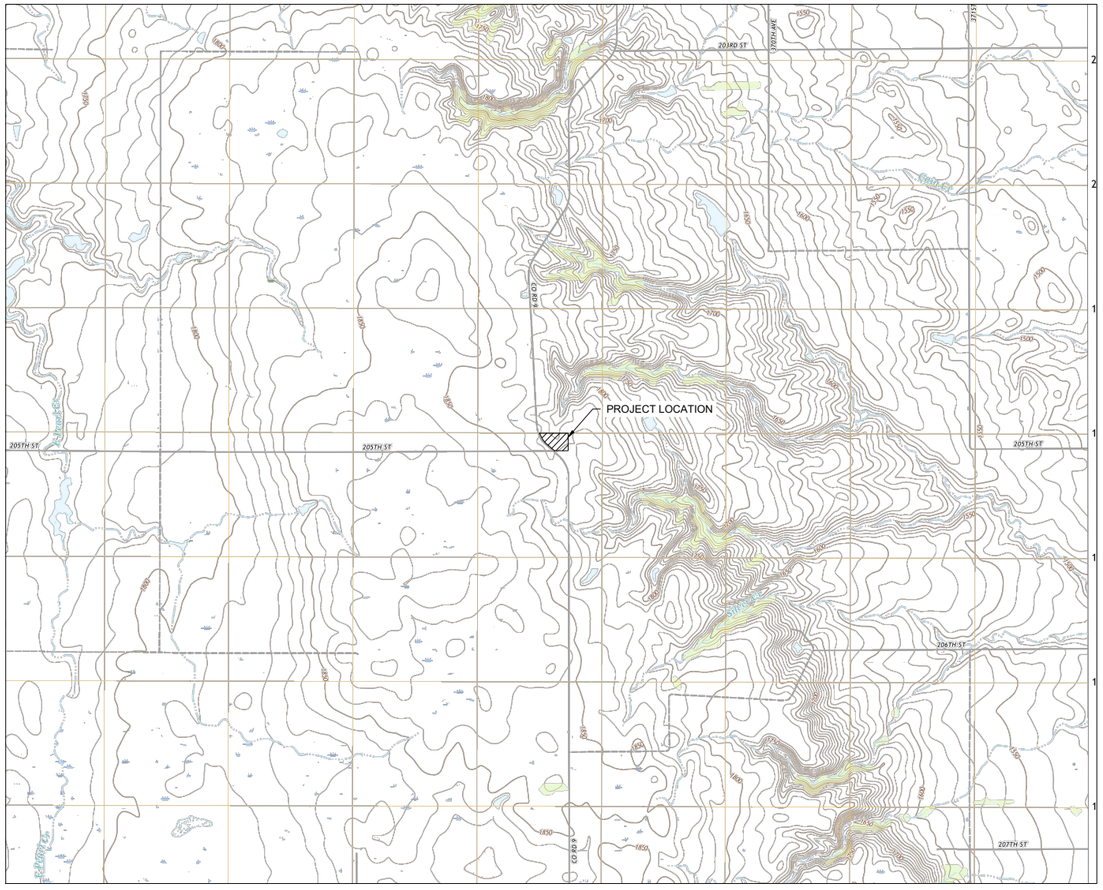
REVISED	BY	COMMENT
2/1/2021	BJB	Map Updates

Apex Companies, LLC
1746 Cole Blvd., Bldg. 21 Suite 250
Lakewood, Colorado 80401
Phone: (303) 487-1020
www.apexcos.com

SWEETLAND WIND FARM

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)
HAND COUNTY, SOUTH DAKOTA
JANUARY, 2021

DRAWING INDEX	
01	COVER SHEET
02	GENERAL NOTES
03	INITIAL EROSION CONTROL MEASURES
04	FINAL EROSION CONTROL MEASURES
05	DETAILS



PROJECT NAME: SWEETLAND WIND FARM SWPPP

PROJECT ADDRESS: SE ¼ OF SE ¼ S18,T111N,R66W
HAND COUNTY, SOUTH DAKOTA

OWNER ADDRESS: 4865 STERLING DR, SUITE 200
BOULDER, CO 80301

DESIGN FIRM'S NAME AND ADDRESS: APEX COMPANIES
209 MAIN STREET, UNIT A
MEAD, COLORADO 80542
PH: (307) 755-3485

REGISTERED PROFESSIONAL ENGINEER DEREK WONG

STATE OF SOUTH DAKOTA NO. _____

No.	Revision/Issue	Date
1	FINAL DESIGN	01/29/2021

SCOUT CLEAN ENERGY - SWEETLAND WIND FARM
STORMWATER POLLUTION PREVENTION PLAN (SWPPP)
COVER SHEET
HAND COUNTY, SOUTH DAKOTA

APEX apexcos.com
209 Main St, Unit A
Mead, CO 80542
(307)755-3485

SHEET TITLE:
SWEETLAND WIND FARM SWPPP
SCOUT CLEAN ENERGY
4865 STERLING DR, STE 200
BOULDER, CO 80301

Drawn by:	Reviewed by:
JL	DC
Project: 121.022.01	Sheet: 01
Date: 01/29/2021	
Scale: As Noted	

C:\Users\james.lester\Downloads\SWEETWATER_WINDFARM\COVER_SHEET_SWEETLAND.dwg

STORMWATER POLLUTION PREVENTION PLAN CHECKLIST

(THE NUMBERS LEFT OF THE TITLE HEADINGS ARE REFERENCE NUMBERS TO THE GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES (STORMWATER PERMIT))

STAFF TRAINING/SWPPP IMPLEMENTATION

TO PROMOTE STORMWATER MANAGEMENT AWARENESS SPECIFIC FOR THIS PROJECT, THE CONTRACTOR'S EROSION CONTROL SUPERVISOR SHOULD PROVIDE CORRESPONDENCE OF HOW THE SWPPP WILL BE IMPLEMENTED. THE CONTRACTOR'S EROSION CONTROL SUPERVISOR IS RESPONSIBLE FOR PROVIDING THIS INFORMATION AT THE PRECONSTRUCTION MEETING, AND SUBSEQUENTLY COMPLETING AN ATTENDANCE LOG, WHICH SHOULD IDENTIFY SITE-SPECIFIC IMPLEMENTATION OF THE SWPPP AND THE NAMES OF THE PERSONNEL WHO ATTENDED THE PRECONSTRUCTION MEETING. DOCUMENTATION OF THE PRECONSTRUCTION MEETING WILL BE FILED WITH THE SWPPP DOCUMENTS.

5.3 (3): DESCRIPTION OF CONSTRUCTION ACTIVITIES

- 5.3 (3A): PROJECT LIMITS (SEE TITLE SHEET)
- 5.3 (3A): PROJECT DESCRIPTION (SEE TITLE SHEET)
- 5.3 (4): SITE MAP(S) (SEE TITLE SHEET AND PLANS)
- MAJOR SOIL DISTURBING ACTIVITIES (CHECK ALL THAT APPLY)
- CLEARING AND GRUBBING
- EXCAVATION/BORROW
- GRADING AND SHAPING
- FILLING
- OTHER (DESCRIBE):
- 5.3 (3B): TOTAL PROJECT AREA
- 5.3 (3B): TOTAL AREA TO BE DISTURBED
- 5.3 (3C): MAXIMUM AREA DISTURBED AT ONE TIME
- 5.3 (3D): EXISTING VEGETATIVE COVER (%)
- 5.3 (3D): DESCRIPTION OF VEGETATIVE COVER
- 5.3 (3E): SOIL PROPERTIES: AASHTO SOIL OR USDA-NRCS SOIL SERIES CLASSIFICATION
- 5.3 (3F): NAME OF RECEIVING WATER BODY/BODIES
- 5.3 (3G): LOCATION OF CONSTRUCTION SUPPORT ACTIVITY AREAS

5.3 (3H): ORDER OF CONSTRUCTION ACTIVITIES

SPECIAL SEQUENCING REQUIREMENTS (SEE SHEET).

THE CONTRACTOR WILL ENTER THE ESTIMATED START DATE.

ESTIMATED START DATE _____

DESCRIPTION

1. INSTALL STABILIZED CONSTRUCTION ENTRANCE(S).
2. INSTALL PERIMETER PROTECTION WHERE RUNOFF MAY EXIT SITE.
3. INSTALL PERIMETER PROTECTION AROUND STOCKPILES.
4. CLEARING AND GRUBBING.
5. REMOVE AND STOCKPILE TOPSOIL.
6. STABILIZE DISTURBED AREAS.
7. FINAL GRADING.
8. REMOVAL OF PROTECTION DEVICES.
9. RESEED AREAS DISTURBED BY REMOVAL ACTIVITIES.

PROCEDURES FOR INSPECTIONS

- INSPECTIONS WILL BE CONDUCTED AT LEAST ONCE EVERY 7 DAYS.
- ALL CONTROLS WILL BE MAINTAINED IN GOOD WORKING ORDER. NECESSARY REPAIRS WILL BE INITIATED WITHIN 24 HOURS OF THE SITE INSPECTION REPORT.
- SILT FENCE WILL BE INSPECTED FOR DEPTH OF SEDIMENT AND FOR TEARS TO ENSURE THE FABRIC IS SECURELY ATTACHED TO THE POSTS AND THAT THE POSTS ARE WELL ANCHORED. SEDIMENT BUILDUP WILL BE REMOVED FROM THE SILT FENCE WHEN IT REACHES 1/3 OF THE HEIGHT OF THE SILT FENCE.
- SEDIMENT BASINS AND TRAPS WILL BE CHECKED. SEDIMENT WILL BE REMOVED WHEN DEPTH REACHES APPROXIMATELY 50 PERCENT OF THE STRUCTURE'S CAPACITY, AND AT THE CONCLUSION OF THE CONSTRUCTION.
- CHECK DAMS WILL BE INSPECTED FOR STABILITY. SEDIMENT WILL BE REMOVED WHEN DEPTH REACHES ½ THE HEIGHT OF THE DAM.
- ALL SEEDED AREAS WILL BE CHECKED FOR BARE SPOTS, WASHOUTS, AND VIGOROUS GROWTH FREE OF SIGNIFICANT WEED INFESTATIONS.
- INSPECTION AND MAINTENANCE REPORTS WILL BE PREPARED FOR EACH SITE INSPECTION, THIS FORM WILL ALSO BE USED TO DOCUMENT CHANGES TO THE SWPPP. A COPY OF THE COMPLETED INSPECTION FORM WILL BE FILED WITH THE SWPPP DOCUMENTS.
- THE PROJECT ENGINEER AND CONTRACTOR'S EROSION CONTROL SUPERVISOR ARE RESPONSIBLE FOR INSPECTIONS. MAINTENANCE AND REPAIR ACTIVITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE PROJECT ENGINEER WILL COMPLETE THE INSPECTION AND MAINTENANCE REPORTS AND DISTRIBUTE.

LOW FLOW SILT FENCE

THE LOW FLOW SILT FENCE FABRIC PROVIDED WILL BE FROM THE APPROVED PRODUCT LIST. THE APPROVED PRODUCT LIST FOR LOW FLOW SILT FENCE MAY BE VIEWED AT THE FOLLOWING INTERNET SITE:

HTTP://SDDOT.COM/BUSINESS/CERTIFICATION/PRODUCTS/DEFAULT.ASPX

LOW FLOW SILT FENCE WILL BE PLACED AT THE LOCATIONS NOTED IN THE TABLE AND AT LOCATIONS THAT WILL MINIMIZE SILTATION OF ADJACENT STREAMS, LAKES, DAMS, OR DRAINAGE AREAS AS DETERMINED BY THE ENGINEER DURING CONSTRUCTION.

PERMANENT SEEDING

CONTRACTOR SHALL UTILIZE SDDOT TYPE G PERMANENT SEED MIXTURE (OR AN APPROVED ALTERNATE).

TEMPORARY AND PERMANENT SEEDING

1. PRIOR TO SEEDING, ENSURE THAT AREAS TO BE REVEGETATED HAVE SOIL CONDITIONS CAPABLE OF SUPPORTING VEGETATION. OVERLOT GRADING CAN RESULT IN LOSS OF TOPSOIL, RESULTING IN POOR QUALITY SUBSOILS AT THE GROUND SURFACE THAT HAVE LOW NUTRIENT VALUE, LITTLE ORGANIC MATTER CONTENT, FEW SOIL MICROORGANISMS, ROOTING RESTRICTIONS, AND CONDITIONS LESS CONDUCIVE TO INFILTRATION OF PRECIPITATION. AS A RESULT, IT IS TYPICALLY NECESSARY TO PROVIDE STOCKPILED TOPSOIL, COMPOST, OR OTHER SOIL AMENDMENTS AND ROTOTILL THEM INTO THE SOIL TO A DEPTH OF 6 INCHES OR MORE.
2. TOPSOIL SHOULD BE SALVAGED DURING GRADING OPERATIONS FOR USE AND SPREAD ON AREAS TO BE REVEGETATED LATER. TOPSOIL SHOULD BE VIEWED AS AN IMPORTANT RESOURCE TO BE UTILIZED FOR VEGETATION ESTABLISHMENT, DUE TO ITS WATER-HOLDING CAPACITY, STRUCTURE, TEXTURE, ORGANIC MATTER CONTENT, BIOLOGICAL ACTIVITY, AND NUTRIENT CONTENT. AT A MINIMUM, THE UPPER 6 INCHES OF TOPSOIL SHOULD BE STRIPPED, STOCKPILED, AND ULTIMATELY RESPREAD ACROSS AREAS THAT WILL BE REVEGETATED.
3. WHERE TOPSOIL IS NOT AVAILABLE, SUBSOILS SHOULD BE AMENDED TO PROVIDE AN APPROPRIATE PLANT-GROWTH MEDIUM. ORGANIC MATTER, SUCH AS WELL DIGESTED COMPOST, CAN BE ADDED TO IMPROVE SOIL CHARACTERISTICS CONDUCIVE TO PLANT GROWTH. OTHER TREATMENTS CAN BE USED TO ADJUST SOIL PH CONDITIONS WHEN NEEDED. SOIL TESTING, WHICH IS TYPICALLY INEXPENSIVE, SHOULD BE COMPLETED TO DETERMINE AND OPTIMIZE THE TYPES AND AMOUNTS OF AMENDMENTS THAT ARE REQUIRED.
4. IF THE DISTURBED GROUND SURFACE IS COMPACTED, RIP OR ROTOTILL THE SURFACE PRIOR TO PLACING TOPSOIL. IF ADDING COMPOST TO THE EXISTING SOIL SURFACE, ROTOTILLING IS NECESSARY. SURFACE ROUGHENING WILL ASSIST IN PLACEMENT OF A STABLE TOPSOIL LAYER ON STEEPER SLOPES, AND ALLOW INFILTRATION AND ROOT PENETRATION TO GREATER DEPTH.
5. PRIOR TO SEEDING, THE SOIL SURFACE SHOULD BE ROUGH AND THE SEEDBED SHOULD BE FIRM, BUT NEITHER TOO LOOSE NOR COMPACTED. THE UPPER LAYER OF SOIL SHOULD BE IN A CONDITION SUITABLE FOR SEEDING AT THE PROPER DEPTH AND CONDUCIVE TO PLANT GROWTH. SEED-TO-SOIL CONTACT IS THE KEY TO GOOD GERMINATION.

FUELING, MAINTENANCE, TRASH AND POLLUTANTS

FUELING, VEHICLE AND EQUIPMENT MAINTENANCE, DESIGNATED WASH WATER COLLECTION, LUBRICANT AND CHEMICAL STORAGE, MATERIAL STORAGE, STAGING AREAS, DEBRIS COLLECTION DUMPSTERS, PORTABLE TOILETS, AND OTHER EQUIPMENT STORAGE, IF APPLICABLE, AREAS SHALL BE WITHIN THE PROPERTY BOUNDARY INDICATED ON SHEET 03. REFER TO THE SWPPP SECTION 4.0 FOR POLLUTION PREVENTION STANDARDS.

No.	Revision/Issue	Date
1	FINAL DESIGN	01/29/2021

SCOUT CLEAN ENERGY - SWEETLAND WIND FARM
STORMWATER POLLUTION PREVENTION PLAN (SWPPP)
GENERAL NOTES
HAND COUNTY, SOUTH DAKOTA

APEX
apexcos.com
209 Main St, Unit A
Mead, CO 80542
(307)755-3485

SHEET TITLE:
SWEETLAND WIND FARM SWPPP
SCOUT CLEAN ENERGY
4865 STERLING DR, STE 200
BOULDER, CO 80301

Drawn by:	Reviewed by:
JL	DC
Project: 121.022.01	Sheet: 02
Date: 01/29/2021	
Scale: As Noted	

C:\Users\james.lester\Downloads\SWEETWATER_WINDFARM\COVER_SHEET_SWEETLAND.dwg

GRADING QUANTITIES (VOLUMES IN CUBIC YARDS)		
CUT	FILL	NET
2578	2563	15 **(CUT)**

LEGEND

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PARCEL BOUNDARY
- SITE BOUNDARY
- RIGHT OF WAY
- SILT FENCE
- FLOW DIRECTION
- DRAINAGE BASIN BOUNDARY
- TOPSOIL STOCKPILE PROTECTION
- SEDIMENT TRAP
- VEHICLE TRACKING CONTROL

N

SCALE IN FEET
0 15 30 60

01/05 SILT FENCE

02/05 SILT TRAP

01/05 SILT FENCE

S=3H:1V

SILT FENCE 01/05

2 F0.4

3 F0.7

DRAINAGE BASIN AREA = 3.8-AC

S=1%

1826

CUT

FILL

S=1%

1827

S=1%

FILL

CUT

03/05 TOPSOIL STOCK PILE PROTECTION

1828

S=1%

S=3H:1V

1 F1.1

4 C3.5

S=3H:1V

1829
1830

FUTURE ACCESS TO PAD FROM SOUTHERN PERIMETER (BY OTHERS)

369TH AVE (ASPHALT)

EDGE OF ROAD

205TH ST (ASPHALT)

04/05 VEHICLE TRACKING CONTROL (CONTRACTOR TO SELECT STYLE & CONFIRM LOCATION OF VEHICLE TRACKING CONTROLS)

FARM ROAD (GRAVEL)

No.	Revision/Issue	Date
1	FINAL DESIGN	01/29/2021

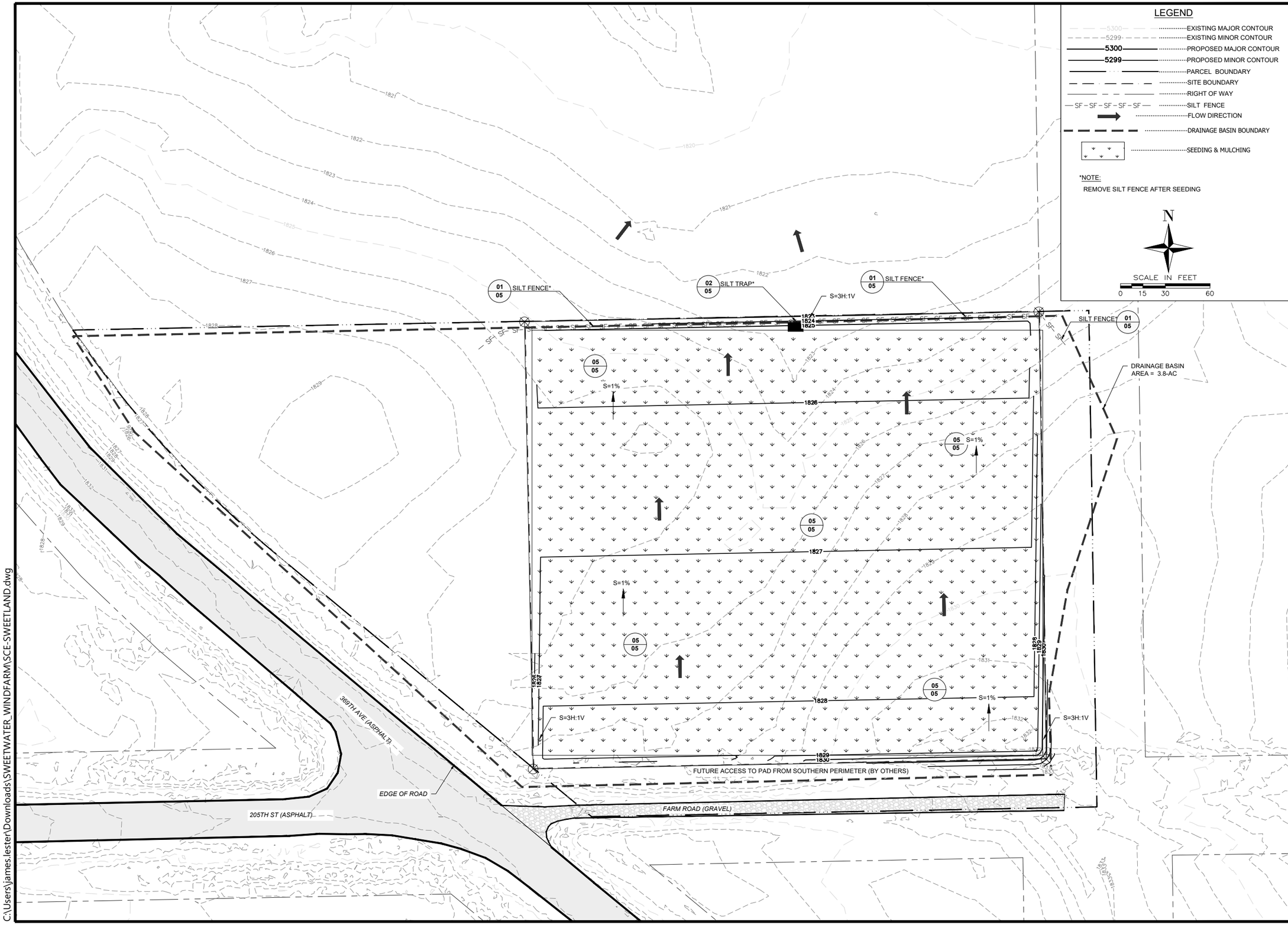
SCOUT CLEAN ENERGY - SWEETLAND WIND FARM
STORMWATER POLLUTION PREVENTION PLAN (SWPPP)
INITIAL EROSION CONTROL MEASURES
HAND COUNTY, SOUTH DAKOTA

APEX apexcos.com
209 Main St, Unit A
Mead, CO 80542
(307)755-3485

SHEET TITLE:
SWEETLAND WIND FARM SWPPP
SCOUT CLEAN ENERGY
4865 STERLING DR, STE 200
BOULDER, CO 80301

Drawn by:	Reviewed by:
JL	DC
Project: 121.022.01	Sheet: 03
Date: 01/29/2021	
Scale: As Noted	

C:\Users\james.lester\Downloads\SWEETWATER_WINDFARM\SCE-SWEETLAND.dwg



No.	Revision/Issue	Date
1	FINAL DESIGN	01/29/2021

SCOUT CLEAN ENERGY - SWEETLAND WIND FARM
STORMWATER POLLUTION PREVENTION PLAN (SWPPP)
FINAL EROSION CONTROL MEASURES
HAND COUNTY, SOUTH DAKOTA

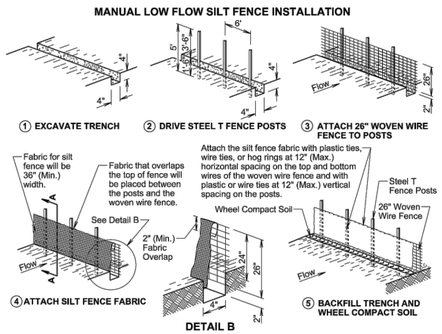
APEX apexcos.com
209 Main St, Unit A
Mead, CO 80542
(307)755-3485

SHEET TITLE:
SWEETLAND WIND FARM SWPPP
SCOUT CLEAN ENERGY
4865 STERLING DR, STE 200
BOULDER, CO 80301

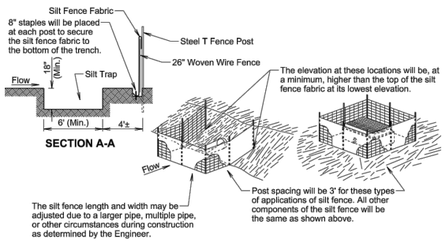
Drawn by:	Reviewed by:
JL	DC
Project: 121.022.01	Sheet: 04
Date: 01/29/2021	
Scale: As Noted	

C:\Users\james.lester\Downloads\SWEETWATER_WINDFARM\SCE-SWEETLAND.dwg

MANUAL LOW FLOW SILT FENCE INSTALLATION



01/05 SILT FENCE



02/05 SILT TRAP

Minimum Drill Seeding Rates for Perennial Grasses[B]

Seed Mix	Pounds of PLS/acre
SDDOT Type G Seed Mixture (Steep grades, long backslopes, or erosive soils)	
Western Wheatgrass (Flintlock, Rodan, Rosanna)	9.0
Switchgrass (Dacotah, Forestburg, Nebraska 28, Pathfinder, Summer, Sunburst, Trailblazer)	5.0
Indiangrass (Holt, Tomahawk)	1.0
Big Bluestem (Bison, Bonilla, Champ, Pawnee, Sunnyview)	1.0
Oats or Winter Wheat	10.0
Total	**26.0**

NOTES:

SEED MIXTURE SHALL BE CONFIRMED W/ LANDOWNER.

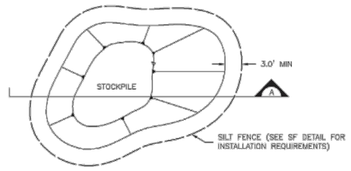
[A]ALL OF THE ABOVE SEEDING MIXES AND RATES ARE BASED ON DRILL SEEDING FOLLOWED BY CRIMPED HAY OR STRAW MULCH. THESE RATES SHALL BE DOUBLED IF SEED IS BROADCAST AND SHALL BE INCREASED BY 50 PERCENT IF THE SEEDING IS DONE USING A BRILLION DRILL OR IS APPLIED THROUGH HYDRAULIC SEEDING. HYDRAULIC SEEDING MAY BE SUBSTITUTED FOR DRILLING ONLY WHERE SLOPES ARE STEEPER THAN 3:1. IF HYDRAULIC SEEDING IS USED, HYDRAULIC MULCHING SHALL BE DONE AS A SEPARATE OPERATION.

[B]IF THE SITE IS TO BE IRRIGATED, THE TRANSITION TURF SEED RATES SHALL BE DOUBLED. TO PROVIDE TEMPORARY EROSION CONTROL BETWEEN THE SEEDING DATES, UTILIZE SURFACE ROUGHENING (ON THE CONTOUR OR PERPENDICULAR TO PREVAILING WINDS) AND APPLY A MULCH AS SPECIFIED ABOVE.

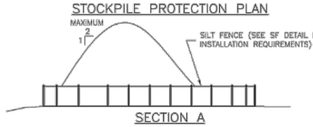
PERENNIAL GRASSES CAN BE SEEDED USING A DRILL SEEDER IN AREAS PREVIOUSLY PLANTED WITH A TEMPORARY GRASS COVER. IN THIS CASE, THE ANNUAL GRASS MAY NEED TO BE MOWED BEFORE PERENNIAL GRASSES ARE SEEDED. BROADCAST SEEDING OR HYDROSEEDING SHALL NOT BE DONE ON AREAS THAT HAVE A LIVE CROP OF ANNUAL GRASSES WITHOUT FIRST REWORKING AND PREPARING THE TOPSOIL.

SOURCES: SIOUX FALLS CHAPTER 12 EROSION CONTROL MANUAL, SDDOT

05/05 SEEDING



STOCKPILE PROTECTION PLAN



SECTION A

SP-1. STOCKPILE PROTECTION

STOCKPILE PROTECTION INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   -LOCATION OF STOCKPILES.
   -TYPE OF STOCKPILE PROTECTION.

2. INSTALL PERIMETER CONTROLS IN ACCORDANCE WITH THEIR RESPECTIVE DESIGN DETAILS. SILT FENCE IS SHOWN IN THE STOCKPILE PROTECTION DETAILS; HOWEVER, OTHER TYPES OF PERIMETER CONTROLS INCLUDING SEDIMENT CONTROL LOGS OR ROCK SOCKS MAY BE SUITABLE IN SOME CIRCUMSTANCES. CONSIDERATIONS FOR DETERMINING THE APPROPRIATE TYPE OF PERIMETER CONTROL FOR A STOCKPILE INCLUDE WHETHER THE STOCKPILE IS LOCATED ON A PERVIOUS OR IMPERVIOUS SURFACE, THE RELATIVE HEIGHTS OF THE PERIMETER CONTROL AND STOCKPILE, THE ABILITY OF THE PERIMETER CONTROL TO CONTAIN THE STOCKPILE WITHOUT FAILING IN THE EVENT THAT MATERIAL FROM THE STOCKPILE SHIFTS OR SLUMPS AGAINST THE PERIMETER, AND OTHER FACTORS.

3. STABILIZE THE STOCKPILE SURFACE WITH SURFACE ROUGHENING, TEMPORARY SEEDING AND MULCHING, EROSION CONTROL BLANKETS, OR SOIL BINDERS. SOILS STOCKPILED FOR AN EXTENDED PERIOD (TYPICALLY FOR MORE THAN 60 DAYS) SHOULD BE SEEDED AND MULCHED WITH A TEMPORARY GRASS COVER ONCE THE STOCKPILE IS PLACED (TYPICALLY WITHIN 14 DAYS). USE OF MULCH ONLY OR A SOIL BINDER IS ACCEPTABLE IF THE STOCKPILE WILL BE IN PLACE FOR A MORE LIMITED TIME PERIOD (TYPICALLY 30–60 DAYS).

4. FOR TEMPORARY STOCKPILES ON THE INTERIOR PORTION OF A CONSTRUCTION SITE, WHERE OTHER DOWNGRADIENT CONTROLS, INCLUDING PERIMETER CONTROL, ARE IN PLACE, STOCKPILE PERIMETER CONTROLS MAY NOT BE REQUIRED.

STOCKPILE PROTECTION MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

STOCKPILE PROTECTION MAINTENANCE NOTES

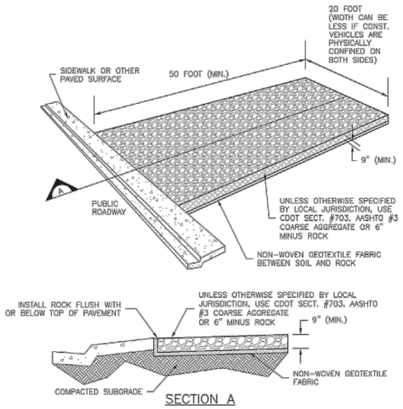
4. IF PERIMETER PROTECTION MUST BE MOVED TO ACCESS SOIL STOCKPILE, REPLACE PERIMETER CONTROLS BY THE END OF THE WORKDAY.

5. STOCKPILE PERIMETER CONTROLS CAN BE REMOVED ONCE ALL THE MATERIAL FROM THE STOCKPILE HAS BEEN USED.

(DETAILS ADAPTED FROM FARMER, COLORADO, NOT AVAILABLE IN AUTOCAD)

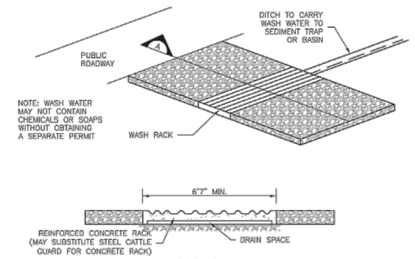
NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

03/05 TOPSOIL STOCKPILE PROTECTION



SECTION A

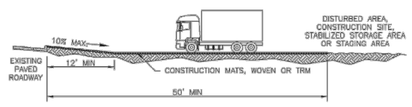
VTC-1. AGGREGATE VEHICLE TRACKING CONTROL

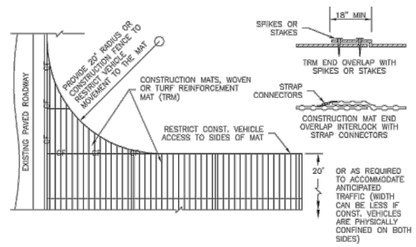


SECTION A

VTC-2. AGGREGATE VEHICLE TRACKING CONTROL WITH WASH RACK

04/05 VEHICLE TRACKING CONTROL





VTC-3. VEHICLE TRACKING CONTROL W/ CONSTRUCTION MAT OR TURF REINFORCEMENT MAT (TRM)

STABILIZED CONSTRUCTION ENTRANCE/EXIT INSTALLATION NOTES

1. SEE PLAN VIEW FOR
   -LOCATION OF CONSTRUCTION ENTRANCE(S)/EXIT(S).
   -TYPE OF CONSTRUCTION ENTRANCE(S)/EXITS(S) (WITH/WITHOUT WHEEL WASH, CONSTRUCTION MAT OR TRM).

2. CONSTRUCTION MAT OR TRM STABILIZED CONSTRUCTION ENTRANCES ARE ONLY TO BE USED ON SHORT DURATION PROJECTS (TYPICALLY RANGING FROM A WEEK TO A MONTH) WHERE THERE WILL BE LIMITED VEHICULAR ACCESS.

3. A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE LOCATED AT ALL ACCESS POINTS WHERE VEHICLES ACCESS THE CONSTRUCTION SITE FROM PAVED RIGHT-OF-WAYS.

4. STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

5. A NON-WOVEN GEOTEXTILE FABRIC SHALL BE PLACED UNDER THE STABILIZED CONSTRUCTION ENTRANCE/EXIT PRIOR TO THE PLACEMENT OF ROCK.

6. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.

STABILIZED CONSTRUCTION ENTRANCE/EXIT MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY TO THE STABILIZED ENTRANCE/EXIT TO MAINTAIN A CONSISTENT DEPTH.

5. SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED THROUGHOUT THE DAY AND AT THE END OF THE DAY BY SHOVELING OR SWEEPING. SEDIMENT MAY NOT BE WASHED DOWN STORM SEWER DRAINS.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM CITY OF BROOMFIELD, COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE:
CONTRACTOR SHALL SELECT VTC METHOD.

No.	Revision/Issue	Date
1	FINAL DESIGN	01/29/2021

SCOUT CLEAN ENERGY - SWEETLAND WIND FARM
STORMWATER POLLUTION PREVENTION PLAN (SWPPP)
DETAIL SHEET
HAND COUNTY, SOUTH DAKOTA

APEX apexcos.com
209 Main St, Unit A
Mead, CO 80542
(307)755-3485

SHEET TITLE:
SWEETLAND WIND FARM SWPPP
SCOUT CLEAN ENERGY
4865 STERLING DR, STE 200
BOULDER, CO 80301

Drawn by:	Reviewed by:
JL	DC
Project: 121.022.01	Sheet: 05
Date: 01/29/2021	
Scale: As Noted	

C:\Users\james.lester\Downloads\SWEETWATER_WINDFARM\COVER_SHEET_SWEETLAND.dwg

Appendix B –2018 South Dakota Department of Environmental And Natural Resources (SDDENR) Construction General Permit (CGP)

Permit Number: SDR100000

SOUTH DAKOTA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

General Permit Authorizing Stormwater Discharges Associated with Construction Activities Under the South Dakota Surface Water Discharge System

In compliance with the provisions of the South Dakota Water Pollution Control Act and the Administrative Rules of South Dakota (ARSD), Article 74:52, owners and operators of stormwater discharges from **construction activities**, located in the state of South Dakota are authorized to discharge in accordance with the conditions and requirements set forth herein.

This General Permit shall become effective on April 1, 2018.

General permit coverage for the [PERMITTEE] shall become effective [EFFECTIVE DATE].

This General Permit and the authorization to discharge shall expire at midnight, **March 31, 2023.**

Signed this **23rd** day of **March, 2018,**

Authorized Permitting Official

Steven M. Pirner
Secretary
Department of Environment and Natural Resources

Note: *This page will be replaced with a copy containing the assigned permit number once coverage has been authorized.*

TABLE OF CONTENTS

1.0 DEFINITIONS

ARSD – Administrative Rules of South Dakota.

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

Borrow Areas – the areas where materials are dug for use as fill, either onsite or offsite.

Commencement of Construction Activities – the initial disturbance of soils (or 'breaking ground') associated with clearing, grading, or excavating activities or other construction-related activities (e.g., stockpiling of fill material).

Construction Site – the land or water area where construction activities will occur and where control measures will be installed and maintained. The construction site includes construction support activities, which may be located at a different part of the property from where the primary construction activity will take place, or on a different piece of property altogether. The construction site is often a smaller subset of the lot or parcel within which the project is taking place.

Construction Site Washout – as used in this general permit, refers to any wash waters derived from the cleaning of construction trucks and/or equipment including, but not limited to, concrete, mortar, grout, stucco, form release oils, paints, curing compounds, and other construction materials.

Construction Support Activity – a construction-related activity that specifically supports the construction activity and can include activities associated with concrete or asphalt batch plants, equipment staging yards, materials storage areas, excavated material disposal areas, and borrow areas.

Construction Waste – discarded material including, but not limited to, packaging materials, scrap construction materials, masonry products, timber, steel, pipe, electrical cuttings, plastics, and Styrofoam.

Control Measures – as used in this general permit, refer to any best management practice or other method, including narrative effluent limits, used to minimize erosion and sedimentation, and thereby prevent or reduce the discharge of pollutants to surface waters of the state.

Corrective Action – as used in this general permit, refers to any action taken to (1) repair, modify, or replace any control measure used at the site; (2) clean up and dispose of spills, releases, or other deposits found on the site; or (3) remedy a permit violation.

Dewatering – the act of draining or pumping rain water, ground water, or surface waters from building foundations, vaults, trenches, and other areas of the construction site.

Discharge – the addition of any pollutant or combination of pollutants to surface waters of the state from any point source.

Earth-Disturbing Activities – as used in this general permit, means actions taken to alter the existing vegetation and/or underlying soil of a site.

Effective Operating Condition – as used in this general permit, means a control measure is kept in effective operating condition if it has been implemented and maintained in such a manner that it is working as designed to minimize pollutant discharges.

Final Stabilization – on areas not covered by permanent structures, means either (1) vegetation has been established that provides a uniform (e.g., evenly distributed, without large bare areas) perennial vegetative cover with a density of 70 percent of the natural background vegetative cover, (2) permanent non-vegetative stabilization methods have been implemented to provide effective cover for exposed portions of the site, or (3) disturbed portions of a construction site on land used for agricultural purposes must be returned to pre-construction agricultural use.

Historic Property – any building, structure, object, district, area, or site that is significant in the history, architecture, archaeology, paleontology, or culture of the state, its communities or the nation as stated in SDCL 1-19A-2.

Infeasible – as used in this general permit, means not technologically possible or not economically practicable and achievable in light of best industry practices.

Larger Common Plan of Development or Sale – a contiguous area where multiple separate and distinct land disturbing activities may be taking place at different times, on different schedules, but under one proposed plan. "One plan" is broadly defined as any announcement or piece of documentation (including a sign, public notice or hearing, sales pitch, advertisement, drawing, permit application, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating construction activities may occur on a specific plot.

Minimize – to reduce and/or eliminate to the extent achievable using control measures that are technologically available and economically achievable and practicable in light of best industry practices.

Municipal Separate Storm Sewer System – a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains) that is owned or operated by the state or a municipality and is designed or used for collecting or conveying stormwater. This definition does not include combined sewers or conveyances that are part of a publicly-owned treatment works, as defined by ARSD 74:52:01:01(36).

Municipality – a city, town, county, district, sanitary district, or other public body created by or under state law with jurisdiction over the disposal of sewage, industrial wastes, or other wastes.

Natural Buffer – as used in this general permit, means an area of undisturbed natural cover surrounding surface waters within which construction activities are restricted. Natural cover

includes the vegetation, exposed rock, or barren ground that exists prior to commencement of construction activities.

Nonpoint Source – a source of pollution that is not defined as a point source.

Non-Stormwater Discharges – discharges that do not originate from runoff events. They can include, but are not limited to, discharges of process water, air conditioner condensate, non-contact cooling water, vehicle wash water, sanitary wastes, construction washout water, paint wash water, irrigation water, or pipe testing water.

Notice of Intent or **NOI** – the form (electronic or paper) provided by the Secretary required for authorization of coverage under this general permit (Appendix A).

Notice of Termination or **NOT** – the form (electronic or paper) provided by the Secretary required for terminating coverage under this general permit (Appendix B).

Operator – as used in this general permit and in the context of stormwater discharges associated with construction activity means any party associated with a construction project that meets either of the following two criteria:

1. The party has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or
2. The party has day-to-day operational control of those activities at a project that are necessary to ensure compliance with the general permit conditions (e.g., they are authorized to direct workers at a site to carry out activities required by the general permit).

The operator, along with the owner, is responsible for ensuring compliance with all conditions of this general permit and with development and implementation of the stormwater pollution prevention plan.

Pesticide – any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pests, or any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant.

Note: drugs used to control diseases of humans or animals (such as livestock and pets) are not considered pesticides; such drugs are regulated by the Food and Drug Administration. Fertilizers, nutrients, and other substances used to promote plant survival and health are not considered plant growth regulators and thus are not pesticides. Biological control agents, except for certain microorganisms, are exempted from regulation as pesticides under FIFRA. (Biological control agents include beneficial predators such as birds or ladybugs that eat insect pests, parasitic wasps, fish, etc.)

Point Source – any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, animal feeding operation, or vessel or other floating craft from which pollutants are or may be discharge. Construction sites disturbing one (1) or more acres are point sources. Therefore, any

water flowing off the construction site constitutes a discharge and must be covered by a Surface Water Discharge permit.

Pollutant-Generating Activities – at construction sites, as used in this general permit, means those activities that lead to or could lead to the generation of pollutants, either as a result of earth-disturbance or a related construction support activity. Some of the types of pollutants that are typically found at construction sites are:

1. Sediment;
2. Nutrients;
3. Heavy metals;
4. Pesticides and herbicides;
5. Oil and grease;
6. Bacteria and viruses;
7. Trash, debris, and solids;
8. Treatment polymers; and
9. Any other toxic chemicals.

Prohibited Discharges – as used in this general permit, means discharges that are not allowed under this general permit, see Section 2.3.

Qualified Local Program – a municipal program for stormwater discharges associated with construction sites that has been formally approved by SDDENR to act in lieu of the state program.

Regulated Substance – the compounds designated by the department under South Dakota Codified Law §§ 23A-27-25, 34A-1-39, 34A-6-1.3(17), 34A-11-9, 34A-12-1 to 34A-12-15, inclusive, 45-6B-70, 45-6C-45, 45-6D-60, and 45-9-68, including pesticides and fertilizers regulated by the Department of Agriculture; the hazardous substances designated by the federal Environmental Protection Agency pursuant to section 311 of the Federal Water Pollution Control Act and Clean Water Act (33 United States Code sections 1251 to 1387, inclusive), as amended to January 1, 2011; the toxic pollutants designated by Congress or the Federal Environmental Protection Agency pursuant to section 307 of the Toxic Substances Control Act (15 United States Code sections 2601 to 2671, inclusive), as amended to January 1, 2011; the hazardous substances designated by the Federal Environmental Protection Agency pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (42 United States code sections 9601 to 9675, inclusive), as amended to January 1, 2011; and petroleum, petroleum substances, oil, gasoline, kerosene, fuel oil, oil sludge, oil refuse, oil mixed with other wastes, crude oils, substances, or additives to be utilized in the refining or blending of crude petroleum or petroleum stock, and any other oil or petroleum substance. This term does not include sewage and sewage sludge.

Runoff Event – a precipitation event or snowmelt that results in a measurable amount of surface runoff.

SDDENR – the South Dakota Department of Environment and Natural Resources.

Secretary – the Secretary of the South Dakota Department of Environment and Natural Resources, or an authorized representative.

Section 303(d) List or 303(d) List – a list of South Dakota's water quality-limited surface waters requiring the development of Total Maximum Daily Loads (TMDLs) to comply with Section 303(d) Report is available on the SDDENR website. A link to a map of 303(d) listed waters, waters with approved TMDLs is available on the SDDENR stormwater webpage.

Stormwater – means, for the purpose of this general permit, stormwater runoff, snowmelt runoff, or surface runoff.

Stormwater Associated with Construction Activity – means a discharge of pollutants in stormwater to surface waters of the state from areas where construction site or construction support activities occur.

Stormwater Associated with Industrial Activity – means stormwater runoff, snow melt runoff, or surface runoff and drainage from industrial activities as defined in 40 C.F.R. Section 122.26(b)(14) (July 1, 2016).

Stormwater Pollution Prevention Plan or **SWPPP –** means a site-specific, written document that, among other things: 1) identifies potential sources of stormwater pollution at the construction site; 2) describes control measures to reduce or eliminate pollutants in stormwater discharges from the construction site; and 3) identifies procedures the owner or operator will implement to comply with the terms and conditions of this general permit. See Section 5.0 for details on the requirements for a SWPPP.

Surface Waters of the State – lakes, ponds, streams, rivers, wetlands, and any other body or accumulation of water on the land surface that is considered to be waters of the state, but not waste treatment systems, including treatment ponds, lagoons, leachate collection ponds, or stormwater retention ponds designed to meet the requirements of the federal Clean Water Act.

Surface Water Quality Standards – water quality standards adopted pursuant to South Dakota Codified Law §§ 34A-2-10 and 34A-2-11 or actual existing beneficial uses, whichever is higher, and effluent standards adopted pursuant to SDCL § 34A-2-13 or pursuant to the best professional judgment of the Secretary, whichever is applicable. If waters have more than one designated beneficial use and criteria are established for a parameter that is common to two or more uses, such as pH, the more restrictive criterion for the common parameter applies.

Temporary Stabilization – means a condition where exposed soils or disturbed areas are provided a temporary vegetative and/or non-vegetative protective cover to prevent erosion and sediment loss. Temporary stabilization may include temporary seeding, geotextiles, mulches, and other techniques to reduce or eliminate erosion until either final stabilization can be achieved or until further construction activities take place to re-disturb the area.

Total Maximum Daily Load or **TMDL** – means the sum of the individual wasteload allocations for point sources, load allocations for nonpoint sources, and natural background. TMDLs can be expressed in terms of mass per time, toxicity, or other appropriate measures.

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

U.S. EPA – the United States Environmental Protection Agency.

Waters of the State – all waters within the jurisdiction of this state, including all streams, lakes, ponds, impounding reservoirs, marshes, watercourses, waterways, wells, springs, irrigation systems, drainage systems, and all other bodies or accumulations of water, surface and underground, natural or artificial, public or private, situated wholly or partly within or bordering upon the state.

Work Day – means, for the purpose of this general permit, a calendar day on which construction activities will take place.

2.0 COVERAGE UNDER THIS GENERAL PERMIT

2.1 Eligibility Requirements

This general permit shall apply to stormwater discharges from construction sites located within the state of South Dakota. Only those projects that meet all of the following eligibility requirements may be covered under this general permit:

1. You are the owner or operator of the construction project for which discharge will be covered under this general permit. The owner must obtain coverage under this general permit and all operators at the site must comply with the permit conditions.

2. Your project:

    a. Will disturb one (1) or more acres of land; or

    b. Will disturb less than one (1) acre of land but is part of a larger common plan of development or sale that will ultimately disturb one (1) or more acres of land; or

    c. Is less than one (1) acre, but has construction support activities required to be covered and the total area exceeds one (1) or more acres of land; or

    d. Has been designated by the Secretary or the United States Environmental Protection Agency (U.S. EPA) as needing a permit.

3. You have complied with all applicable requirements imposed by the applicable county, city, or other local government entities.

4. If your project will encroach, damage, or destroy a historic property included in the national register of historic places or the state register of historic places located in South Dakota, you must have approval from the South Dakota State Historic Preservation Office prior to submitting the Notice of Intent (NOI). You must attach an approval letter from the State Historic Preservation Office with the NOI.

2.2 Discharges Authorized

The following discharges shall be authorized under this general permit:

1. Stormwater discharges from projects detailed in Section 2.1.2.

2. Stormwater discharges from construction support activities provided:

    a. The support activity is directly related to the construction site required to have permit coverage;

    b. The support activity does not continue to operate beyond the completion of the construction activity at the project it supports. If the support activity continues past the initial permitted project, you must obtain a separate permit for those activities;

c. The support activity is included in the SWPPP as required by Section 5.0; and

d. Control measures are implemented for discharges from the support activity area.

3. Stormwater construction discharges combined with discharges from an industrial source, as long as:

   a. The industrial source is located on the same site as your construction activity; and

   b. You may not combine stormwater discharges from industrial and construction activities unless each source is covered by its own permit, or are not required to obtain permit coverage.

4. Discharges to waters for which there is a total maximum daily load (TMDL) allocation for sediment, suspended solids, and turbidity are covered only if you develop a SWPPP that is consistent with the assumptions, allocations, and requirements in the approved TMDL. If a specific numeric wasteload allocation has been established that would apply to discharges from construction activity, the permittee must incorporate that allocation into the SWPPP and implement necessary steps to meet that allocation.

2.3 Discharges Not Authorized

The following discharges are not authorized by this general permit:

1. **Post-Construction Discharges**. This general permit is not designed to address post-construction discharges after you have completed construction activities and achieved final stabilization at the site. Stormwater discharges associated with industrial activities must obtain coverage under a separate stormwater permit.

2. **Discharges Mixed with Non-Stormwater**. This general permit does not authorize discharges of non-stormwater.

3. **Discharges of Fill Material**. This general permit does not authorize you to discharge fill material into surface waters of the state. You are required to obtain a Section 404 federal Clean Water Act permit from the U.S. Army Corps of Engineers.

4. **Discharges Threatening Water Quality**. This general permit does not authorize your discharge from a construction site if the discharge will cause, or have the reasonable potential to cause or contribute to, violations of Surface Water Quality Standards. In such cases, the Secretary may deny you coverage under the general permit or require you to obtain an individual Surface Water Discharge permit.

5. **Discharges Threatening Endangered Species**. This general permit does not authorize your discharge from a construction site if the discharge will not ensure the protection of species that are federally-listed as endangered under the federal Endangered Species Act.

6. **Discharges of Regulated Substances**. This general permit does not authorize you to discharge regulated substances, hazardous substances, or oil resulting from onsite spills. You are subject to the federal reporting requirements of 40 CFR Part 110, Part 117, and Part 302 relating to spills or other releases of oils or hazardous substances. You must report spills in excess of the reportable quantities as required in Section 7.1.

2.4 Requesting Permit Coverage

To request coverage under this general permit, you must submit a complete and accurate Notice of Intent (NOI) (Appendix A) to SDDENR at least **15 calendar days** prior to the commencement of construction activities at the site. ***The NOI must be signed by the owner of the property where construction activities will occur.***

1. You must identify the person(s) responsible for day-to-day operations at the construction site, if different from the owner. A Contractor Authorization Form, included in Appendix C, must be submitted to SDDENR as soon as a contractor is identified if the contractor was not identified on the NOI.

2. You are not prohibited from submitting a late NOI. When you submit a late NOI, your authorization to discharge is only for discharges that occur after SDDENR grants coverage. SDDENR reserves the right to take appropriate enforcement action for any unpermitted discharges that may have occurred between the commencement of construction activities and the time authorization for your discharge is granted.

3. SDDENR will not process incomplete NOIs.

4. You must submit a completed and signed NOI to SDDENR by emailing the NOI to stormwater@state.sd.us, or mailing the NOI to SDDENR at the address in Section 7.3.

5. SDDENR will review each complete NOI and make a decision to grant or deny coverage or request additional information. You will receive an authorization letter from SDDENR if permit coverage is granted for your project.

6. Upon the effective date of this general permit, the Secretary will terminate the existing general permit.

    a. If you are authorized under the existing general permit and you have submitted the Notice of Intent for Reauthorization Form (found in Appendix E) prior to permit expiration date, your coverage will automatically continue under the new general permit. Once the new general permit is issued, you will receive an authorization letter from SDDENR notifying you of the continued coverage.

b. Projects covered under the existing general permit must be in compliance with the conditions in the new general permit by **October 1, 2018.** You must still maintain compliance with all requirements in the existing general permit during the grace period. SDDENR may grant additional time on a case by case basis if necessary. To obtain such an extension, you must request it from SDDENR in writing.

2.5 Transferring Permit Coverage

If a new owner purchases a construction site or a portion of the site covered under this general permit, you are responsible for notifying the new owner(s) of the general permit requirements and communicating the importance of achieving final stabilization on the site. You must transfer permit coverage to the new owner. Appendix D includes a form for transferring permit coverage for all or a portion of a project or development to a new owner.

2.6 Terminating Permit Coverage

Until the Secretary terminates your coverage under this general permit, you are required to comply with all conditions and effluent limits in this general permit. To terminate coverage, you are required to submit a complete and accurate Notice of Termination (NOT), found in Appendix B, and signed in accordance with Section 7.4. You must submit the NOT within **30 calendar days** of meeting any one of the following conditions.

1. You have completed all earth-disturbing activities at your site and, if applicable, all construction support activities covered by this general permit, and you have met all the following requirements:

    a. You have met the stabilization requirements listed in Section 3.19 and have reached final stabilization for any areas disturbed during construction and over which you had control during the construction activities;

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

    c. You have removed and properly disposed of all temporary control measures, including silt fence, and of which you installed and maintained during construction, except those that are intended for long-term use following termination of your general permit coverage; and

    d. You have removed all potential pollutants and pollutant-generating activities associated with construction.

2. You have obtained coverage under an individual or alternative general permit that addresses the discharges from the construction site.

2.7 Reporting Requirements

On October 22, 2015, the U.S. EPA published in the federal register a rule that has made electronic reporting of permit and compliance monitoring information mandatory for all National Pollution Discharge Elimination System (NPDES) permits. These are referred to as Surface Water Discharge (SWD) permits in South Dakota. The final rule became effective December 21, 2015.

Phase II of the final rule requires that authorized state NPDES programs begin electronically collecting, managing, and sharing construction stormwater permitting information by December 21, 2020. This includes general permit reports such as Notices of Intent (NOI), Notices of Termination (NOT), and all other remaining NPDES program reports. SDDENR is currently developing programs to meet this requirement and will notify facilities as they become available.

Electronic reporting will be required once SDDENR has fully developed an electronic reporting system. In the interim, all general permit reports must be submitted by email (stormwater@state.sd.us), or to the address listed in Section 7.3.

A hybrid approach will be available for owners/operators that do not expect to submit NOIs for multiple projects. This approach will provide users the ability to electronically submit the data for construction stormwater general permit reports without using the electronic signature verification process. Following electronic submittal of the reports, a hard copy of the Certification of Applicant with an original signature must be mailed to SDDENR.

2.8 Requiring an Individual Permit or an Alternative General Permit

SDDENR may either deny coverage or require you to apply for an individual Surface Water Discharge permit or an alternative general permit. In considering whether we deny coverage or require an alternative permit, the following will be taken into consideration:

1. You cannot comply with the conditions of this general permit;

2. There has been a change in the availability of demonstrated technologies or practices for the control or abatement of pollutants applicable to construction sites;

3. Effluent limitation guidelines are promulgated or revised for point sources covered by this general permit;

4. A water quality management plan is approved containing requirements applicable to your construction site;

5. Your discharge is a significant contributor of pollution to surface waters of the state or it presents a health hazard; or

6. You are discharging to an impaired water body and the best management practices are not sufficient to implement the assigned wasteload allocations in a Total Maximum Daily Load (TMDL) approved by the U.S. EPA.

2.9 Continuation of Coverage for Expired General Permit

If you wish to continue to be covered by this general permit after its expiration date, you must submit a Notice of Intent for Reauthorization (Appendix E). An expired general permit continues in full force and effect until a new general permit is issued. You will continue to have coverage under the current general permit until a new general permit is issued.

2.10 Requirement to Post Notice of Your General Permit Coverage

You must post a sign or other notice at a safe, publicly accessible location near the project site.

1. At a minimum, your notice must include the general permit tracking number (found on the cover page of your general permit and in the authorization letter) and a contact name and phone number for obtaining additional project information.

2. The notice must be located so that it is visible from the public road that is nearest to the active part of the construction site and must be readily viewed from a public right-of-way.

2.11 Property Rights

1. The Secretary's issuance of this general permit, adoption of design criteria, and approval of plans and specifications, does not convey any property rights of any sort, any exclusive privileges, any authorization to damage, injure or use any private property, any authority to invade personal rights, any authority to violate federal, state or local laws or regulations, or any taking, condemnation or use of eminent domain against any property owned by third parties.

2. The State does not warrant that your compliance with this general permit, design criteria, approved plans and specifications, and operation under this general permit, will not cause damage, injury or use of private property, an invasion of personal rights, or violation of federal, state or local laws or regulations. You are solely and severally liable for all damage, injury or use of private property, invasion of personal rights, infringement of federal, state or local laws and regulations, or taking or condemnation of property owned by third parties, that may result from actions taken under this general permit.

2.12 Reopener Provisions

SDDENR may reopen and modify this general permit to include appropriate conditions (following proper administrative procedures) if state or federal statutes or regulations change.

2.13 Severability

If any portion of the general permit is found to be void or is challenged, the remaining permit requirements shall remain valid and enforceable.

2.14 Permit Actions

This general permit may be modified, revoked and reissued, or terminated by the Secretary for cause. Any request for such changes does not stay any permit condition.

3.0 EFFLUENT LIMITS

You are required to comply with the following effluent limits for discharges from your construction site and/or from construction support activities representing the degree of effluent reduction attainable through the best practicable control technology currently available to minimize the pollutants present in the discharges. In order to achieve compliance with the conditions of this permit, you are required to address the following effluent limits by developing a Stormwater Pollution Prevention Plan (SWPPP) as required in Section 5.0. If you determine any of the following limits are infeasible, you must document your rationale in your SWPPP.

Stormwater discharges regulated under this general permit that may discharge to a surface water with an approved TMDL for sediment, total suspended solids, or turbidity must be consistent with the TMDL and any associated wasteload allocation (WLA) for construction or stormwater related discharges. In most cases compliance with this permit will be considered adequate, unless otherwise notified by the Secretary. The Secretary may require an individual permit, as referenced in Section 2.8, should compliance with this general permit be deemed insufficient to meet relevant WLAs.

3.1 Proper Operation and Maintenance

You must properly operate and maintain all sediment and erosion controls, best management practices, treatment systems, and any other control(s) used to achieve compliance with the conditions of this general permit in accordance with manufacturer's specifications, good engineering practices, and design specifications of the SWPPP.

3.2 Erosion and Sediment Control Requirements

1. You must design, install, and maintain effective erosion and sediment controls to minimize soil erosion and the discharge of pollutants during earth-disturbing activities. The stormwater controls must be designed to function properly and withstand a 2-year, 24-hour precipitation event. See Appendix F for instructions to determine your construction site's precipitation for a 2-year, 24-hour event.

2. You must account for the following factors when designing your erosion and sediment controls:

    a. The nature of resulting stormwater runoff and run-on at the construction site, including factors such as expected flow from impervious surfaces, slopes, and site drainage features. Controls must be able to control stormwater volume, velocity, and flow rates from a 2-year, 24-hour precipitation event across the construction site.

    b. Anticipated soil characteristics at the construction site, including soil type and range of particle sizes.

3.3 Installation Requirements

1. You must complete installation of down gradient erosion and sediment controls before any land disturbing activity takes place in order to control discharges.

2. You must install all other control measures planned for each phase of the project as described in your SWPPP as soon as conditions on the site allow.

3. You must install all control measures using good engineering practices and follow the manufacturer's specifications. Any departures from the manufacturer's specifications must reflect good engineering practices and must be explained in your SWPPP.

3.4 Perimeter Controls

You must have effective down gradient sediment controls, and controls for any side slope boundaries deemed appropriate for individual site conditions, to minimize pollutant discharges from the construction site.

3.5 Sediment Basins

If you use a sediment basin to control the discharge of sediment from the site, you must meet the requirements listed below.

1. Sediment basins must be designed, constructed, and operated in accordance with the requirements found in your local city or county drainage board.

2. Outlet structures must withdraw water from the surface of the sediment basin or impoundment to allow for proper sediment removal in the pond.

3. Erosion controls and velocity dissipation devices must be used to prevent erosion within the sediment basin as well as at inlets and outlets from the basin.

4. Sediment basins must be situated outside of surface waters and any natural buffers established under Section 3.10. The basins must be designed to avoid collecting water from wetlands and other water bodies.

3.6 Minimize Sediment Track-Out

You must minimize the track-out of sediment from the construction site where vehicles leave the site. To comply with this requirement, you must:

1. Restrict vehicle use to properly designated access points;

2. Use appropriate stabilization techniques at all construction site access point(s) so sediment removal occurs prior to vehicle exit.

3. Where sediment has been tracked out from your site onto offsite streets, other paved areas, and/or sidewalks, remove the deposited sediment by the end of the same work

day in which the track-out occurs. You must remove the track-out by sweeping, shoveling, or vacuuming these surfaces, or by using other similarly effective means of sediment removal. You are prohibited from hosing or sweeping tracked-out sediment into storm drain inlet, surface waters of the state, or any stormwater conveyance unless the conveyance is connected to a sediment basin, sediment trap, or similar effective control. You must obtain approval from the owner of the sediment traps before hosing or sweeping sediment into those controls.

3.7 Remove Offsite Accumulation

If sediment escapes the construction site, you must initiate removal of the offsite accumulations to minimize impacts by the end of the same work day. You must revise your SWPPP and implement controls to minimize further offsite accumulation.

3.8 Minimize Dust

You must minimize the generation of dust at the construction site to avoid pollutants from being deposited into surface waters of the state. This can be accomplished through the appropriate application of water or other dust suppression techniques.

3.9 Minimize Run-on

You must minimize run-on to your construction site.

3.10 Provide Natural Buffers

You must comply with the following requirements if disturbed portions of the construction site are within fifty (50) feet of 1) a lake assigned immersion recreation or limited contact recreational beneficial uses in ARSD 74:51:02:02 and listed in ARSD 74:51:02:04; or 2) a river or stream assigned any of the warmwater or coldwater fish life propagation beneficial uses in ARSD 74:51:03:02 and listed in ARSD 74:51:03:04 to 74:51:03:27, inclusive.

1. Provide and maintain a 50-foot undisturbed natural buffer.

    a. When the natural buffer between the disturbed area(s) and surface waters of the state is less than fifty (50) feet, you must provide a combination of undisturbed buffer and supplemental erosion and sediment controls that achieves the sediment load reduction equivalent to a 50-foot undisturbed natural buffer.

    b. When no undisturbed buffer can be provided between the disturbed area(s) and surface waters of the state, you must provide erosion and sediment controls that achieve the sediment load reduction equivalent to a 50-foot undisturbed natural buffer.

    c. Document in your SWPPP how any undisturbed natural buffer and the supplemented erosion and sediment controls achieve the sediment load reduction equivalent to a 50-foot undisturbed natural buffer.

2. Direct surface runoff to vegetated areas and maximize stormwater infiltration to reduce pollutant discharges.

3. Delineate and clearly mark all natural buffer areas with flags, tape, or other similar marking device. No construction or other activity should occur in the delineated buffer area.

4. **Exception.** You are not required to maintain a 50-foot undisturbed natural buffer or install additional controls if there is no discharge of stormwater to surface waters of the state through the area between your site and the surface waters. This includes situations where you have implemented control measures, such as a berm or other barrier, to prevent such discharges.

3.11 Preserve Topsoil

You must preserve native topsoil on your site, unless infeasible. Preserving topsoil is not required where the intended function of a specific area of the site dictates that the topsoil be disturbed or removed.

3.12 Minimize Steep Slope Disturbance

You must minimize the disturbance of slopes that are greater than a three horizontal to one vertical (3:1) slope, unless infeasible.

3.13 Protect Storm Drain Inlets

1. You must protect all storm drain inlets that receive stormwater flows from the construction site by using appropriate best management practices during construction to minimize the discharge of pollutants from the site.

2. You must maintain the inlet protection until you have permanently stabilized all sources that have the potential to discharge pollutants to the inlet. If local officials require you to remove the inlet controls during the winter, you must install alternative controls to prevent sediment from entering the storm drain inlet.

3.14 Erosive Velocity Control

1. You must use erosion controls and velocity dissipation devices where necessary along the length of stormwater conveyance channels and outlets to minimize erosion of the channel, adjacent stream bank, slope, and downstream waters.

2. You must provide energy dissipation BMPs prior to connecting pipe or culvert outlets to surface water.

3. You must control the stormwater discharges, including both peak flowrates and total stormwater volume, to minimize channel and streambank erosion and scour in the immediate vicinity of discharge points.

3.15 Minimize Soil Compaction

In areas of your site where final vegetative stabilization or infiltration will occur, you must either:

1. Restrict vehicle and equipment use in these locations to avoid soil compaction; or

2. Condition areas of compacted soil prior to seeding or planting to support vegetation growth.

3. **Exception.** You are not required to minimize soil compaction where the intended function of a specific area of the site dictates that soil be compacted.

3.16 Minimize Exposed Soil

You must schedule and sequence soil disturbing and stabilizing activities to minimize the amount and duration of soil exposure to erosion and sedimentation by wind, rain, surface runoff, and vehicle tracking. Consider factors such as high precipitation seasons when scheduling soil disturbing activities.

3.17 Protect Stockpiles

For any stockpiles or land clearing debris you must:

1. Locate the stockpiles and debris outside of any natural buffers established as required in Section 3.10 and away from any stormwater conveyances, drain inlets, and areas where stormwater flow is concentrated;

2. Protect the stockpiles debris from contact with stormwater run-on by using temporary sediment controls, berms, or other BMPs;

3. Properly maintain and position stockpiles to minimize dust generation and wind transport of sediment; and

4. Minimize stormwater runoff from the piles by properly positioning stockpiles and debris or installing effective sediment controls.

5. You are prohibited from placing stockpiles in surface waters of the state.

3.18 Stabilization Requirements

You are required to stabilize exposed portions of your site in accordance with the requirements of this section. You are responsible for implementing winter stabilization methods during frozen ground conditions if the site was not stabilized prior to the ground freezing.

1. **Deadline to Initiate Stabilization.** You must begin soil stabilization measures by the following work day whenever earth-disturbing activities have permanently or temporarily ceased on any portion of the site.

a. Earth-disturbing activities have permanently ceased when you complete clearing, grading, and excavation within any area of your site that will not include permanent structures.

b. Earth-disturbing activities have temporarily ceased when you cease clearing, grading, and excavation within any area for a period of at least **14 calendar days**, but will resume such activities in the future.

2. **Deadline to Complete Temporary Stabilization**. As soon as practicable, but no later than **14 calendar days** after initiating soil stabilization measures, you are required to have completed:

   a. All activities necessary to initially seed or plant the area to be stabilized for vegetative stabilization practices.

   b. The installation or application of all non-vegetative measures.

   c. As soon as practicable after seeding or planting, select, design, and install non-vegetative erosion controls (e.g., mulch or rolled erosion control products) to prevent erosion on the seeded or planted areas while vegetation establishes.

3. **Criteria for Final Stabilization**. To be considered as having reached final stabilization, you must meet the criteria below based on the type of cover you are using.

   a. **Vegetative Stabilization**. If you are seeding or planting vegetation to stabilize the site, you must meet the following requirements:

      i. Provide 70 percent or more of the density of coverage that was provided by vegetation prior to commencement of construction activities.

      ii. Provide perennial vegetative cover.

      iii. Minimize the presence of invasive species.

   b. **Non-Vegetative Stabilization**. If you are using non-vegetative controls for final stabilization at your site, the controls must provide effective cover to properly stabilize the exposed portions of your site.

   c. **Return to Pre-construction Agricultural Land Use.** For construction projects on land used for agricultural purposes, final stabilization may be accomplished by returning the disturbed land to its pre-construction agricultural use. Areas disturbed that were not previously used for agricultural purposes, such as buffer strips immediately next to surface waters and areas not being returned to pre-agricultural use must meet the final stabilization criteria listed in (a) and (b) above.

4. **Site Specific Stabilization Requirements**. If you are constructing in the specific areas listed below, you must complete the following stabilization requirements as soon as practicable, but no later than the deadlines listed below after initiating soil stabilization measures:

    a. Stream diversions or drainage ditches that divert water around or drain water from your construction site must be stabilized with appropriate controls prior to connection with any surface water.

    b. For stockpiles that will be unused for 14 or more days, provide cover or appropriate temporary stabilization consistent with Section 3.18.

3.19 Maintenance Requirements

1. **Effective operating condition.** You must ensure that all erosion and sediment controls remain in effective operating condition until final stabilization is complete. At a minimum, you must:

    a. Remove sediment from sedimentation basins when the design capacity has been reduced by 50% or more.

    b. Remove sediment from sediment controls before the deposit reaches 50% of the above-ground height of the control.

    c. Repair vegetative buffers if they become silt-covered, contain rills, or are otherwise rendered ineffective.

    d. You must repair and stabilize eroded areas by the end of the same work day they are identified. If repair is infeasible, you must implement alternative control measures.

    e. Clean inlet protection devices when sediment accumulates, or when the filter becomes clogged, or performance is compromised.

    f. Ensure that all controls remain in effective operating condition and are protected from activities that would reduce their effectiveness.

    g. All nonfunctional BMPs must be repaired, replaced, maintained or supplemented with functional BMPs. If a nonfunctioning BMP is supplemented, the nonfunctional BMP shall be removed.

2. **Deadline for maintenance.** If you find a problem or if your inspections identify that control measures are not operating effectively, you must make the necessary repairs or modifications as follows:

    a. If you discover a problem that does not require repair or replacement, you must initiate work to fix the problem on the same day. If the problem is identified at a time in the work day when it is too late to complete the corrective actions, you must initiate work to fix the problem on the following work day or before the next anticipated runoff event, whichever comes first.

    b. If you need to install new erosion or sediment controls or need to complete repairs, you must complete the work before the next anticipated runoff event or by no later than seven (7) calendar days from the time the problem is discovered, whichever comes first.

    c. You must modify your SWPPP within seven (7) calendar days of completing the work. The SWPPP must address any changes to the controls and must detail the necessary steps to prevent similar damage in the future.

3.20 Pollution Prevention Procedures

You must design, install, implement, and maintain effective pollution prevention measures to minimize the discharge of pollutants from the activities listed below. Spills must be reported as required in Section 7.1 of this general permit.

1. **Prohibited Discharges.** You are prohibited from discharging the following from your construction site:

    a. Wastewater from washout and cleanout of concrete, stucco, paint, form release oils, curing compounds, and other construction materials.

    b. Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance.

    c. Detergents, soaps, or solvents used in vehicle and equipment washing.

    d. Toxic or hazardous substances from a spill or other release.

    e. Waste, garbage, floatable debris, construction debris, and sanitary waste.

2. **Fueling and Maintenance of Equipment or Vehicles**. If you fuel or maintain equipment or vehicles at your site, you must minimize the discharge of spilled or leaked materials from the area where these activities take place.

3. **Washing of Equipment and Vehicles**. You must provide an effective means of minimizing the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other types of washing. The washing must be limited to a defined area of the site and must be properly disposed.

4. **Management of Construction Products, Chemicals, Materials, and Wastes**. You must properly store, handle, and dispose of any construction products and materials, chemicals, landscape materials, and wastes in order to minimize the exposure to stormwater. Products or wastes that are either not a source of contamination to stormwater or are designed to be exposed to stormwater are not held to this requirement. Requirements are as follows:

    a. You must cover or otherwise protect any materials that have the potential to leach pollutants in order to minimize contact with stormwater and prevent the discharge of pollutants.

    b. Clean up spills by the end of the same work day in which the spill occurred, using dry clean-up methods where possible, and dispose of used materials properly. Do not clean surfaces or spills by hosing the area down. Eliminate the source of the spill to prevent a discharge or continuation of an ongoing discharge.

    c. For registered pesticides and fertilizers, you must comply with all application and disposal requirements included on the label. Pesticides and fertilizers must be stored under cover or other effective means designed to minimize contact with stormwater. You must document any departures from the manufacturer's specifications for applying fertilizers and pesticides.

    d. Store all diesel fuel, oil, hydraulic fluids, other petroleum products, and other chemicals and products in water-tight container.

    e. Hazardous or toxic wastes that may be present at construction sites include, but are not limited to, paints, solvents, petroleum-based products, wood preservatives, additives, curing compounds, acids, and alkaline materials. For these materials and wastes, you must:

        i. Separate hazardous or toxic wastes and materials from construction and domestic waste.

        ii. Store hazardous or toxic wastes and materials in sealed containers and provide secondary containment as applicable. These containers must be constructed of suitable materials to prevent leakage and corrosion. These containers must be labeled in accordance with the applicable Resource Conservation and Recovery Act (RCRA) requirements and all other applicable federal, state, or local requirements.

        iii. Dispose of hazardous or toxic wastes in accordance with the manufacturer's recommended method of disposal and in compliance with federal, state, and local requirements.

f. You must provide effective containment for all liquid and solid wastes generated by washout operations including, but not limited to, concrete, stucco, paint, form release oils, curing compounds, and other construction materials related to the construction activity. For these materials and wastes, you must comply with the following requirements:

   i. Designate areas to be used for washout and cleanout activities. The containment must be designed so that it does not result in runoff from washout operations or during runoff events;

   ii. Install signs adjacent to each washout facility directing site personnel to use the proper facilities for concrete disposal and other washout wastes;

   iii. Direct all wash water into a leak-proof container or leak-proof pit;

   iv. Do not dump liquid wastes in the storm sewers; and,

   v. Clean up and properly dispose of any accumulated wastes in designated waste containers.

g. You must provide proper waste disposal receptacles of sufficient size and number to handle construction wastes including, but not limited to, packaging materials, scrap construction materials, masonry products, timber, pipe, and electrical cuttings, plastics, Styrofoam®, concrete, and other trash or building materials.

   i. For sanitary waste, you must position portable toilets so they are secure and will not be tipped or knocked over. You must properly remove and dispose of wastes from the portable toilets.

3.21 Construction Dewatering

You are prohibited from discharging from dewatering activities, including discharges from dewatering of trenches and excavation, unless the discharges are managed by the following controls:

1. You shall not discharge toxic pollutants in toxic amounts.

2. Your discharge shall not impart a visible film or sheen to the surface of the receiving water or adjoining shoreline.

3. Your discharge shall not contain visible pollutants. You must visually monitor the discharge for suspended solids. If you observe suspended solids in the discharge, you must implement the following requirements:

   a. You must install additional best management practices and update your stormwater pollution prevention plan to reduce the visible solids.

b. You must sample the dewatering discharge for total suspended solids on a daily basis until there is no longer a discharge of visible solids. The samples must be analyzed in accordance with Title 40 of the Code of Federal Regulations, Part 136. If the total suspended solids value exceeds 53 mg/L in any sample or measurement, you must cease the dewatering discharge to surface waters of the state until you can demonstrate the additional best management practices are sufficient to eliminate the visible pollutants. You must also document this in your stormwater pollution prevention plan (SWPPP).

4. You must use best management practices to minimize or prevent stream channel scouring or erosion caused by dewatering discharges.

5. You cannot add chemicals to the discharge without prior approval from SDDENR.

6. You must obtain a Temporary Water Right. Contact SDDENR Water Rights Program at (605) 773-3352 for more information and to obtain a temporary water right.

4.0 INSPECTION REQUIREMENTS

You are required to conduct site inspections to determine the effectiveness of your control measures and your compliance with the conditions of the general permit.

4.1 Person(s) Responsible for Inspecting the Site

The person(s) inspecting your site may be a member of your staff or a third party you hire to conduct the inspections. You are responsible for ensuring the person who conducts the inspection is knowledgeable in the principles and practice of erosion and sediment controls and pollution, possesses the skills to assess conditions at the site that could impact stormwater quality, and is able to assess the effectiveness of any control measures selected and installed to meet the requirements of the general permit.

4.2 Frequency of Inspections

At a minimum, you must conduct a site inspection at the following frequencies:

1. Once every 7 calendar days; or

2. Once every 14 calendar days **and** within 24 hours of precipitation that exceeds 0.25 inches or snowmelt that generates runoff. You must keep a properly maintained rain gauge on your site.

4.3 Reduction of Inspection Frequency

You may reduce your inspection frequency from the requirements above under the following circumstances. You must document the beginning and ending dates of these periods in your inspection records.

1. **Partial final stabilization.** You may reduce the frequency of inspections to once per month on any portion of your site where you have reached final stabilization. If construction activity resumes in this portion at a later date, you must increase the frequency as required in Section 4.2 above.

2. **Frozen conditions.** If you are suspending earth-disturbing activities due to frozen conditions and all disturbed areas of the site have been temporarily or permanently stabilized as required in Section 3.19, you shall conduct inspections at least once per month. You must resume weekly inspections by no later than March 1st of each year until your site is permanently stabilized and you have submitted a Notice of Termination (NOT) in accordance with Section 2.6.

4.4 Areas that Need to Be Inspected

During your site inspections you must, at a minimum, inspect the following areas:

1. All areas that have been cleared, graded, or excavated and have not yet reached final stabilization;

2. All sediment and erosion control measures and best management practices, including inlet protection;

3. Vegetated buffers;

4. Stockpiles, chemical and fuel storage, fertilizer and pesticide storage and other material, waste, borrow, and/or equipment storage and maintenance areas;

5. All areas where stormwater typically flows within the site, including drainage ways designed to divert, convey, and/or treat stormwater;

6. All points of discharge from the site including surface waters, drainage ditches, and conveyance systems; and,

7. All dewatering activities at the site.

8. **Exception.** You are not required to inspect areas that, at the time of the inspection, are unsafe for your inspection personnel. A detailed description of the situation must be documented in your inspection records explaining the reason the site conditions prevented the inspection.

4.5 Requirements for Inspections

During your site inspections you must, at a minimum:

1. Check whether all erosion and sediment controls and best management practices are implemented and functioning to minimize pollutant discharges. Determine if you need to replace, repair, or maintain any controls.

2. Check for spills, leaks, or other accumulation of pollutants on the site, or for the presence of conditions that could lead to spills, leaks, or other accumulations of pollutants on site. Determine if you need to install additional controls or take corrective actions to prevent the discharge of these pollutants.

3. Determine if site conditions have changed and if current controls are still effective in controlling pollutants from leaving your site. Identify any locations where new or modified control measures are necessary.

4. Check for signs of erosion, scour, and sediment deposits that have occurred on or off the construction site:

    a. Inspect the discharge points and, where applicable, the banks of any surface waters of the state flowing within your property boundaries or immediately adjacent to your property.

    b. Identify areas where you need to correct erosion and remove sediment.

c. Determine if you need controls to reduce the velocity of the discharge or prevent further erosion and sedimentation.

5. If a discharge is occurring during your inspection, you are required to:

   a. Identify all points of the property where there is a discharge;

   b. Observe and document the visual quality of the stormwater discharge and note the characteristics of the discharge, including color, odor, floating, settled, or suspended solids, foam, oil sheen, and other obvious indicators of stormwater pollutants; and

   c. Document whether your control measures are operating effectively. Describe any controls that are not clearly operating as intended or are in need of maintenance.

6. Identify all incidents of noncompliance that you observe.

7. Based on the results of your inspection, you must initiate corrective action(s) where needed.

4.6 Inspection Report

You must complete an inspection report in conjunction with each site inspection.

1. Each inspection report must be maintained in accordance with the requirements in Section 7.3 and must include the following information;

   a. Date and time of the inspection.

   b. Names and titles of the personnel conducting the inspection.

   c. Date and amount of most recent precipitation event, as well as if runoff was flowing onsite and/or offsite at the time of the inspection.

   d. A summary of your inspection findings, covering, at a minimum, the observations you made as required in Sections 4.4. and 4.5;

   e. Specific locations where maintenance, additional best management practices, cleanup, or corrective action is needed;

   f. The results of the total suspended solids levels in any dewatering discharge, as required by Section 3.21; and

   g. A summary of any corrective actions taken in response to the inspection findings, including any changes made to the SWPPP.

2. If you have determined it is unsafe to inspect a portion of your site, you must describe the reason(s) you found it to be unsafe and specify the locations that were not inspected.

3. If an inspection does not identify any incidents of noncompliance, you must include a statement in the report that the site is in compliance with the SWPPP and the general permit.

4. You must sign and certify each inspection report in accordance with the signatory requirements found in Section 7.4.

5.0 STORMWATER POLLUTION PREVENTION PLAN

You must develop a stormwater pollution prevention plan, also referred to as a "SWPPP," to be covered under this general permit. Stormwater management documents developed under other regulatory programs may be included or incorporated by reference in the SWPPP, or used in whole as a SWPPP if it meets the requirements of this section.

5.1 SWPPP Deadlines

1. You must develop the SWPPP **prior** to the submittal of the NOI.

   Note: If you were covered under the February 1, 2010, general permit and reauthorized under this general permit, you must update your SWPPP to comply with the conditions of this general permit by **October 1, 2018**.

2. You must implement and maintain the SWPPP for any construction activity requiring this general permit until final stabilization is reached.

5.2 TMDL

For projects that discharge stormwater to a water body listed as impaired under section 303(d) of the Federal Clean Water Act due to sediment, suspended solids, or turbidity, you must identify the water body and impairment in the SWPPP. Your SWPPP must describe and conform to any Wasteload Allocation (WLA) for the water body as required in Section 2.2.4

5.3 SWPPP Contents

You must develop your SWPPP to ensure compliance with the effluent limits in Section 3.0. Your SWPPP must include the following information, at a minimum.

1. **Personnel**. Your SWPPP must identify those person(s), by name or position, who are knowledgeable and experienced in the application of erosion and sediment control BMPs and who are responsible for the development and implementation of any portion of the SWPPP, for any later modifications to the SWPPP, and for compliance with the requirements of this general permit.

2. **Staff Training**. The SWPPP shall outline how employees and responsible parties shall be trained on the implementation of the SWPPP. Training must be provided at least annually, as new employees or responsible parties are hired, or as necessary to ensure compliance with the SWPPP and this general permit. Employees and responsible parties include individuals who are responsible for conducting inspections or for the design, installation, maintenance, or repair of stormwater controls.

3. **Description of Construction Activities**. Your SWPPP must include a narrative description of the nature of your construction activities, including the following:

a. A description of the overall project and type of construction activities to occur on the site and a description of the final completed project;

b. The total size of the project and total area expected to be disturbed by construction activities;

c. The maximum area expected to be disturbed at any one time;

d. Description of the existing vegetation at the site and an estimate of the percent of vegetative ground cover;

e. A description of the soil within the disturbed areas;

f. The name of the surface waters or municipal separate storm sewer system at or near the disturbed area that could potentially receive discharges from the project site;

g. Any construction support activity areas; and,

h. The intended sequence and estimated dates of construction activity for the following:

i. Implementation of BMPs, including when they will be operational and an explanation of how you will ensure the control measures are installed by the time each phase of earth-disturbing activity begins.

ii. Commencement and duration of earth-disturbing activities, including clearing and grubbing, mass grading, site preparation (i.e., excavating, cutting and filling), final grading, and creation of soil and vegetation stockpiles requiring stabilization.

iii. Cessation, temporary or permanent, of construction activities on the site or in designated portions of the site.

4. **Site Map.** You must include a legible site map depicting the following features and boundaries of the project:

a. Pre-construction site conditions, including existing vegetative and non-vegetative cover (e.g. – forest, pasture, pavement, structures, etc.);

b. Locations where earth-disturbing activities will occur, noting any phasing of construction activities;

c. Approximate slopes before and after major grading activities. Note areas with a slope greater than three horizontal to one vertical (3:1);

d. Topography of the site;

e. Drainage patterns of stormwater and authorized non-stormwater flows from the site property before and after major grading activities. Mark the flow direction with arrows on the map.

f. Locations and names, where appropriate, of all surface waters of the state that exist within or in the immediate vicinity of the site and could potentially receive discharges from the project site.

g. Locations of any surface water crossings, noting areas where work near waterbodies is necessary;

h. Location of any stormwater conveyances including, but not limited to, sediment ponds, ditches, pipes, swales, stormwater diversions, culverts, and ditch blocks;

i. Discharge locations, including locations of any storm drain inlets on or in the immediate vicinity of the site that could potentially receive discharges from the project site;

j. Locations where stormwater or allowable non-stormwater will be discharged to surface waters of the state on or in the immediate vicinity of the site.

k. Locations where sediment, soil, or other construction materials will be stockpiled;

l. Designated site access points;

m. Locations of structures and other impervious surfaces upon completion of construction;

n. Natural buffer boundaries and widths;

o. Locations of fueling activity, vehicle and equipment maintenance areas, designated wash water collection areas, lubricant and chemical storage, paint storage, material storage, staging areas, and debris collection areas;

p. Locations of all activities that could potentially generate pollutants at the site, such as dumpsters, chemical storage, construction site washout, portable toilets, or equipment storage.

q. Location and types of all sediment and erosions controls, velocity dissipation devices, post-construction controls, and all other BMPs used on the site.

r. Locations of construction support activities covered by this general permit.

5. **Description and Maintenance of Control Measures.** Your SWPPP must include a narrative description of the erosion and sediment control measures that will be implemented during construction at your site to meet the conditions of this general permit. For each control measure you must provide a narrative on the following:

a. A timeframe for the installation, maintenance, and removal (if necessary) of all selected BMPs for each phase of construction activity;

b. Your rationale for the selection of all BMPs, including calculations as necessary;

c. Whether selected BMPs are temporary or permanent;

d. A description of maintenance specifications and procedures;

e. A description of structural diversion practices intended to divert flows from exposed soils, store flows, or otherwise limit runoff and the discharge of pollutants from exposed areas of the site;

f. A description of the removal of any temporary stormwater conveyance; and

g. A description of the temporary and final stabilization of areas of exposed soil where construction activities have been completed or temporarily ceased. Your SWPPP must describe the specific vegetative and/or non-vegetative practices you will use to comply with the stabilization requirements in Section 3.19, along with the reasons for choosing each practice.

6. **Procedures for Inspections.** The SWPPP must describe the procedures you will follow for conducting site inspections and, where necessary, taking corrective actions. The following information must also be included in your SWPPP:

   a. Personnel responsible for conducting inspections;

   b. Required frequency of inspections;

   c. Rationale for reduction of inspection frequency; and,

   d. Any inspection checklists or other forms that you will use.

7. **Post Construction Stormwater Management.** You must identify stormwater management practices that will be installed during the construction process to control pollutants in stormwater discharges occurring after construction operations have been completed. Maintenance for onsite stormwater management features is the responsibility of the permittee until the NOT is submitted or the feature is accepted by the party responsible for long term maintenance. The following information must be included in your SWPPP:

   a. An explanation of the technical basis used to select the practices to control pollution where flows exceed pre-development levels;

   b. A description of structural stormwater management practices such as stormwater ponds, open vegetated swales, natural depressions to allow

infiltration of runoff onsite, and sequential systems that combine several practices or other post construction stormwater management features; and

c. The location of velocity and energy dissipation devices placed at discharge points and appropriate erosion protection for outfall channels and ditches.

8. **Pollution Prevention Procedures**

a. **Spill Prevention and Response Procedures**. Your SWPPP must describe the procedures you will follow to prevent and respond to spills and leaks, including:

i. Procedures for expeditiously stopping, containing, and cleaning up spills, leaks, and other releases. The SWPPP must identify the name or position of the employee(s) responsible for detection and response of spills and leaks;

ii. Procedures for notification of appropriate facility personnel, emergency response agencies, and regulatory agencies as required by Section 7.1; and,

iii. Ways to prevent reoccurrence of such releases and steps to prevent any such releases from contaminating stormwater runoff. The SWPPP shall be modified and changes implemented as appropriate.

b. **Waste Management Procedures**. The SWPPP must describe procedures for how you will handle and dispose of all wastes generated at your site, including, but not limited to, clearing and demolition debris, sediment removed from the site, construction and domestic waste, hazardous or toxic waste, and sanitary waste.

9. **Construction Site Pollutants**

a. You must include information in your SWPPP about all activities that could generate pollutants at your site. Examples of pollutant-generating activities include, but are not limited to: paving operations; concrete, paint, and stucco washout; solid waste storage and disposal; storage of fertilizers, pesticides, solvents, fuels, and soils. You must include in your SWPPP a description of the removal of construction equipment and vehicles and any cessation of any pollutant generating activities.

b. You must include an inventory of the pollutants and chemicals associated with your construction activity and consider where potential spills and leaks could occur.

c. If SDDENR approves the use of water treatment chemicals, your SWPPP must include:

i. A listing of all water treatment chemicals planned for use at the site and why these chemicals were selected;

ii. The proper dosage and method of application for all water treatment chemicals;

iii. All applicable Safety Data Sheets (SDS) for chemicals planned to be used;

iv. Schematic drawings of any controls or treatment system used for the application of the water treatment chemicals;

v. A description of how the chemicals will be stored;

vi. Copies of the applicable manufacturer's specifications regarding the use of the water treatment chemicals and chemical treatment systems;

vii. A description of the training that personnel who handle, apply, or store the chemicals have received or will receive prior to the use of water treatment chemicals and chemical treatment systems;

viii. A description of safe handling, spill prevention, and spill response procedures; and

ix. A copy of the approval letter from SDDENR, approving the use of the water treatment chemicals and/or chemical treatment system.

10. **Non-Stormwater Discharges.** You must identify in your SWPPP all sources of non-stormwater discharges.

11. **Infeasibility Documentation.** If you determine it is infeasible to comply with any of the requirements of this general permit, you must thoroughly document your rationale in your SWPPP.

5.4 SWPPP Certification

You must sign and date your SWPPP as required by Section 7.4.

5.5 Required SWPPP Modifications

1. **Conditions Requiring SWPPP Modification**. You must modify your SWPPP, including the site map(s), in response to any of the following conditions:

   a. When you have a new operator responsible for implementation of any part the SWPPP.

   b. When you make changes to your construction plans, sediment and erosion control measures, or any best management practices at your site that are no longer accurately reflected in your SWPPP. This includes changes made in response to corrective actions triggered by inspections.

c. To reflect areas on your site map where operational control has been transferred (including the date of the transfer) or has been covered under a new permit since initiating coverage under this general permit.

d. If inspections by site staff, local officials, SDDENR, or U.S. EPA determine that SWPPP modifications are necessary for compliance with this general permit.

e. To reflect any revisions to applicable federal, state, or local requirements that affect the control measures implemented at the site.

f. If approved by the Secretary, to reflect any changes in chemical water treatment systems or controls, including the use of a different water treatment chemical, different dosage rates, or different areas or methods of application.

2. **Deadlines for SWPPP Modification**. You must complete the required revisions to the SWPPP within 7 calendar days following any of the items listed above.

3. **Documentation of Modifications to the Plan**. You are required to maintain records showing the dates of all SWPPP modifications. The records must include the name of the person authorizing each change and a brief summary of all changes.

4. **Certification Requirements**. All modifications made to your SWPPP must be signed and certified as required in Section 7.4.

5. **Required Notice to Other Operators**. If there are multiple operators at the site, you must notify each operator that may be impacted by the change to the SWPPP within 24 hours.

6.0 SPECIAL CONDITIONS

6.1 Qualified Local Programs

1. To receive approval as a qualified local program, SDDENR will review the local requirements to ensure they comply with both state and federal requirements. SDDENR may authorize minor variations and alternative standards in lieu of the specific conditions of the general permit based upon the unique comprehensive control measures established in the qualifying local program. SDDENR will review each qualifying local program for recertification during the renewal of its municipal separate storm sewer system permit.

2. If a construction site is within the jurisdiction of a qualifying local program, the operator shall submit a Notice of Intent (NOI) to SDDENR to be covered under the general permit and comply with all requirements of the qualifying local program. Compliance with the qualifying local program requirements is deemed to be compliance with this general permit. A violation of qualifying local program requirements is also a violation of this general permit.

3. At this time only the City of Sioux Falls is meeting SDDENR's minimum requirements. If additional municipalities are approved as a Qualifying Local Program in the future, a modification to this general permit will be offered for public comment in the municipality's local newspaper.

7.0 REPORTING AND RECORDKEEPING REQUIREMENTS

7.1 Emergency Spill Notification

1. You must report a release or spill of a regulated substance (including petroleum and petroleum products) to SDDENR as soon as you become aware of it if any one of the following conditions exists:

    a. The release or spill threatens or is in a position to threaten waters of the state (surface water or ground water);

    b. The release or spill causes an immediate danger to human health or safety;

    c. The release or spill exceeds 25 gallons;

    d. The release or spill causes a sheen on surface water;

    e. The release or spill of any substance that exceeds the ground water quality standards of ARSD Chapter 74:54:01;

    f. The release or spill of any substance that exceeds the surface water quality standards of ARSD Chapter 74:51:01;

    g. The release or spill of any substance that harms or threatens to harm wildlife or aquatic life;

    h. The release or spill of crude oil in field activities under SDCL chapter 45-9 is greater than 1 barrel (42 gallons); or

    i. The release or spill is required to be reported according to Superfund Amendments and Reauthorization Act (SARA) Title III List of Lists, Consolidated List of Chemicals Subject to Reporting Under the Emergency Planning and Community Right to Know Act, US Environmental Protection Agency.

2. To report a release or spill, call SDDENR at 605-773-3296 during regular office hours (8 a.m. to 5 p.m. Central Standard Time). To report the release after hours, on weekends or holidays, call South Dakota Emergency Management at 605-773-3231. Reporting the release to SDDENR does not meet any obligation for reporting to other state, local, or federal agencies. Therefore, you must also contact local authorities to determine the local reporting requirements for releases. A written report of the unauthorized release of any regulated substance, including quantity discharged and the location of the discharge shall be sent to SDDENR within 14 days of the discharge.

7.2 Planned Changes

You must notify SDDENR as soon as possible of any planned physical alterations or additions to your site. Notice is required only when the alteration or addition could significantly change the nature or increase the quantity of pollutant discharged, or could result in noncompliance with permit conditions. This notification also applies to pollutants that are not addressed by the effluent limits in Section 3.0.

7.3 Records Contents & Retention

1. You must maintain onsite, or make readily available to SDDENR, the following documents:

    a. The SWPPP, including all certificates, reports, records, or other information required by this general permit.

    b. A copy of the Notice of Intent (NOI) submitted to SDDENR, along with any correspondence related to coverage under this general permit.

    c. A copy of the authorization letter you receive from SDDENR granting coverage under this general permit.

    d. A copy of this general permit.

2. You must retain copies of the SWPPP, your inspection records, all reports required by this general permit, and records of the date you used to complete the NOI and NOT for a period of at least three (3) years from the date you terminate your coverage under the general permit. SDDENR may extend the time period for retaining your records with a written notification to you.

3. You must submit all reports and documents required to be submitted to SDDENR by this general permit by email (stormwater@state.sd.us), or to the address below:

    SD Department of Environment and Natural Resources
    Surface Water Quality Program
    523 East Capitol
    Pierre, SD 57501

7.4 Signatory Requirements

1. All applications submitted to SDDENR under this general permit must be signed by either a principal executive officer or ranking elected official.

2. All reports required by the general permit and other information requested by SDDENR shall be signed by the person described in Paragraph 1 above or by a duly authorized representative of that person. A person is a duly authorized representative if:

   a. The authorization is made in writing by a person described in Paragraph 1 above and submitted to SDDENR; and

   b. The authorized representative must have responsibility for the overall operation of the site, such as the superintendent, or have overall responsibility for environmental matters. A duly authorized representative may be either a named individual or any individual occupying a named position.

3. If the authorization under Paragraph 2 above is no longer accurate, you must submit a new authorization to SDDENR.

4. You must include the following certification statement with all documents signed under this section:

   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 qualified personal properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

7.5 Duty to Provide Information

1. You must provide, within a reasonable period of time, any information SDDENR requests to determine whether cause exists for modifying, revoking and reissuing, or terminating this general permit, or to determine compliance with the general permit.

2. You must provide to SDDENR, upon request, copies of the records required to be kept by this general permit.

3. You must make your SWPPP available to SDDENR, U.S. EPA, or your local storm sewer operator upon request.

4. If you become aware that you failed to submit any relevant facts or submitted incorrect information in your NOI, you must promptly submit such facts or information.

5. You must provide SDDENR with an updated point of contact including a mailing address.

7.6 Availability of Information

1. Except for data determined to be confidential under ARSD Section 74:52:02:17, all reports you prepare and submit in accordance with the terms of this general permit must be available for public inspection at the offices of SDDENR.

2. Your name and address, the NOI and NOT, your SWPPP, and your inspection records will not be considered confidential.

8.0 COMPLIANCE REQUIREMENTS

8.1 Duty to Comply

1. You must comply with all conditions of this general permit. Any permit noncompliance is a violation of the South Dakota Water Pollution Control Act and the federal Clean Water Act. A violation is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

2. If you violate a condition of the general permit or make any false statement, representation, or certification, you may be subject to enforcement action under South Dakota Codified Law, Chapter 34A-2.

3. You are responsible for complying with all local ordinance and requirements. Local governments may have additional or more stringent requirements than those included in this general permit.

8.2 Duty to Mitigate

You must take all reasonable steps to minimize or prevent any discharge of pollutants in violation of this general permit if it has a reasonable likelihood of adversely affecting human health or the environment.

8.3 Need to Halt or Reduce Activity Not a Defense

It is not a defense for you in an enforcement action that it would have been necessary to halt or reduce your construction activity to maintain compliance with the conditions of the general permit.

8.4 Upset Conditions

1. An upset constitutes an affirmative defense to an action brought for noncompliance with technology-based permit effluent limits if the requirements of Paragraph 2 of this section are met. You will have an opportunity for a judicial determination on any claim of an upset only if SDDENR or U.S EPA bring an enforcement action for noncompliance with technology-based effluent limits.

2. If you wish to establish an affirmative defense of any upset, you must demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

    a. An upset occurred and you can identify the cause of the upset;

    b. You were properly operating the pollution controls at your site;

c. You notified SDDENR within 24 hours of becoming aware of the upset. To report a release or spill, call SDDENR at 605-773-3296 during regular office hours (8 a.m. to 5 p.m. Central Standard Time). To report the release after hours, on weekends or holidays, call South Dakota Emergency Management at 605-773-3231.

d. You complied with the mitigation measures required under Section 8.2.

3. In any enforcement proceeding, you have the burden of proof to establish and document that an upset occurred.

8.5 Removed Substances

Collected solids, sludge, grit, or other pollutants removed in the course of treatment shall be properly disposed of in a manner to prevent any pollutant from entering surface waters of the state or creating a health hazard.

8.6 Inspections and Entry

You must allow SDDENR, U.S. EPA, or the operator of a municipal separate storm sewer system receiving your discharges to:

1. Enter your construction site and enter areas where you keep the records required by the general permit;

2. Have access to and copy, at reasonable times, any records that you must keep under the conditions of the general permit;

3. Inspect, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated under this general permit; and

4. At reasonable times, sample or monitor any substances or parameters at any location for the purpose of ensuring permit compliance or as otherwise authorized by the South Dakota Water Pollution Control Act (SDCL 34A-2).

8.7 Oil and Hazardous Substance Liability

Nothing in this general permit shall relieve you from any responsibilities, liabilities, or penalties you may be subject to under Section 311 of the federal Clean Water Act.

8.8 Penalties for Violations of general permit Conditions

1. If you violate a condition of the general permit, you are in violation of the provisions of SDCL 34A-2-36 and subject to penalties under SDCL 34A-2-75. In addition to a jail sentence authorized by SDCL 22-6-2, you can be subject to a criminal fine not to exceed $10,000 per day per violation. You can also be subject to a civil penalty not to exceed $10,000 per day per violation, or for damages to the environment of this state.

2. Except as provided above in the Upset Conditions in Section 8.4, nothing in this general permit relieves you of the civil or criminal penalties for noncompliance.

8.9 Penalties for Falsification of Reports

1. If you knowingly make any false statement, representation, or certification in any record or other document submitted or required to be maintained under this general permit, you are in violation of the provisions of SDCL 34A-2-77 and subject to penalties under SDCL 34A-2-75.

2. If you falsify, tamper with, or knowingly render inaccurate any monitoring device or method required to be maintained under this general permit, you are in violation of the provisions of SDCL 34A-2-77 and is subject to penalties under SDCL 34A-2-75.

3. In addition to a jail sentence authorized by SDCL 22-6-2, you can be subject to a criminal fine not to exceed $10,000 per day per violation. You are also subject to a civil penalty not to exceed $10,000 per day per violation, or for damages to the environment of this state.

Appendix C – Copy of Notice of Intent (NOI)

DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
NOTICE OF INTENT (NOI)
to Obtain Coverage Under the SWD General Permit for
Stormwater Discharges Associated with Construction Activities

Submit form to: SD Department of Environment and Natural Resources
Surface Water Quality Program
523 East Capitol Avenue
Pierre, South Dakota 57501
stormwater@state.sd.us
Telephone: 1-800-SDSTORM

ALL QUESTIONS MUST BE ANSWERED COMPLETELY FOR THIS FORM TO BE VALID

I. Site Owner Contact Information:

Company Name: Sweetland Wind Farm, LLC

Primary Contact Person: Michael Rucker

Mailing Address: 5775 Flatiron Parkway, Suite 120

City: Boulder State: CO Zip Code: 80301

Phone Number: 303-562-5263 Email Address: michael@scoutcleanenergy.com

Type of Ownership: [x] Private [ ] Federal [ ] State [ ] Other (Municipal, County, etc.)
(any type not listed previously)

II. Contractor Information:

Will any contractors be responsible for erosion and sediment control practices: [x] Yes [ ] No

(A contractor authorization form must be submitted for each contractor that will have day to day responsibility for erosion and sediment control practices. If these contractors have not been identified at the time this NOI is submitted, the contractor authorization form may be submitted after they have been identified, but before they begin construction work.)

III. Engineering Firm Contact Information (if applicable):

Contact Person: _____

Contact's Email Address: _____

IV. Construction Project Information:

Project Name: Sweetland Substation

Physical Project Address or Description of Construction Site Location:
NE Corner of Intersection of County Road 9 and 205th Street

City: Wessington State: SD Zip Code: 57381

On-Site Contact Person: _____

Contact's Email Address: _____

Contact's Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Phone Number: _____ County of Construction Site: Hand

Latitude: 44.4144 Longitude: -98.8032 Source (GPS, Google, etc.): Google

Quarter(s): SESE Section(s): 18 Township(s): 111N Range(s): 66W

FOR DENR USE ONLY

Permit Number: _____ Date Approved: _____ Approved by: _____

Construction Project Information (Continued):

Is this project on Tribal Lands? ☐ Yes ☑ No

Total area disturbed by the project (in acres): 3.75

Will this project encroach, damage, or destroy one of the historic sites identified at the following wesites:

https://www.nps.gov/subjects/nationalhistoriclandmarks/list-of-nhls-by-state.htm ☐ Yes ☑ No

http://history.sd.gov/Preservation/nationalregisterofhistoricplaces.aspx ☐ Yes ☑ No

V. Stormwater Pollution Prevention Plan (SWPPP):

Has the SWPPP been developed as required? ☑ Yes ☐ No

(The plan must be developed **before** the NOI is submitted. DENR will not issue coverage before this has been developed.)

VI. Receiving Waters:

Please list all possible waters that may receive a discharge from this site. If discharging to a Municipal Storm Sewer System, indicate which municipality and the ultimate receiving water.

Unnamed ephemeral tributary of Silver Creek; Silver Creek

VII. Nature of Discharge:

Please include a brief description of the construction project:

Grubbing, stripping and grading for construction of a substation.

Will construction dewatering be required? ☐ Yes ☑ No If yes, please complete section IX also.

VIII. Construction Dates:

Project Start Date (MM/DD/YYYY): 02/18/2021

Estimated Completion Date (MM/DD/YYYY): 03/19/2021

IX. Dewatering Activities (Complete this section if you answered yes in VII):

Date dewatering will commence (MM/DD/YYYY): _____

Date dewatering will end (MM/DD/YYYY): _____

Total volume of dewatering (gallons): _____ Average flow rate (gallons per minute): _____

Source of water to be discharged: _____

Receiving water: _____

Brief description of water treatment processes to be employed, if any: _____

Will the dewatering discharge contain anything other than uncontaminated groundwater and stormwater: ☐ Yes ☐ No

NOTE: If there will be dewatering activities, please place points of withdrawal and discharge on a topographic map, or other map if a topographic map is unavailable. This map should extend to one (1) square mile beyond the property boundaries of the facility and each of its discharge facilities, and those wells, springs, and other surface water bodies, drinking water wells, and surface water intake structures listed in public records, or otherwise known to the applicant in the map area.

X. Other Information

List other information you feel should be brought to the attention of the SDDENR regarding coverage under this general permit. Attach additional sheets if necessary.

STATE OF SOUTH DAKOTA

BEFORE THE SECRETARY OF

THE DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

IN THE MATTER OF THE APPLICATION OF)
Sweetland Wind Farm, LLC) **CERTIFICATION OF**
STATE OF South Dakota) **APPLICANT**
COUNTY OF Hand)

I, Michael Rucker, the applicant in the above matter after being duly sworn upon oath hereby certify the following information in regard to this application:

I have read and understand South Dakota Codified Law Section 1-40-27 which provides:

"The secretary may reject an application for any permit filed pursuant to Titles 34A or 45, including any application by any concentrated swine feeding operation for authorization to operate under a general permit, upon making a specific finding that:

(1) The applicant is unsuited or unqualified to perform the obligations of a permit holder based upon a finding that the applicant, any officer, director, partner, or resident general manager of the facility for which application has been made:

(a) Has intentionally misrepresented a material fact in applying for a permit;

(b) Has been convicted of a felony or other crime involving moral turpitude;

(c) Has habitually and intentionally violated environmental laws of any state or the United States which have caused significant and material environmental damage;

(d) Has had any permit revoked under the environmental laws of any state or the United States; or

(e) Has otherwise demonstrated through clear and convincing evidence of previous actions that the applicant lacks the necessary good character and competency to reliably carry out the obligations imposed by law upon the permit holder; or

(2) The application substantially duplicates an application by the same applicant denied within the past five years which denial has not been reversed by a court of competent jurisdiction. Nothing in this subdivision may be construed to prohibit an applicant from submitting a new application for a permit previously denied, if the new application represents a good faith attempt by the applicant to correct the deficiencies that served as the basis for the denial in the original application.

All applications filed pursuant to Titles 34A and 45 shall include a certification, sworn to under oath and signed by the applicant, that he is not disqualified by reason of this section from obtaining a permit. In the absence of evidence to the contrary, that certification shall constitute a prima facie showing of the suitability and qualification of the applicant. If at any point in the application review, recommendation or hearing process, the secretary finds the applicant has intentionally made any material misrepresentation of fact in regard to this certification,

consideration of the application may be suspended and the application may be rejected as provided for under this section.

Applications rejected pursuant to this section constitute final agency action upon that application and may be appealed to circuit court as provided for under chapter 1-26."

I certify pursuant to 1-40-27, that as an applicant, officer, director, partner, or resident general manager of the activity or facility for which the application has been made that I; a) have not intentionally misrepresented a material fact in applying for a permit; b) have not been convicted of a felony or other crime of moral turpitude; c) have not habitually and intentionally violated environmental laws of any state or the United States which have caused significant and material environmental damage; (d) have not had any permit revoked under the environmental laws of any state or the United States; or e) have not otherwise demonstrated through clear and convincing evidence of previous actions that I lack the necessary good character and competency to reliably carry out the obligations imposed by law upon me. I also certify that this application does not substantially duplicate an application by the same applicant denied within the past five years which denial has not been reversed by a court of competent jurisdiction. Further;

"I declare and affirm under the penalties of perjury that this claim (petition, application, information) has been examined by me, and to the best of my knowledge and belief, is in all things true and correct."

Dated this 3 day of February, 2021.

Michael Rucker

Applicant (print)

Applicant (signature)

Subscribed and sworn before me this 3 day of Feb, 2021.

Notary Public (signature)

My commission expires: 1/13/2024

(SEAL)

Sabah Bugrara
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID# 20204001479
MY COMMISSION EXPIRES 01/13/2024

PLEASE ATTACH ANY ADDITIONAL INFORMATION NECESSARY TO DISCLOSE ALL FACTS AND DOCUMENTS PERTAINING TO SDCL 1-40-27 (1) (a) THROUGH (e). ALL VIOLATIONS MUST BE DISCLOSED, BUT WILL NOT AUTOMATICALLY RESULT IN THE REJECTION OF AN APPLICATION

Appendix D – Blank Forms

- Blank Form are included in this Appendix. The forms include:
  - Contractor Authorization Form
  - Training Forms
  - Onsite Training Log
  - Offsite Training Log
  - Inspection Form
  - Corrective Action Form
  - Grading and Stabilization Activities Log
  - Transfer of Coverage Form
  - Reauthorization Form
  - Notice of Termination (NOT) Form

Completed forms shall be stored in Appendix H and I of this SWPPP

DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
CONTRACTOR AUTHORIZATION FORM

for Coverage Under the SWD General Permit for
Stormwater Discharges Associated with Construction Activities

This form is required to be submitted when a contractor will act as an operator and have day to day responsibility for erosion and sediment control measures. Submission of this form shall in no way relieve the permittee of permit obligations. Please submit this form to the following address:

Submit form to: SD Department of Environment and Natural Resources
Surface Water Quality Program
523 East Capitol Avenue
Pierre, South Dakota 57501
stormwater@state.sd.us
Telephone: 1-800-SDSTORM

ALL QUESTIONS MUST BE ANSWERED COMPLETELY FOR THIS FORM TO BE VALID

Project Name: _____ Permit Number (if available): _____

Project Site Legal Location: _____

Contractor Company Name: _____

Responsible Contact Person: _____

Contact's Email Address: _____

Contractor Mailing Address: _____

City: _____ State: _____ Zip Code: _____ Phone Number: _____

The contractor(s) responsible for the day to day operation of the construction site shall certify the following:

"I certify under penalty of law that I understand and will comply with the terms and conditions of the Surface Water Discharge General Permit for Stormwater Discharges Associated with Construction Activities for the project identified above."

South Dakota Codified Laws Section 1-40-27 provides:

"The secretary may reject an application for any permit filed pursuant to Titles 34A or 45, including any application by any concentrated swine feeding operation for authorization to operate under a general permit, upon making a specific finding that:

(1) The applicant is unsuited or unqualified to perform the obligations of a permit holder based upon a finding that the applicant, any officer, director, partner or resident general manager of the facility for which application has been made:

(a) Has intentionally misrepresented a material fact in applying for a permit;

(b) Has been convicted of a felony or other crime involving moral turpitude;

(c) Has habitually and intentionally violated environmental laws of any state or the United States which have caused significant and material environmental damage;

(d) Has had any permit revoked under the environmental laws of any state or the United States; or

FOR DENR USE ONLY

Permit Number: _____ Date Approved: _____ Approved by: _____

(e) Has otherwise demonstrated through clear and convincing evidence of previous actions that the applicant lacks the necessary good character and competency to reliably carry out the obligations imposed by law upon the permit holder; or

(2) The application substantially duplicates an application by the same applicant denied within the past five years which denial has not been reversed by a court of competent jurisdiction. Nothing in this subdivision may be construed to prohibit an applicant from submitting a new application for a permit previously denied, if the new application represents a good faith attempt by the applicant to correct the deficiencies that served as the basis for the denial in the original application.

All applications filed pursuant to Titles 34A and 45 shall include a certification, sworn to under oath and signed by the applicant, that he is not disqualified by reason of this section from obtaining a permit. In the absence of evidence to the contrary, that certification shall constitute a prima facie showing of the suitability and qualification of the applicant. If at any point in the application review, recommendation or hearing process, the secretary finds the applicant has intentionally made any material misrepresentation of fact in regard to this certification, consideration of the application may be suspended and the application may be rejected as provided for under this section.

Applications rejected pursuant to this section constitute final agency action upon that application and may be appealed to circuit court as provided for under chapter 1-26."

I certify pursuant to SDCL 1-40-27, that as an applicant, officer, partner, or resident general manager of the activity or facility for which the application has been made that I; a) have not intentionally misrepresented a material fact in applying for a permit; b) have not been convicted of a felony or other crime of moral turpitude; c) have not habitually and intentionally violated environmental laws of any state or the United States which have caused significant and material environmental damage; d) have not had any permit revoked under the environmental laws of any state or the United States; or e) have not otherwise demonstrated through clear and convincing evidence of previous actions that I lack the necessary good character and competency to reliably carry out the obligations imposed by law upon me. I also certify that this application does not substantially duplicate an application by the same applicant denied within the past five years which denial has not been reversed by a court of competent jurisdiction. Further;

"I declare and affirm under the penalties of perjury that this claim (petition, application, information) has been examined by me, and to the best of my knowledge and belief, is in all things true and correct."

Dated this _____ day of _____, 20____.

_____

Applicant (print)

_____

Applicant (signature)

Subscribed and sworn before me this _____ day of _____, 20____.

_____

Notary Public (signature)

My commission expires: _____

(SEAL)

PLEASE ATTACH A SHEET DISCLOSING ALL FACTS PERTAINING TO SDCL 1-40-27 (1) (a) THROUGH (e). ALL VIOLATIONS MUST BE DISCLOSED, BUT WILL NOT AUTOMATICALLY RESULT IN THE REJECTION OF AN APPLICATION.

Stormwater Pollution Prevention Onsite Training Log

Project Name:

Project Location:

Instructor's Name(s):

Instructor's Title(s):

Stormwater Training Topic: (*check as appropriate)*

- ❑ **Sediment and Erosion Controls**
- ❑ **Emergency Procedures**
- ❑ **Stabilization Controls**
- ❑ **Inspections/Corrective Actions**
- ❑ **Pollution Prevention Measures**

Specific Training Objective:_____

_____

Attendee Roster: (*attach additional pages as necessary)*

No.	Name of Attendee	Company
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

Stormwater Pollution Prevention Offsite Training Log

Project Name:

Project Location:

Instructor's Name(s):

Instructor's Title(s):

Course Location: _____ Date: _____

Course Length (hours): _____

Stormwater Training Topic: (*check as appropriate)*

- ❑ **Sediment and Erosion Controls**
- ❑ **Emergency Procedures**
- ❑ **Stabilization Controls**
- ❑ **Inspections/Corrective Actions**
- ❑ **Pollution Prevention Measures**

Specific Training Objective:_____

_____

Attendee Roster: (*attach additional pages as necessary)*

No.	Name of Attendee	Company
1		
2		
3		
4		
5		
6		
7		
8		

2017 Construction General Permit
Inspection Report Template – Field Version

Purpose
This Inspection Report Template (or "template") is to assist you in preparing inspection reports for EPA's 2017 Construction General Permit (CGP). If you are covered under the 2017 CGP, you can use this template to create an inspection report form that is customized to the specific circumstances of your site and that complies with the minimum reporting requirements of Part 4.7 of the permit. Note that the use of this form is optional; you may use your own inspection report form provided it includes the minimum information required in Part 4.7 of the CGP.

If you are covered under a state CGP, this template may be helpful in developing a form that can be used for that permit; however, it will need to be modified to meet the specific requirements of that permit. If your permitting authority requires you to use a specific inspection report form, you should not use this form.

Notes:
While EPA has made every effort to ensure the accuracy of all instructions contained in the Inspection Report Template, it is the permit, not the template, that determines the actual obligations of regulated construction stormwater discharges. In the event of a conflict between the Inspection Report Template and any corresponding provision of the 2017 CGP, you must abide by the requirements in the permit. EPA welcomes comments on the Inspection Report Template at any time and will consider those comments in any future revision of this document. You may contact EPA for CGP-related inquiries at cgp@epa.gov.

Overview of Inspection Requirements (see CGP Part 4)
Construction operators covered under the 2017 CGP are subject to the following inspection requirements:

Person(s) Responsible for Inspecting the Site (see Part 4.1)
The person(s) inspecting your site must be a "qualified person" who may be either on your staff or a third party you hire to conduct such inspections.

- A "qualified person" is a person knowledgeable in the principles and practice of erosion and sediment controls and pollution prevention, who possesses the appropriate skills and training to assess conditions at the construction site that could impact stormwater quality, and the appropriate skills and training to assess the effectiveness of any stormwater controls selected and installed to meet the requirements of this permit.

Inspection Frequency (see Part 4.2)
You are required to conduct inspections either:

- Once every 7 calendar days; or
- Once every 14 calendar days and within 24 hours of a storm event of 0.25 inches or greater or the occurrence of runoff from snowmelt sufficient to cause a discharge.

Your inspection frequency is increased if the site discharges to a sensitive water. See Part 4.3. Your inspection frequency may be decreased to account for stabilized areas, or for arid, semi-arid, or drought-stricken conditions, or for frozen conditions. See Part 4.4.

Areas That Need to Be Inspected (see Part 4.5)
During each inspection, you must inspect the following areas of your site:

- Cleared, graded, or excavated areas of the site;
- Stormwater controls (e.g., perimeter controls, sediment basins, inlets, exit points etc.) and pollution prevention practices (e.g., pollution prevention practices for vehicle fueling/maintenance and washing, construction product storage, handling, and disposal, etc.) at the site;
- Material, waste, or borrow areas covered by the permit, and equipment storage and maintenance areas;
- Areas where stormwater flows within the site;
- Stormwater discharge points; and
- Areas where stabilization has been implemented.

What to Check For During Your Inspection (see Part 4.6)
During your site inspection, you are required to check:

- Whether stormwater controls or pollution prevention practices are properly installed, require maintenance or corrective action, or whether new or modified controls are required;
- For the presence of conditions that could lead to spills, leaks, or other pollutant accumulations and discharges;
- For locations where new or modified stormwater controls are necessary to meet requirements of the permit;

- Whether there are visible signs of erosion and sediment accumulation at points of discharge and to the channels and streambanks that are in the immediate vicinity of the discharge;
- If a stormwater discharge is occurring at the time of the inspection, whether there are obvious, visual signs of pollutant discharges; and
- If any permit violations have occurred on the site.

Inspection Reports (see Part 4.7)
Within 24 hours of completing each inspection, you are required to complete an inspection report that includes:

- Date of inspection;
- Names and titles of person(s) conducting the inspection;
- Summary of inspection findings;
- Rain gauge or weather station readings if your inspection is triggered by the 0.25-inch storm threshold; and
- If you determine that a portion of your site is unsafe to access for the inspection, documentation of what conditions prevented the inspection and where these conditions occurred on the site

Instructions for Using This Template
This Field Version of the Inspection Report Template is intended to be used in the field and filled out by hand. If you will be filling out the Inspection Report Template electronically (i.e., you will be typing in your findings), please use the Electronic Version of the Inspection Report Template available at https://www.epa.gov/npdes/stormwater-discharges-construction-activities#resources. The Electronic Version includes text fields with instructions for what to enter.

Keep in mind that this document is a template and not an "off-the-shelf" inspection report that is ready to use without some modification. You must first customize this form to include the specifics of your project in order for it to be useable for your inspection reports. Once you have entered all of your site-specific information into these fields, you may print out this form for use in the field to complete inspection reports.

The following tips for using this template will help you ensure that the minimum permit requirements are met:

- **Review the inspection requirements.** Before you start developing your inspection report form, read the CGP's Part 4 inspection requirements. This will ensure that you have a working understanding of the permit's underlying inspection requirements.
- **Complete all required text fields.** Fill out all text fields. Only by filling out all fields will the template be compliant with the requirements of the permit. (Note: Where you do not need the number of rows provided in the template form for your inspection, you may leave those rows blank. Or, if you need more space to document your findings, you may add an additional sheet.)
- **Use your site map to document inspection findings.** In several places in the template, you are directed to specify the location of certain features of your site, including where stormwater controls are installed and where you will be stabilizing exposed soil. You are also asked to fill in location information for unsafe conditions and the locations of any discharges occurring during your inspections. Where you are asked for location information, EPA encourages you to reference the point on your SWPPP site map that corresponds to the requested location on the inspection form. Using the site map as a tool in this way will help you conduct efficient inspections, will assist you in evaluating problems found, and will ensure proper documentation.
- **Sign and certify each inspection report.** The operator or a duly authorized representative (see Appendix I, Part I.11.2) must sign and certify each inspection report for it to be considered complete. Where a contractor or subcontractor carries out your inspections, it is recommended that you also have the inspector sign and certify the form, in addition to the signature and certification required of the permitted operator. The template includes a signature block for both parties.
- **Include the inspection form with your SWPPP.** Once your form is complete, make sure to include a copy of the inspection form in your SWPPP in accordance with Part 7.2.7.e of the CGP.
- **Retain copies of all inspection reports with your records.** You must also retain in your records copies of all inspection reports in accordance with the requirements in Part 4.7.3 of the 2017 CGP. These reports must be retained for at least 3 years from the date your permit coverage expires or is terminated.

Section-by-Section Instructions
You will find specific instructions corresponding to each section of the report form on the reverse side of each page. These instructions provide you with more details in terms of what EPA expects to be documented in these reports.

General Information (see reverse for instructions)					
Name of Project		**NPDES ID No.**		**Inspection Date**	
Weather conditions during inspection		**Inspection start time**		**Inspection end time**	
Inspector Name, Title & Contact Information					
Present Phase of Construction					
Inspection Location (if multiple inspections are required, specify location where this inspection is being conducted)					

Inspection Frequency *(Note: you may be subject to different inspection frequencies in different areas of the site. Check all that apply)*

Standard Frequency:

☐ Every 7 days

☐ Every 14 days and within 24 hours of a 0.25" rain or the occurrence of runoff from snowmelt sufficient to cause a discharge

Increased Frequency:

☐ Every 7 days and within 24 hours of a 0.25" rain (for areas of sites discharging to sediment or nutrient-impaired waters or to waters designated as Tier 2, Tier 2.5, or Tier 3)

Reduced Frequency:

☐ Twice during first month, no more than 14 calendar days apart; then once per month after first month; (for stabilized areas)

☐ Twice during first month, no more than 14 calendar days apart; then once more within 24 hours of a 0.25" rain (for stabilized areas on "linear construction sites")

☐ Once per month and within 24 hours of a 0.25" rain (for arid, semi-arid, or drought-stricken areas during seasonally dry periods or during drought)

☐ Once per month (for frozen conditions where earth-disturbing activities are being conducted)

Was this inspection triggered by a 0.25" storm event? ☐ Yes ☐ No

If yes, how did you determined whether a 0.25" storm event has occurred?

☐ Rain gauge on site ☐ Weather station representative of site. Specify weather station source:

Total rainfall amount that triggered the inspection (in inches)**:**

Was this inspection triggered by the occurrence of runoff from snowmelt sufficient to cause a discharge? ☐ Yes ☐ No

Unsafe Conditions for Inspection

Did you determine that any portion of your site was unsafe for inspection per CGP Part 4.5? ☐ Yes ☐ No

If "yes", complete the following:

- Describe the conditions that prevented you from conducting the inspection in this location:

- Location(s) where conditions were found:

Instructions for Filling Out "General Information" Section

Name of Project
Enter the name for the project.

NPDES ID No.
Enter the NPDES ID number that was assigned to your NOI for permit coverage.

Inspection Date
Enter the date you conducted the inspection.

Weather Conditions During Inspection
Enter the weather conditions occurring during the inspection, e.g., sunny, overcast, light rain, heavy rain, snowing, icy, windy.

Inspection start and end times
Enter the time you started and ended the inspection.

Inspector Name, Title & Contact Information
Provide the name of the person(s) (either a member of your company's staff or a contractor or subcontractor) that conducted this inspection. Provide the inspector's name, title, and contact information as directed in the form.

Present Phase of Construction
If this project is being completed in more than one phase, indicate which phase it is currently in.

Inspection Location
If your project has multiple locations where you conduct separate inspections, specify the location where this inspection is being conducted. If only one inspection is conducted for your entire project, enter "Entire Site." If necessary, complete additional inspection report forms for each separate inspection location.

Inspection Frequency
Check the box that describes the inspection frequency that applies to you. Note that you may be subject to different inspection frequencies in different areas of your site. If your project does not discharge to a "sensitive water" (i.e., a water impaired for sediment or nutrients, or listed as Tier 2, 2.5, or 3 by your state or tribe) and you are not affected by any of the circumstances described in CGP Part 4.4, then you can choose your frequency based on CGP Part 4.2 – either every 7 calendar days, or every 14 calendar days and within 24 hours of a 0.25-inch storm event. For any portion of your site that discharges to a sensitive water, your inspection frequency for that area is fixed under CGP Part 4.3 at every 7calendar days and within 24 hours of a 0.25-inch storm event. If portions of your site are stabilized, are located in arid, semi-arid, or drought-stricken areas, or are subject to frozen conditions, consult CGP Part 4.4 for the applicable inspection frequency. Check all the inspection frequencies that apply to your project.

Was This Inspection Triggered by a 0.25 Inch Storm Event or the occurrence of runoff from snowmelt sufficient to cause a discharge?
If you were required to conduct this inspection because of a 0.25-inch (or greater) rain event, indicate whether you relied on an on-site rain gauge or a nearby weather station (and where the weather station is located). Also, specify the total amount of rainfall for this specific storm event. If you were required to conduct this inspection because of the occurrence of runoff from snowmelt, then check the appropriate box.

Unsafe Conditions for Inspection
Inspections are not required where a portion of the site or the entire site is subject to unsafe conditions. See CGP Part 4.5. These conditions should not regularly occur, and should not be consistently present on a site. Generally, unsafe conditions are those that render the site (or a portion of it) inaccessible or that would pose a significant probability of injury to applicable personnel. Examples could include severe storm or flood conditions, high winds, and downed electrical wires.

If your site, or a portion of it, is affected by unsafe conditions during the time of your inspection, provide a description of the conditions that prevented you from conducting the inspection and what parts of the site were affected. If the entire site was considered unsafe, specify the location as "Entire site"

Condition and Effectiveness of Erosion and Sediment (E&S) Controls (CGP Part 2.2) (see reverse for instructions)				
Type/Location of E&S Control [Add an additional sheet if necessary]	**Maintenance Needed?***	**Corrective Action Required?***	**Date on Which Maintenance or Corrective Action First Identified?**	**Notes**
1.	☐Yes ☐No	☐Yes ☐No		
2.	☐Yes ☐No	☐Yes ☐No		
3.	☐Yes ☐No	☐Yes ☐No		
4.	☐Yes ☐No	☐Yes ☐No		
5.	☐Yes ☐No	☐Yes ☐No		
6.	☐Yes ☐No	☐Yes ☐No		
7.	☐Yes ☐No	☐Yes ☐No		
8.	☐Yes ☐No	☐Yes ☐No		
9.	☐Yes ☐No	☐Yes ☐No		
10.	☐Yes ☐No	☐Yes ☐No		

*** Note:** The permit differentiates between conditions requiring routine maintenance, and those requiring corrective action. The permit requires maintenance in order to keep controls in effective operating condition. Corrective actions are triggered only for specific conditions, which include: 1) A stormwater control needs repair or replacement (beyond routine maintenance) if it is not operating as intended; 2) A stormwater control necessary to comply with the permit was never installed or was installed incorrectly; 3) You become aware that the stormwater controls you have installed and are maintaining are not effective enough for the discharge to meet applicable water quality standards or applicable requirements in Part 3.1; 4) One of the prohibited discharges in Part 1.3 is occurring or has occurred; or 5) EPA requires corrective actions as a result of a permit violation found during an inspection carried out under Part 4.8. If a condition on your site requires a corrective action, you must also fill out a corrective action form found at https://www.epa.gov/npdes/stormwater-discharges-construction-activities#resources. See Part 5 of the permit for more information.

Instructions for Filling Out the "Erosion and Sediment Control" Table

Type and Location of E&S Controls
Provide a list of all erosion and sediment (E&S) controls that your SWPPP indicates will be installed and implemented at your site. This list must include at a minimum all E&S controls required by CGP Part 2.2. Include also any natural buffers established under CGP Part 2.2.1. Buffer requirements apply if your project's earth-disturbing activities will occur within 50 feet of a water of the U.S. You may group your E&S controls on your form if you have several of the same type of controls (e.g., you may group "Inlet Protection Measures", "Perimeter Controls", and "Stockpile Controls" together on one line), but if there are any problems with a specific control, you must separately identify the location of the control, whether maintenance or corrective action is necessary, and in the notes section you must describe the specifics about the problem you observed.

Maintenance Needed?
Answer "yes" if the E&S control requires maintenance due to normal wear and tear in order for the control to continue operating effectively. At a minimum, maintenance is required in the following specific instances: (1) for perimeter controls, whenever sediment has accumulated to half or more the above-ground height of the control (CGP Part 2.2.3.a); (2) where sediment has been tracked-out onto the surface of off-site streets or other paved areas (CGP Part 2.2.4); (3) for inlet protection measures, when sediment accumulates, the filter becomes clogged, and/or performance is compromised (CGP Part 2.2.10); and (4) for sediment basins, as necessary to maintain at least half of the design capacity of the basin (CGP Part 2.2.12.f). Note: In many cases, "yes" answers are expected and indicate a project with an active operation and maintenance program. You should also answer "yes" if work to fix the problem is still ongoing from the previous inspection.

Corrective Action Needed?
Answer "yes" if during your inspection you found any of the following conditions to be present (CGP, Part 5.1): (1) a required E&S control needs repair or replacement (beyond routine maintenance required under Part 2.1.4); (2) a require E&S control was never installed or was installed incorrectly; (3) you become aware that the inadequacy of the E&S control has led to an exceedance of an applicable water quality standard; (4) one of the prohibited discharges in Part 1.3 is occurring or has occurred; or (5) EPA requires corrective action for an E&S control as a result of a permit violation found during an inspection carried out under Part 4.8. If you answer "yes", you must take corrective action and complete a corrective action report, found at https://www.epa.gov/npdes/stormwater-discharges-construction-activities#resources.. Note: You should answer "yes" if work to fix the problem from a previous inspection is still ongoing.

Date on Which Maintenance or Corrective Action First Identified?
Provide the date on which the condition that triggered the need for maintenance or corrective action was first identified. If the condition was just discovered during this inspection, enter the inspection date. If the condition is a carryover from a previous inspection, enter the original date of the condition's discovery.

Notes
For each E&S control and the area immediately surrounding it, note whether the control is properly installed and whether it appears to be working to minimize sediment discharge. Describe any problem conditions you observed such as the following, and why you think they occurred as well as actions (e.g., maintenance or corrective action) you will take or have taken to fix the problem:

1. Failure to install or to properly install a required E&S control
2. Damage or destruction to an E&S control caused by vehicles, equipment, or personnel, a storm event, or other event
3. Mud or sediment deposits found downslope from E&S controls
4. Sediment tracked out onto paved areas by vehicles leaving construction site
5. Noticeable erosion at discharge outlets or at adjacent streambanks or channels
6. Erosion of the site's sloped areas (e.g., formation of rills or gullies)
7. E&S control is no longer working due to lack of maintenance

For buffer areas, make note of whether they are marked off as required, whether there are signs of construction disturbance within the buffer, which is prohibited under the CGP, and whether there are visible signs of erosion resulting from discharges through the area.

If maintenance or corrective action is required, briefly note the reason. If maintenance or corrective action have been completed, make a note of the date it was completed and what was done. *If corrective action is required, note that you will need to complete a separate corrective action report describing the condition and your work to fix the problem*.

Condition and Effectiveness of Pollution Prevention (P2) Practices (CGP Part 2.3) (see reverse for instructions)				
Type/Location of P2 Practices [Add an additional sheet if necessary]	**Maintenance Needed?***	**Corrective Action Required?***	**Date on Which Maintenance or Corrective Action First Identified?**	**Notes**
1.	☐Yes ☐No	☐Yes ☐No		
2.	☐Yes ☐No	☐Yes ☐No		
3.	☐Yes ☐No	☐Yes ☐No		
4.	☐Yes ☐No	☐Yes ☐No		
5.	☐Yes ☐No	☐Yes ☐No		
6.	☐Yes ☐No	☐Yes ☐No		
7.	☐Yes ☐No	☐Yes ☐No		
8.	☐Yes ☐No	☐Yes ☐No		
9.	☐Yes ☐No	☐Yes ☐No		
10.	☐Yes ☐No	☐Yes ☐No		

*** Note:** The permit differentiates between conditions requiring routine maintenance, and those requiring corrective action. The permit requires maintenance in order to keep controls in effective operating condition. Corrective actions are triggered only for specific conditions, which include: 1) A stormwater control needs repair or replacement (beyond routine maintenance) if it is not operating as intended; 2) A stormwater control necessary to comply with the permit was never installed or was installed incorrectly; 3) You become aware that the stormwater controls you have installed and are maintaining are not effective enough for the discharge to meet applicable water quality standards or applicable requirements in Part 3.1; 4) One of the prohibited discharges in Part 1.3 is occurring or has occurred; or 5) EPA requires corrective actions as a result of a permit violation found during an inspection carried out under Part 4.8. If a condition on your site requires a corrective action, you must also fill out a corrective action form found at https://www.epa.gov/npdes/stormwater-discharges-construction-activities#resources. See Part 5 of the permit for more information.

Instructions for Filling Out the "Pollution Prevention (P2) Practice" Table

Type and Location of P2 Controls
Provide a list of all pollution prevention (P2) practices that are implemented at your site. This list must include all P2 practices required by Part 2.3, and those that are described in your SWPPP.

Maintenance Needed?
Answer "yes" if the P2 practice requires maintenance due to normal wear and tear in order for the control to continue operating effectively. Note: In many cases, "yes" answers are expected and indicate a project with an active operation and maintenance program.

Corrective Action Needed?
Answer "yes" if during your inspection you found any of the following conditions to be present (CGP, Part 5.1): (1) a required P2 practice needs repair or replacement (beyond routine maintenance required under Part 2.1.4); (2) a require P2 practice was never installed or was installed incorrectly; (3) you become aware that the inadequacy of the P2 practice has led to an exceedance of an applicable water quality standard; (4) one of the "prohibited discharges" listed in CGP Part 1.3 is occurring or has occurred, or (5) EPA requires corrective action for a P2 practice as a result of a permit violation found during an inspection carried out under Part 4.8. If you answer "yes", you must take corrective action and complete a corrective action report (see https://www.epa.gov/npdes/stormwater-discharges-construction-activities#resources). Note: You should answer "yes" if work to fix the problem from a previous inspection is still ongoing.

Date on Which Maintenance or Corrective Action First Identified?
Provide the date on which the condition that triggered the need for maintenance or corrective action was first identified. If the condition was just discovered during this inspection, enter the inspection date. If the condition is a carryover from a previous inspection, enter the original date of the condition's discovery.

Notes
For each P2 control and the area immediately surrounding it, note whether the control is properly installed, whether it appears to be working to minimize or eliminate pollutant discharges, and whether maintenance or corrective action is required. Describe problem conditions you observed such as the following, and why you think they occurred, as well as actions you will take or have taken to fix the problem:

1. Failure to install or to properly install a required P2 control
2. Damage or destruction to a P2 control caused by vehicles, equipment, or personnel, or a storm event
3. Evidence of a spill, leak, or other type of pollutant discharge, or failure to have properly cleaned up a previous spill, leak, or other type of pollutant discharge
4. Spill response supplies are absent, insufficient, or not where they are supposed to be located
5. Improper storage, handling, or disposal of chemicals, building materials or products, fuels, or wastes
6. P2 practice is no longer working due to lack of maintenance

If maintenance or corrective action is required, briefly note the reason. If maintenance or corrective action have been completed, make a note of the date it was completed and what was done. *If corrective action is required, note that you will need to complete a separate corrective action report describing the condition and your work to fix the problem*.

Stabilization of Exposed Soil (CGP Part 2.2.14) (see reverse for instructions)			
Stabilization Area **[Add an additional sheet if necessary]**	**Stabilization Method**	**Have You Initiated Stabilization?**	**Notes**
1.		☐ YES ☐ NO If yes, provide date:	
2.		☐ YES ☐ NO If yes, provide date:	
3.		☐ YES ☐ NO If yes, provide date:	
4.		☐ YES ☐ NO If yes, provide date:	
5.		☐ YES ☐ NO If yes, provide date:	

Description of Discharges (CGP Part 4.6.6) (see reverse for instructions)	
Was a stormwater discharge or other discharge occurring from any part of your site at the time of the inspection? ☐ Yes ☐ No **If "yes", provide the following information for each point of discharge:**	
Discharge Location **[Add an additional sheet if necessary]**	**Observations**
1.	Describe the discharge: At points of discharge and the channels and banks of waters of the U.S. in the immediate vicinity, are there any visible signs of erosion and/or sediment accumulation that can be attributed to your discharge? ☐ Yes ☐ No If yes, describe what you see, specify the location(s) where these conditions were found, and indicate whether modification, maintenance, or corrective action is needed to resolve the issue:
2.	Describe the discharge: At points of discharge and the channels and banks of waters of the U.S. in the immediate vicinity, are there any visible signs of erosion and/or sediment accumulation that can be attributed to your discharge? ☐ Yes ☐ No If yes, describe what you see, specify the location(s) where these conditions were found, and indicate whether modification, maintenance, or corrective action is needed to resolve the issue:

Instructions for Filling Out the "Stabilization of Exposed Soil" Table

Stabilization Area
List all areas where soil stabilization is required to begin because construction work in that area has permanently stopped or temporarily stopped (i.e., work will stop for 14 or more days), and all areas where stabilization has been implemented.

Stabilization Method
For each area, specify the method of stabilization (e.g., hydroseed, sod, planted vegetation, erosion control blanket, mulch, rock).

Have You Initiated Stabilization
For each area, indicate whether stabilization has been initiated.

Notes
For each area where stabilization has been initiated, describe the progress that has been made, and what additional actions are necessary to complete stabilization. Note the effectiveness of stabilization in preventing erosion. If stabilization has been initiated but not completed, make a note of the date it is to be completed. If stabilization has been completed, make a note of the date it was completed. If stabilization has not yet been initiated, make a note of the date it is to be initiated, and the date it is to be completed.

Instructions for Filling Out the "Description of Discharges" Table

You are only required to complete this section if a discharge is occurring at the time of the inspection.

Was a Stormwater Discharge Occurring From Any Part of Your Site At The Time of the Inspection?
During your inspection, examine all points of discharge from your site, and determine whether a discharge is occurring. If there is a discharge, answer "yes" and complete the questions below regarding the specific discharge. If there is not a discharge, answer "no" and skip to the next page.

Discharge Location (repeat as necessary if there are multiple points of discharge)
Location of discharge. Specify the location on your site where the discharge is occurring. The location may be an outlet from a stormwater control or constructed stormwater channel, a discharge into a storm sewer inlet, or a specific point on the site. Be as specific as possible; it is recommended that you refer to a precise point on your site map.

Describe the discharge. Include a specific description of any noteworthy characteristics of the discharge such as color; odor; floating, settled, or suspended solids; foam; oil sheen; and other obvious pollution indicators.

Are there visible signs of erosion or sediment accumulation? At each point of discharge and the channel and streambank in the immediate vicinity, visually assess whether there are any obvious signs of erosion and/or sediment accumulation that can be attributed to your discharge. If you answer "yes", include a description in the space provided of the erosion and sediment deposition that you have found, specify where on the site or in the water of the U.S. it is found, and indicate whether modification, maintenance, or corrective action is needed to resolve the issue.

Contractor or Subcontractor Signature and Certification
(see reverse for instructions)

"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, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature of Contractor or Subcontractor: _____ **Date:**

Printed Name and Affiliation: _____

Operator Signature and Certification
(see reverse for instructions)

"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, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature of Operator or "Duly Authorized Representative": _____ **Date:**

Printed Name and Affiliation: _____

Instructions for Signature/Certification

Each inspection report must be signed and certified to be considered complete.

Contractor or Subcontractor Signature and Certification
Where you rely on a contractor or subcontractor to carry out the inspection and complete the inspection report, you should require the inspector to sign and certify each report. Note that this does not relieve you, the permitted operator, of the requirement to sign and certify the inspection report as well.

Operator Signature and Certification
At a minimum, the inspection report must be signed by either (1) the person who signed the NOI, or (2) a duly authorized representative of that person. The following requirements apply to scenarios (1) and (2):

If the signatory will be the person who signed the NOI for permit coverage, as a reminder, that person must be one of the following types of individuals:

- *For a corporation*: A responsible corporate officer. For the purpose of this subsection, a responsible corporate officer means: (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
- *For a partnership or sole proprietorship*: A general partner or the proprietor, respectively.
- *For a municipality, state, federal, or other public agency*: Either a principal executive officer or ranking elected official. For purposes of this subsection, a principal executive officer of a federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA).

If the signatory will be a duly authorized representative, the following requirements must be met:

- The authorization is made in writing by the person who signed the NOI (see above);
- The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and
- The signed and dated written authorization is included in the SWPPP. A copy must be submitted to EPA, if requested.

2017 Construction General Permit
Corrective Action Report Form – Field Version

Purpose
This Corrective Action Report Form is to assist you in preparing corrective action reports for EPA's 2017 Construction General Permit (CGP). If you are covered under EPA's 2017 CGP, you can use this form to create a corrective action report that complies with the minimum reporting requirements of Part 5.4 of the permit.

You are only required to fill out this form if one of the conditions triggering corrective action in Part 5.1 or 5.3 occurs on your site. Routine maintenance is generally not considered to trigger corrective action. Corrective actions are triggered only for specific conditions that are identified below in the "Overview of Corrective Action Requirements."

If you are covered under a state CGP, this form may be helpful in developing a report that can be used for that permit; however, it will need to be modified to meet the specific requirements of the permit. If your permitting authority requires you to use a specific corrective action report form, you should not use this form.

Notes
While EPA has made every effort to ensure the accuracy of all instructions contained in the Corrective Action Report Form, it is the permit, not the form, that determines the actual obligations of regulated construction stormwater discharges. In the event of a conflict between the Corrective Action Report Form and any corresponding provision of the 2017 CGP, you must abide by the requirements in the permit. EPA welcomes comments on the Corrective Action Report Form at any time and will consider those comments in any future revision of this document. You may contact EPA for CGP-related inquiries at cgp@epa.gov.

Overview of Corrective Action Requirements
Construction operators covered under the 2017 CGP are required to conduct corrective actions and report on progress made in correcting the problem condition(s) in accordance with the following requirements:

Conditions Triggering Corrective Action (Parts 5.1 and 5.3)
Corrective action is required whenever any of the following conditions occur at your site:

- A stormwater control needs repair or replacement (beyond routine maintenance required under Part 2.1.4); or
- A stormwater control necessary to comply with the requirements of this permit was never installed, or was installed incorrectly; or
- Discharges are causing an exceedance of applicable water quality standards; or
- A Part 1.3 prohibited discharge has occurred; or
- EPA requires corrective action as a result of permit violations found during an inspection carried out under Part 4.8.

Deadlines for Completing Corrective Actions (Part 5.2)
For any condition triggering corrective action:

- You must immediately take all reasonable steps to address the condition (e.g. cleaning up contaminated surfaces so the material(s) is not discharged in subsequent storm events);
- If the problem does not require a new or replacement control or significant repair, you must complete the corrective action by the close of the next business day
- If the problem does require a new or replacement control or significant repair, you must complete corrective action (e.g., installing and making operational any new or modified control, completing repairs) by no later than 7 calendar days from the time of discovery of the condition. If infeasible to complete the installation or repair within 7 calendar days, you must document why it is infeasible and document your schedule for completing the corrective action as soon as practicable. If any of these actions result in changes to the stormwater controls documented in your SWPPP, you must modify your SWPPP within 7 calendar days.

Deadlines for Documenting Corrective Actions in a Report (Part 5.4)
You are required to complete a corrective action report for each corrective action you take in accordance with the following deadlines.

- Within 24 hours of *identifying* the corrective action condition, you must document the following:
  - The condition identified at your site; and
  - The date and time you identified the condition

- Within 24 hours of completing the corrective action, you must document the following:
  - The actions you took to address the condition, and
  - Whether any SWPPP modifications are required.

Instructions for Using This Report Form
This Field Version of the Corrective Action Report Form is intended to be used in the field and filled out by hand. If you will be filling out the Corrective Action Report Form electronically (i.e., you will be typing in your findings), please use the Electronic Version of the Corrective Action Report Form available at https://www.epa.gov/npdes/stormwater-discharges-construction-activities#resources. The Electronic Version includes text fields with instructions for what to enter.

The following tips for using this form will help you ensure that the minimum permit requirements are met:

- **Review the corrective action requirements.** Before you fill out this corrective action report form, read the CGP's Part 5 corrective action requirements. This will ensure that you have a working understanding of the permit's underlying corrective action requirements.

- **Complete a separate report for each condition that triggers corrective action.** For each triggering condition on your site, you will need to fill out a separate corrective action report form.

- **Complete all required text fields.** Fill out all text fields. Only by filling out all fields will the form be compliant with the requirements of the permit. (Note: Where you do not need the number of rows provided in the corrective action report form, you may leave those rows blank. Or, if you need more space to document your findings, you may add an additional sheet.)
- **Sign and certify each corrective action report.** The operator or a duly authorized representative (see Appendix I, Part I.11.2) must sign and certify each corrective action report form for it to be considered complete. Where a contractor or subcontractor carries out your corrective actions, it is recommended that you also have that individual sign and certify the form, in addition to the signature and certification required of the permitted operator. The form includes a signature block for both parties.
- **Include the corrective action report form with your SWPPP.** Once your form is complete, make sure to include a copy of the corrective action report form in your SWPPP in accordance with Part 7.2.7.e of the CGP.
- **Retain copies of all corrective action reports with your records.** You must retain copies of your corrective action reports in your records in accordance with the requirements in Part 5.4.4 of the 2017 CGP. These reports must be retained for at least 3 years from the date your permit coverage expires or is terminated.

Section-by-Section Instructions
You will find specific instructions corresponding to each section of the report form on the reverse side of each page. These instructions were written in order to provide you with more details in terms of what EPA expects to be documented in these reports

Section A – Initial Report (CGP Part 5.4.1) (Complete this section within 24 hours of identifying the condition that triggered corrective action)					
Name of Project		**NPDES ID No.**		**Today's Date**	
Date Problem First Discovered		**Time Problem First Discovered**			
Name and Contact Information of Individual Completing this Form					

What site conditions triggered the requirement to conduct corrective action *(check the box that applies)*:

- ☐ A stormwater control needs repair or replacement (beyond routine maintenance required under Part 2.1.4)
- ☐ A stormwater control necessary to comply with the requirements of this permit was never installed, or was installed incorrectly
- ☐ A discharge is causing an exceedance of applicable water quality standards
- ☐ A Part 1.3 prohibited discharge has occurred
- ☐ EPA requires corrective action as a result of permit violations found during an EPA inspection carried out under Part 4.8

Provide a description of the problem:

Deadline for completing corrective action *(check the box that applies)*:

- ☐ Immediately take all reasonable steps to address the condition, including cleaning up any contaminated surfaces so the material will not discharge in subsequent storm events
- ☐ Complete by close of the next business day when problem does not require a new or replacement control or significant repair
- ☐ No later than 7 calendar days from the time of discovery for problems that require a new or replacement control or significant repair
- ☐ Infeasible to complete the installation or repair within 7 calendar days. Explain why it is infeasible and document schedule for installing control:

Enter date of corrective action completion: _____

Section B – Corrective Action Completion (CGP Part 5.4.2)

(Complete this section no later than 24 hours after completing the corrective action)

Section B.1 – Why the Problem Occurred

Cause(s) of Problem (Add an additional sheet if necessary)	**How You Determined the Cause and the Date You Determined the Cause**
1.	**1.**
2.	**2.**

Section B.2 – Stormwater Control Modifications Implemented to Correct the Problem

List of Stormwater Control Modification(s) Needed to Correct Problem (Add an additional sheet if necessary)	**Date of Completion**	**SWPPP Update Necessary?**	**Notes**
1.		☐Yes ☐No If yes, provide date SWPPP modified:	
2.		☐Yes ☐No If yes, provide date SWPPP modified:	

Instructions for Filling Out the Initial Report (Section A)

You must complete Section A of the report form within 24 hours of discovering the condition that triggered corrective action

Name of Project
Enter the name for the project.

NPDES ID No.
Enter the NPDES ID number that was assigned to your NOI for permit coverage.

Today's Date
Enter the date you completed this form.

Date/Time Problem First Discovered
Specify the date on which the triggering condition was first discovered. Also specify the time of the discovery.

Name/Contact Information
Provide the individual's name, title, and contact information as directed in the form.

Site Condition That Triggered Corrective Action
Under the CGP, corrective action is required when one of 4 triggering conditions occurs at your site or when EPA requires a corrective action as a result of a permit violation found during an EPA inspection. See CGP Parts 5.1 and 5.3. Check the box that corresponds to the condition that triggered this corrective action.

Description of the Site Condition
Provide a summary description of the condition you found that triggered corrective action under CGP Part 5.1 and the specific location where it was found. Be as specific as possible about the location; it is recommended that you refer to a precise point on your site map. If you have already provided this explanation in an inspection report, you can refer to that report.

Deadline for Completing Corrective Action
This deadline is fixed in CGP Part 5.2. For all projects, the deadlines are: (1) immediately take all reasonable steps; (2) by the close of the next business day when the problem does not require significant repair or replacement; (3) no more than 7 calendar days after the date you discovered the problem when the problem does require significant repair or replacement, or (4) if it is infeasible to complete work within the first 7 days, as soon as practicable following the 7th day. If your estimated date of completion falls after the 7-day deadline consistent with (3), above, explain (a) why you believe it is infeasible to complete work within 7 days, and (b) why the date you have established for making the new or modified stormwater control operational is the soonest practicable timeframe.

Instructions for Filling Out the Corrective Action Completion Table (Section B)

You must complete Section B of the report form no later than 24 hours after completing the correction action.

Section B.1 – Why the Problem Occurred
After you have had the opportunity to examine the problem more closely, provide details as to what you believe to be the cause of the problem, and specify the follow-up actions you took (along with the dates of such actions) to diagnose the problem. This is consistent with CGP Part 5.4.2.

Section B.2 – Stormwater Control Modifications Implemented
Provide a list of modifications you made to your stormwater controls to correct the problem and the date you completed such work. Keep in mind that your work must be completed within the timeline specified in Section A for the completion of corrective action work.

Also, if a SWPPP modification is necessary consistent with Part 7.4.1.a in order to reflect changes implemented at your site, indicate the date you modified your SWPPP. Keep in mind that SWPPP changes must be made within 7 days of discovering the problem that triggered this corrective action.

Space is provided for you to include additional notes or observations regarding the change that you implemented at your site to correct the problem.

Section C –Signature and Certification (CGP Part 5.4.3)

Section C.1 – Contractor or Subcontractor Signature and 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, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature of Contractor or Subcontractor: _____

Date:

Printed Name and Affiliation: _____

Section C.2 – Operator Signature and 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, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature of Operator or "Duly Authorized Representative": _____

Date:

Printed Name and Affiliation: _____

Instructions for Signature and Certification (Section C)

Each corrective action report must be signed and certified to be considered complete.

Section C.1 – Contractor or Subcontractor Signature and Certification
Where you rely on a contractor or subcontractor to complete this report and the associated corrective action, you should require the individual(s) to sign and certify each report. Note that this does not relieve you, the permitted operator, of the requirement to sign and certify the report as well.

Section C.2 – Operator Signature and Certification
At a minimum, the corrective action report form must be signed by either (1) the person who signed the NOI, or (2) a duly authorized representative of that person. The following requirements apply to scenarios (1) and (2):

If the signatory will be the person who signed the NOI for permit coverage, as a reminder, that person must be one of the following types of individuals:

- *For a corporation*: A responsible corporate officer. For the purpose of this subsection, a responsible corporate officer means: (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
- *For a partnership or sole proprietorship*: A general partner or the proprietor, respectively.
- *For a municipality, state, federal, or other public agency*: Either a principal executive officer or ranking elected official. For purposes of this subsection, a principal executive officer of a federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA).

If the signatory will be a duly authorized representative, the following requirements must be met:

- The authorization is made in writing by the person who signed the NOI (see above);
- The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and
- The signed and dated written authorization is included in the SWPPP. A copy must be submitted to EPA, if requested.

Grading and Stabilization Activities Log

Date Grading Activity Initiated	**Description of Grading Activity**	**Description of Stabilization Measure and Location**	**Date Grading Activity Ceased** (Indicate Temporary or Permanent)	**Date When Stabilization Measures Initiated**

DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
TRANSFER OF PERMIT COVERAGE FORM

for Coverage Under the SWD General Permit for
Stormwater Discharges Associated with Construction Activities

This form is required to be submitted when ownership of a construction project or an individual lot in a larger common plan of development has been transferred to a different owner. Please submit this form to the following address:

Submit form to: SD Department of Environment and Natural Resources
Surface Water Quality Program
523 East Capitol Avenue
Pierre, South Dakota 57501
stormwater@state.sd.us
Telephone: 1-800-SDSTORM

Project Name: _____ Permit Number: _____

Site (Lot) Legal Location: _____

Site (Lot) Description: _____

Previous Owner's Name: _____

New Owner's Name: _____

New Owner's Mailing Information:

City: _____ State: _____ Zip Code: _____

Phone Number: _____ Email: _____

Stabilization measures implemented prior to transfer: _____

_____

Date transfer of property responsibility and liability becomes effective: _____

****NOTE: Any change in location, operation, and/or coverage area requires that the Stormwater Pollution Prevention Plan be updated and revised to reflect all changes.**

The site (lot) described about is covered under the General Permit for Stormwater Discharges Associated with Construction Activity. Temporary or permanent stabilization has been established on the site, which has now transferred ownership/responsibility as indicated above. The new owners, or operators, have been made aware of the importance of site stabilization in an effort to control pollutant runoff and/or sedimentation.

The new owner assumes responsibility for implementing best management practices to reduce or eliminate a discharge of pollutants to waters of the state. The new owner is aware that permit coverage for the site is required until all soil-disturbing activities at the site have been completed and one of the following conditions have been met:

- **all portions of the site not covered by pavement or permanent structures have a uniform perennial vegetative cover over at least 70% of the site; or**
- **equivalent permanent stabilization measure have been employed, such as the use of riprap, gabions, or geotextiles.**

New Owner/Operator Signature: _____

Date: _____

Previous Owner/Operator Signature: _____

Date: _____

FOR DENR USE ONLY

Permit Number: _____ Date Approved: _____ Approved by: _____

DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
NOTICE OF INTENT (NOI) for REAUTHORIZATION
of Coverage Under the SWD General Permit for
Stormwater Discharges Associated with Construction Activities

The following facility currently has coverage under the General Permit for Stormwater Discharges Associated with Construction Activities. ***This form must be submitted if you wish to continue coverage under the General Permit.*** Submission of this form shall in no way relieve the permittee of permit obligations required prior to submission of this form. Please submit this form to the following address:

Submit form to: SD Department of Environment and Natural Resources
Surface Water Quality Program
523 East Capitol Avenue
Pierre, South Dakota 57501
stormwater@state.sd.us
Telephone: 1-800-SDSTORM

Update information below as needed. Please print or type information.

I. Permit Number: _____

II. Owner Information:

Company Name: _____

Primary Contact Person: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Phone Number: _____ Email Address: _____

III. Construction Project Information:

Project Name: _____

Project Description: _____

On-Site Contact Person: _____

Mailing Address: _____

City: _____ County: _____ State: _____ Zip Code: _____

Phone Number: _____ Total area disturbed by the project (in acres): _____

Project Start Date: _____ Estimated Completion Date: _____

IV. Signature of Applicant

By signing this form, you are requesting to continue permit coverage under the reissued General Permit. You are certifying you will comply with the new General Permit and update your Stormwater Pollution Prevention Plan if necessary to meet the reissued General Permit conditions.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including revocation of the permit and the possibility of fine and imprisonment for knowing violations. In addition, I certify that I am aware of the terms and conditions of the General Stormwater permit and I agree to comply with those requirements.

NOTE: The NOI for Reauthorization must be signed by the authorized chief elective or executive offier of the applicant, or by the applicant, if an individual project.

Name (print): _____ Title: _____

Signature: _____ Date: _____

FOR DENR USE ONLY

Permit Number: _____ Date Reauthorized: _____ Approved by: _____

Delegation of Authority

I, _____ (name), hereby designate the person or specifically described position below to be a duly authorized representative for the purpose of overseeing compliance with environmental requirements, including the Construction General Permit, at the _____ construction site. The designee is authorized to sign any reports, stormwater pollution prevention plans, and all other documents required by the permit.

_____ (name of person or position)

_____ (company)

_____ (address)

_____ (city, state, zip)

_____ (phone)

By signing this authorization, I confirm that I meet the requirements to make such a designation as set forth in Appendix I of EPA's Construction General Permit (CGP), and that the designee above meets the definition of a "duly authorized representative" as set forth in Appendix I.

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, 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.

Name: _____

Company: _____

Title: _____

Signature: _____

Date: _____

Contractor / Subcontractor Certification Statement

Stormwater Pollution Prevention Plan

Project Title: _____

Operator(s): _____

As a subcontractor, you are required to comply with the Stormwater Pollution Prevention Plan (SWPPP) for any work that you perform on-site. Any person or group who violates any condition of the SWPPP may be subject to substantial penalties or loss of contract. You are encouraged to advise each of your employees working on this project of the requirements of the SWPPP. A copy of the SWPPP is available for your review at the office trailer.

Each subcontractor engaged in activities at the construction site that could impact stormwater must be identified and sign the following certification statement:

I certify under the penalty of law that I have read and understand the terms and conditions of the SWPPP for the above designated project and agree to follow the practices described in the SWPPP.

This certification is hereby signed in reference to the above-named project:

Company: _____

Address: _____

Telephone Number: _____

Type of construction service to be provided: _____

_____

_____

Signature: _____

Title: _____

Date: _____

APEX

Stormwater Pollution Prevention Onsite Training Log

Project Name:

Project Location:

Instructor's Name(s):

Instructor's Title(s):

Stormwater Training Topic: (*check as appropriate)*

- ❑ **Sediment and Erosion Controls**
- ❑ **Emergency Procedures**
- ❑ **Stabilization Controls**
- ❑ **Inspections/Corrective Actions**
- ❑ **Pollution Prevention Measures**

Specific Training Objective:_____

_____

Attendee Roster: (*attach additional pages as necessary)*

No.	Name of Attendee	Company
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

Stormwater Pollution Prevention Offsite Training Log

Project Name:

Project Location:

Instructor's Name(s):

Instructor's Title(s):

Course Location: _____ Date: _____

Course Length (hours): _____

Stormwater Training Topic: (*check as appropriate)*

- ❑ **Sediment and Erosion Controls**
- ❑ **Emergency Procedures**
- ❑ **Stabilization Controls**
- ❑ **Inspections/Corrective Actions**
- ❑ **Pollution Prevention Measures**

Specific Training Objective:_____

_____

Attendee Roster: (*attach additional pages as necessary)*

No.	Name of Attendee	Company
1		
2		
3		
4		
5		
6		
7		
8		

Grading and Stabilization Activities Log

Date Grading Activity Initiated	**Description of Grading Activity**	**Description of Stabilization Measure and Location**	**Date Grading Activity Ceased** (Indicate Temporary or Permanent)	**Date When Stabilization Measures Initiated**

DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
NOTICE OF TERMINATION (NOT)
of Coverage Under the SWD General Permit for
Stormwater Discharges Associated with Construction Activities

This form is required to be submitted when a discharge permit is no longer required or necessary. Submission of this form shall in no way relieve the permittee of permit obligations required prior to submission of this form. Please submit this form to the following address:

Submit form to: SD Department of Environment and Natural Resources
Surface Water Quality Program
523 East Capitol Avenue
Pierre, South Dakota 57501
stormwater@state.sd.us
Telephone: 1-800-SDSTORM

I. Permit Number: _____

II. Primary Contact Information:

Company Name: _____

Primary Contact Person: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Phone Number: _____ Email Address: _____

III. Mailing Address for Facility/Site Location:

Project Name: _____

Primary Contact Person: _____

Contact's Email Address: _____

Contact's Mailing Address: _____

City: _____ State: _____ Zip Code: _____

I certify under penalty of law that all stormwater discharges associated with construction activity from the identified facility that are authorized by a SWD general permit have been eliminated. I understand that by submitting the Notice of Termination, I am no longer authorized to discharge stormwater associated with construction activity under this general permit, and that discharging pollutants in stormwater associated with construction activity to waters of the state is unlawful under the federal Clean Water Act and the South Dakota Water Pollution Control Act if the discharge is not authorized by a SWD permit. I also understand that the submittal of this Notice of Termination does not release an operator from liability for any violations of this permit or the South Dakota Water Pollution Control Act. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NOTE: Notice of Termination shall be signed by the authorized chief elective or executive officer of the applicant, or by the applicant, if an individual.

Name: _____ Title: _____

Signature: _____ Date: _____

FOR DENR USE ONLY

Permit Number: _____ Date Approved: _____ Letter Date: _____ Approved by: _____

Appendix E – Soils Data

The following documents are included in this Appendix

- USDA NRCS – Soils Data Report
- RUSLE Outputs - (To be included when performed)

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Hand County, South Dakota

January 29, 2021

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map (Sweetland Substation Soils Map)

Map Scale: 1:1,300 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 15 30 60 90

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Hand County, South Dakota
Survey Area Data: Version 22, Jun 3, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 16, 2010—Feb 6, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend (Sweetland Substation Soils Map)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
WmC	Glenham loam, rolling	6.5	98.2%
ZyE	Betts-Java loams, steep	0.1	1.8%
Totals for Area of Interest		**6.6**	**100.0%**

Map Unit Descriptions (Sweetland Substation Soils Map)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The

delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Hand County, South Dakota

WmC—Glenham loam, rolling

Map Unit Setting

National map unit symbol: cv03
Elevation: 1,310 to 1,970 feet
Mean annual precipitation: 18 to 25 inches
Mean annual air temperature: 43 to 50 degrees F
Frost-free period: 130 to 155 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Glenham and similar soils: 99 percent
Minor components: 1 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Glenham

Setting

Landform: Plains
Landform position (two-dimensional): Backslope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy till

Typical profile

H1 - 0 to 5 inches: loam
H2 - 5 to 13 inches: clay loam
H3 - 13 to 60 inches: loam

Properties and qualities

Slope: 6 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Gypsum, maximum content: 2 percent
Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water capacity: High (about 11.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: R055CY010SD - Loamy
Forage suitability group: Loam (G055CY100SD)
Other vegetative classification: Loam (G055CY100SD)
Hydric soil rating: No

Minor Components

Tetonka

Percent of map unit: 1 percent
Landform: Potholes
Landform position (two-dimensional): Toeslope
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R055CY004SD - Wet Meadow
Other vegetative classification: Wet (G053CY900SD)
Hydric soil rating: Yes

ZyE—Betts-Java loams, steep

Map Unit Setting

National map unit symbol: cv0x
Elevation: 1,300 to 2,300 feet
Mean annual precipitation: 15 to 25 inches
Mean annual air temperature: 43 to 48 degrees F
Frost-free period: 130 to 150 days
Farmland classification: Not prime farmland

Map Unit Composition

Betts and similar soils: 50 percent
Java and similar soils: 30 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Betts

Setting

Landform: Moraines
Landform position (two-dimensional): Shoulder
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy till

Typical profile

H1 - 0 to 4 inches: loam
H2 - 4 to 30 inches: clay loam
H3 - 30 to 60 inches: loam

Properties and qualities

Slope: 15 to 34 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None

Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Gypsum, maximum content: 2 percent
Maximum salinity: Very slightly saline to moderately saline (2.0 to 8.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water capacity: High (about 11.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: C
Ecological site: R053CY012SD - Thin Upland
Forage suitability group: Not suited (G053CY000SD)
Other vegetative classification: Not suited (G053CY000SD)
Hydric soil rating: No

Description of Java

Setting

Landform: Moraines
Landform position (two-dimensional): Backslope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy till

Typical profile

H1 - 0 to 3 inches: loam
H2 - 3 to 6 inches: loam
H3 - 6 to 40 inches: loam
H4 - 40 to 60 inches: loam

Properties and qualities

Slope: 15 to 25 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Gypsum, maximum content: 5 percent
Maximum salinity: Nonsaline to moderately saline (0.0 to 8.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water capacity: High (about 10.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: B
Ecological site: R053CY012SD - Thin Upland
Forage suitability group: Limy Upland (G053CY400SD)
Other vegetative classification: Limy Upland (G053CY400SD)
Hydric soil rating: No

Minor Components

Glenham

Percent of map unit: 10 percent
Landform: Moraines
Landform position (two-dimensional): Backslope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R053CY010SD - Loamy
Other vegetative classification: Loam (G053CY100SD)
Hydric soil rating: No

Prosper

Percent of map unit: 10 percent
Landform: Swales
Landform position (two-dimensional): Footslope
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R053CY010SD - Loamy
Other vegetative classification: Loam (G053CY100SD)
Hydric soil rating: No

Soil Information for All Uses

Suitabilities and Limitations for Use

The Suitabilities and Limitations for Use section includes various soil interpretations displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each interpretation.

Land Management

Land management interpretations are tools designed to guide the user in evaluating existing conditions in planning and predicting the soil response to various land management practices, for a variety of land uses, including cropland, forestland, hayland, pastureland, horticulture, and rangeland. Example interpretations include suitability for a variety of irrigation practices, log landings, haul roads and major skid trails, equipment operability, site preparation, suitability for hand and mechanical planting, potential erosion hazard associated with various practices, and ratings for fencing and waterline installation.

Erosion Hazard (Off-Road, Off-Trail) (Sweetland Substation)

The ratings in this interpretation indicate the hazard of soil loss from off-road and off-trail areas after disturbance activities that expose the soil surface. The ratings are based on slope, soil erosion factor K, and an index of rainfall erosivity (R). The soil loss is caused by sheet or rill erosion in off-road or off-trail areas where 50 to 75 percent of the surface has been exposed by logging, grazing, mining, or other kinds of disturbance.

The ratings are both verbal and numerical. The hazard is described as "slight," "moderate," "severe," or "very severe." A rating of "slight" indicates that erosion is unlikely under ordinary climatic conditions; "moderate" indicates that some erosion is likely and that erosion-control measures may be needed; "severe" indicates that erosion is very likely and that erosion-control measures, including revegetation of bare areas, are advised; and "very severe" indicates that significant erosion is expected, loss of soil productivity and off-site damage are likely, and erosion-control measures are costly and generally impractical.

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the specified aspect of forestland management (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Map—Erosion Hazard (Off-Road, Off-Trail) (Sweetland Substation)

Map Scale: 1:1,300 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 15 30 60 90

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- Very severe
- Severe
- Moderate
- Slight
- Not rated or not available

Soil Rating Lines
- Very severe
- Severe
- Moderate
- Slight
- Not rated or not available

Soil Rating Points
- Very severe
- Severe
- Moderate
- Slight
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Hand County, South Dakota
Survey Area Data: Version 22, Jun 3, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 16, 2010—Feb 6, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Tables—Erosion Hazard (Off-Road, Off-Trail) (Sweetland Substation)

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
WmC	Glenham loam, rolling	Moderate	Glenham (99%)	Surface kw times slope times R index (0.18)	6.5	98.2%
ZyE	Betts-Java loams, steep	Severe	Betts (50%)	Surface kw times slope times R index (0.89)	0.1	1.8%
			Java (30%)	Surface kw times slope times R index (0.84)		
Totals for Area of Interest					**6.6**	**100.0%**

Rating	Acres in AOI	Percent of AOI
Moderate	6.5	98.2%
Severe	0.1	1.8%
Totals for Area of Interest	**6.6**	**100.0%**

Rating Options—Erosion Hazard (Off-Road, Off-Trail) (Sweetland Substation)

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Suitability for Roads (Natural Surface) (Sweetland Substation)

The ratings in this interpretation indicate the suitability for using the natural surface of the soil for roads. The ratings are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification of the soil, depth to a water table, ponding, flooding, and the hazard of soil slippage.

The ratings are both verbal and numerical. The soils are described as "well suited," "moderately suited," or "poorly suited" to this use. "Well suited" indicates that the soil has features that are favorable for the specified kind of roads and has no limitations. Good performance can be expected, and little or no maintenance is needed. "Moderately suited" indicates that the soil has features that are moderately favorable for the specified kind of roads. One or more soil properties are less than desirable, and fair performance can be expected. Some maintenance is needed. "Poorly suited" indicates that the soil has one or more properties that are

unfavorable for the specified kind of roads. Overcoming the unfavorable properties requires special design, extra maintenance, and costly alteration.

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the specified aspect of forestland management (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Map—Suitability for Roads (Natural Surface) (Sweetland Substation)

Map Scale: 1:1,300 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 15 30 60 90

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- Poorly suited
- Moderately suited
- Well suited
- Not rated or not available

Soil Rating Lines

- Poorly suited
- Moderately suited
- Well suited
- Not rated or not available

Soil Rating Points

- Poorly suited
- Moderately suited
- Well suited
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Hand County, South Dakota
Survey Area Data: Version 22, Jun 3, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 16, 2010—Feb 6, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Tables—Suitability for Roads (Natural Surface) (Sweetland Substation)

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
WmC	Glenham loam, rolling	Moderately suited	Glenham (99%)	Slope (0.50)	6.5	98.2%
				Low strength (0.50)		
				Dusty (0.10)		
ZyE	Betts-Java loams, steep	Poorly suited	Betts (50%)	Slope (1.00)	0.1	1.8%
				Low strength (0.50)		
				Dusty (0.09)		
			Java (30%)	Slope (1.00)		
				Low strength (0.50)		
				Dusty (0.08)		
Totals for Area of Interest					**6.6**	**100.0%**

Rating	Acres in AOI	Percent of AOI
Moderately suited	6.5	98.2%
Poorly suited	0.1	1.8%
Totals for Area of Interest	**6.6**	**100.0%**

Rating Options—Suitability for Roads (Natural Surface) (Sweetland Substation)

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Suitability for Roads (Natural Surface) (Sweetland Substation)

The ratings in this interpretation indicate the suitability for using the natural surface of the soil for roads. The ratings are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification of the soil, depth to a water table, ponding, flooding, and the hazard of soil slippage.

The ratings are both verbal and numerical. The soils are described as "well suited," "moderately suited," or "poorly suited" to this use. "Well suited" indicates that the

soil has features that are favorable for the specified kind of roads and has no limitations. Good performance can be expected, and little or no maintenance is needed. "Moderately suited" indicates that the soil has features that are moderately favorable for the specified kind of roads. One or more soil properties are less than desirable, and fair performance can be expected. Some maintenance is needed. "Poorly suited" indicates that the soil has one or more properties that are unfavorable for the specified kind of roads. Overcoming the unfavorable properties requires special design, extra maintenance, and costly alteration.

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the specified aspect of forestland management (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Map—Suitability for Roads (Natural Surface) (Sweetland Substation)

Map Scale: 1:1,300 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 15 30 60 90

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- Poorly suited
- Moderately suited
- Well suited
- Not rated or not available

Soil Rating Lines

- Poorly suited
- Moderately suited
- Well suited
- Not rated or not available

Soil Rating Points

- Poorly suited
- Moderately suited
- Well suited
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Hand County, South Dakota
Survey Area Data: Version 22, Jun 3, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 16, 2010—Feb 6, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Tables—Suitability for Roads (Natural Surface) (Sweetland Substation)

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
WmC	Glenham loam, rolling	Moderately suited	Glenham (99%)	Slope (0.50)	6.5	98.2%
				Low strength (0.50)		
				Dusty (0.10)		
ZyE	Betts-Java loams, steep	Poorly suited	Betts (50%)	Slope (1.00)	0.1	1.8%
				Low strength (0.50)		
				Dusty (0.09)		
			Java (30%)	Slope (1.00)		
				Low strength (0.50)		
				Dusty (0.08)		
Totals for Area of Interest					**6.6**	**100.0%**

Rating	Acres in AOI	Percent of AOI
Moderately suited	6.5	98.2%
Poorly suited	0.1	1.8%
Totals for Area of Interest	**6.6**	**100.0%**

Rating Options—Suitability for Roads (Natural Surface) (Sweetland Substation)

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Erosion Hazard (Off-Road, Off-Trail) (Sweetland Substation)

The ratings in this interpretation indicate the hazard of soil loss from off-road and off-trail areas after disturbance activities that expose the soil surface. The ratings are based on slope, soil erosion factor K, and an index of rainfall erosivity (R). The soil loss is caused by sheet or rill erosion in off-road or off-trail areas where 50 to 75 percent of the surface has been exposed by logging, grazing, mining, or other kinds of disturbance.

The ratings are both verbal and numerical. The hazard is described as "slight," "moderate," "severe," or "very severe." A rating of "slight" indicates that erosion is unlikely under ordinary climatic conditions; "moderate" indicates that some erosion is likely and that erosion-control measures may be needed; "severe" indicates that erosion is very likely and that erosion-control measures, including revegetation of bare areas, are advised; and "very severe" indicates that significant erosion is expected, loss of soil productivity and off-site damage are likely, and erosion-control measures are costly and generally impractical.

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the specified aspect of forestland management (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Map—Erosion Hazard (Off-Road, Off-Trail) (Sweetland Substation)

Map Scale: 1:1,300 if printed on A landscape (11" x 8.5") sheet.

N

0 15 30 60 90 Meters

0 50 100 200 300 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- Very severe
- Severe
- Moderate
- Slight
- Not rated or not available

Soil Rating Lines
- Very severe
- Severe
- Moderate
- Slight
- Not rated or not available

Soil Rating Points
- Very severe
- Severe
- Moderate
- Slight
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Hand County, South Dakota
Survey Area Data: Version 22, Jun 3, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 16, 2010—Feb 6, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Tables—Erosion Hazard (Off-Road, Off-Trail) (Sweetland Substation)

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
WmC	Glenham loam, rolling	Moderate	Glenham (99%)	Surface kw times slope times R index (0.18)	6.5	98.2%
ZyE	Betts-Java loams, steep	Severe	Betts (50%)	Surface kw times slope times R index (0.89)	0.1	1.8%
			Java (30%)	Surface kw times slope times R index (0.84)		
Totals for Area of Interest					**6.6**	**100.0%**

Rating	Acres in AOI	Percent of AOI
Moderate	6.5	98.2%
Severe	0.1	1.8%
Totals for Area of Interest	**6.6**	**100.0%**

Rating Options—Erosion Hazard (Off-Road, Off-Trail) (Sweetland Substation)

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

Soil Erosion Factors

Soil Erosion Factors are soil properties and interpretations used in evaluating the soil for potential erosion. Example soil erosion factors can include K factor for the whole soil or on a rock free basis, T factor, wind erodibility group and wind erodibility index.

K Factor, Whole Soil (Sweetland Substation K Factor)

Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and saturated hydraulic conductivity (Ksat). Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

"Erosion factor Kw (whole soil)" indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Factor K does not apply to organic horizons and is not reported for those layers.

Map—K Factor, Whole Soil (Sweetland Substation K Factor)

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

.02
.05
.10
.15
.17
.20
.24
.28
.32
.37
.43
.49
.55
.64
Not rated or not available

Soil Rating Lines

.02
.05
.10
.15
.17
.20
.24
.28
.32
.37
.43
.49
.55
.64
Not rated or not available

Soil Rating Points

.02
.05
.10
.15
.17
.20
.24
.28
.32
.37
.43
.49
.55
.64
Not rated or not available

Water Features

Streams and Canals

Transportation

Rails
Interstate Highways
US Routes
Major Roads
Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Hand County, South Dakota
Survey Area Data: Version 22, Jun 3, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 16, 2010—Feb 6, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—K Factor, Whole Soil (Sweetland Substation K Factor)

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
WmC	Glenham loam, rolling	.37	6.5	98.2%
ZyE	Betts-Java loams, steep	.37	0.1	1.8%
Totals for Area of Interest			**6.6**	**100.0%**

Rating Options—K Factor, Whole Soil (Sweetland Substation K Factor)

Aggregation Method: Dominant Condition

Aggregation is the process by which a set of component attribute values is reduced to a single value that represents the map unit as a whole.

A map unit is typically composed of one or more "components". A component is either some type of soil or some nonsoil entity, e.g., rock outcrop. For the attribute being aggregated, the first step of the aggregation process is to derive one attribute value for each of a map unit's components. From this set of component attributes, the next step of the aggregation process derives a single value that represents the map unit as a whole. Once a single value for each map unit is derived, a thematic map for soil map units can be rendered. Aggregation must be done because, on any soil map, map units are delineated but components are not.

For each of a map unit's components, a corresponding percent composition is recorded. A percent composition of 60 indicates that the corresponding component typically makes up approximately 60% of the map unit. Percent composition is a critical factor in some, but not all, aggregation methods.

The aggregation method "Dominant Condition" first groups like attribute values for the components in a map unit. For each group, percent composition is set to the sum of the percent composition of all components participating in that group. These groups now represent "conditions" rather than components. The attribute value associated with the group with the highest cumulative percent composition is returned. If more than one group shares the highest cumulative percent composition, the corresponding "tie-break" rule determines which value should be returned. The "tie-break" rule indicates whether the lower or higher group value should be returned in the case of a percent composition tie. The result returned by this aggregation method represents the dominant condition throughout the map unit only when no tie has occurred.

Component Percent Cutoff: None Specified

Components whose percent composition is below the cutoff value will not be considered. If no cutoff value is specified, all components in the database will be considered. The data for some contrasting soils of minor extent may not be in the database, and therefore are not considered.

Tie-break Rule: Higher

The tie-break rule indicates which value should be selected from a set of multiple candidate values, or which value should be selected in the event of a percent composition tie.

Layer Options (Horizon Aggregation Method): All Layers (Weighted Average)

For an attribute of a soil horizon, a depth qualification must be specified. In most cases it is probably most appropriate to specify a fixed depth range, either in centimeters or inches. The Bottom Depth must be greater than the Top Depth, and the Top Depth can be greater than zero. The choice of "inches" or "centimeters" only applies to the depth of soil to be evaluated. It has no influence on the units of measure the data are presented in.

When "Surface Layer" is specified as the depth qualifier, only the surface layer or horizon is considered when deriving a value for a component, but keep in mind that the thickness of the surface layer varies from component to component.

When "All Layers" is specified as the depth qualifier, all layers recorded for a component are considered when deriving the value for that component.

Whenever more than one layer or horizon is considered when deriving a value for a component, and the attribute being aggregated is a numeric attribute, a weighted average value is returned, where the weighting factor is the layer or horizon thickness.

T Factor (Sweetland Substation T Factor)

The T factor is an estimate of the maximum average annual rate of soil erosion by wind and/or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

Map Scale: 1:1,300 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 15 30 60 90

Feet
0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- 1
- 2
- 3
- 4
- 5
- Not rated or not available

Soil Rating Lines

- 1
- 2
- 3
- 4
- 5
- Not rated or not available

Soil Rating Points

- 1
- 2
- 3
- 4
- 5
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Hand County, South Dakota
Survey Area Data: Version 22, Jun 3, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 16, 2010—Feb 6, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—T Factor (Sweetland Substation T Factor)

Map unit symbol	Map unit name	Rating (tons per acre per year)	Acres in AOI	Percent of AOI
WmC	Glenham loam, rolling	5	6.5	98.2%
ZyE	Betts-Java loams, steep	5	0.1	1.8%
Totals for Area of Interest			**6.6**	**100.0%**

Rating Options—T Factor (Sweetland Substation T Factor)

Units of Measure: tons per acre per year

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

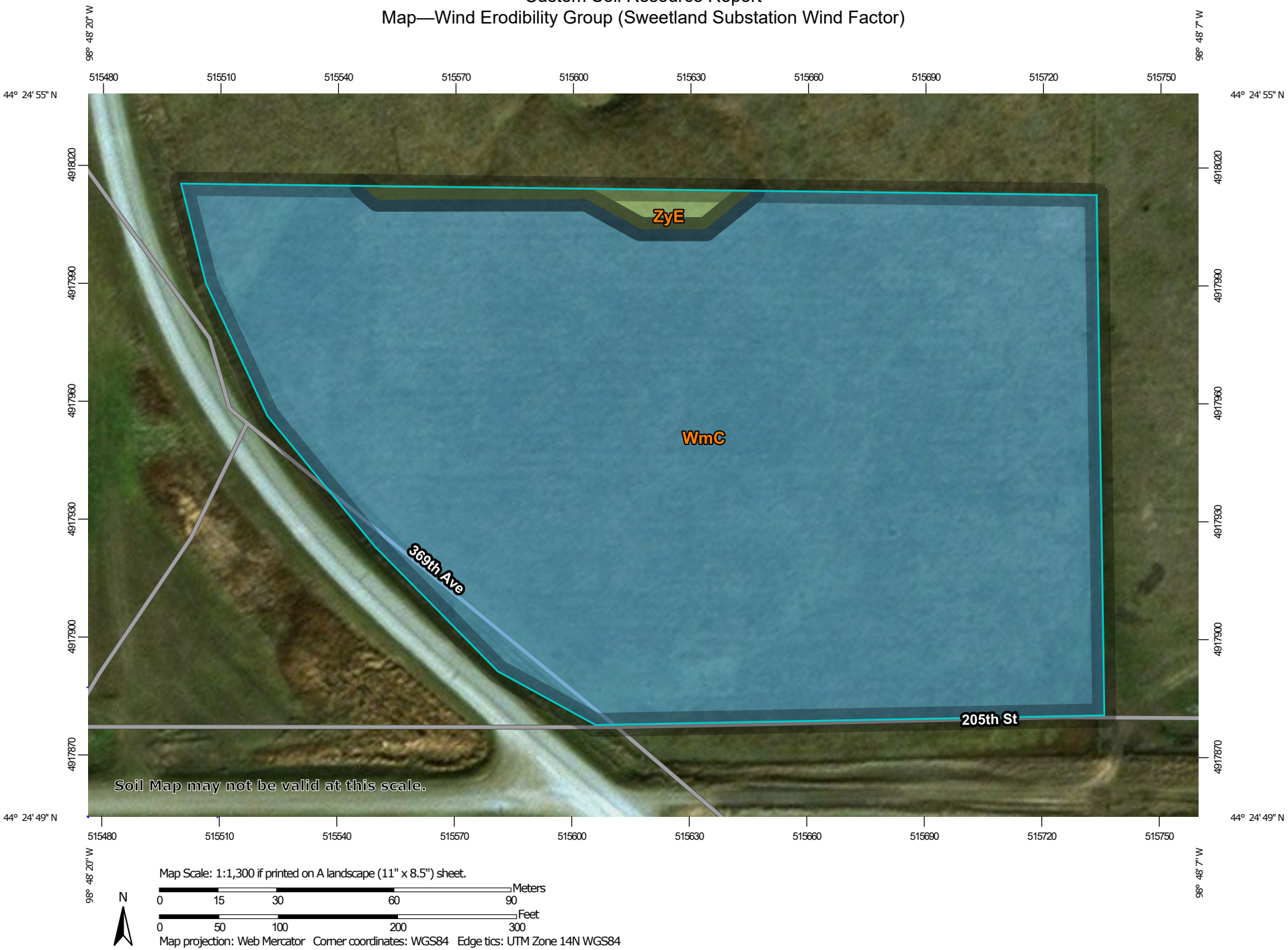
Tie-break Rule: Lower

Interpret Nulls as Zero: No

Wind Erodibility Group (Sweetland Substation Wind Factor)

A wind erodibility group (WEG) consists of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible.

Map—Wind Erodibility Group (Sweetland Substation Wind Factor)



Map Scale: 1:1,300 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 15 30 60 90

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

1
2
3
4
4L
5
6
7
8
Not rated or not available

Soil Rating Lines

1
2
3
4
4L
5
6
7
8
Not rated or not available

Soil Rating Points

1
2
3
4
4L
5
6
7
8
Not rated or not available

Water Features

Streams and Canals

Transportation

Rails
Interstate Highways
US Routes
Major Roads
Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Hand County, South Dakota
Survey Area Data: Version 22, Jun 3, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 16, 2010—Feb 6, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Wind Erodibility Group (Sweetland Substation Wind Factor)

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
WmC	Glenham loam, rolling	6	6.5	98.2%
ZyE	Betts-Java loams, steep	4L	0.1	1.8%
Totals for Area of Interest			**6.6**	**100.0%**

Rating Options—Wind Erodibility Group (Sweetland Substation Wind Factor)

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

Soil Qualities and Features

Soil qualities are behavior and performance attributes that are not directly measured, but are inferred from observations of dynamic conditions and from soil properties. Example soil qualities include natural drainage, and frost action. Soil features are attributes that are not directly part of the soil. Example soil features include slope and depth to restrictive layer. These features can greatly impact the use and management of the soil.

Hydrologic Soil Group (Sweetland Substation HSG)

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

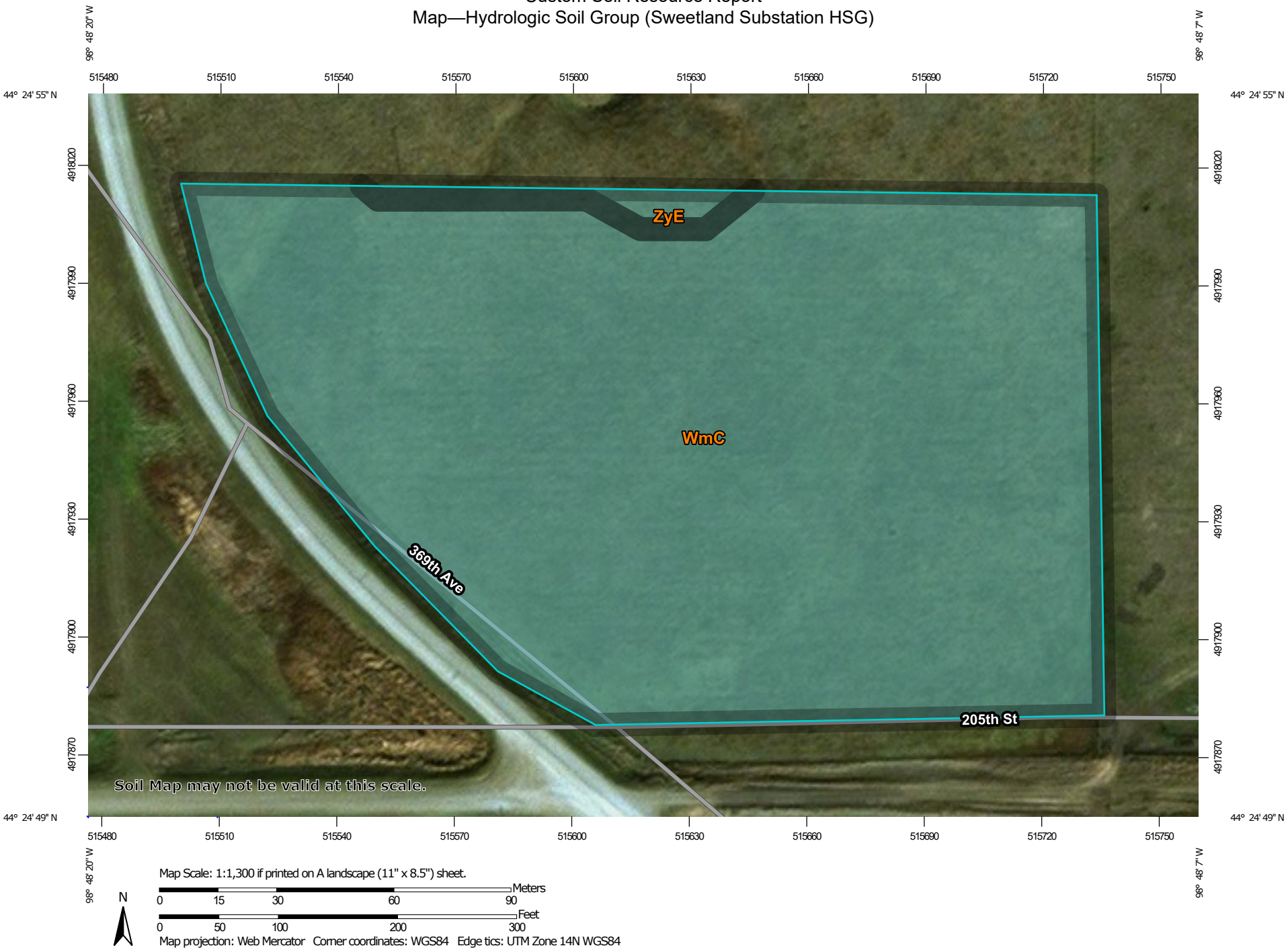
Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Map—Hydrologic Soil Group (Sweetland Substation HSG)



Map Scale: 1:1,300 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 15 30 60 90

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Lines

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Points

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Hand County, South Dakota
Survey Area Data: Version 22, Jun 3, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 16, 2010—Feb 6, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Hydrologic Soil Group (Sweetland Substation HSG)

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
WmC	Glenham loam, rolling	C	6.5	98.2%
ZyE	Betts-Java loams, steep	C	0.1	1.8%
Totals for Area of Interest			**6.6**	**100.0%**

Rating Options—Hydrologic Soil Group (Sweetland Substation HSG)

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

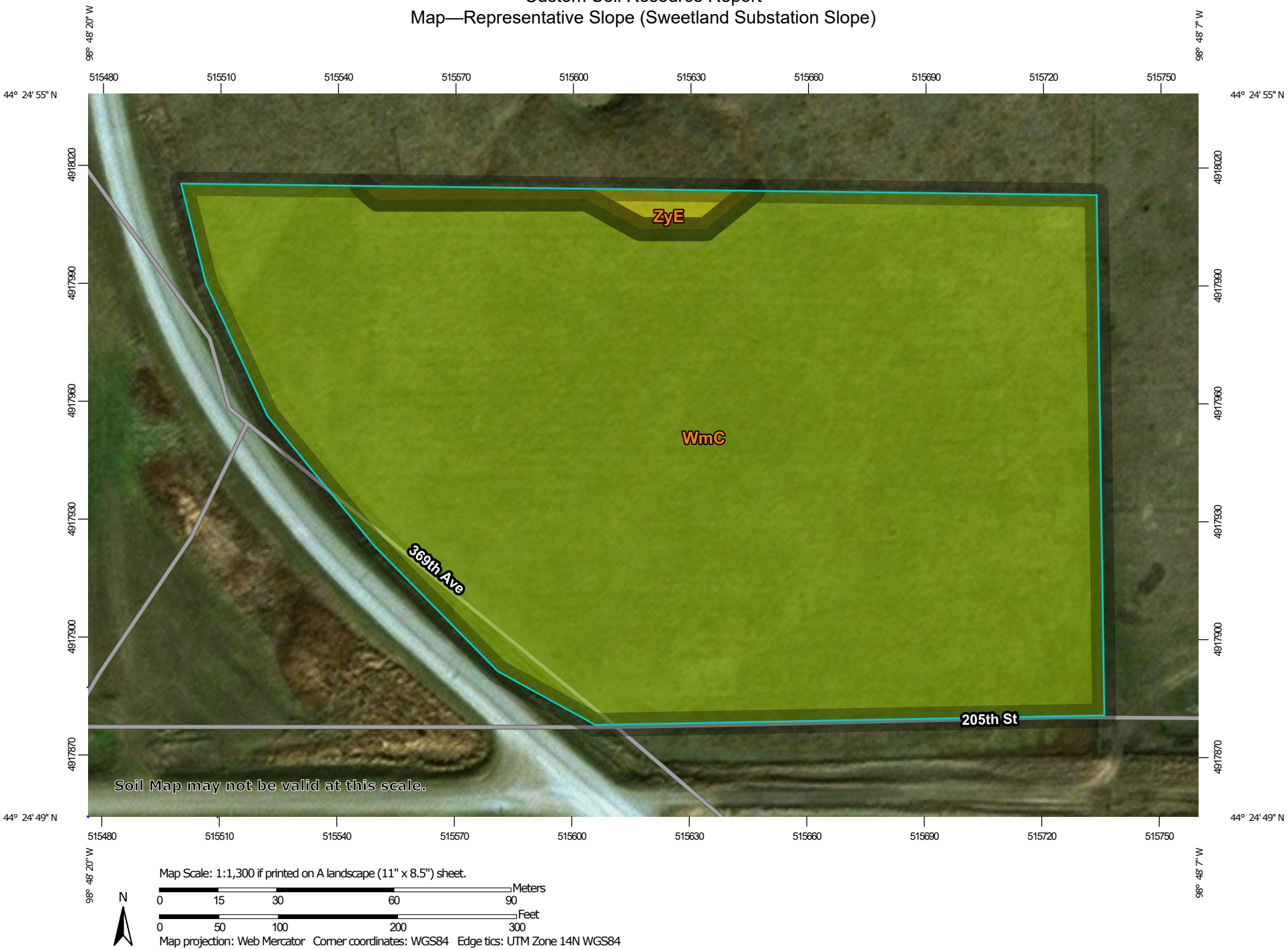
Tie-break Rule: Higher

Representative Slope (Sweetland Substation Slope)

Slope gradient is the difference in elevation between two points, expressed as a percentage of the distance between those points.

The slope gradient is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Map—Representative Slope (Sweetland Substation Slope)



Map Scale: 1:1,300 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 15 30 60 90

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- 0 - 5
- 5 - 15
- 15 - 45
- 45 - 60
- 60 - 100
- Not rated or not available

Soil Rating Lines
- 0 - 5
- 5 - 15
- 15 - 45
- 45 - 60
- 60 - 100
- Not rated or not available

Soil Rating Points
- 0 - 5
- 5 - 15
- 15 - 45
- 45 - 60
- 60 - 100
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Hand County, South Dakota
Survey Area Data: Version 22, Jun 3, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 16, 2010—Feb 6, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Representative Slope (Sweetland Substation Slope)

Map unit symbol	Map unit name	Rating (percent)	Acres in AOI	Percent of AOI
WmC	Glenham loam, rolling	7.0	6.5	98.2%
ZyE	Betts-Java loams, steep	25.0	0.1	1.8%
Totals for Area of Interest			**6.6**	**100.0%**

Rating Options—Representative Slope (Sweetland Substation Slope)

Units of Measure: percent

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Interpret Nulls as Zero: No

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374

United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

Appendix F – SWPPP Modifications & Amendments

(Store Here)

Appendix G – Completed Delegation, Subcontractor Certification and Training Forms

(Store Here)

Appendix H – Completed Inspection, Corrective Action and Grading Forms

(Store Here)