Notes: All items highlighted in red are to be updated by the selected contractor after contract award. The contractor will also need to submit the Notice of Intent (NOI) for compliance with the 2026 Construction General Permit (CGP) Permit AKR100000.

# Storm Water Pollution Prevention Plan

# For

Portage Overhead Primary System Improvement
E2214092
Portage Glacier Rd
Whittier, Alaska 99693

# Operator(s)

Chugach Electric Association, Inc.
Darvin Thornton
1200 E 1st Ave, Bldg. N 6
Anchorage, AK 99501
907-762-4634
Darvin_Thornton@chugachelectric.com

# SWPPP Contact(s)

Contractor TBD
Company
Name
City, State, Zip Code
Telephone
Email Address

# SWPPP Preparation Date

3/20/2026

*Estimated Project Dates*

| Start of Construction | Completion of Construction |
|---|---|
| 7/1/2026 | 4/30/2027 |

**APDES Permit Authorization Number:**
TBD

# RECORD OF SWPPP AMENDMENTS

| Date of Revision | Section | Description |
|---|---|---|
| | | |
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# OPERATOR PLAN AUTHORIZATION/CERTIFICATION/DELEGATION

**(To be signed by Responsible Corporate Officer)**

I state that based on my review this SWPPP meets the minimum requirements of the Construction General Permit and that the **Contractor TBD** has day-to-day operational control of the project site**. Contractor TBD** is responsible for the maintenance and implementation of the SWPPP including inspections, documentation, and application of the Best Management Practices at the site. **Chugach Electric Association, Inc. (CEA)** will notify all subcontractors of the requirement of this SWPPP. **CEA** has operational control over the project specifications, including the ability to make changes to the project specifications.

I hereby designate **TBD** as my authorized representative. This designee is responsible for the overall operations of the site and will be responsible for the implementation of the Storm Water Pollution Prevention Plan, compliance with the Construction General Permit, selecting and implementing additional Best Management Practices as conditions warrant, and signing all inspection reports required.

I certify under penalty of law that this document and all attachments were prepared under direction of **CEA** 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.

Contractor TBD

| | |
|---|---|
| Signature | Date |
| Printed Name | Title |

***(Intentionally left blank)***

# TABLE OF CONTENTS

1.0 PERMITTEE (5.3.1) ..... 9
1.1 Operator(s)/Contractor(s) ..... 9
1.2 Subcontractors ..... 9
2.0 STORM WATER CONTACTS (5.3.2) ..... 11
3.0 PROJECT INFORMATION (5.3.3) ..... 12
3.1 Project Information ..... 12
3.2 Project Site Specific Conditions (5.3.3) ..... 12
4.0 NATURE OF CONSTRUCTION ACTIVITY (5.3.4) ..... 14
4.1 Scope of Work ..... 14
4.2 Project Function (5.3.4.1) ..... 14
4.3 Support Activities (As Applicable) ..... 14
4.4 Sequence and Timing of Soil-disturbing Activities (5.3.4.2) ..... 15
4.5 Size of property and total area expected to be disturbed (5.3.4.3) ..... 15
4.6 Identification of All Potential Pollutant Sources (5.3.4.5) ..... 15
5.0 SITE MAPS (5.3.5) ..... 17
6.0 DISCHARGES ..... 17
6.1 Locations of Other Industrial Storm Water Discharges (5.3.8) ..... 17
6.2 Allowable Non-Storm Water Discharges (1.4.3; 4.3.7; 5.3.9) ..... 17
7.0 DOCUMENTATION OF PERMIT ELIGIBILITY RELATED TO TOTAL MAXIMUM DAILY LOADS (3.2, 5.6) ..... 17
7.1 Identify Receiving Waters (5.3.3.3) ..... 17
7.2 Identify TMDLs (5.6.1) ..... 18
8.0 DOCUMENTATION OF PERMIT ELIGIBILITY RELATED TO ENDANGERED SPECIES (3.3, 5.7) ..... 18
8.1 Information on Endangered or Threatened Species or Critical Habitat (5.7.1) ..... 18
9.0 APPLICABLE FEDERAL, STATE, TRIBAL, OR LOCAL REQUIREMENTS (4.15) ..... 18
10.0 CONTROL MEASURES/BEST MANAGEMENT PRACTICES (4.0; 5.3.6) ..... 19
10.1 Minimize Amount of Soil Exposed During Construction Activity (4.2.2) ..... 19
10.2 Maintain Natural Buffer Areas (4.2.3) ..... 20
10.3 Control Storm Water Discharges and Flow Rates (4.2.5) ..... 23
10.3.1 Protect Steep Slopes (4.2.6) ..... 25
10.4 Storm Water Inlet Protection Measures (4.3.1) ..... 25
10.5 Water Body Protection Measures (4.3.2) ..... 26
10.6 Down-Slope Sediment Controls (4.3.3) ..... 27
10.7 Stabilized Construction Vehicle Access and Exit Points (4.3.4) ..... 28
10.8 Dust Generation and Track-Out from Vehicles (4.3.5 and 4.3.6) ..... 28
10.9 Soil Management (4.3.7) ..... 29

10.10 Authorized Non-Storm Water Discharges (4.3.8) ..... 29
10.11 Sediment Basins (4.3.9) ..... 30
10.12 Dewatering (4.4) ..... 30
10.13 Soil Stabilization (4.5, 5.3.6.3) ..... 30
10.14 Treatment Chemicals (4.6; 5.3.6.4) ..... 32
10.15 Treatment Chemicals (4.6.1) ..... 32
10.15.1 Treatment Chemical Use Procedures (4.6.2) ..... 32
10.15.2 Application of Treatment Chemicals (4.6.3) ..... 32
10.16 Active Treatment System Information or cationic treatment chemicals (4.6.7) ..... 32
10.17 Good Housekeeping Measures (4.8) ..... 32
10.17.1 Washing of Equipment and Vehicles (4.8.1) ..... 32
10.17.2 Fueling and Maintenance Areas (4.8.2) ..... 33
10.17.3 Staging and Material Storage Areas (4.8.3) ..... 33
10.17.4 Washout of Applicators/Containers Used for Paint, Concrete, and Other Materials (4.8.4) ..... 33
10.17.5 Fertilizer or Pesticide Use (4.8.5) ..... 34
10.18 Spill Notification (4.9) ..... 34
10.19 Construction and Waste Materials (4.8.6, 5.3.7) ..... 34
11.0 INSPECTIONS (5.4; 6.0) ..... 35
11.1 Inspection Schedules (5.4.1.2; 6.1; 6.2) ..... 35
11.2 Inspection Form or Checklist (5.4.1.3; 6.7) ..... 36
11.3 Corrective Action Procedures (5.4.1.4; 8.0) ..... 36
11.4 Inspection recordkeeping (5.4.2) ..... 37
12.0 MONITORING PLAN (If Applicable) (5.5; 7.0) ..... 37
12.1 Determination of Need for Monitoring Plan ..... 37
12.2 Monitoring Plan Development ..... 37
12.3 Monitoring Considerations ..... 37
13.0 POST-AUTHORIZATION RECORDS (5.8) ..... 38
13.1 Additional Documentation Requirements (5.8.2) ..... 38
13.1.1 Records of Employee Training (4.14; 5.8.2.7) ..... 39
14.0 MAINTAINING AN UPDATED SWPPP (5.9) ..... 39
14.1 Log of SWPPP Modifications (5.9.2) ..... 40
14.2 Deadlines for SWPPP Modifications (5.9.3) ..... 40
15.0 ADDITIONAL SWPPP REQUIREMENTS (5.10) ..... 40
15.1 Retention of SWPPP (5.10.1) ..... 40
15.2 Main Entrance Signage (5.10.2) ..... 40
15.3 Availability of SWPPP (5.10.3) ..... 40
15.4 Signature and Certification (5.10.4) ..... 40
15.5 Submittal of a Modification to NOI (2.7) ..... 41

**APPENDICES**

A. Site Maps and Drawings
B. BMP Details
C. Project Schedule
D. Supporting Documentation:
    - TMDLs
    - Endangered Species
    - Other Permits or Requirements
E. Delegation of Authority, Subcontractor Certifications
F. Permit Conditions:
    - Copy of Signed Notice of Intent
    - Copy of Letter from ADEC Authorizing Coverage, with ADEC NOI Tracking Number
    - Copy of 2026 Construction General Permit
G. Grading and Stabilization Records
H. Monitoring Plan (If Applicable) and Reports
I. Training Records
J. Corrective Action Log
K. Inspection Records

***(Intentionally left blank)***

# 1.0 PERMITTEE (5.3.1)

## 1.1 Operator(s)/Contractor(s)

| Owner/Operator Information | | | |
|---|---|---|---|
| Organization: Contractor TBD | Name: | Title: | |
| Phone: | Fax (optional): | Email: | |
| Mailing Address: | Street (PO Box): | | |
| | City: | State: | Zip: |
| Area of Control | **Day-to-day operational control of those activities at a site which are necessary to ensure compliance with a SWPPP or other permit conditions.** | | |

| Owner/Operator Information | | | |
|---|---|---|---|
| Organization: Chugach Electric Association, Inc. | Name: Darvin Thornton | Title: Project Manager | |
| Phone: 907-762-4634 | Fax (optional): | Email: Darvin_Thornton@Chugachelectric.com | |
| Mailing Address: | Street (PO Box): 1200 E 1st Ave Bldg. N 6 | | |
| | City: Anchorage | State: Alaska | Zip: 99501 |
| Area of Control | **Operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications.** | | |

## 1.2 Subcontractors

| Subcontractor Information | | | |
|---|---|---|---|
| Organization: TBD | Name: | Title: | |
| Phone: | Fax (optional): | Email: | |
| Mailing Address: | Street (PO Box): | | |
| | City: | State: | Zip: |
| Area of Control | | | |

| Subcontractor Information | | | |
|---|---|---|---|
| Organization: TBD | Name: | Title: | |
| Phone: | Fax (optional): | Email: | |
| Mailing Address: | Street (PO Box): | | |
| | City: | State: | Zip: |

| | |
|---|---|
| Area of Control | |

| Subcontractor Information | | | |
|---|---|---|---|
| Organization: TBD | Name: | Title: | |
| Phone: | Fax (optional): | Email: | |
| Mailing Address: | Street (PO Box): | | |
| | City: | State: | Zip: |
| Area of Control | | | |

| Subcontractor Information | | | |
|---|---|---|---|
| Organization: TBD | Name: | Title: | |
| Phone: | Fax (optional): | Email: | |
| Mailing Address: | Street (PO Box): | | |
| | City: | State: | Zip: |
| Area of Control | | | |

# 2.0 STORM WATER CONTACTS (5.3.2)

| Qualified Personnel | Responsibility |
|---|---|
| **Project Manager**<br>Chugach Electric Association, Inc.<br>Darvin Thornton<br>1200 E 1st Ave,<br>Anchorage, AK 99501<br>907-762-4634<br>Darvin_Thornton@chugachelectric.com | Authority to stop and/or modify construction activities as necessary to comply with the SWPPP and the terms and conditions of the permit. |
| **Storm Water Lead**<br>Contractor TBD<br>Company<br>Name<br>City, State, Zip Code<br>Telephone #<br>Email | The Contractor's duly authorized representative is responsible and in charge of the day-to-day work. Authority to stop and/or modify construction activities as necessary to comply with the SWPPP and the terms and conditions of the permit. |
| **SWPPP Preparer**<br>Midnight Sun Environmental, LLC<br>Annie Collie<br>560 E 34th Ave, Ste 102<br>Anchorage, Alaska 99503<br>907-344-3244<br>Annie@midnightsunenv.com<br>AK-CESCL# ASA-24-0014 EXP: 3/14/2027 | Possess the skills to assess conditions at the construction site that could impact storm water quality. Familiar with Part 5 as a means to implement the permit. |
| **Storm Water Inspector**<br>Contractor TBD<br>Company<br>Name<br>City, State, Zip Code<br>Telephone #<br>Email | Assess conditions at the construction site that could impact storm water quality. Assess the effectiveness of any erosion and sediment control measures selected to control the quality of storm water discharge, and familiar with Part 6 as a means to ensure compliance with the permit. |

# 3.0 PROJECT INFORMATION (5.3.3)

## 3.1 Project Information

| | | | |
|---|---|---|---|
| Project Name: Portage OH Primary System Improvement | | | |
| Location Address: | Street: Portage Glacier Highway | Borough or similar government subdivision: Municipality of Anchorage | |
| | City: Portage | State: Alaska | Zip: |
| | Latitude (decimal degree, 5 places): 60.8188 N | Longitude (decimal degree, 5 places): -148.9716 W | |
| | Determined By: ☐ GPS ☐ Web Map: ☐ USGS Topo Map, Scale: ☒ Other: Google Earth | | |

## 3.2 Project Site Specific Conditions (5.3.3)

**Mean annual precipitation based on nearest weather stations (inches)**: The Western Regional Climate Center (WRCC) reports the following average annual precipitation level for Portage 1 S, Alaska (507494). Period of Record: 01/01/1973 to 02/28/1995 = 78.26 inches average total precipitation. WRCC, http://www.wrcc.dri.edu.

**PORTAGE 1 S, ALASKA (507494)**

**Period of Record Monthly Climate Summary**

**Period of Record : 01/01/1973 to 02/28/1995**

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Average Max. Temperature (F) | 29.5 | 27.1 | 36.4 | 42.4 | 53.5 | 59.4 | 64.8 | 61.5 | 54.4 | 42.5 | 28.3 | 32.3 | 44.3 |
| Average Min. Temperature (F) | 15.0 | 10.5 | 19.1 | 26.9 | 37.1 | 42.8 | 45.8 | 43.6 | 37.8 | 29.2 | 13.9 | 18.2 | 28.3 |
| Average Total Precipitation (in.) | 8.82 | 6.26 | 4.06 | 5.08 | 3.87 | 4.02 | 2.95 | 6.12 | 10.50 | 9.75 | 5.11 | 11.69 | 78.26 |
| Average Total SnowFall (in.) | 23.3 | 24.6 | 30.1 | 7.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 4.4 | 22.0 | 35.8 | 147.9 |
| Average Snow Depth (in.) | 12 | 13 | 7 | 5 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 13 | 4 |

Percent of possible observations for period of record.
Max. Temp.: 41.2% Min. Temp.: 41% Precipitation: 42.5% Snowfall: 41.9% Snow Depth: 42.9%
Check Station Metadata or Metadata graphics for more detail about data completeness.

*Western Regional Climate Center, wrcc@dri.edu*

**Soil Type(s) and Slopes** *(describe soil type(s) and current slopes; note any changes due to grading or fill activities)*: The soil within the Portage Valley primarily consists of glacial outwash and alluvial deposits, including silts, sands, and gravels interbedded with organic-rich layers. These deposits have been shaped by glacial retreat, meltwater streams, and periodic flooding events. Much of the valley floor is underlain by poorly drained soils, including Histosols and Cryaquepts, with organic mats and variable silt content. The dominant soil types in the project area include layered silty loam and peat, with some areas exhibiting permafrost influence.

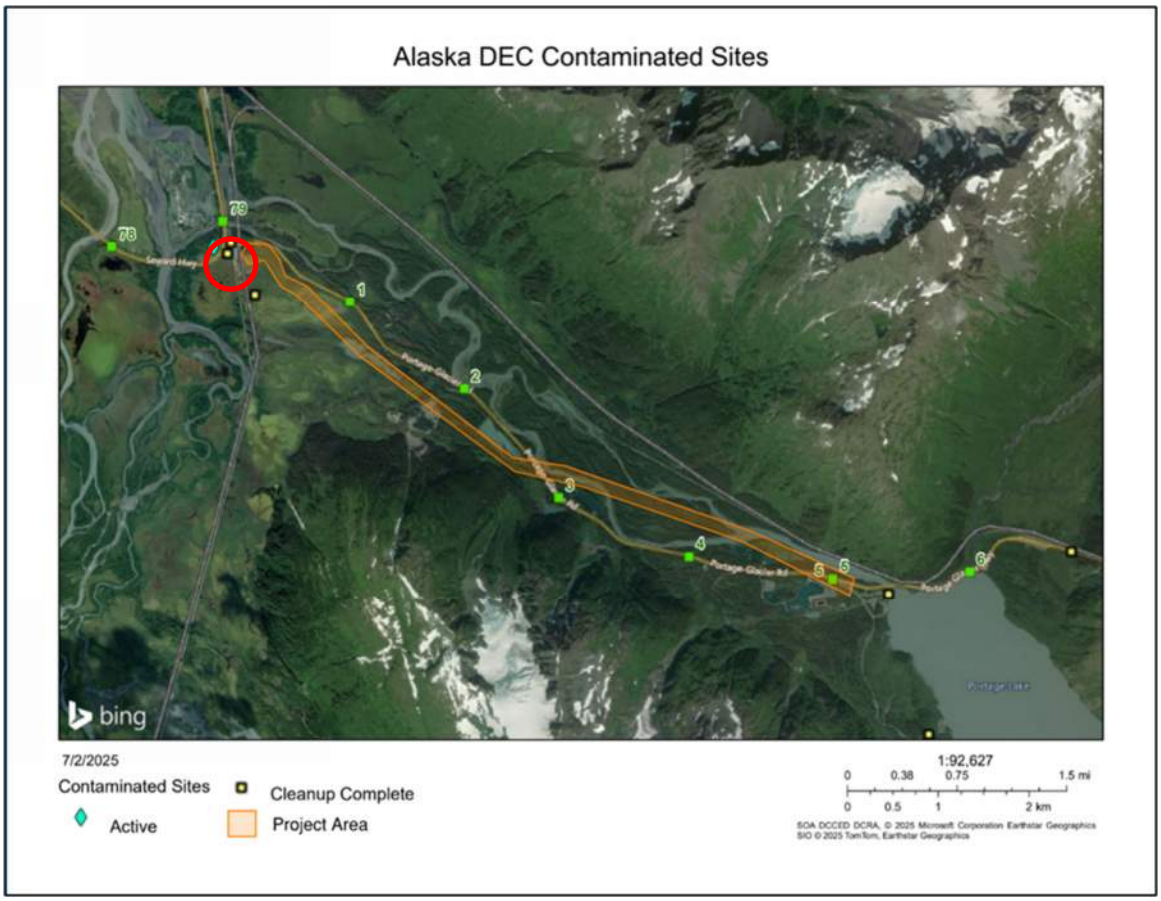
**Landscape Topography**: Project lies within the Portage Valley between the Portage Substation and the western entrance of the Whittier Tunnel. The area is a glacially carved valley with a broad, low-gradient floodplain bordered by steep mountain slopes. Terrain along the project right-of-way (ROW) is mostly level to gently sloping. Slopes range from flat to approximately 10%, and elevation varies from about 20 feet to 300 feet above sea level.

**Drainage Patterns** (*describe current drainage patterns and note any changes due to grading or fill activities*): Drainage within the Portage Valley consists primarily of surface runoff and shallow subsurface flow directed toward Portage Creek and associated wetlands (Appendix A). Flow generally follows natural contours from north to south, influenced by glacial outwash features. The project will not alter existing drainage patterns in the area.

**Approximate Growing Season**: The approximate median growing season for the Cook Inlet ecoregion is May 8 to October 5 (USACE 2007 Wetlands Alaska Regional Supplement).

**Type of Existing Vegetation**: The Portage Valley is characterized by lowland spruce/hardwood forest, with dominant species including Sitka spruce, hemlock, and alder. Wetland and floodplain areas support dense willow thickets and herbaceous vegetation such as cow parsnip and various berries. Most of the project ROW is a transmission corridor with intermittent brush and understory growth.

**Historic site contamination evident from existing site features and known past usage of the site**: The ADEC Contaminated Sites database was searched by MSE in July 2025 for ADEC-classified contaminated sites within a quarter mile of the project area. There are three DEC-identified contaminated sites: One Active, two Cleanup Complete. The map and table below highlight the Active site in immediate proximity to the project area. This map can be found in Appendix A of this SWPPP.




*http://dec.alaska.gov/arcgis/rest/services/SPAR/Contaminated_Sites/MapServer*

| Site Name | Hazard ID | Status | Site Information | Distance Away from Project Area |
|---|---|---|---|---|
| Portage Chevron Service Station 9-2609<br>Mile 79 Seward Highway<br>File Number: 2110.38.007 | 2007 | Active | Petroleum contamination was found in soil and groundwater during a 1993 assessment, and a contaminated drinking water well was replaced. Cleanup efforts were conducted, but contamination remains, and groundwater monitoring is ongoing. | 1000 ft southwest from Portage Glacier Rd |

# 4.0 NATURE OF CONSTRUCTION ACTIVITY (5.3.4)

## 4.1 Scope of Work

CEA will reconstruct approximately 5 miles of the 25-kV transmission line extending from the Portage Substation to an existing switch located west of Portage Lake, in Portage Valley, Alaska. Approximately 140, mostly single pole structures, will be replaced in-kind with new wooden structures and conductors. At least three structures may be relocated outside of the existing ROW to avoid future erosion issues associated with Portage Creek and an existing pond.

## 4.2 Project Function (5.3.4.1)

The purpose of the project is to rebuild and upgrade approximately 5 miles of existing distribution line. The line section will be rebuilt to accommodate anticipated electrical load growth in Whittier. The distribution line is the only source of electric power in Portage Valley and Whittier.

## 4.3 Support Activities (As Applicable)

**Support activities for this project are**:

| Support Activity | Location | Dedicated | |
|---|---|---|---|
| | | Yes | No |
| Concrete Batch Plant | | ☐ | ☑ |
| Asphalt Batch Plant | | ☐ | ☑ |
| Equipment Staging Yards | TBD | ☑ | ☐ |
| Material Storage Areas | TBD | ☑ | ☐ |
| Excavated Material Disposal Areas | | ☐ | ☑ |
| Borrow Areas | | ☐ | ☑ |

## 4.4 Sequence and Timing of Soil-disturbing Activities (5.3.4.2)

Construction activities are scheduled to commence during 2026, with construction extending into the winter 2026-2027 seasons with a goal to minimize ground disturbing activities during summer months. A contractor provided detailed project schedule will need to be attached to Appendix C. The major phases of construction will proceed as follows:

- Mobilize equipment and materials and set up project show-up/ laydown area
- Surveying
- Installing BMPs
- ROW Clearing
- Installation/Retirement of Structures
- Installation of conductors, wire pulling
- Cleanup
- Final Stabilization

## 4.5 Size of property and total area expected to be disturbed (5.3.4.3)

**The following are estimates of the construction site**:

| | | |
|---|---|---|
| Total Project Area:..... | 120 | acres |
| Construction-site area to be disturbed: ..... | 10 | acres |
| Percentage impervious area BEFORE construction:..... | 5 | % |
| Runoff coefficient BEFORE construction: ..... | 0.30 | |
| Percentage impervious area AFTER construction: ..... | 5 | % |
| Runoff coefficient AFTER construction:..... | 0.30 | |

## 4.6 Identification of All Potential Pollutant Sources (5.3.4.5)

**Potential sources of sediment to storm water runoff**:

- Soil fines transported as dust to impervious areas
- Vehicle tracking of mud or dirt onto roadway
- Runoff from unpaved and disturbed surfaces
- Runoff from temporarily staged material piles
- Rainwater wash-off from equipment tracks and buckets
- Sediment plumes from in-water work

**Potential pollutants and sources, other than sediment, to storm water runoff**:

| Trade Name Material | Storm Water Pollutants | Location |
|---|---|---|
| Vehicle and equipment fluids (e.g., oil, grease, fuel, solvents, coolants) | Petroleum hydrocarbons, volatile compounds, etc. | Project show-up and laydown areas and along the project corridor. |

| | | |
|---|---|---|
| Concrete | Washout water | TBD |
| General Site Litter and Waste | Various | Project show-up and other work areas along the project corridor. |
| Sanitary Waste | Fecal Coliform Bacteria, Portable Toilet Sanitizer/Deodorizing Liquid | Staging Area |
| Survey Marking Paint | Various solvents unless water based. | Along project corridor |
| Vehicle and equipment fluids (e.g., oil, grease, fuel, solvents, coolants) | Petroleum hydrocarbons, volatile compounds, etc. | Project show-up and laydown areas and along the project corridor. |

# 5.0 SITE MAPS (5.3.5)

**Include a general location map in Appendix A of this SWPPP**. (5.3.4.4)

A general location map is included in Appendix A of this SWPPP.

**Include site maps in Appendix A of this SWPPP**. (5.3.5)

Site maps are included in Appendix A of this SWPPP.

# 6.0 DISCHARGES

## 6.1 Locations of Other Industrial Storm Water Discharges (5.3.8)

There are no asphalt plants, concrete plants, material sites, or off-site disposal sites dedicated to this project. All materials will be procured from licensed commercial businesses. All off-site disposal sites will be licensed commercial facilities or private property with their own SWPPP plans.

## 6.2 Allowable Non-Storm Water Discharges (1.4.3; 4.3.8; 5.3.9)

The following are non-storm water discharges authorized by the 2026 Construction General Permit (CGP):

- Water used to control dust in an effort to minimize tracking and dust generation;
- Potable water including uncontaminated water line flushing;
- Uncontaminated excavation dewatering; and
- Water used for seeding activities or landscape irrigation as needed.

# 7.0 DOCUMENTATION OF PERMIT ELIGIBILITY RELATED TO TOTAL MAXIMUM DAILY LOADS (3.2, 5.6)

## 7.1 Identify Receiving Waters (5.3.3.3)

**Description of receiving waters**: The project area storm water discharges into Portage Creek and three small unnamed streams that drain into the Placer River.

The perennial streams that cross the transmission line ROW in the project area, Portage Creek (AWC 247-60-10220-2027), Unnamed Creek 1 (AWC 247-60-10210-2015-3021), Unnamed Creek 2 (AWC 247-60-10210-2015-3015) and Unnamed Creek 3 (AWC 247-60-10210-2015) are listed as anadromous waters by the Alaska Department of Fish and Game (ADF&G) Anadromous Waters Catalog (AWC) (Appendix A). In addition to these perennial streams, there are several seasonal drainages that may be anadromous or contain resident fish populations.

**Description of storm sewer and/or drainage systems**: Existing storm drain system consists of ditches that ultimately drain into Turnagain Arm.

**Other**: Wetland habitats are located along the entire transmission line in Portage Valley. The National Wetland Inventory map is in Appendix A.

The ARRC Wetland Mitigation Bank for Portage is located at the beginning of the project. Special caution needs to be taken in this area in order not to disturb the mitigation bank. See ARRC permission for more details.

## 7.2 Identify TMDLs (5.6.1)

**Is an EPA-established or approved TMDL published for the receiving water(s) listed in Section 7.1?** ☐ Yes ☑ No.

**TMDL**: MSE searched the ADEC's Integrated Water Quality Map in July of 2025 and found no impaired waters within the project area.

**Summary of consultation with state or federal TMDL authorities (5.6.2)**: N/A

**Measures taken to ensure compliance with TMDL (5.6.3)**: N/A

# 8.0 DOCUMENTATION OF PERMIT ELIGIBILITY RELATED TO ENDANGERED SPECIES (3.3, 5.7)

## 8.1 Information on Endangered or Threatened Species or Critical Habitat (5.7)

**Are endangered or threatened species and critical habitats on or near the project area? (5.7.1)** ☐ Yes ☒ No.

**Describe how this determination was made**: US Fish and Wildlife Service (USFWS) Information for Planning and Conservation (IPaC) Regulatory Review document and Resources List (Appendix D).

**Will species or habitat be adversely affected by storm water discharge? (5.7.2)** ☐ Yes ☒ No.

**Include any agency correspondence in the SWPPP (5.7.4)**.

**Provide summary of necessary measures (5.7.5)**: No measures are necessary.

# 9.0 APPLICABLE FEDERAL, STATE, TRIBAL, OR LOCAL REQUIREMENTS (4.15)

The CEA Contractor will carry out all activities in compliance with federal, state, local, and private property environmental regulations. Permits anticipated to be required for this project include:

- ADEC 2026 CGP
- Amendment to USFS Special Use Permit 4003.7 (Amendment.36)
- ARRC ROW Permit #20172 Supplement #3
- DOT&PF, ROW Permit 1-132300-25-028-A2
- US Army Corps of Engineers (USACE) Nationwide Permit 57 (2025-00302)-PENDING
- ADF&G - Fish Habitat Permit FH22-II-0089 Amendment 1

# Control Measures

## 10.0 CONTROL MEASURES/BEST MANAGEMENT PRACTICES (4.0; 5.3.6)

The BMPs listed in this section were selected based on the project drawings for construction activity and the natural environment of the project. Each BMP listed in the SWPPP may or may not be used as field conditions demand. BMP details are presented in Appendix B.

BMPs found to be damaged or inadequate will be repaired or replaced as outlined in CGP 8.2 or as soon as practicable and before the next rainfall event. Specific maintenance parameters are outlined in the following sections and are provided in the BMP details in Appendix B. Temporary BMPs shall not be removed until the area of disturbance they control has received final stabilization or temporary stabilization capable of preventing erosion and introduction of fines into storm water runoff.

### 10.1 Minimize Amount of Soil Exposed During Construction Activity (4.2.1 and 4.2.2)

The BMPs listed in this section were selected based on the project drawings for construction activity and the natural environment of the project. Each BMP listed in the SWPPP may or may not be used as field conditions demand. BMP details are presented in Appendix B.

BMPs found to be damaged or inadequate will be repaired or replaced as outlined in CGP 8.2 or as soon as practicable and before the next rainfall event. Specific maintenance parameters are outlined in the following sections and are provided in the BMP details in Appendix B. Temporary BMPs shall not be removed until the area of disturbance they control has received final stabilization or temporary stabilization capable of preventing erosion and introduction of fines into storm water runoff.

| |
|---|
| ***BMP Description: Scheduling SS-1*** |
| ***Source: Caltrans Storm Water Quality Handbooks, Construction Site Best Management Practices Manual, May 2017.*** |
| ***Installation Schedule***:<br>Project scheduling will occur to minimize land disturbance for all project areas. |
| ***Maintenance and Inspection***:<br>No maintenance is required. Project schedule changes that affect sediment control measures will be recorded in the SWPPP. |
| ***Responsible Staff***:<br>SWPPP Lead as specified in section 2.0. |

#### 10.1.1 Delineation of Site

The permittee will generally delineate the location of all areas where soil-disturbing construction activities will occur and specific areas that will be left undisturbed, such as trees, boundaries of sensitive areas, or buffers established under Part 4.2.1 of the 2026 CGP. Marking clearing limits are used to prevent equipment and construction-related activities from impacting areas outside the project boundaries. Project limits/clearing limits will be marked with flagging/surveyor's stakes or fencing.

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| ***BMP Description: Site Delineation/Clearing Limits BMP 54*** |
| ***Source: DOT&PF Alaska SWPPP Guide. October 2016*** |
| ***Installation Schedule***: Prior to the start of soil disturbing activities in work area. |
| ***Maintenance and Inspection***:<br>Inspect at the frequency described in Section 11.1 of this SWPPP and maintain as indicated by the inspector. |
| ***Responsible Staff***:<br>SWPPP Lead as specified in section 2.0. |

## 10.2 Maintain Natural Buffer Areas (4.2.3)

**Are stream crossings or waters of the U.S. located within or immediately adjacent to the property?** ☑ Yes ☐ No.

Stream crossings need to follow the CEA Transmission Line ROW Corridor and Access Management Plan-Standard Operating Procedure 6 Stream Crossings and 7 Wetlands. Where alternate route selection is not possible, a stream crossing by the fording method is allowable under the following conditions:

- The stream bed is completely dry.
- The stream bottom and banks are composed of coarse and clean materials (boulders, gravel, cobble) with little or no fine material that downstream siltation will occur and no critical fish habitats are known to exist at the crossing area.
- Winter conditions exist and crossing can be accomplished by utilizing natural ice cover if the ice is at least 12 inches thick.
- A determination was made by a fisheries biologist that important fish habitat is not present at the crossing or within a reasonable zone of the crossing.
- Under all of the above conditions, steep and/or erodible banks are to be avoided unless winter snow cover is sufficient to protect stream banks from damage.

Where stream crossings cannot be made by the fording method, crossings shall be accomplished by an alternative method:

1. Temporary pipe culverts
2. Temporary bridging

**Crossing Wetlands:** CEA's preferred method of crossing wetlands shall be by passage in winter months where frozen ground conditions exist, utilizing low-pressure ground equipment (LPG) and snow and ice covers of 12 inches and 12 inches, respectively. Where both snow and ice conditions are not met, consideration shall be given to the utilization of matting. Where winter wetland crossing is not possible and ground conditions are suitable per agency standards, the contractor shall utilize a combination of LPG equipment and/or distributed weight matting. The contractor will follow the General Conditions of the USACE Permit.

**Working in Wetlands:** All work activity within wetland areas shall be accomplished only per the written criteria developed as part of CEA's submitted scope of work and as approved in writing in the permit issued by the authorizing agency(s). Under no circumstances shall field personnel deviate from approved permit activities—be it substituting vehicular equipment, expanding the permit boundary, working outside of temperature or snow cover constraints, or changing schedules. Where field personnel are confronted with situations that will impact

their ability to comply with the permit requirement, work shall cease, and the project coordinator shall be advised immediately.

Natural vegetation must be preserved in all areas where no construction is planned, or where project activities will occur later. If necessary, perimeter controls such as vegetation buffers (a minimum of 25 feet wide) and fiber rolls will be used to protect wetlands, creeks, and other waterways.

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| ***BMP Description: Preservation of Existing Vegetation AK-1*** |
| ***Source: DOT&PF Alaska SWPPP Guide. February 2011*** |
| ***Installation Schedule***:<br>Undisturbed area or strip of natural vegetation that will provide a living filter to reduce soil erosion and runoff velocities. |
| ***Maintenance and Inspection***:<br>Keep heavy equipment off of these slopes to preserve vegetation. Replace or repair fencing or flagging as necessary. Inspect as per requirements of the ACGP. Check for damage by equipment and vehicles. Ensure water flowing through the area is not forming ponds, riling, or gullies. |
| ***Responsible Staff***:<br>SWPPP Lead as specified in section 2.0. |

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| ***BMP Description: Vegetation Buffer BMP 38*** |
| ***Source: DOT&PF Alaska SWPPP Guide. October 2016*** |
| ***Installation Schedule***:<br>Undisturbed area or strip of natural vegetation that will provide a living filter to reduce soil erosion and runoff velocities. |
| ***Maintenance and Inspection***:<br>Keep heavy equipment off of these slopes to preserve vegetation. Replace or repair fencing or flagging as necessary. Check for damage by equipment and vehicles, and for sediment build up. Ensure water flowing through the area is not forming ponds, rills, or gullies. Inspect as per requirements of the ACGP. |
| ***Responsible Staff***:<br>SWPPP Lead as specified in section 2.0. |

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|---|
| ***BMP Description: Temporary Stream Crossing NS-4 BMP 27*** |
| ***Source: Caltrans Storm Water Quality Handbook, March 2003*** |
| ***Installation Schedule***:<br>Stream crossing can be used when construction requires vehicles/materials need to cross waterways to minimize, reduce, and manage erosion and downstream sedimentation caused by vehicles. |
| ***Maintenance and Inspection***:<br>Periodic removal of debris behind fords, in culverts, and under bridges. Replacement of lost protective aggregate from inlets outlets of culverts. Removal of temporary crossings promptly when it is no longer needed. Inspection shall, at a minimum, occur weekly and after each significant rainfall. |
| ***Responsible Staff***:<br>SWPPP Lead as specified in section 2.0. |

| ***BMP Description: Prefabricated Driving Ground Protection Mat BMP 14*** |
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| ***Source: DOT&PF Alaska SWPPP Guide. October 2016*** |
| ***Installation Schedule***:<br>Ensure that the ground is clear of large rocks or objects. Lay the mat flat onto surface. Interlock multiple mats to cover areas that require protection. Connect the mats according to manufacturer's specifications. |
| ***Maintenance and Inspection***:<br>Look for split, torn, or unravelling fabric or broken units. Ensure that the mats cover areas that require protection. Ensure vehicles do not drive on surfaces outside of the mats. Inspect for track out. Replace damaged mats. Remove sediment that accumulates on the mats. Clean or replace mats if there is evidence of track out. |
| ***Responsible Staff***:<br>SWPPP Lead as specified in section 2.0. |

| ***BMP Description: Fiber Rolls BMP 10a & 10b*** |
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| ***Source: DOT&PF Alaska SWPPP Guide. October 2016*** |
| ***Installation Schedule***:<br>Fiber rolls may be placed along trenching activities to delineate the work area and control sediment. Fiber Rolls may be used as a check dam. Fiber rolls are installed prior to soil disturbance. |
| ***Maintenance and Inspection***:<br>Fiber rolls should be placed downslope of ground-disturbing activities where a vegetative buffer does not exist. Equipment cannot drive over the installed fiber rolls; if damaged, the sections must be replaced. Remove sediment accumulated upslope of the roll when it reaches one-half the distance between the top of the fiber roll and the ground surface. Inspect as per requirements of the ACGP. Specific locations are identified in Appendix A, BMP Maps. |
| ***Responsible Staff***: SWPPP Lead as specified in section 2.0.<br>The SWPPP Lead/Inspector. The Project General Foreman is responsible for maintenance of this BMP. |

| ***BMP Description: Silt Fence BMP 20*** |
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| ***Source: DOT&PF Alaska SWPPP Guide. October 2016*** |
| ***Installation Schedule***:<br>Silt fence can be used as a perimeter protection below the toe of exposed erodible slopes. |
| ***Maintenance and Inspection***:<br>Repair undercut silt fences. Repair or replace split, torn, slumping, or weathered fabric. Inspect silt fence when rain is forecast. Maintain silt fences to provide an adequate sediment holding capacity. Sediment shall be removed when the sediment accumulation reaches one- third (1/3) of the barrier height. Removed sediment shall be incorporated. Inspect as per requirements of the CGP. |
| ***Responsible Staff***:<br>SWPPP Lead as specified in section 2.0. |

## 10.3 Control Storm Water Discharges and Flow Rates (4.2.5)

To reduce storm water flow rates, a vegetation buffer will be maintained around disturbed areas to help dissipate the velocity of runoff and facilitate infiltration of storm water prior to leaving the project ROW.

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| ***BMP Description: Vegetation Buffer BMP 38*** |
| ***Source: DOT&PF Alaska SWPPP Guide. February 2016*** |
| ***Installation Schedule***:<br>Undisturbed area or strip of natural vegetation that will provide a living filter to reduce soil erosion and runoff velocities. |
| ***Maintenance and Inspection***:<br>Keep heavy equipment off of these slopes to preserve vegetation. Replace or repair fencing or flagging as necessary. Check for damage by equipment and vehicles, and for sediment build up. Ensure water flowing through the area is not forming ponds, rills, or gullies. Inspect as per requirements of the CGP. |
| ***Responsible Staff***:<br>SWPPP Lead as specified in section 2.0. |

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|---|
| ***BMP Description: Fiber Rolls BMP 10a & 10b*** |
| ***Source: DOT&PF Alaska SWPPP Guide. October 2016*** |
| ***Installation Schedule***:<br>Fiber rolls can be placed along trenching activities to delineate the work area and control sediment. Fiber Rolls may be used as a check dam to control flow rates. Fiber rolls are installed prior to soil disturbance. |
| ***Maintenance and Inspection***:<br>Fiber rolls or compost sock would be installed prior to construction activities. Fiber rolls will be placed downslope of ground-disturbing activities where a vegetative buffer does not exist. Equipment cannot drive over the installed fiber rolls; if damaged, the sections must be replaced. Remove sediment accumulated upslope of the roll when it reaches one-half the distance between the top of the fiber roll and the ground surface. Inspect as per requirements of the CGP. Specific locations are identified in Appendix A, BMP Maps. |
| ***Responsible Staff***:<br>SWPPP Lead as specified in section 2.0. |

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| ***BMP Description: Silt Fence BMP 20*** |
| ***Source: DOT&PF Alaska SWPPP Guide. October 2016*** |
| ***Installation Schedule***:<br>Silt fence can be used as a perimeter protection below the toe of exposed erodible slopes, prior to spring thaw where determined necessary. |
| ***Maintenance and Inspection***:<br>Repair undercut silt fences. Repair or replace split, torn, slumping, or weathered fabric. Inspect silt fence when rain is forecast. Maintain silt fences to provide an adequate sediment holding capacity. Sediment shall be removed when the sediment accumulation reaches one- third (1/3) of the barrier height. Removed sediment shall be incorporated. Inspect as per requirements of the CGP. |

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| ***Responsible Staff***:<br>SWPPP Lead as specified in section 2.0. |

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| ***BMP Description: Geotextiles, Plastic Covers and Erosion Control Blankets/Mats BMP EC-11*** |
| ***Source: Best Management Practices Manual. Idaho, January 2014*** |
| ***Installation Schedule***:<br>Prepare the site properly to ensure complete contact of the blanket or matting with the soil. Grade and shape the area of installation. Installation shall be in accordance with the manufacturer's standard. |
| ***Maintenance and Inspection***:<br>Inspections shall be conducted as required by the CGP permit or contract specifications. Areas treated with temporary geotextiles, mats, blankets, and other covers shall be maintained to provide adequate erosion control. Any failures shall be repaired immediately. If washout or breakage occurs, reinstall the material after repairing the damage to the slope or channel. |
| ***Responsible Staff***:<br>SWPPP Lead as specified in section 2.0. |

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| ***BMP Description: Earth Dikes and Drainage Swales (ED/DS) EC-10*** |
| ***Source: Urban Storm Drainage Criteria Manual Volume 3, Best Management Practices. November 2010*** |
| ***Installation Schedule***:<br>A dike located at the top of a slope to divert upland runoff away from the disturbed area and convey it in a temporary or permanent channel. A diversion dike located at the base or mid-slope of a disturbed area to intercept runoff and reduce the effective slope length. |
| ***Maintenance and Inspection***:<br>Inspect earth dikes for stability, compaction, and signs of erosion and repair. Inspect side slopes for erosion and damage to erosion control fabric. Stabilize slopes and repair fabric as necessary. If there is reoccurring extensive damage, consider installing rock check dams or lining the channel with riprap. |
| ***Responsible Staff***:<br>SWPPP Lead as specified in section 2.0. |

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| ***BMP Description: Compost Berm-BMP 4.00*** |
| ***Source: AKDOT Alaska SWPPP Guide, December 2016*** |
| ☐ ***Permanent*** ☑ ***Temporary*** |
| ***Installation Schedule:***<br>Install prior to soil disturbance in the contributing drainage area. |
| ***Maintenance and Inspection:***<br>The base of the berm should be twice as wide as the height of the berm. Reshape and add more compost material to the berm if it becomes damaged. |
| ***Responsible Staff:*** SWPPP Lead as specified in section 2.0.<br>SWPPP Lead/ Inspector as specified in section 2.0. |

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| ***BMP Description: Brush Barrier*** |
| ***Source: US Environmental Protection Agency, 2021 (modified for Alaska)*** |
| ☐ ***Permanent*** ☑ ***Temporary*** |
| ***Installation Schedule:***<br>Install as clearing and grubbing occurs in the contributing drainage area. |
| ***Maintenance and Inspection:***<br>The barrier mound should be at least 2 feet high and 2 feet wide at its base and only installed parallel to slop contours. Wood mulch or brush-based branches being used should have a diameter smaller than 6 inches and may be composed of mulch or densely packed branches with leaves attached. The barrier may be covered with a filter fabric or rock on the uphill side of the barrier. Fasten it on the downslope edge using rocks, stakes, sandbags, or another equally effective method. |
| ***Responsible Staff:***<br>SWPPP Lead/ Inspector as specified in section 2.0. |

### 10.3.1 Protect Steep Slopes (4.2.6)

**Will steep slopes be present at the site during construction?** ☐ Yes ☑ No.

Steep slopes are not anticipated and soil disturbance in hilly areas will be kept to a minimum.

## 10.4 Protect Permafrost Where Applicable (4.2.7)

**Is permafrost present on site?** ☐ Yes ☒ No.

Based on regional conditions, permafrost is not anticipated within the project area; therefore, permafrost protection measures are not required.

## 10.5 Storm Water Inlet Protection Measures (4.3.1)

No storm drain inlets exist near the project site. If culverts are encountered, then culvert inlet protection will be utilized.

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| ***BMP Description: Culvert Inlet Protection BMP 8*** |
| ***Source: DOT&PF Alaska SWPPP Guide. October 2016*** |
| ***Installation Schedule***:<br>Culvert Inlet Protection should be sited and constructed in a manner that will facilitate cleanout and disposal of trapped sediment. Culvert Inlet Protection should be constructed in a manner that will allow flow to pass and minimize ponding after the run-off has ceased. |
| ***Maintenance and Inspection***:<br>Use sandbags, fiber roll, or compost sock. Assure that barrier makes full contact with soil, all around the inlet in a single continuous circle. Inspect for sediment accumulation, displacement, and structural damage. Repair or replace any structural damaged materials as soon as practicable. |
| ***Responsible Staff***:<br>SWPPP Lead as specified in section 2.0. |

## 10.6 Water Body Protection Measures (4.3.2)

All work must comply with the CEA Transmission Line ROW Corridor and Access Management Plan. A vegetative buffer will be maintained around most water bodies along the project alignment; however, some sections require crossing streams and wetlands. If winter conditions do not sufficiently limit ground disturbance, the contractor shall implement appropriate BMPs to minimize sedimentation and protect water quality. These BMPs may include rock filter berms, temporary stream crossings, silt fences, and fiber rolls.

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| ***BMP Description: Rock Filter Berm BMP 16*** |
| ***Source: DOT&PF Alaska SWPPP Guide. October 2016*** |
| ***Installation Schedule***:<br>Designed to prevent sediment in sheet flow from leaving the construction site. Properly installed berm intercepts sheet drainage contains sediment on-site, and does not permit spillover or bypass. |
| ***Maintenance and Inspection***:<br>Berms should be placed on level contours at the toe of slope. Provide sufficient area for ponded water on the upgradient side of the berms. |
| ***Responsible Staff***:<br>SWPPP Lead as specified in section 2.0. |

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| ***BMP Description: Vegetation Buffer BMP 38*** |
| ***Source: DOT&PF Alaska SWPPP Guide. February 2016*** |
| ***Installation Schedule***:<br>Undisturbed area or strip of natural vegetation that will provide a living filter to reduce soil erosion and runoff velocities. |
| ***Maintenance and Inspection***:<br>Keep heavy equipment off these slopes to preserve vegetation. Replace or repair fencing or flagging, as necessary. Check for damage by equipment and vehicles, and for sediment build up. Ensure water flowing through the area is not forming ponds, rills, or gullies. Inspect as per requirements of the CGP. |
| ***Responsible Staff***:<br>SWPPP Lead as specified in section 2.0. |

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|---|
| ***BMP Description: Temporary Stream Crossing NS-4 BMP 27*** |
| ***Source: Caltrans Storm Water Quality Handbook, March 2003*** |
| ***Installation Schedule***:<br>Stream crossing can be used when construction requires vehicles/materials need to cross waterways to minimize, reduce, and manage erosion and downstream sedimentation caused by vehicles. |
| ***Maintenance and Inspection***:<br>Periodic removal of debris behind fords, in culverts, and under bridges. Replacement of lost protective aggregate from inlets outlets of culverts. Removal of temporary crossings promptly when it is no longer needed. Inspection shall, at a minimum, occur weekly and after each significant rainfall. |
| ***Responsible Staff***:<br>SWPPP Lead as specified in section 2.0. |

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| ***BMP Description: Silt Fence BMP 20*** |
| ***Source: DOT&PF Alaska SWPPP Guide. October 2016*** |
| ***Installation Schedule***:<br>Silt fence can be used as a perimeter protection below the toe of exposed erodible slopes, prior to spring thaw where determined as necessary. |
| ***Maintenance and Inspection***:<br>Repair undercut silt fences. Repair or replace split, torn, slumping, or weathered fabric. Inspect silt fence when rain is forecast. Maintain silt fences to provide an adequate sediment holding capacity. Sediment shall be removed when the sediment accumulation reaches one- third (1/3) of the barrier height. Removed sediment shall be incorporated. Inspect as per requirements of the CGP. |
| ***Responsible Staff***:<br>SWPPP Lead as specified in section 2.0. |

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|---|
| ***BMP Description: Fiber Rolls BMP 10a & 10b*** |
| ***Source: DOT&PF Alaska SWPPP Guide. October 2016*** |
| ***Installation Schedule***:<br>Fiber rolls can be placed along trenching activities to delineate the work area and control sediment. Fiber Rolls may be used as a check dam. Fiber rolls are installed prior to soil disturbance. |
| ***Maintenance and Inspection***:<br>Fiber rolls or compost sock will be installed prior to construction activities. Fiber rolls will be placed downslope of ground-disturbing activities where a vegetative buffer does not exist. Equipment cannot drive over the installed fiber rolls; if damaged, the sections must be replaced. Remove sediment accumulated upslope of the roll when it reaches one-half the distance between the top of the fiber roll and the ground surface. Inspect as per requirements of the ACGP. Specific locations are identified in Appendix A, BMP Maps. |
| ***Responsible Staff***:<br>SWPPP Lead as specified in section 2.0. |

## 10.7 Down-Slope Sediment Controls (4.3.3)

Fiber rolls will be used as down-slope sediment control as needed to prevent any sediment from leaving the project area.

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| ***BMP Description: Fiber Rolls BMP 10a &10b*** |
| ***Source: DOT&PF Alaska SWPPP Guide. October 2016*** |
| ***Installation Schedule***:<br>Fiber rolls will be placed along trenching activities to delineate the work area and control sediment. Fiber Rolls may be used as a check dam. Fiber rolls are installed prior to soil disturbance. |
| ***Maintenance and Inspection***:<br>Fiber rolls or compost sock will be installed prior to construction activities. Fiber rolls will be placed downslope of ground-disturbing activities where a vegetative buffer does not exist. Equipment cannot drive over the installed fiber rolls; if damaged, the sections must be replaced. Remove sediment accumulated upslope of the roll when it reaches one-half the distance between the top of the fiber roll |

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| and the ground surface. Inspect as per requirements of the ACGP. Specific locations are identified in Appendix A, BMP Maps. |
| ***Responsible Staff***:<br>SWPPP Lead as specified in section 2.0. |

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| ***BMP Description: Silt Fence BMP 20*** |
| ***Source: DOT&PF Alaska SWPPP Guide. October 2016*** |
| ***Installation Schedule***:<br>Silt fence can be used as a perimeter protection below the toe of exposed erodible slopes, prior to spring thaw where determined necessary. |
| ***Maintenance and Inspection***:<br>Repair undercut silt fences. Repair or replace split, torn, slumping, or weathered fabric. Inspect silt fence when rain is forecast. Maintain silt fences to provide an adequate sediment holding capacity. Sediment shall be removed when the sediment accumulation reaches one- third (1/3) of the barrier height. Removed sediment shall be incorporated. Inspect as per requirements of the ACGP. |
| ***Responsible Staff***:<br>SWPPP Lead as specified in section 2.0. |

## 10.8 Stabilized Construction Vehicle Access and Exit Points (4.3.4)

Project access is from an existing road and along the utility ROW. A stabilized construction entrance or exit in the form of a rumble mat or strips will be utilized at project access points.

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| ***BMP Description: Stabilized Construction Exit AK-23 & 24*** |
| ***Source: DOT&PF Alaska SWPPP Guide. October 2016*** |
| ***Installation Schedule***:<br>A vehicle tracking entrance/exit provides a stabilized gravel area or pad underlined with a geotextile and located where traffic enters or exits the construction site. |
| ***Maintenance and Inspection***:<br>Maintain each entrance in a condition that will prevent mud or sediment on the public rights-of-way. Replace gravel material when surface voids are visible. Inspect as per requirements of the ACGP. Specific locations are identified in Appendix A, BMP Maps. |
| ***Responsible Staff***:<br>SWPPP Lead as specified in section 2.0. |

## 10.9 Dust Generation and Track-Out from Vehicles (4.3.5 and 4.3.6)

Dust is not anticipated due to most of the ground disturbance being done during winter conditions. Should dust generation and track out from vehicles become a threat to storm water quality, sweeping will be utilized to remove loose sediments from paved surfaces.

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| ***BMP Description: Street Sweeping AK-55*** |

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| ***Source: DOT&PF Alaska SWPPP Guide 2016*** |
| ***Installation Schedule***:<br>Sweep and vacuum as needed to minimize dust and track out. |
| ***Maintenance and Inspection***:<br>Inspect ingress /egress access points daily and during routine SWPPP inspections. |
| ***Responsible Staff***:<br>SWPPP Lead as specified in Section 2.0 |

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| ***BMP Description: Wind Erosion Control WE-1*** |
| ***BMP Manual/Publication: Caltrans, Storm Water Quality Handbooks, Construction Site Best Management Practices (BMP) Manual, May 2017*** |
| ***Installation Schedule***:<br>Apply water or other dust palliatives as necessary to prevent or alleviate erosion by the forces of wind. |
| ***Maintenance and Inspection***:<br>Check areas where wind erosion controls have been implemented daily for erosion and visible dust. |
| ***Responsible Staff***:<br>SWPPP Lead as specified in Section 2.0 |

## 10.10 Soil Management (4.3.7)

**Will soil stockpiles be at the site during construction?** ☐ Yes ☑ No.

Soil stockpiles are not anticipated, however, piles from the excavation during installation may be present for short durations. Stabilization beyond good housekeeping measures should be minimal. If necessary, the plastic covering will be used to cover stockpiles if sediment from soil piles is expected to migrate.

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| ***BMP Description: Geotextiles, Plastic Covers and Erosion Control Blankets/Mats BMP EC-11*** |
| ***Source: Best Management Practices Manual. Idaho, January 2014*** |
| ***Installation Schedule***:<br>Prepare the site properly to ensure complete contact of the blanket or matting with the soil. Grade and shape the area of installation. Installation shall be in accordance with the manufacturer's standard. |
| ***Maintenance and Inspection***:<br>Inspections shall be conducted as required by the CGP permit or contract specifications. Areas treated with temporary geotextiles, mats, blankets, and other covers shall be maintained to provide adequate erosion control. Any failures shall be repaired immediately. If washout or breakage occurs, reinstall the material after repairing the damage to the slope or channel. |
| ***Responsible Staff***:<br>SWPPP Lead as specified in Section 2.0 |

## 10.11 Authorized Non-Storm Water Discharges (4.3.8)

Describe any measures taken to minimize any non-storm water authorized by this permit.

The following are non-storm water discharges authorized by the 2026 CGP:

- Water used to control dust to minimize tracking and dust generation.
- Potable water including uncontaminated water line flushing.
- Construction dewatering waters that are treated by an appropriate control measure in compliance with part 4.4.2 of the CGP including filtration designed to remove sediment.

## 10.12 Sediment Basins (4.3.9)

**Will a sediment basin be required during construction?** ☐ Yes ☒ No.

## 10.13 Dewatering (4.4)

**Will dewatering be conducted during construction?** ☒ Yes ☐ No.

**Will excavation dewatering be conducted within 1,500 feet of a DEC mapped contaminated site found on the following website**? ☐ Yes ☒ No.
https://www.arcgis.com/home/item.html?id=315240bfbaf84aa0b8272ad1cef3cad3

Describe control measures to be implemented to comply with dewatering discharges authorized either under the CGP or the DEC Excavation Dewatering general permit requirements.

Excavation dewatering is not expected to be within 1,500 feet of the one DEC contaminated site located on the west side of the project area. If excavation dewatering needs to occur within 1,500 feet of the contaminated site, the contractor will need to obtain an excavation dewatering permit with DEC (AKG002000).

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| ***BMP Description: Excavation Dewatering BMP 7-8-9*** |
| ***Source: Best Management Practices Manual. DOT&PF, Alaska SWPPP Guide, October 2016*** |
| ***Installation Schedule***:<br>Installed prior to soil disturbance in the contributing drainage area. |
| ***Maintenance and Inspection***:<br>When pumping, monitor pumps and intake and discharge points. Inspect the conveyance structure for leaks, erosion, or other defects. Inspect the treatment controls for bypass, clogging, and signs of inadequate treatment. Inspect discharge point for erosion or failure of the energy dissipation material. Inspect the equipment area for properly stored fuel and other potentially hazardous substances. Maintenance: Reinforce, repair, or restore any portion of the treatment controls, conveyance system, or energy dissipater |
| ***Responsible Staff***:<br>SWPPP Lead as specified in Section 2.0 |

## 10.14 Soil Stabilization (4.5, 5.3.6.3)

Disturbance of vegetative areas will be minimized to the maximum extent practicable. Most of the project will be performed within the existing transmission line. Vegetated areas seeding guidelines will be followed by the Alaska Plant Materials Center – Revegetation Manual.

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| ***BMP Description: Soil Binders SS-5*** |
| ***Source: Caltrans, Storm Water Quality Handbooks, Construction Site Best Management Practices (BMP) Manual, May 2017*** |
| ***Installation Schedule***:<br>After selecting an appropriate soil binder, the untreated soil surface must be prepared before applying the soil binder. The untreated soil surface must contain sufficient moisture to assist the agent in achieving uniform distribution. |
| ***Maintenance and Inspection***:<br>High traffic areas shall be inspected daily, and lower-traffic areas shall be inspected weekly. Reapplying the selected soil binder may be needed for proper maintenance. |
| ***Responsible Staff***:<br>SWPPP Lead as specified in Section 2.0 |

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| ***BMP Description: Permanent Seeding BMP 52 & 53*** |
| ***Source: DOT&PF Alaska SWPPP Guide. October 2016*** |
| ***Installation Schedule***:<br>Permanent seeding should be conducted in conjunction with various forms of mulching, matting, and annual grass (cereal grain) as a nurse crop.<br>Seeding should be done at the proper time of year. Proper application of fertilizers as prescribed will contribute to the success of the seeding. Once seeded, the site should not be disturbed. Irrigation may have to be used in low precipitation area (arid/semi-arid) for establishment. |
| ***Maintenance and Inspection***:<br>Inspect all seeded areas on a regular basis and after each major storm event to check for areas where corrective measures may have to be made.<br>Indicate which areas need to be reseeded or where other remedial actions are necessary to assure establishment of permanent seeding.<br>Continue monitoring of the site/area until permanent vegetation is established. |
| ***Responsible Staff***:<br>The SWPPP Lead as specified in Section 2.0 |

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| ***BMP Description: Temporary Seeding BMP 57*** |
| ***Source: DOT&PF Alaska SWPPP Guide. October 2016*** |
| ***Installation Schedule***:<br>Grade as needed where it's feasible to permit the use of equipment for seedbed preparation.<br>Prepare the seedbed by using surface roughening if soil has been compacted by machinery or heavy foot traffic. If using hand or mechanical methods, apply fertilizer in order to optimize growing conditions, followed by seed, mulch, and water. |
| ***Maintenance and Inspection***:<br>Inspect newly seeded areas on a regular basis and after each storm event to check for areas where protective measures (mulch) have failed or where plant growth is not proceeding at the desired rate.<br>Water seeded areas daily until initial ground cover is established if rainfall does not provide moisture |

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| for seed germination. Reseed areas where growth is absent or inadequate. Provide additional fertilizer if needed. |
| ***Responsible Staff***:<br>SWPPP Lead as specified in Section 2.0 |

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| ***BMP Description: Mulching AK-9*** |
| ***Source: DOT&PF Alaska SWPPP Guide 2-2011*** |
| ***Installation Schedule***:<br>Mulch can be be applied to all seeded areas. Hydro mulching can be installed with the seed at specified rates per project specs in Appendix B. |
| ***Maintenance and Inspection***:<br>Replace mulch that has been loosened or dislodged. In addition, reseed areas if necessary. Water mulched areas periodically to ensure that moisture content will be maintained, and seed germination and grass growth will continue. Inspect as per requirements of the ACGP to check for rill erosion, dislocation, or failure. |
| ***Responsible Staff***:<br>SWPPP Lead as specified in Section 2.0 |

## 10.15 Treatment Chemicals (4.6; 5.3.6.4)

**Will treatment chemicals be used to control erosion and/or sediment during construction?** ☐ Yes ☒ No.

### 10.15.1 Treatment Chemicals (4.6.1; 5.3.6.4)

N/A

### 10.15.2 Treatment Chemical Use Procedures (4.6.2)

N/A

### 10.15.3 Application of Treatment Chemicals (4.6.3)

N/A

## 10.16 Active Treatment System Information or cationic treatment chemicals (4.6.7)

**Will an ATS or cationic treatment chemicals be used as a control measure at the site?** ☐ Yes ☒ No.

N/A

## 10.17 Good Housekeeping Measures (4.8)

### 10.17.1 Washing of Equipment and Vehicles (4.8.1)

**Will equipment and vehicle washing and/or wheel wash-down be conducted at the site?** ☐ Yes ☒ No.

### 10.17.2 Fueling and Maintenance Areas (4.8.2)

**Will equipment and vehicle fueling or maintenance be conducted at the site?** ☒ Yes ☐ No.

If the contractor plans to refuel equipment on-site at the project laydown areas, they must use duck ponds or similar containment measures to capture any drips. A spill kit with response and cleanup supplies must also be available on-site. Depending on fuel storage requirements a SPCC may be required to be completed by the Contractor.

| |
|---|
| ***BMP Description:*** **Vehicle and Equipment Storage, Maintenance, and Fueling AK-42** |
| ***Source:*** **DOT&PF Alaska SWPPP Guide 2016** |
| ***Installation Schedule***:<br>Vehicle and equipment maintenance activities will be located at least 50 feet from any downstream drainages or water bodies. Inspect vehicles and equipment daily for leaks. Repair leaks as soon as practicable. Store and/or dispose of all chemicals, lubricants, and fuels according to manufacturer's recommendations. Perform all maintenance away from water bodies, environmentally sensitive areas, discharge points, and potential erosion areas. Keep a spill kit and drip pans/duck ponds accessible to vehicles being maintained. |
| ***Maintenance and Inspection***:<br>Equipment operators will visually inspect for leaks daily during active construction. Dispose of chemicals and clean up materials as soon as practicable. |
| ***Responsible Staff***:<br>SWPPP Lead as specified in Section 2.0 |

### 10.17.3 Staging and Material Storage Areas (4.8.3)

Designate areas to be used for staging and material storage areas. Locate such activities, to the extent practicable, away from storm water conveyance channels, storm water inlets, and waters of the U.S.; and minimize the exposure to precipitation and storm water and vandalism for all chemicals, treatment chemicals, liquid products, petroleum products, and other materials that have the potential to pose a threat to human health or the environment.

The contractor will determine the specific staging and storage areas for the project. CEA's contractor should designate staging areas to be located away from storm water drainage channels, storm water inlets, and waters of the U.S.

### 10.17.4 Washout of Applicators/Containers Used for Paint, Concrete, and Other Materials (4.8.4)

**Will washout areas for trucks, applicators, or containers of concrete, paint, or other materials be used at the site?** ☒ Yes ☐ No.

The contractor will determine the specific concrete washout area/s for the project. CEA's contractor should designate washout areas to be located away from storm water drainage channels, storm water inlets, and waters of the U.S.

| |
|---|
| ***BMP Description: Concrete Washout BMP 06.00*** |
| ***Source:* DOT&PF Alaska SWPPP Guide 2016** |
| ***Installation Schedule***:<br>Concrete washout containment to be placed a minimum of 50 feet from storm drains, open ditches, or waterbodies, or provide secondary containment for the washout. Provide sufficient capacity to handle the expected volume of solids and wash water at 50% max capacity and allow 12 inches minimum of freeboard. |
| ***Maintenance and Inspection***:<br>Inspect and verify that concrete washout BMPs are in place prior to the commencement of concrete work. Determine if the concrete washout is filled to 50% capacity. If using self-installed containment: inspect the plastic liner to ensure it is securely anchored and intact; inspect the sidewalls for leaks; ensure the construction doesn't damage the sidewalls. Repair damaged washouts before the next concrete pour. If necessary, provide new washouts until the existing washouts are operational. |
| ***Responsible Staff***:<br>SWPPP Lead as specified in Section 2.0 |

### 10.17.5 Fertilizer or Pesticide Use (4.8.5)

**Will fertilizers or pesticides be used at the site?** ☒ Yes ☐ No.

If hand seeding, no fertilizer is needed. However, in the case of hydroseeding or other forms of revegetation, applications of fertilizers are necessary. Fertilizer application shall be in accordance with the Alaska Plant Materials Center, A revegetation Manual for Alaska, 2008.

## 10.18 Spill Notification (4.9)

Releases of hazardous substances or petroleum hydrocarbons in excess of the EPA's or ADEC's reportable quantities are documented in this plan; see Appendix H.

## 10.19 Construction and Waste Materials (4.8.6, 5.3.7)

Construction and waste materials that will be present on-site include but are not limited to: collected sediment, paper, plastic, fabric, liquid petroleum products, fuels, petroleum-contaminated material (used oil filters, etc.), drilling mud (contained and disposed off-site in accordance with state and federal regulations), solvents and cleaners, lead/acid batteries, toners, fluorescent light bulbs, batteries, other common office supplies, construction waste, and general trash.

The following requirements will be followed for the storage, handling, and disposal of construction debris and waste materials (with designated areas to be used for staging and material storage):

- Such activities will be located, to the extent practicable, away from storm water drainage channels, storm drain inlets, and Waters of the U.S.

- Construction personnel shall minimize the exposure to precipitation, storm water, and vandalism of all chemicals, liquid products, petroleum products, and other materials that have the potential to pose a threat to human health or the environment.
- Collected sediment, paper, plastic, fabric, construction, and demolition debris, and other domestic wastes shall be disposed of according to federal, state, and local requirements.
- Hazardous or toxic waste shall be stored in appropriate sealed containers and disposed of in accordance with each applicable manufacturer's recommended method of disposal and/or federal, state, and local requirements.
- Containment shall be provided for sanitation facilities (portable toilets) to prevent discharge(s) of pollutants to the storm water drainage system or receiving waters. Sanitation facilities shall be cleaned regularly and inspected for leaks and spills.

| ***BMP Description: Solid Waste Management WM-6*** |
|---|
| ***Source: Idaho DOT Best Management Practices Manual. Idaho, January 2014*** |
| ***Installation Schedule***:<br>Continuously during construction activities. |
| ***Maintenance and Inspection***:<br>All collection containers will be covered and emptied when full. Inspect as per requirements of the ACGP. |
| ***Responsible Staff***:<br>SWPPP Lead as specified in Section 2.0 |

| ***BMP Description: Sanitary/Septic Waste Management WM-10*** |
|---|
| ***Source: Idaho DOT Best Management Practices Manual. Idaho, January 2014*** |
| ***Installation Schedule***:<br>As needed. Portable toilets will be placed, when possible, away from impervious surfaces and will be kept as far away as possible from the storm drain system and waterways. Portable toilets will be tied down or otherwise secured to prevent tipping. |
| ***Maintenance and Inspection***:<br>Portable toilets will be inspected daily and will be serviced by the supplier as necessary. |
| ***Responsible Staff***:<br>SWPPP Lead as specified in Section 2.0 |

# 11.0 INSPECTIONS (5.4; 6.0)

## 11.1 Inspection Schedules (5.4.1.2; 6.1; 6.2)

**Inspection frequency**: Inspections will occur once every seven calendar days.

**Justification for reduction in inspection frequency, if applicable**:

(1) If the project is undergoing winter construction the inspection frequency will be reduced to once per month if runoff is unlikely due to continuous frozen conditions. If above freezing temperatures or rain events make discharges likely, the permitee must immediately resume a regular inspection frequency (2026 CGP 6.2.4).

(2) If the entire site is stabilized in accordance with Section 4.5 of the 2026 CGP, inspections may be reduced to at least once every month and within two business days of the end of a storm event at an actively staffed site that results in a discharge from the site.

(3) If portions of the project site have achieved final stabilization in accordance with Section 4.5 of the 2026 CGP but construction activity remains on other portions of the site, inspections may be suspended for those portions that have achieved final stabilization. However, inspections must be conducted on those sections within two business days of the end of a storm event that results in a discharge from the portion of the site previously considered finally stabilized.

(4) If the entire site has achieved final stabilization (as defined in Appendix C of the 2026 CGP) and a NOT has been submitted, no further inspection requirements apply to the site.

**Estimated date of winter shutdown**: Winter shutdown is not anticipated for this project.

## 11.2 Inspection Form or Checklist (5.4.1.3; 6.7)

Inspection reports are included in Appendix K. A "Complete by Date" before the next storm event, when practicable, will be noted on the inspection form adjacent to any BMP that requires maintenance or modification.

## 11.3 Corrective Action Procedures (5.4.1.4; 8.0)

**Corrective actions should be implemented when one or more of the following conditions occur:**

- If an incident of non-compliance with the SWPPP or CGP is identified;
- If an Inspection or the Engineer identifies the SWPPP or any part of the SWPPP is ineffective in preventing erosion, sedimentation or the discharge of pollutants;
- If a required BMP was not installed according to the SWPPP schedule or phasing, or was installed incorrectly, or was not installed according to the CGP Part 4.0;
- If a BMP is not operating as intended, has not been maintained in an effective operation condition, or is unable to effectively perform the intended function;
- If a prohibited discharge of pollutants, as specified in CGP Part 4.6, is occurring or will occur; or
- If there is accumulation of sediment or other pollutants, that is in or near any storm water channels, or that may enter Waters of the U.S.
- If there is accumulation of sediment or other pollutants that is being tracked outside the project zone.

**Implement corrective actions so that they comply with the following time requirements:**

For conditions that are easily remedied (i.e. removal of tracked sediment, maintenance of control measure, or spill clean-up); initiate corrective action within 24 hours and complete as soon as possible;

For all other conditions, meet both the following requirements:

- Complete corrective action in time to protect water quality; and
- Complete corrective action no later than the Complete-by-Date that was entered in an Inspection Report.

If a corrective action is not implemented within the time requirements of this section, document the situation in the SWPPP, notify the Engineer, and implement corrective action as soon as possible. If a corrective action could affect a subcontractor, notify the subcontractor within three days of taking corrective action.

**Corrective Action Log**

Corrective actions will be tracked using the Corrective Action Log (see Appendix J). Corrective actions will be implemented as soon as practicable. Simple actions will be completed within 24 hours.

## 11.4 Inspection recordkeeping (5.4.2)

Records will be maintained for a minimum period of at least three (3) years after the permit is terminated.

# 12.0 MONITORING PLAN (If Applicable) (5.5; 7.0)

## 12.1 Determination of Need for Monitoring Plan

**Is there an EPA-established or approved TMDL for Portage Creek?**

**Is the receiving water listed as impaired for turbidity and/or sediment?** ☐ Yes ☒ No.

**What is the acreage of the disturbance in the proposed construction project?** 10 acres.

**Is the disturbed acreage equal to or greater than 20 acres?** ☐ Yes ☒ No.

## 12.2 Monitoring Plan Development

**Monitoring schedules** (5.5.1.2; 7.3.2): N/A

**Monitoring form or checklist** (5.5.1.3; 7.3.9): N/A

**Corrective action procedures** (5.5.1.4; 8.0): N/A

## 12.3 Monitoring Considerations

- Locate upstream/upgradient sampling point(s) to determine background turbidity in the receiving water body. The location should be reasonably close to discharge but not so close as to experience increased turbidity from discharge. Clearly mark in field and on map in SWPPP.
- Sample the discharge where it enters the receiving water body or where it leaves the construction site. Clearly mark in field and on map in SWPPP.
- The discharge entering the water body impaired for turbidity or sediment must not exceed 5 nephelometric turbidity units (NTU) above natural conditions when the natural turbidity is 50 NTU or

less, and may not have more than a 10-percent increase in turbidity when the natural turbidity is more than 50 NTU, not to exceed a maximum increase of 25 NTU.

- Correct control measures within seven (7) calendar days, update your SWPPP to reflect improvements, submit a Corrective Action Report consistent with the CGP, AND continue daily sampling until discharge meets allowable turbidity.

- If a specific waste-load allocation has been established for turbidity or sediment that would apply to the discharge of storm water from the construction site, the permittee must implement necessary steps to meet that allocation.
- If there is only a general waste-load allocation applicable to construction storm water discharges, the permittee must consult the ADEC to confirm consistency with approved TMDL.

# 13.0 POST-AUTHORIZATION RECORDS (5.8)

**Copy of Permit Requirements (5.8.1)**

**The SWPPP must contain the following documents**:

- copy of CGP (5.8.1.1);

- copy of signed and certified NOI form submitted to ADEC (5.8.1.2);

- upon receipt, a copy of letter from ADEC authorizing permit coverage, providing tracking number (5.8.1.3); and

**These documents must be included in Appendix F**.

## 13.1 Additional Documentation Requirements (5.8.2)

- Dates when grading activities occur (5.8.2.1; insert in Appendix G).

- Dates when construction activities temporarily or permanently cease on a portion of the site (5.8.2.1.3; insert in Appendix G).

- Dates when stabilization measures are initiated (5.8.2.1.4; insert in Appendix G).

- Date of beginning and ending period for winter shutdown (5.8.2.2; insert in Appendix G).

- Copies of inspection reports (5.4.2; 5.8.2.3; insert in Appendix K).

- Copies of monitoring reports, if applicable (5.8.2.4; insert in Appendix H).

- Documentation in support of chemical-treatment processes (4.6; 5.8.2.6; insert in Appendix H).

- Documentation of maintenance and repairs of control measures (5.8.2.8; 8.1; 8.2; insert in Appendix J).

- Documentation of any rainfall monitoring records (6.7.1.3)

### 13.1.1 Records of Employee Training (4.14; 5.8.2.7)

**Describe Training Conducted**:

Training staff and subcontractors is an effective BMP. The Project Manager will be responsible for ensuring that employees are aware of control measures that are being used during construction. Training records including the data, name of attendees, subjects covered, and length of training are located in Appendix I. Items covered during storm water training should include a description of what storm water is, what to look for on the construction project site, what to do if an issue is identified, and who to contact.

**General storm water and BMP awareness training for staff and subcontractors**:

**Good Housekeeping**

- Employee responsibility and accountability, basic cleanup procedures, proper storage, and disposal procedures.

Detailed training will be conducted for staff and subcontractors with specific storm water responsibilities (e.g. installing, inspecting, and maintaining BMPs). This training will include a review of the SWPPP, and the topics listed below:

- SWPPP contents, with emphasis on BMP locations, maintenance, inspections, record keeping, logs, and contacts;
- Good housekeeping measures and employee responsibility and accountability, basic cleanup procedures, proper storage and disposal procedures;
- Spill prevention and response, fuel transfer procedures; and
- Material handling and storage, and hazardous waste management.

**Detailed training for staff and subcontractors with specific storm water responsibilities**:

Detailed training will be conducted for staff and subcontractors with specific storm water responsibilities (e.g. installing, inspecting, and maintaining BMPs). This training will include a review of the SWPPP, and the topics listed below:

- SWPPP contents, with emphasis on BMP locations, maintenance, inspections, record keeping, logs, and contacts;
- Good housekeeping measures and employee responsibility and accountability, basic cleanup procedures, proper storage and disposal procedures;
- Spill prevention and response, fuel transfer procedures; and
- Material handling and storage, and hazardous waste management.

**Individual(s) Responsible for Training**:

Contractor SWPPP Lead- TBD

# 14.0 MAINTAINING AN UPDATED SWPPP (5.9)

The permittee must modify the SWPPP, including site map(s), in response to any of the following:

- whenever changes are made to construction plans, control measures, good housekeeping measures, monitoring plan (if applicable), or other activities at the site that are no longer accurately reflected in SWPPP (5.9.1.1);
- if inspections of site investigations by staff or by local, state, tribal, or federal officials determine SWPPP modifications are necessary for permit compliance (5.9.1.2); and
- to reflect any revisions to applicable federal, state, tribal, or local laws that affect control measures implemented at the construction site (5.9.1.3).

## 14.1 Log of SWPPP Modifications (5.9.2)

A permittee must keep a log showing dates, name of person authorizing the change, and a brief summary of changes for all significant SWPPP modifications (e.g., adding new control measures, changes in project design, or significant storm events that cause replacement of control measures). A form to document SWPPP amendments has been placed at the beginning of this template.

## 14.2 Deadlines for SWPPP Modifications (5.9.3)

Revisions to the SWPPP must be completed within seven days of the inspection that identified the need for a SWPPP modification or within seven days of substantial modifications to the construction plans or changes in site conditions.

# 15.0 ADDITIONAL SWPPP REQUIREMENTS (5.10)

## 15.1 Retention of SWPPP (5.10.1)

A copy of the SWPPP (including a copy of the permit), NOI, and acknowledgement letter from ADEC must be retained at the construction site.

## 15.2 Main Entrance Signage (5.10.2)

A sign or other notice must be posted conspicuously near the main entrance of the site. The sign or notice must include the permit authorization number assigned to the NOI, Operator Contact Name and phone number for obtaining additional construction site information, and location of the SWPP or name and telephone number of the contact person for scheduling SWPPP viewing times. If the location of the SWPPP or the name and telephone number of the contact person for scheduling SWPPP viewing times has changed (i.e., is different than that submitted to DEC in the NOI), the current location of the SWPPP or name and telephone number of a contact person for scheduling viewing times.

## 15.3 Availability of SWPPP (5.10.3)

The permittee must keep a current copy of the SWPPP at the site. The SWPPP must be made available to subcontractors, government and tribal agencies, and MS4 operators, upon request.

## 15.4 Signature and Certification (5.10.4)

The SWPPP must be signed and certified in accordance with the requirements of the CGP Appendix A, Part 1.12. The certification form on page ii of this template meets the requirements of this paragraph.

## 15.5 Submittal of a Modification to NOI (2.7)

Note: A permittee must submit an NOI modification form to DEC (see Permit Part 2.3) to update or correct the following information on the original NOI within 30 calendar days of the change:

- Owner/Operator address and contact information;
- Site information;
- Estimated start or end dates;
- Number of acres to be disturbed; or
- SWPPP location and contact information.

# APPENDICES

APPENDIX A – SITE MAPS AND DRAWINGS

APPENDIX B – BMP DETAILS

APPENDIX C – PROJECT SCHEDULE

APPENDIX D – SUPPORTING DOCUMENTATION:

- TMDL
- ENDANGERED SPECIES
- OTHER PERMITS

APPENDIX E – DELEGATION OF AUTHORITY, SUBCONTRACTOR CERTIFICATIONS

APPENDIX F – PERMIT CONDITIONS:

- COPY OF SIGNED NOTICE OF INTENT
- COPY OF LETTER FROM ADEC AUTHORIZING COVERAGE
- ADEC NOI TRACKING NUMBER
- COPY OF ALASKA CONSTRUCTION GENERAL PERMIT

APPENDIX G – GRADING AND STABILIZATION RECORDS

APPENDIX H – MONITORING PLAN (IF APPLICABLE) AND REPORTS

APPENDIX I – TRAINING RECORDS

APPENDIX J – CORRECTIVE ACTION LOG

APPENDIX K – INSPECTION RECORDS

# APPENDIX A

## SITE MAPS

# E2214092 Portage SWPPP

## BMP Map

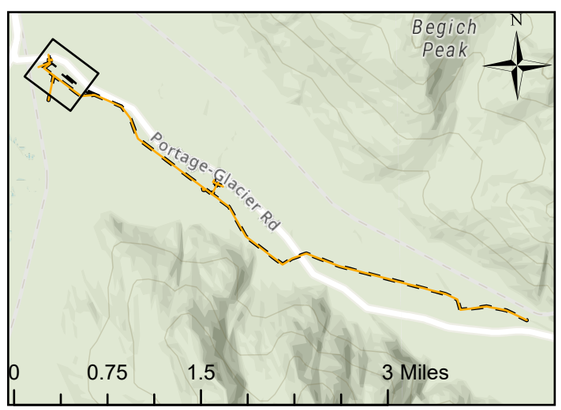
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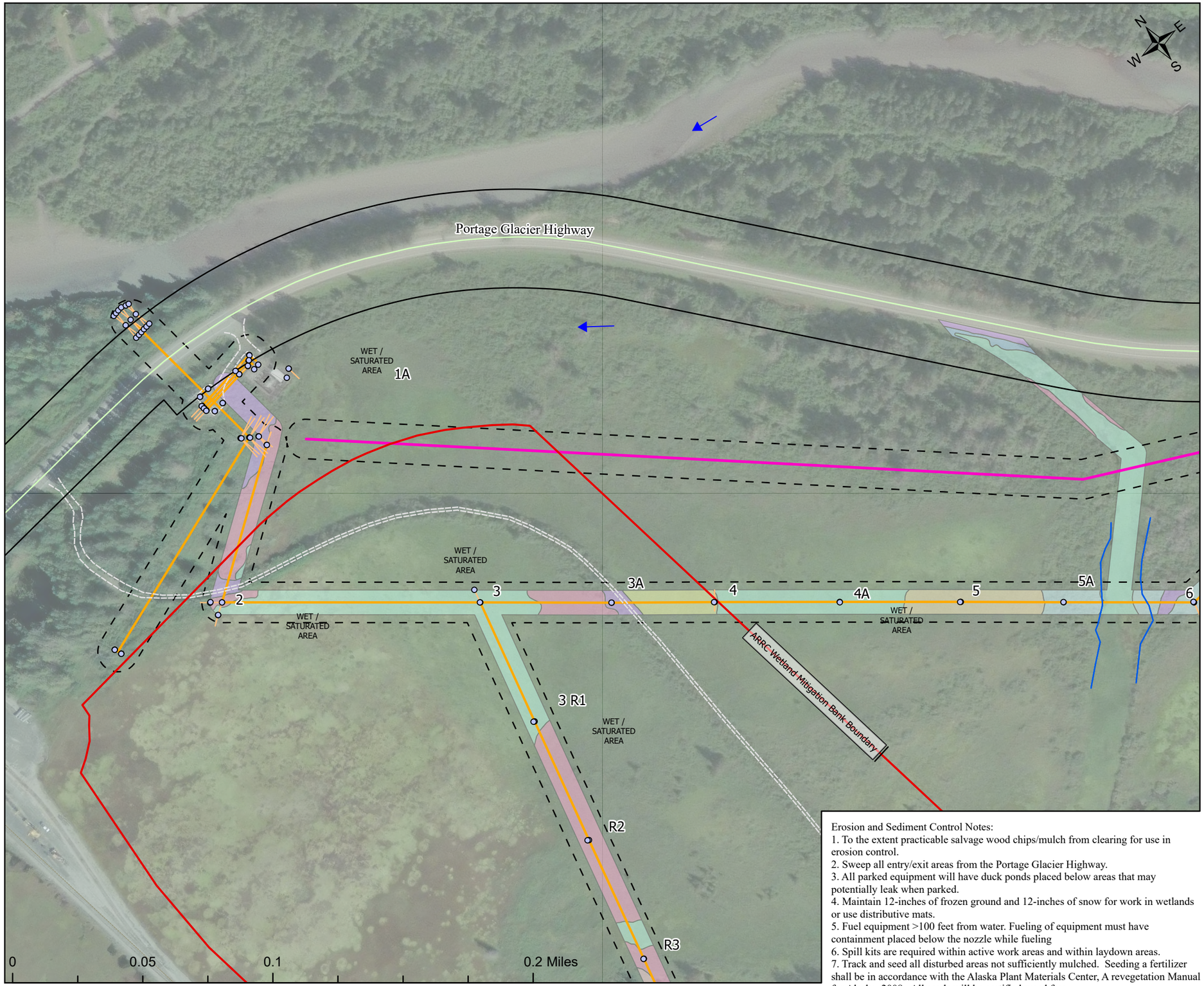
- Realignment Centerline
- 40ft Powerline ROW
- Existing Pole Feature
- Guy Wires
- Stream Outline
- Gravel
- Overhead Power
- AKDOT ROW
- Flow Direction
- Anadromous Stream
- PRMS Boundary

**NWI Wetland Type**

| | | |
|---|---|---|
| PEM1/SS1C | PFO1/EM1B | PSS1Cx |
| PEM1B | PFO1/SS1B | PUBH |
| PEM1C | PSS1/EM1B | PUBHx |
| PEM1Cd | PSS1/EM1C | R3UBH |
| PEM1Cx | PSS1/EM1F | R3USC |
| PEM1F | PSS1B | U |
| | PSS1C | <all other values> |

Page 1 of 13




Erosion and Sediment Control Notes:
1. To the extent practicable salvage wood chips/mulch from clearing for use in erosion control.
2. Sweep all entry/exit areas from the Portage Glacier Highway.
3. All parked equipment will have duck ponds placed below areas that may potentially leak when parked.
4. Maintain 12-inches of frozen ground and 12-inches of snow for work in wetlands or use distributive mats.
5. Fuel equipment >100 feet from water. Fueling of equipment must have containment placed below the nozzle while fueling
6. Spill kits are required within active work areas and within laydown areas.
7. Track and seed all disturbed areas not sufficiently mulched. Seeding a fertilizer shall be in accordance with the Alaska Plant Materials Center, A revegetation Manual for Alaska, 2008. All seeds will be certified weed free.
8. Preservation of 25ft of existing vegetative buffer will be maintained between creeks and wetland areas.

MSE Midnight Sun ENVIRONMENTAL, LLC

Microsoft, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

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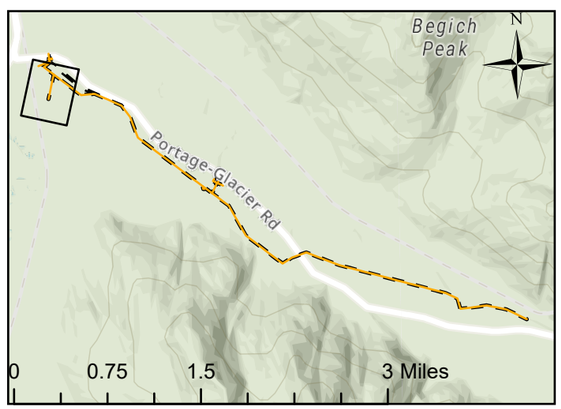
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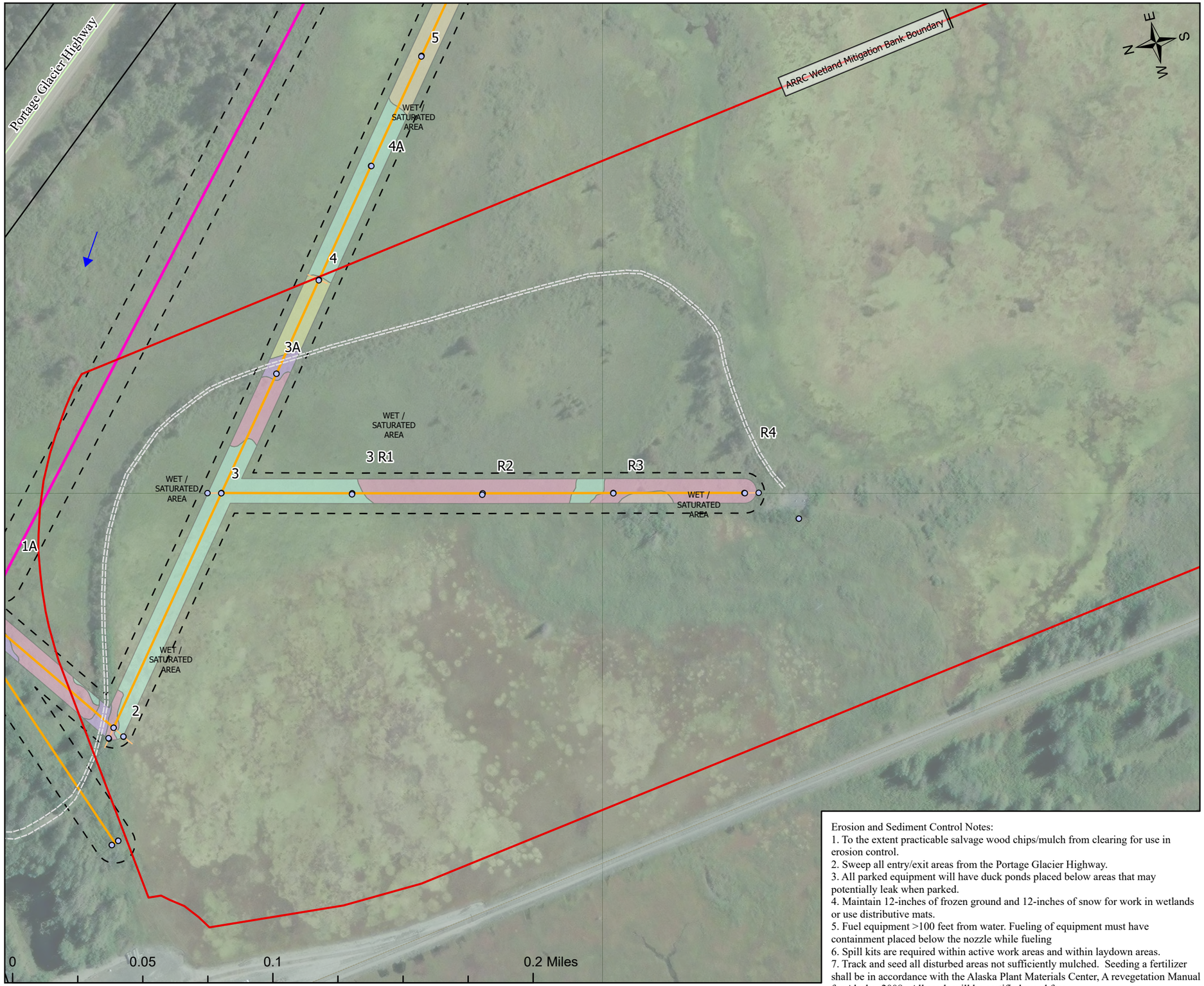
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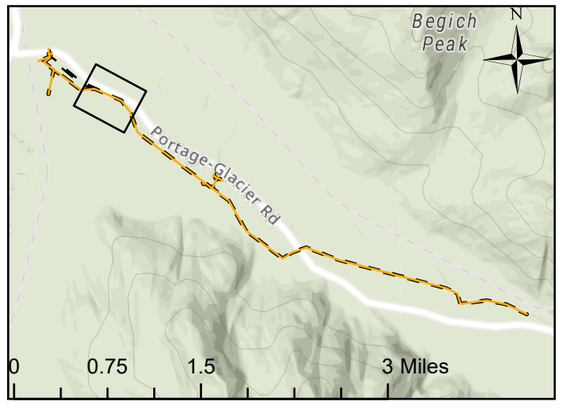
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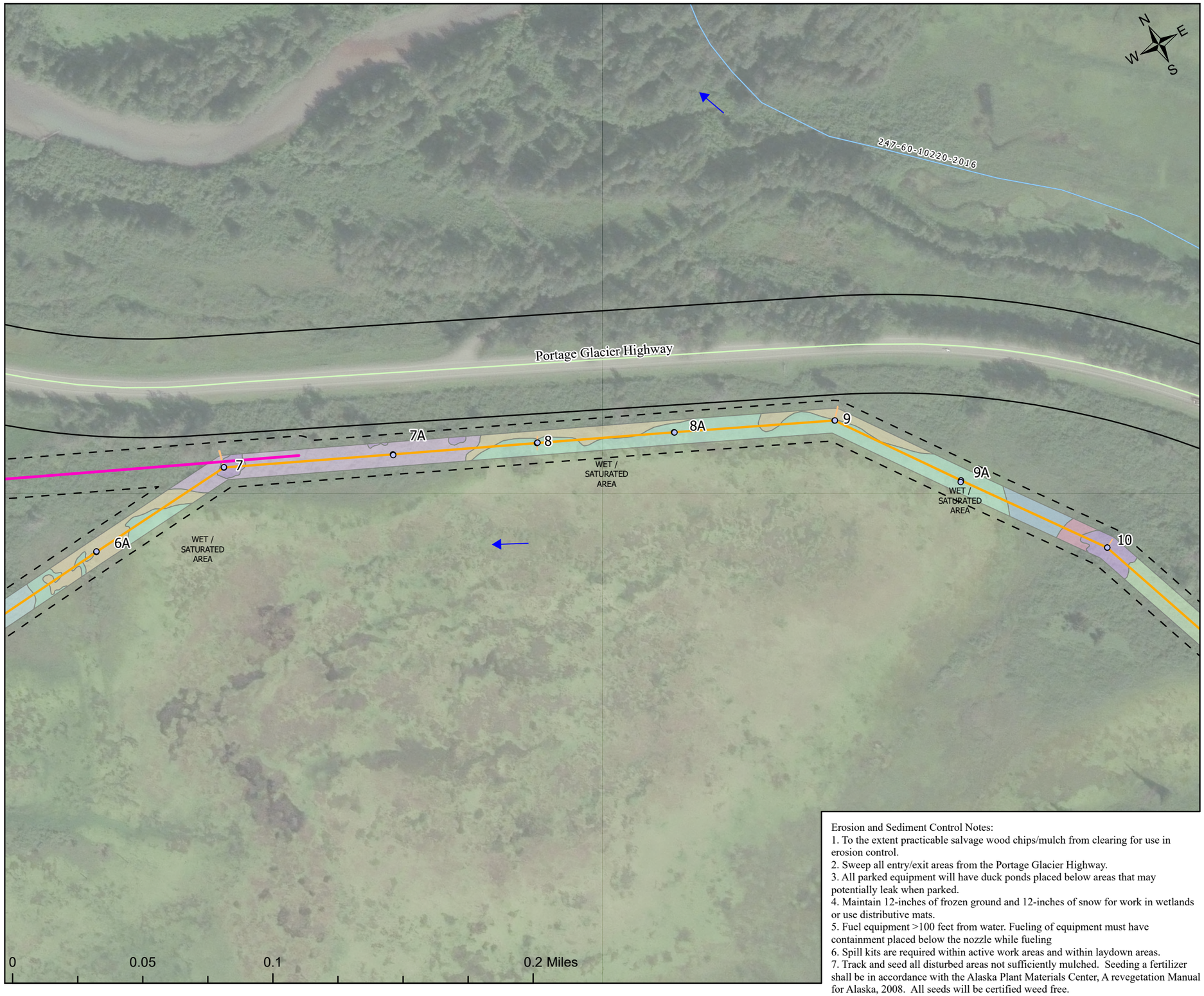
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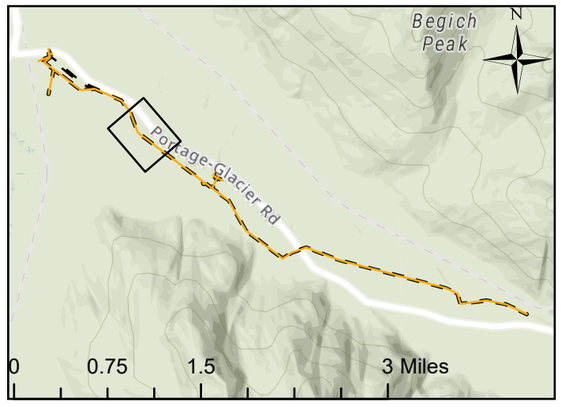
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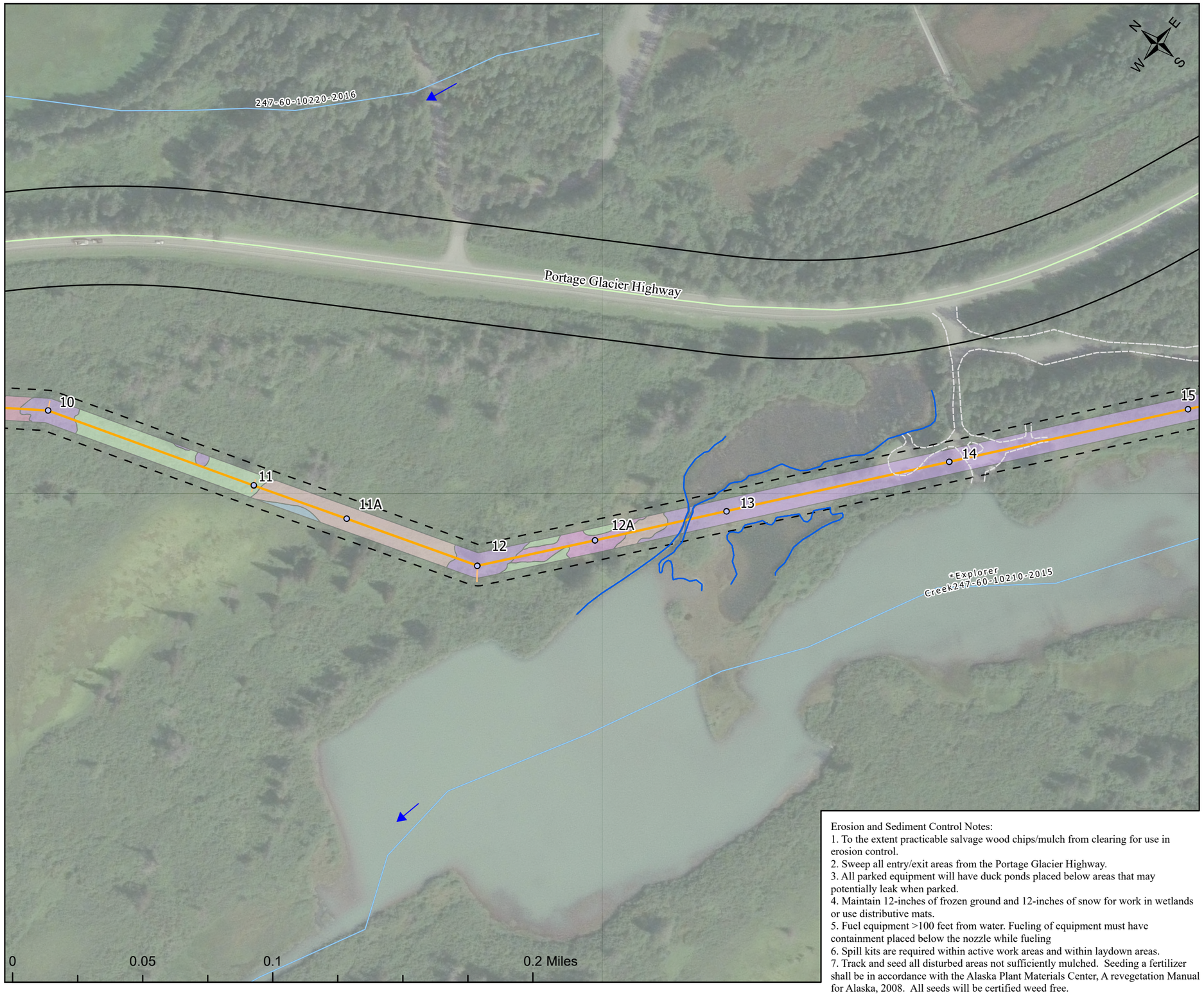
- Realignment Centerline
- 40ft Powerline ROW
- Existing Pole Feature
- Guy Wires
- Stream Outline
- Gravel
- Overhead Power
- AKDOT ROW
- Flow Direction
- Anadromous Stream
- PRMS Boundary

**NWI Wetland Type**

- PEM1/SS1C
- PEM1B
- PEM1C
- PEM1Cd
- PEM1Cx
- PEM1F
- PFO1/EM1B
- PFO1/SS1B
- PSS1/EM1B
- PSS1/EM1C
- PSS1/EM1F
- PSS1B
- PSS1C
- PSS1Cx
- PUBH
- PUBHx
- R3UBH
- R3USC
- U
- <all other values>






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# E2214092 Portage SWPPP

## BMP Map

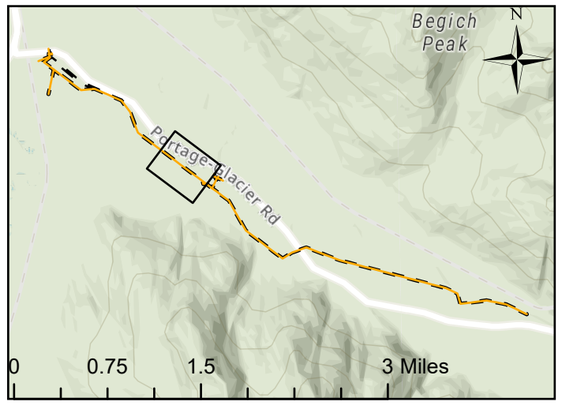
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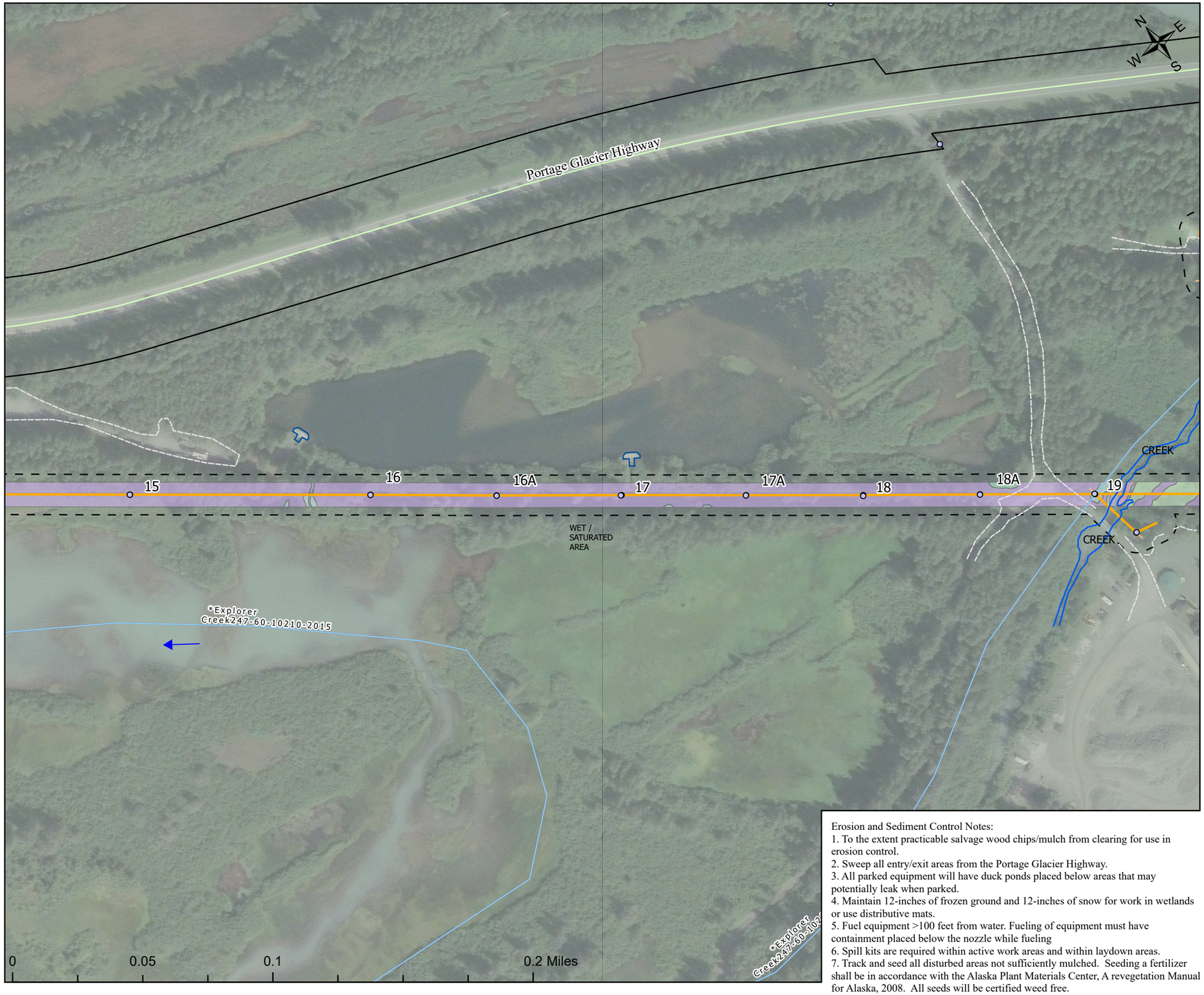
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- 40ft Powerline ROW
- Existing Pole Feature
- Guy Wires
- Stream Outline
- Gravel
- Overhead Power
- AKDOT ROW
- Flow Direction
- Anadromous Stream
- PRMS Boundary

**NWI Wetland Type**

- PEM1/SS1C
- PEM1B
- PEM1C
- PEM1Cd
- PEM1Cx
- PEM1F
- PFO1/EM1B
- PFO1/SS1B
- PSS1/EM1B
- PSS1/EM1C
- PSS1/EM1F
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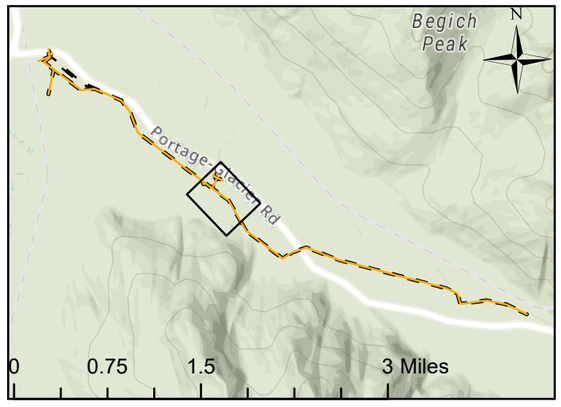
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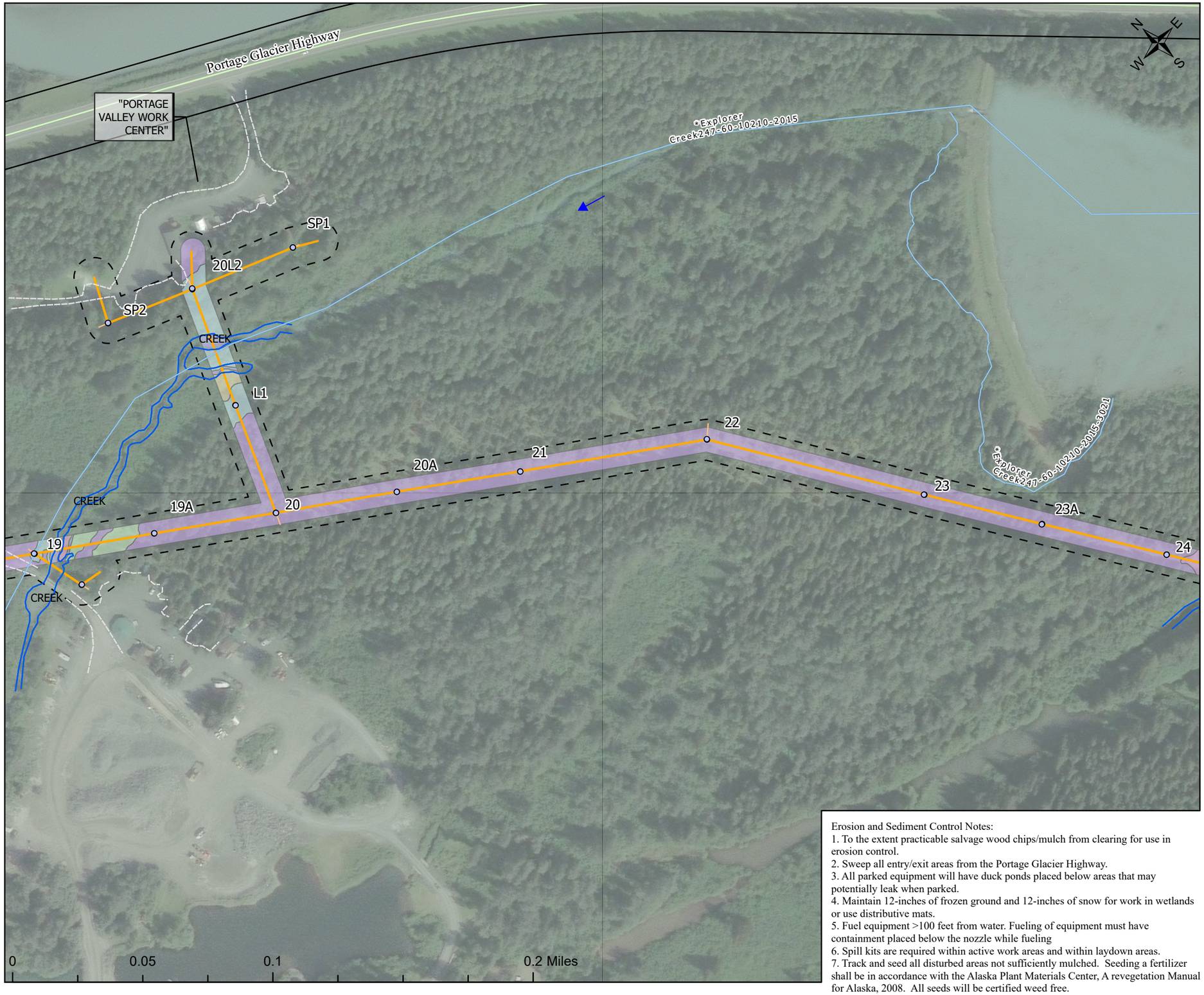
- Realignment Centerline
- 40ft Powerline ROW
- Existing Pole Feature
- Guy Wires
- Stream Outline
- Gravel
- Overhead Power
- AKDOT ROW
- Flow Direction
- Anadromous Stream
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**NWI Wetland Type**

- PEM1/SS1C
- PEM1B
- PEM1C
- PEM1Cd
- PEM1Cx
- PEM1F
- PFO1/EM1B
- PFO1/SS1B
- PSS1/EM1B
- PSS1/EM1C
- PSS1/EM1F
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- PSS1Cx
- PUBH
- PUBHx
- R3UBH
- R3USC
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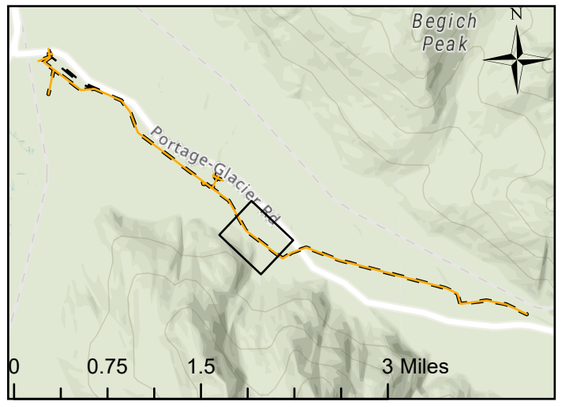
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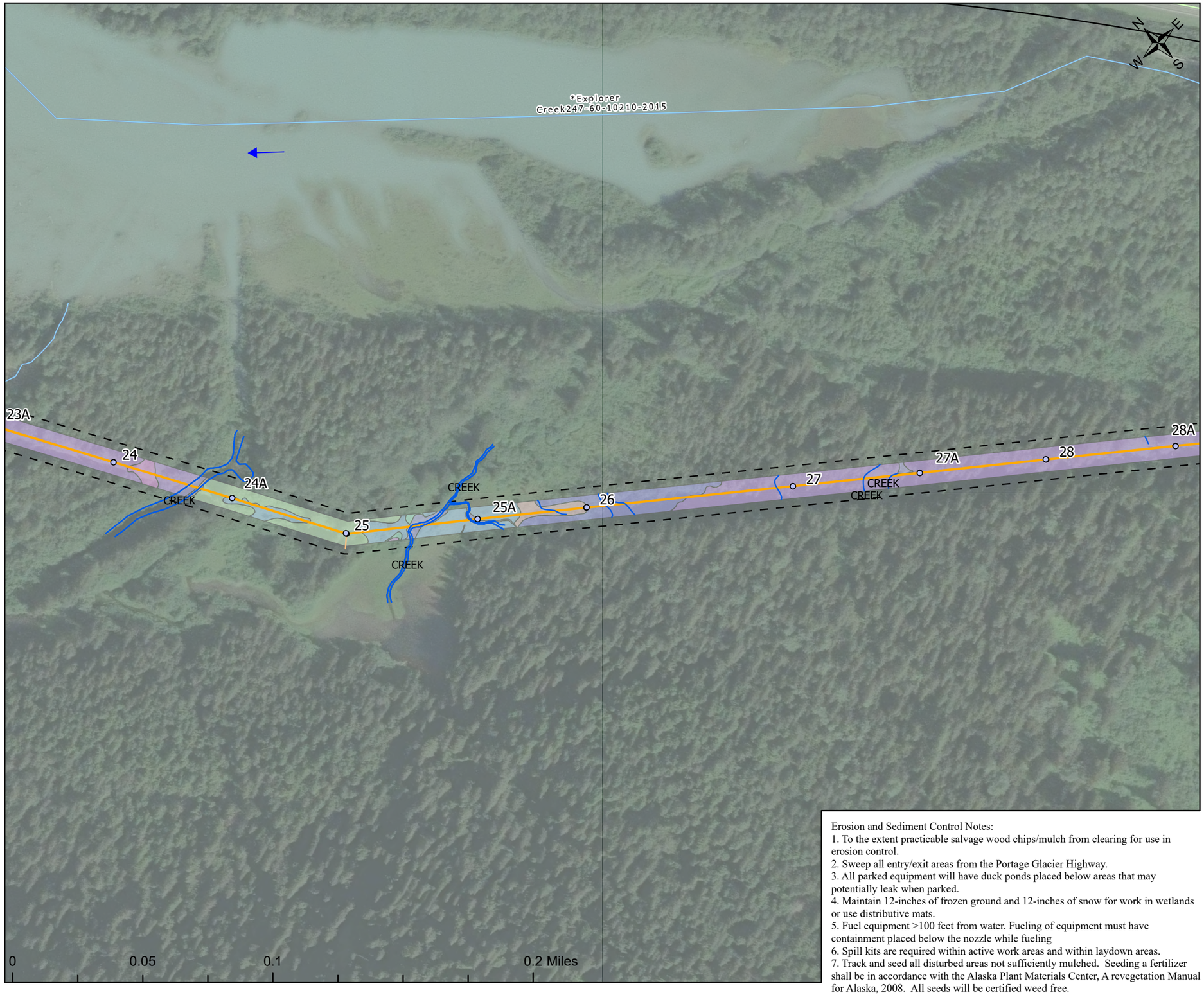
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- Existing Pole Feature
- Guy Wires
- Stream Outline
- Gravel
- Overhead Power
- AKDOT ROW
- Flow Direction
- Anadromous Stream
- PRMS Boundary

**NWI Wetland Type**

| | | |
|---|---|---|
| PEM1/SS1C | PFO1/EM1B | PSS1Cx |
| PEM1B | PFO1/SS1B | PUBH |
| PEM1C | PSS1/EM1B | PUBHx |
| PEM1Cd | PSS1/EM1C | R3UBH |
| PEM1Cx | PSS1/EM1F | R3USC |
| PEM1F | PSS1B | U |
| | PSS1C | <all other values> |






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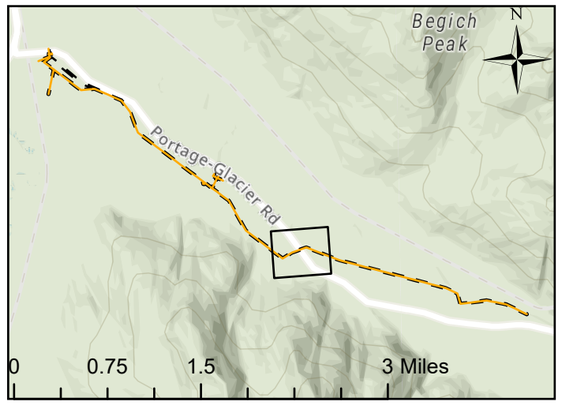
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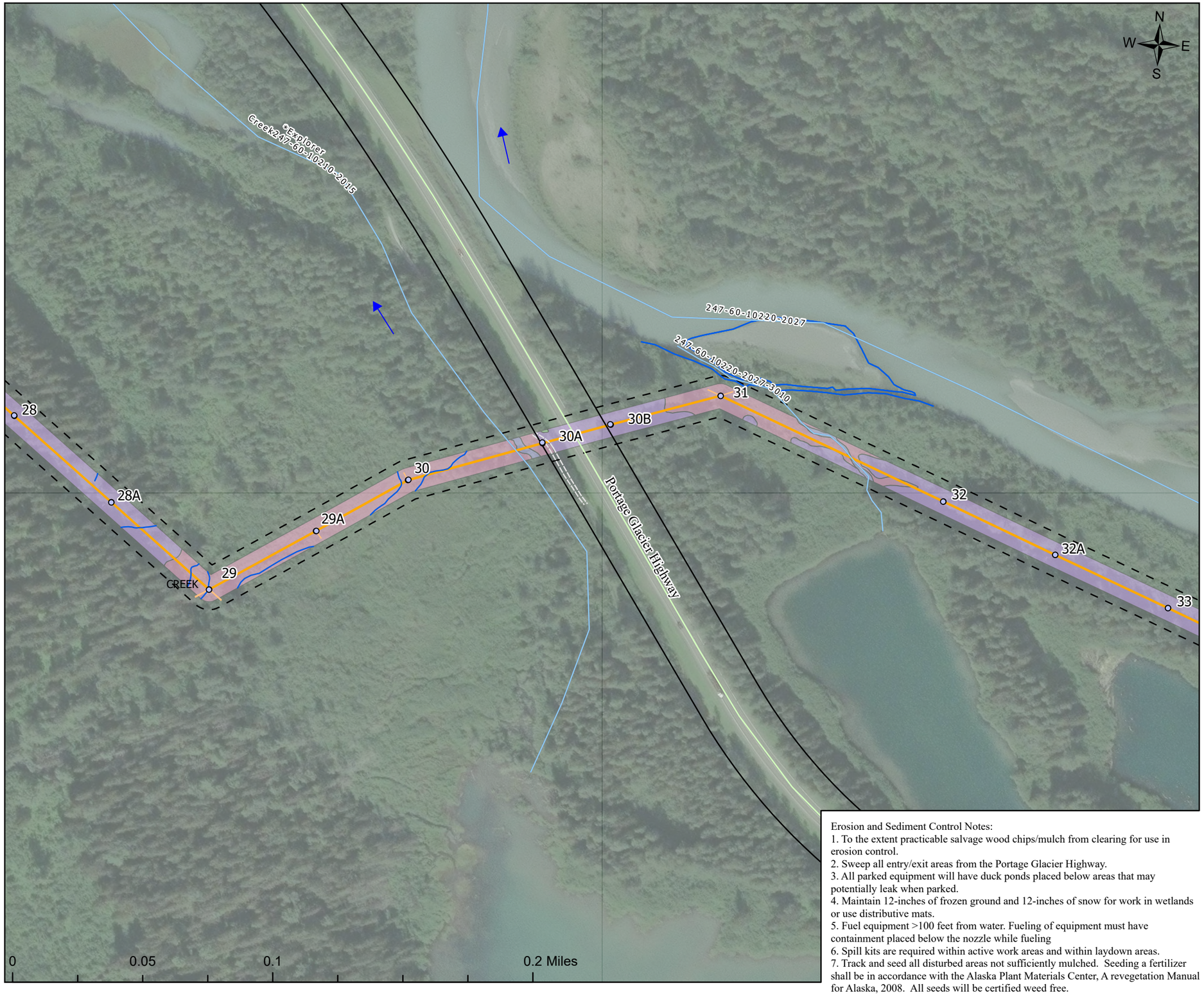
- Realignment Centerline
- 40ft Powerline ROW
- Existing Pole Feature
- Guy Wires
- Stream Outline
- Gravel
- Overhead Power
- AKDOT ROW
- Flow Direction
- Anadromous Stream
- PRMS Boundary

**NWI Wetland Type**

- PEM1/SS1C
- PEM1B
- PEM1C
- PEM1Cd
- PEM1Cx
- PEM1F
- PFO1/EM1B
- PFO1/SS1B
- PSS1/EM1B
- PSS1/EM1C
- PSS1/EM1F
- PSS1B
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- PSS1Cx
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- R3USC
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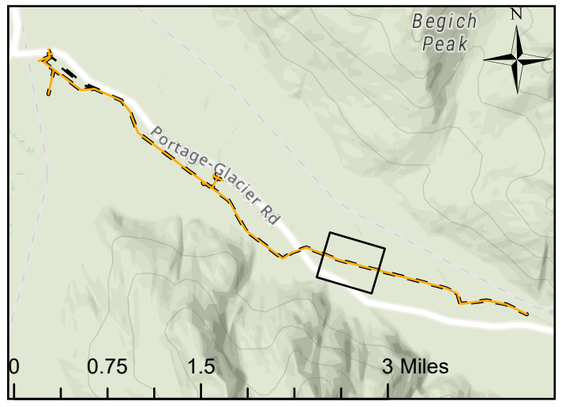
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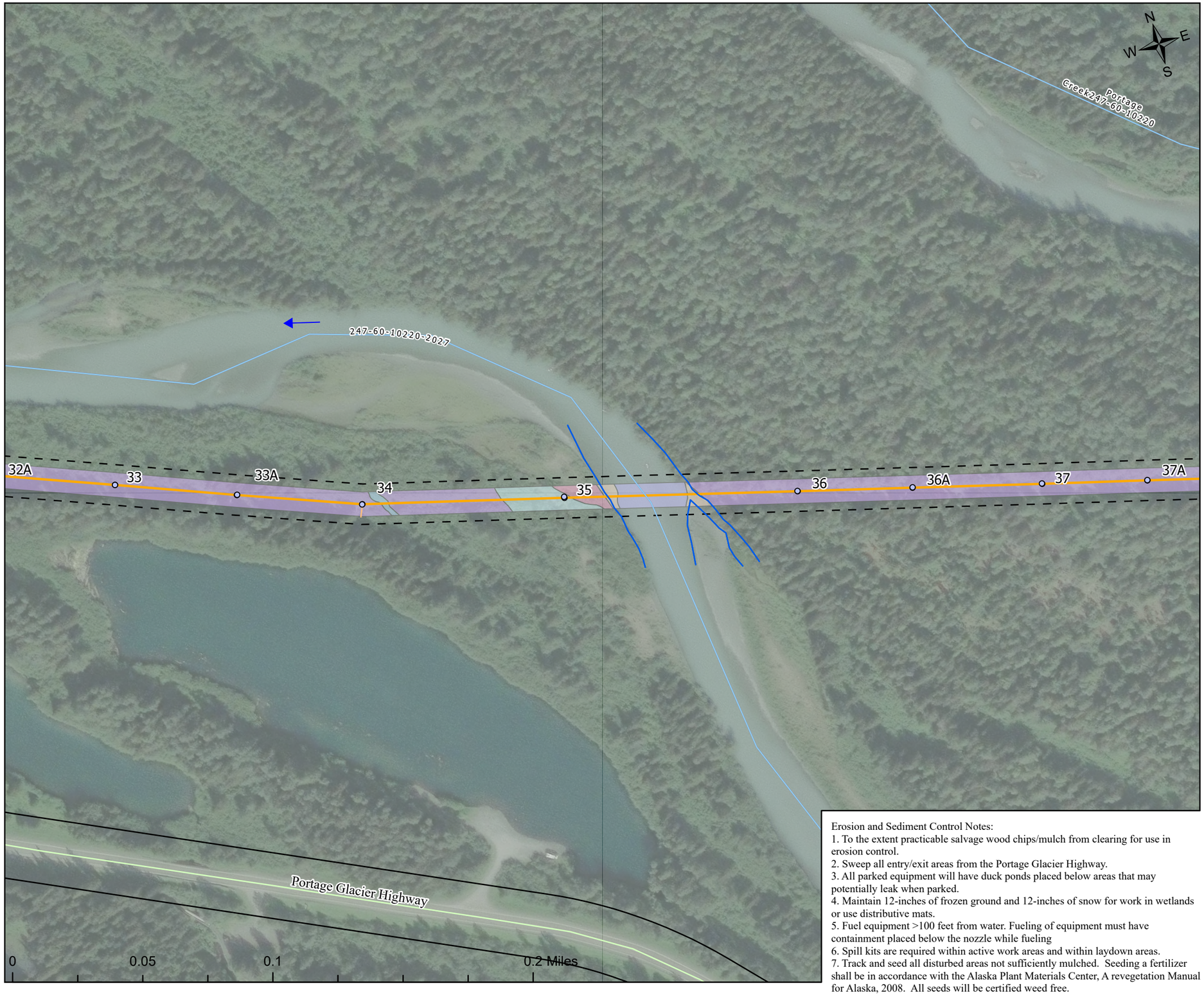
- Realignment Centerline
- 40ft Powerline ROW
- Existing Pole Feature
- Guy Wires
- Stream Outline
- Gravel
- Overhead Power
- AKDOT ROW
- Flow Direction
- Anadromous Stream
- PRMS Boundary

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- PEM1/SS1C
- PEM1B
- PEM1C
- PEM1Cd
- PEM1Cx
- PEM1F
- PFO1/EM1B
- PFO1/SS1B
- PSS1/EM1B
- PSS1/EM1C
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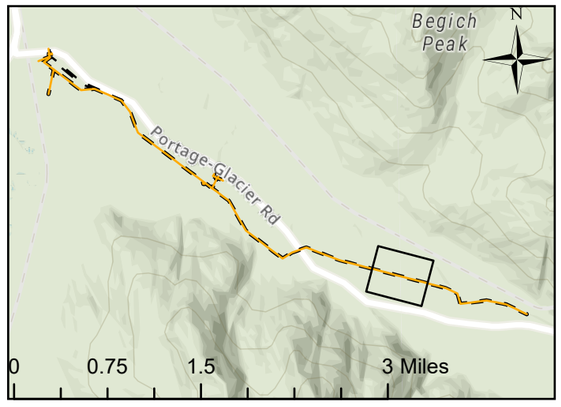
### Legend

- Realignment Centerline
- 40ft Powerline ROW
- Existing Pole Feature
- Guy Wires
- Stream Outline
- Gravel
- Overhead Power
- AKDOT ROW
- Flow Direction
- Anadromous Stream
- PRMS Boundary

**NWI Wetland Type**

- PEM1/SS1C
- PEM1B
- PEM1C
- PEM1Cd
- PEM1Cx
- PEM1F
- PFO1/EM1B
- PFO1/SS1B
- PSS1/EM1B
- PSS1/EM1C
- PSS1/EM1F
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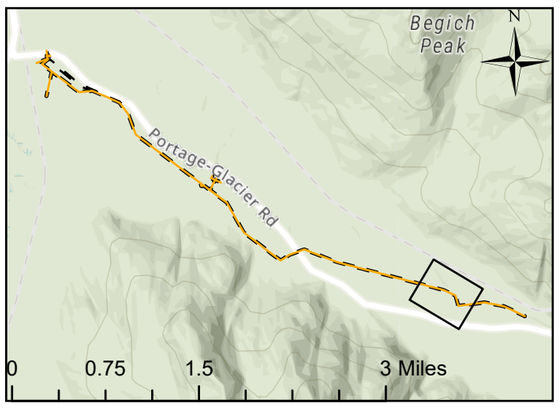
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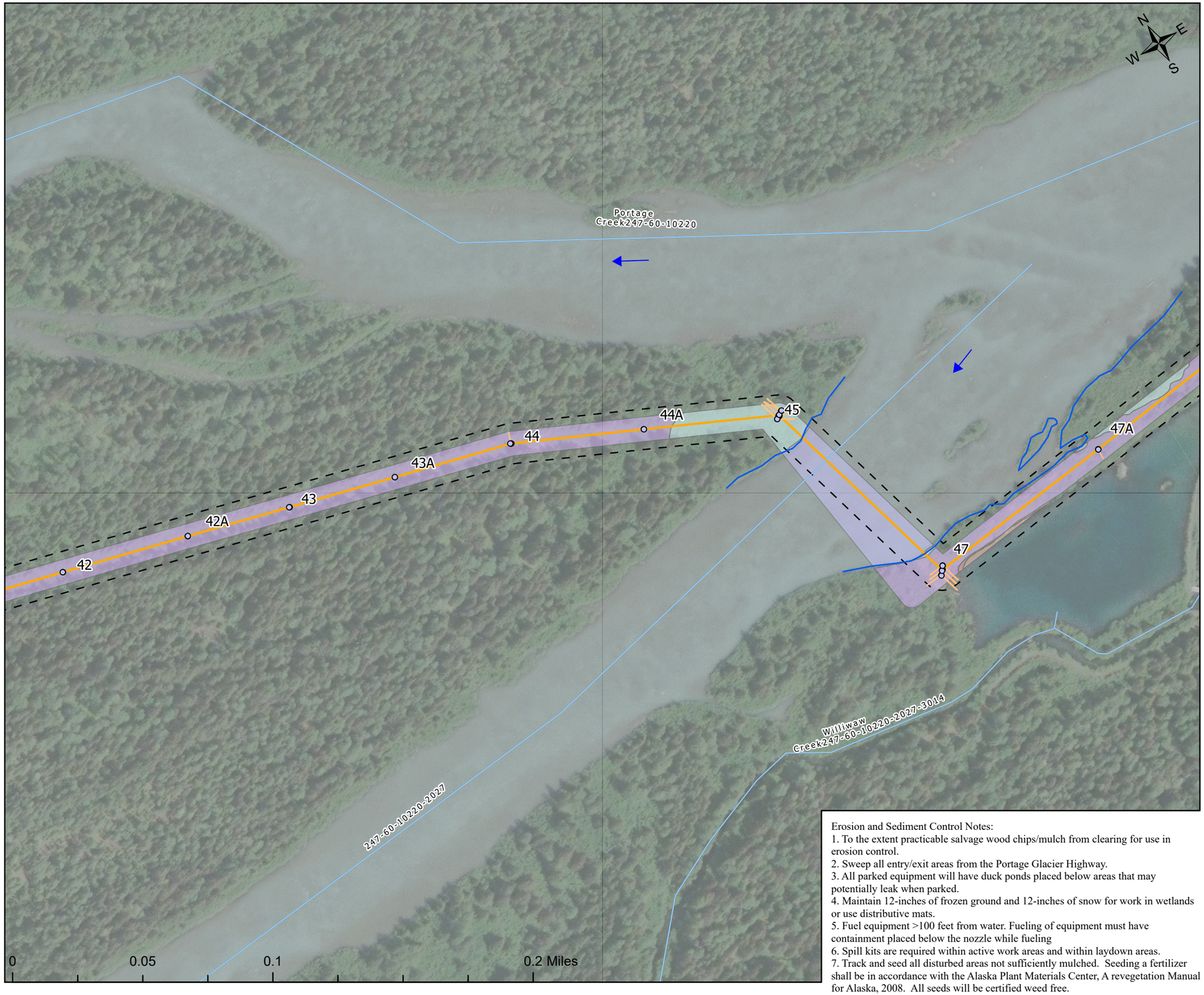
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- PEM1/SS1C
- PEM1B
- PEM1C
- PEM1Cd
- PEM1Cx
- PEM1F
- PFO1/EM1B
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- PSS1/EM1B
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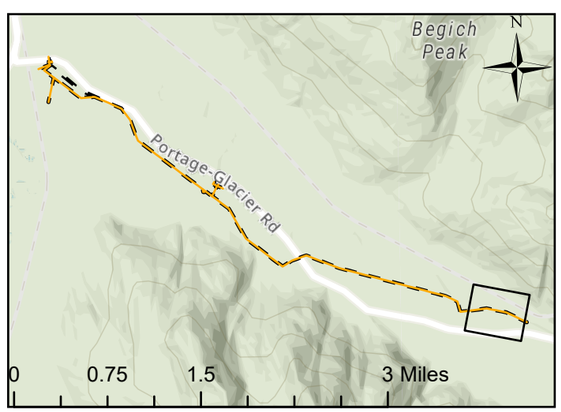
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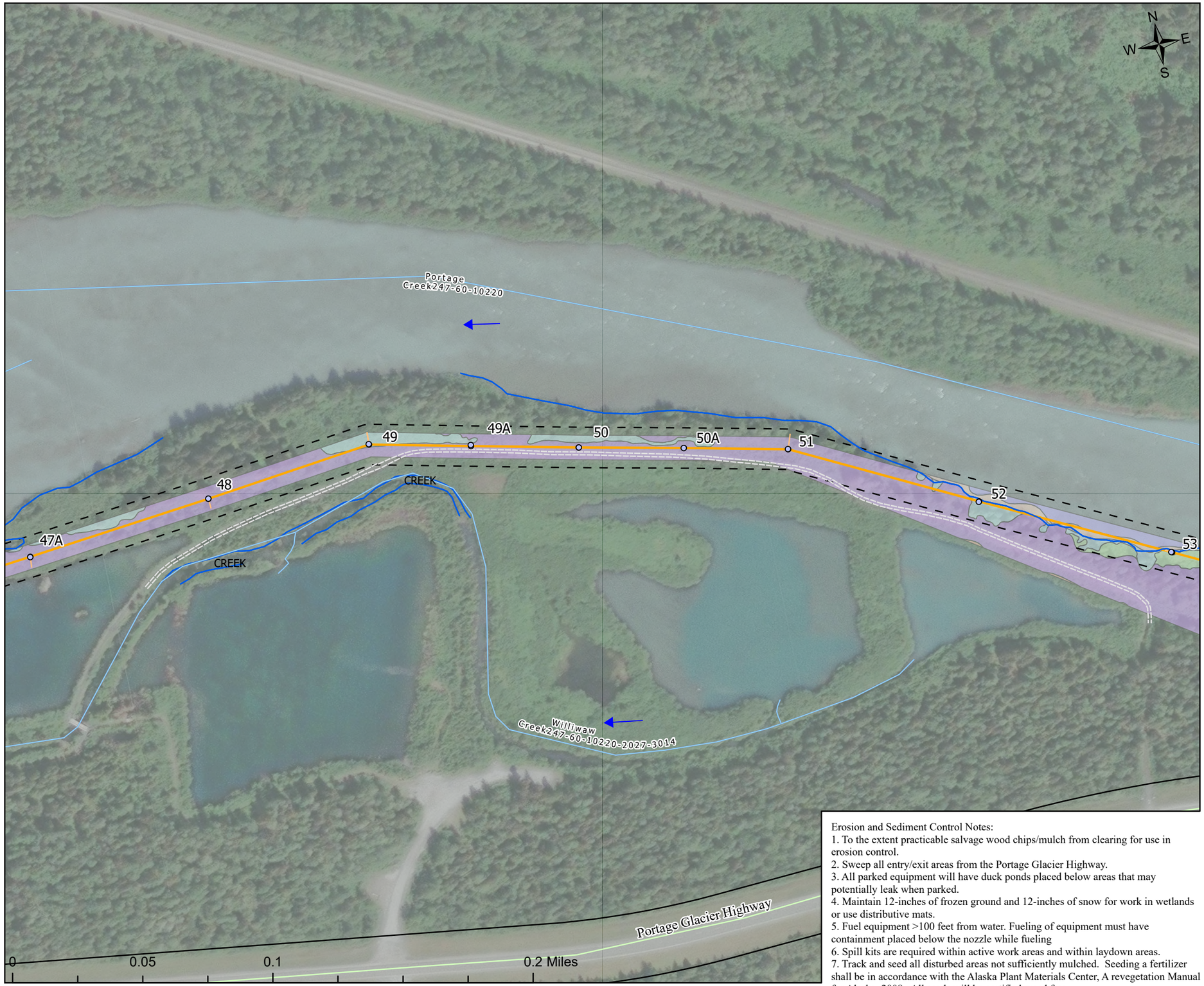
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**NWI Wetland Type**

- PEM1/SS1C
- PEM1B
- PEM1C
- PEM1Cd
- PEM1Cx
- PEM1F
- PFO1/EM1B
- PFO1/SS1B
- PSS1/EM1B
- PSS1/EM1C
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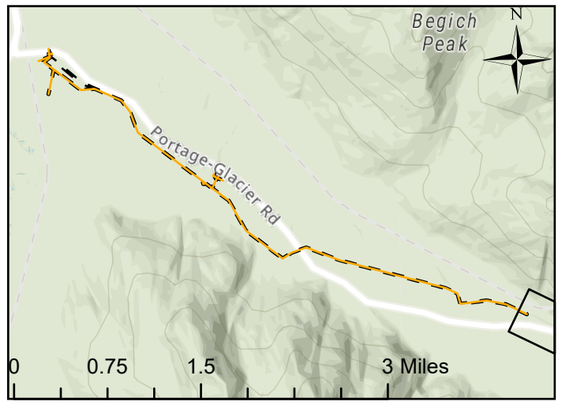
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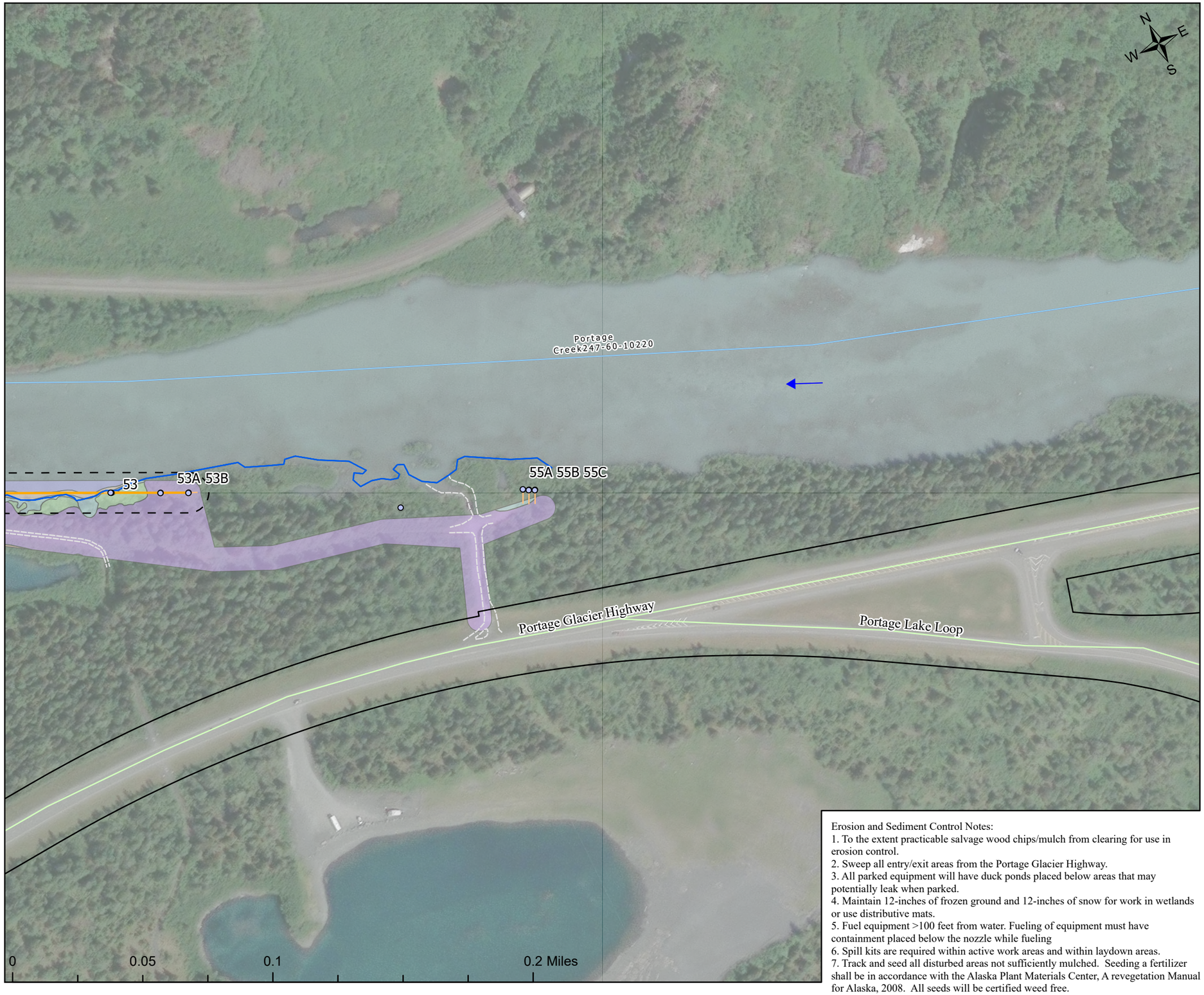
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**NWI Wetland Type**

| | | |
|---|---|---|
| PEM1/SS1C | PFO1/EM1B | PSS1Cx |
| PEM1B | PFO1/SS1B | PUBH |
| PEM1C | PSS1/EM1B | PUBHx |
| PEM1Cd | PSS1/EM1C | R3UBH |
| PEM1Cx | PSS1/EM1F | R3USC |
| PEM1F | PSS1B | U |
| | PSS1C | <all other values> |





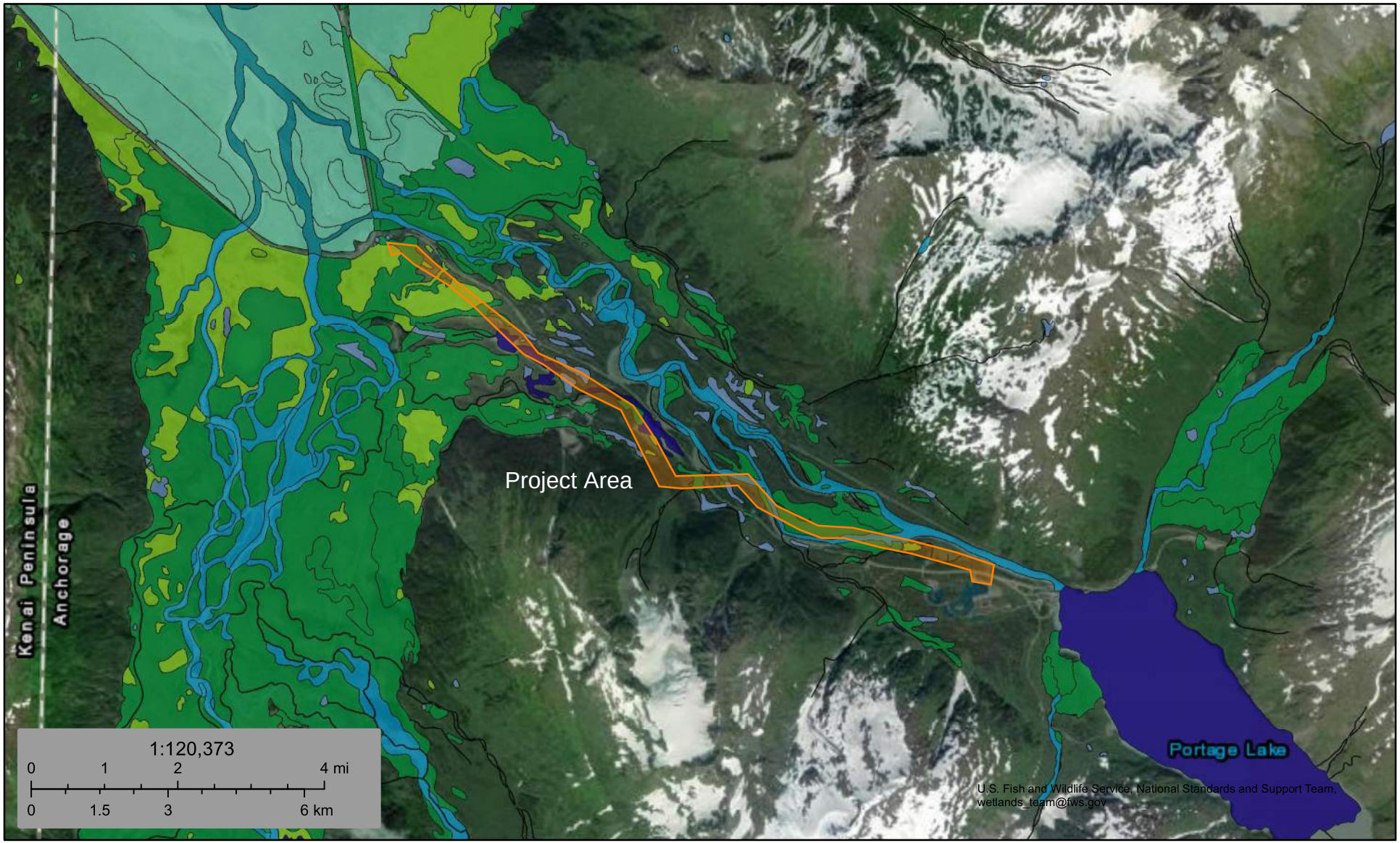

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U.S. Fish and Wildlife Service
National Wetlands Inventory

# Portage T-Line Upgrade NWI




July 7, 2025

**Wetlands**

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

# Alaska DEC Contaminated Sites




7/2/2025

Contaminated Sites

Active

Cleanup Complete

Project Area

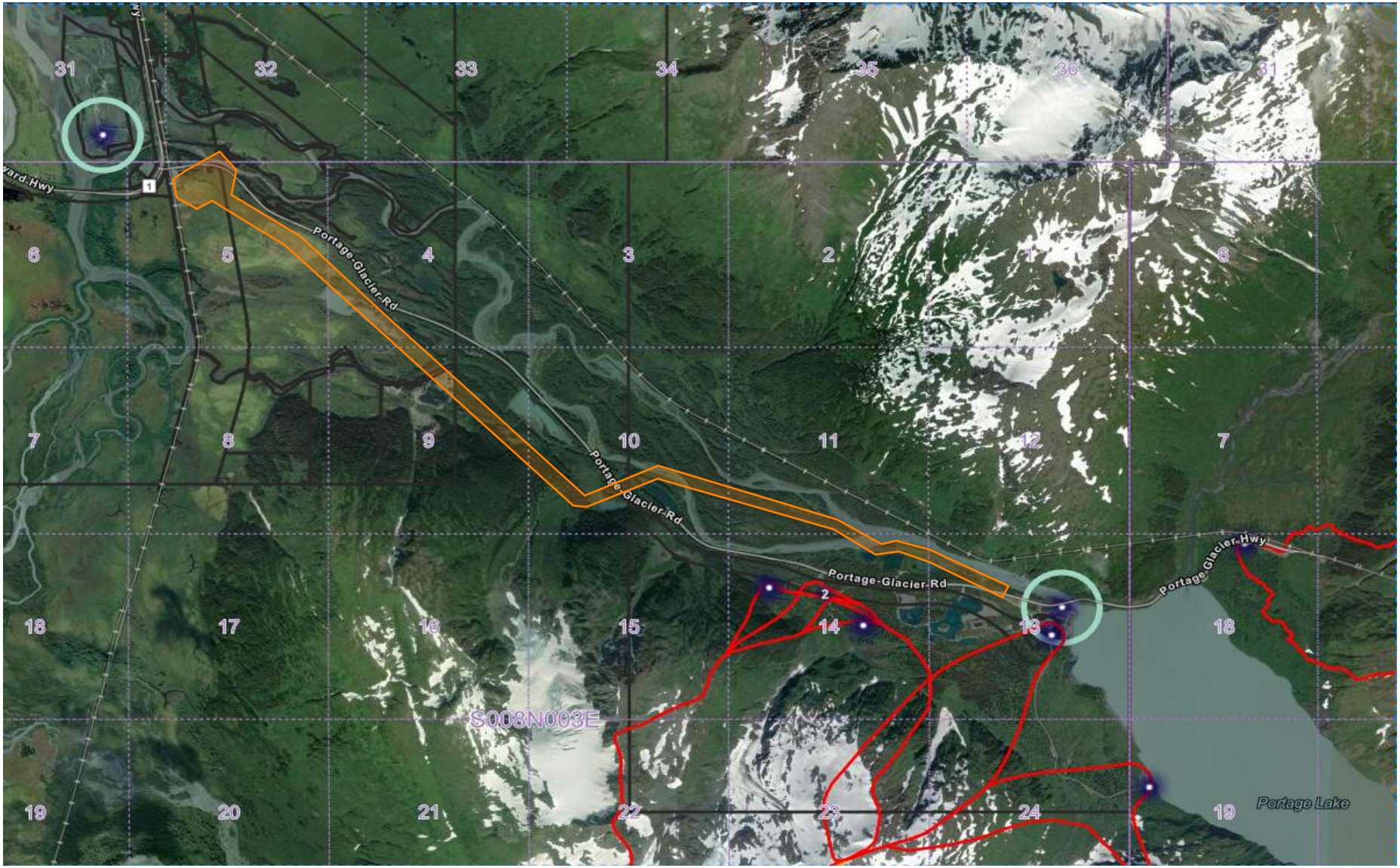
1:92,627

0 0.38 0.75 1.5 mi

0 0.5 1 2 km

SOA DCCED DCRA, © 2025 Microsoft Corporation Earthstar Geographics
SIO © 2025 TomTom, Earthstar Geographics

# Alaska DEC Drinking Water Protection Areas



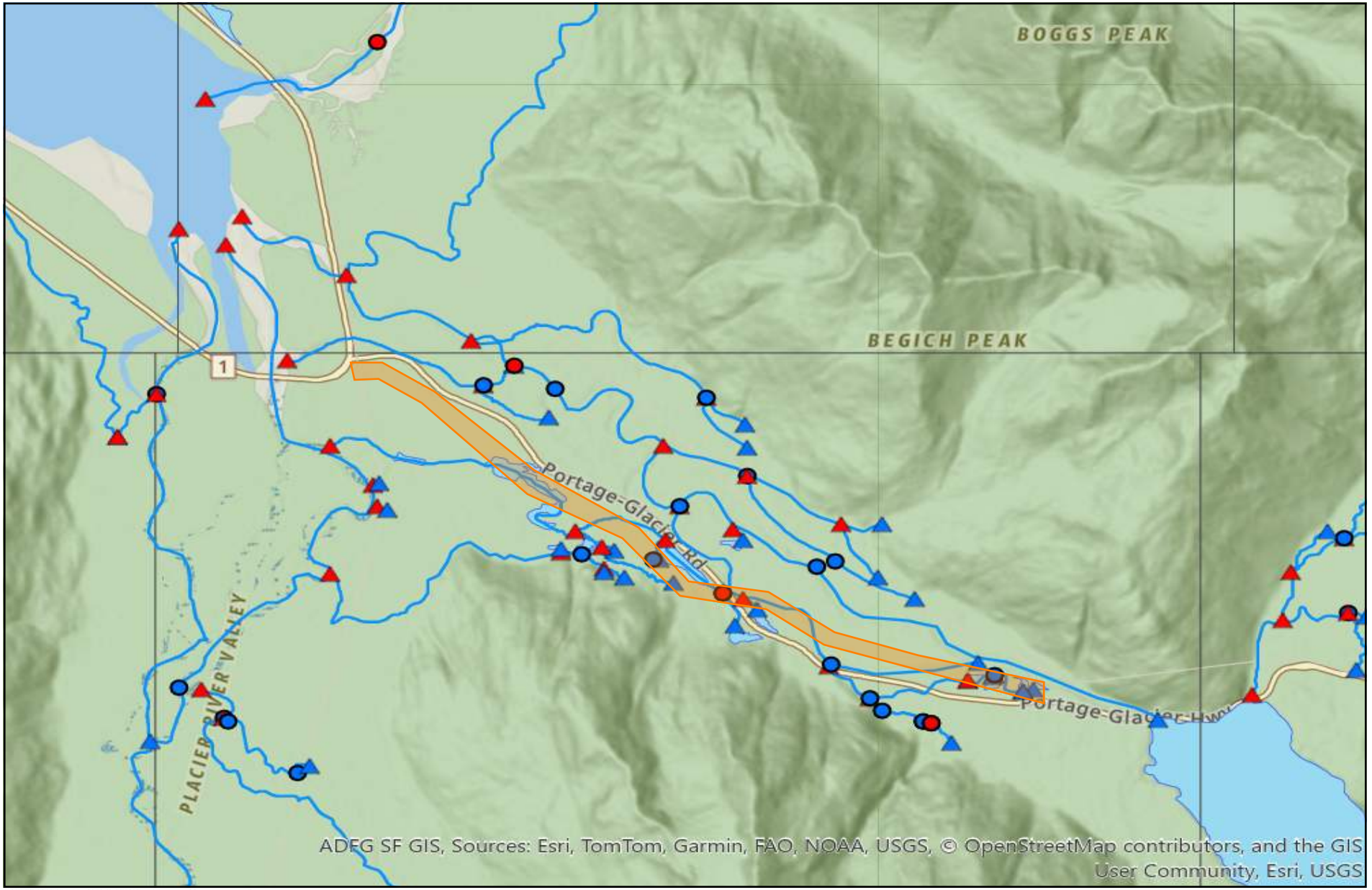

7/2/2025

## LEGEND

- Community Water System (CWS)
- Provisional Protection Areas
- Zone A (GW-Several Months Time of Travel or SW 1000 ft Buffer
- Project Area

N

# Portage Valley Anadromous Waters




7/8/2025

AWC 2025 - Anadromous points

- LOWER
- MID End
- MID Begin
- UPPER

**LEGEND**

AWC 2025 - Anadromous streams

Project Location

AWC 2025 - AWC Lakes

N

# APPENDIX B

## BMP DETAILS

# BMP List

BMPs called in the SWPPP (in order of mention, no repeats):

1. ***Scheduling SS-1 -*** Caltrans Storm Water Quality Handbooks, Construction Site Best Management Practices Manual, May 2017.

2. ***Site Delineation/Clearing Limits BMP 54 -*** DOT&PF Alaska SWPPP Guide. October 2016

3. ***Preservation of Existing Vegetation AK-1 -*** DOT&PF Alaska SWPPP Guide. February 2011

4. ***Vegetation Buffer BMP 38 -*** DOT&PF Alaska SWPPP Guide. October 2016

5. ***Temporary Stream Crossing NS-4 BMP 27 -*** Caltrans Storm Water Quality Handbook, March 2003

6. ***Prefabricated Driving Ground Protection Mat BMP 14*** - DOT&PF Alaska SWPPP Guide. October 2016

7. ***Fiber Rolls BMP 10a & 10b -*** DOT&PF Alaska SWPPP Guide. October 2016

8. ***Silt Fence BMP 20 -*** DOT&PF Alaska SWPPP Guide. October 2016

9. ***Geotextiles, Plastic Covers and Erosion Control Blankets/Mats BMP EC-11 -*** Best Management Practices Manual. Idaho, January 2014

10. ***Earth Dikes and Drainage Swales (ED/DS) EC-10 -*** Urban Storm Drainage Criteria Manual Volume 3, Best Management Practices. November 2010

11. ***Compost Berm BMP 4.00*** – AKDOT Alaska SWPPP Guide, December 2016

12. ***Brush Barrier*** – US Environmental Protection Agency, 2021 (modified for Alaska)

13. ***Culvert Inlet Protection BMP 8 -*** DOT&PF Alaska SWPPP Guide. October 2016

14. ***Rock Filter Berm BMP 16 -*** DOT&PF Alaska SWPPP Guide. October 2016

15. ***Stabilized Construction Exit AK-23 & 24 -*** DOT&PF Alaska SWPPP Guide. October 2016

16. ***Street Sweeping AK-55 -*** DOT&PF Alaska SWPPP Guide 2016

17. ***Wind Erosion Control WE-1 -*** Caltrans, Storm Water Quality Handbooks, Construction Site Best Management Practices (BMP) Manual, May 2017

18. ***Excavation Dewatering BMP 7-8-9 -*** DOT&PF, Alaska SWPPP Guide, October 2016

19. ***Soil Binders SS-5 -*** Caltrans, Storm Water Quality Handbooks, Construction Site Best Management Practices (BMP) Manual, May 2017

20. ***Permanent Seeding BMP 52 & 53 -*** *DOT&PF Alaska SWPPP Guide. October 2016*

21. ***Temporary Seeding BMP 57 -*** *DOT&PF Alaska SWPPP Guide. October 2016*

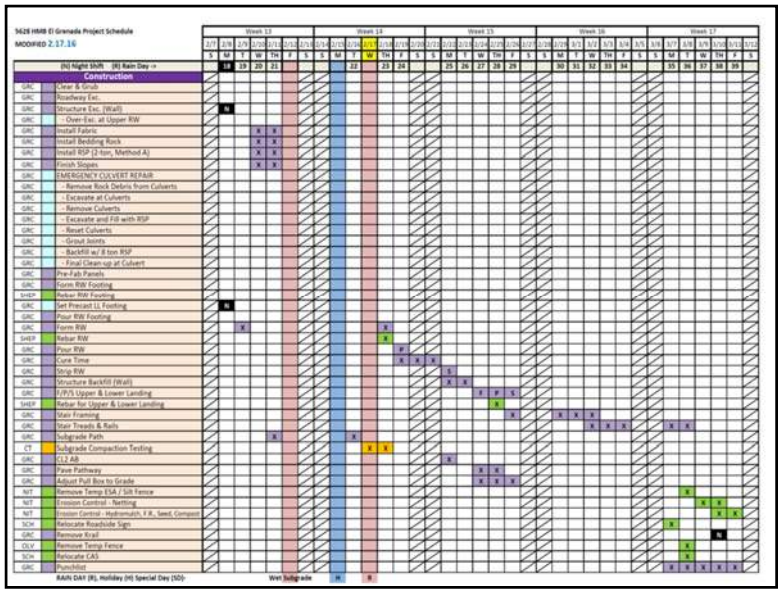
22. ***Mulching AK-9 -*** *DOT&PF Alaska SWPPP Guide 2-2011*

23. **Vehicle and Equipment Storage, Maintenance, and Fueling AK-42 –** DOT&PF Alaska SWPPP Guide 2016

24. ***Concrete Washout BMP 06.00 -*** DOT&PF Alaska SWPPP Guide 2016

25. ***Solid Waste Management WM-6 -*** Idaho DOT Best Management Practices Manual. Idaho, January 2014

26. ***Sanitary/Septic Waste Management WM-10 -*** Idaho DOT Best Management Practices Manual. Idaho, January 2014






Standard Symbol

**BMP Objectives**

| | |
|---|---|
| Soil Stabilization | ☑ |
| Sediment Control | ☑ |
| Tracking Control | ☑ |
| Wind Erosion Control | ☑ |
| Non-Stormwater Management | ☐ |
| Materials and Waste Management | ☐ |

## Definition and Purpose

This BMP involves developing, for every project, a schedule that includes sequencing of construction activities with the implementation of construction site BMPs such as temporary soil stabilization and temporary sediment control measures. The purpose is to reduce the amount and duration of soil exposed to erosion by wind, rain, runoff, and vehicle tracking, and to perform the construction activities and control practices in accordance with the planned schedule.

## Appropriate Applications

Construction sequencing should be scheduled to minimize land disturbance during the wetter months for all projects. In addition, any construction windows required by regulatory permits, and any winter suspension work should be described in the schedule. Appropriate BMPs must be implemented year-round.

## Limitations

Environmental constraints such as nesting season prohibitions reduce the full capabilities of this BMP.

## Standards and Specifications

### *General Requirements*

- Developing a schedule and planning the project operations to minimize erosion and the potential to discharge pollutants to stormwater are the very first steps in an effective stormwater program. The construction schedule must be incorporated into the SWPPP or WPCP. Refer to Section 8 and 13 of the Standard Specifications.

- The schedule should clearly show when work activities that could pollute stormwater with sediment or other contaminants would occur (e.g., grading, move-in, move-out, stockpiling, pile driving), and when soil stabilization, sediment control, and other BMPs associated with each phase of construction would be implemented.
- The schedule should include details on the implementation and deployment of:
  - Temporary and permanent soil stabilization BMPs
  - Temporary sediment control BMPs
  - Tracking control BMPs
  - Wind erosion control BMPs
  - Non-stormwater BMPs and
  - Waste management and materials pollution control BMPs
- The schedule should also include dates for significant long-term operations or activities that may have planned non-stormwater discharges such as dewatering, sawcutting, grinding, drilling, boring, crushing, blasting, painting, hydro-demolition, mortar mixing, bridge cleaning, etc.
- The construction schedule should reflect requirements for in-water work and other construction activity with potential to disturb water and biological resources contained in regulatory agency permits and approvals (RWQCB 401 WQC, USACE 404 permit, DFG 1602 permit, etc.).

### *Recommendations*

- Schedule work to minimize soil disturbing activities during predicted rain events. Consider rescheduling activities for dry periods to minimize maintenance requirements.
- Develop the sequencing and timetable for the start and completion of each item such as site clearing and grubbing, grading, excavation, paving, pouring foundations, installing utilities, etc., to minimize the active construction area.
- Schedule major grading operations during dryer months when practical.
- Stabilize inactive areas within 15 days from the cessation of soil-disturbing activities or one day prior to the onset of precipitation, whichever occurs first. Must consider manufacturers recommendation for the selected soil stabilization BMP to ensure they meet the minimum dry time required. See Appendix B of this Manual for additional guidance.
- Monitor the weather forecast for storm events, which are storms that produce or are forecasted to produce at least 0.1 inch of precipitation within a 24-hour period. When rainfall is predicted, adjust the construction schedule to allow the implementation of soil stabilization, sediment controls, and, if applicable, sediment treatment controls on all disturbed areas prior to the onset of rain.

- Ensure ample supply of BMP materials are on site in order to quickly mobilize and implement required BMPs, particularly ahead of rain events when materials may be in short supply or back order.
- Be prepared year-round to deploy soil stabilization and sediment control practices. Erosion may be caused during dry seasons by unseasonal rainfall, wind, and vehicle tracking. Keep the site stabilized year-round, and retain and maintain sediment trapping devices in operational condition.
- Sequence trenching activities so that most open portions are closed before new trenching begins. Trenched material should be stored on the upstream side of the trenches.
- Incorporate staged seeding and re-vegetation of graded slopes as work progresses.
- Consider the early planting and establishment of permanent vegetation in the schedule to maximize plant establishment success and minimize irrigation and continuous maintenance needs.
- Apply permanent erosion control to areas deemed substantially complete during the project's defined seeding window.

## Maintenance and Inspection

- Verify that work is progressing in accordance with the schedule. If progress deviates, take corrective actions.
- Keep the schedule up to date and ensure it is consistent with the contractor's three-week look ahead, or other routine schedule submitted to the RE under the contract.
- Amend the schedule when changes are warranted or when directed by the RE.

## SWPPP or WPCP

- A Water Pollution Control Schedule (WPCS) must include construction operations and BMP implementation for the entire duration of the project. The WPCS is to be included as an attachment and discussed in section 500.7 of the SWPPP or Section 30.5 of the WPCP.

# BMP 54.00. Site Delineation

## *DESIGN CONSIDERATIONS*

### *Objectives*

Site delineation measures are intended to mark (1) all areas where land disturbing activities will occur, including clearing and grading, and (2) specific areas that will be left undisturbed, such as trees, boundaries of sensitive areas, or environmental buffer zones, prior to work beginning. Buffer zones may include those at stream crossings and around the edges of any wetlands or waters of the U.S. that are located within or immediately adjacent to the property where the construction activity will take place.

This measure is intended to comply with the requirements of Alaska Construction General Permit.

### *Description*

Site delineation measures may be physical barriers, such as temporary fencing, or visual indications, such as staking and flagging, used to delineate specific areas. They are intended to remain until construction activity is completed. The most common measures include temporary fencing, survey flagging tape, stakes, paint on asphalt or concrete, and signs.

### *Other Names*

Flagging, temporary fencing, high-visibility fencing, staking, signs, paint markings.

### *Applicability*

Site delineation applies to all construction projects involving land disturbing activities.

### *Selection Considerations*

Choose marking materials that have high visibility and contrast with the natural surroundings. Select materials based on ability to last for the duration of construction. This is especially important for construction that will span multiple seasons, or last several years.

Sensitive areas and their buffers may require more substantial protection, such as work zone safety fences. Silt fence, in combination with survey flagging, can be an acceptable method of marking sensitive areas and buffers. However, silt fencing should only be used for this purpose if it is also needed for, and properly installed and maintained as, a sediment control measure.

If fencing other than orange fencing is used, provide signage with wording describing the purpose of the fence.

If signs are to be used, specify the type and spacing of signs and the wording on the sign, such as 'No Entry,' 'Keep Out,' 'No Grade Change', 'No Work, Storage Of Materials or Equipment Permitted Beyond This Point,' or other appropriate directive. Specify minimum lettering size for signs.

For long linear projects that are constructed in phases, consider the following:

- Provide delineation to protect adjacent out-of-phase areas that are not part of the current phase of construction.
- Specify installation of site delineation to coincide with phases of construction so that the length of time the site delineation must be inspected and maintained is sufficient but no longer (too far in advance) than necessary.

### *Common Failures or Misuses*

- Failure to install prior to land disturbing activities.
- Inappropriately using materials intended for other purposes. For example, silt fencing material should not be used unless it is properly installed as a sediment control measure (BMP-20).
- Installing markers too close to areas of construction activity; failure to provide adequate maneuvering room for construction activities.
- Damage to markings and flagging cut down during clearing activities.
- Using products that are easily vandalized by humans or disturbed by animals.

*SPECIFICATIONS*

Standard Specification

655 – Site Delineation

***BMP AK-1***
***Preservation of Existing Vegetation***

*Purpose and Description*

- The purpose of preserving existing vegetation is to limit site disturbance and to minimize soil erosion by identifying and protecting pre-existing vegetation on the construction site.[1]

*Applicability*

- Natural vegetation must be preserved in all areas where no construction is planned or will occur at a later date.
- Clear only land that is needed for building activities or vehicle traffic.[2]
- This BMP is not to supersede existing guidelines, restrictions or law, preserve vegetation as required by local governments (such as stream buffers).
- The preservation of existing vegetation is an applicable practice in all regions and climates in Alaska.

*Design and Installation*

- Before any clearing begins, vegetation selected for preservation must be clearly marked with established barriers.[3] These barriers must be about 1 meter in height, must be highly visible and be anchored by wood or metal fence posts at spacing and depth that will adequately support the fence for the entirety of the project.[1]
- A site map must be prepared clearly outlining all areas of vegetation that is to be preserved.[2]
- Vehicle traffic, equipment storage and parking shall be kept away from these areas to prevent soil and root compaction.[1]
- Ground disturbance must be kept from these areas at least as far out as the leaf drip line.[3]
- Maintain pre-existing irrigation systems that may supply water to vegetation selected for preservation.[1]
- To increase chances of survival it is best to limit grade changes in these areas and areas within the drip line.[3]

*Maintenance and Inspection*

- Repair or replace damaged vegetation immediately.[2]
- Inspect preservation areas regularly, if barrier has been removed or visibility reduced repair or replace barrier so that visibility is restored.[3]
- If roots are exposed or damaged, prune ends just above damage with pruning shears or loppers and recover with native soil.[3]

*References*

[1]Caltrans Storm Water Quality Handbooks, March 2003, Construction Site Best Management Practices Manual, SS-2 Preservation of Existing Vegetation, http://www.dot.ca.gov/hq/construc/stormwater/CSBMPM_303_Final.pdf

(Continued on next page)

[2]USEPA (United States Environmental Protection Agency), October 2000, National Menu of Best Management Practices, Preserving Natural Vegetation, http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=browse&Rbutton=detail&bmp=34&minmeasure=4

[3]Washington State Department of Ecology, February 2005, Storm Water Management Manual for Western Washington, Construction Storm Water Pollution Prevention, BMP C101: Preserving Natural Vegetation, http://www.ecy.wa.gov/pubs/0510030.pdf

# BMP 38.00. Vegetation Buffer

## *DESIGN CONSIDERATIONS*

### *Objectives*

A Vegetation Buffer is intended to reduce the quantity of suspended soil sediments in construction-related stormwater runoff by using living strips of vegetation suitable to reducing run-off velocities. The application for this type of control can include, but is not limited to the following:

- Type I – Perimeter Control - Provides a Vegetation Buffer as a perimeter control between the on-site construction related activities and the project boundaries.
- Type II – Natural Buffer - Provides a Vegetation Buffer between the construction related activities and sensitive areas such as waters of the U.S. and riparian areas (as required by the Alaska Construction General Permit [CGP]).

### *Description*

Vegetation Buffers can be strips of existing vegetation or can be areas that are graded and planted with grass or other types of vegetation. They are intended to be used adjacent to where construction activities will occur and are primarily designed to treat sheet flow. Vegetation Buffers should not be used in areas with concentrated flows. Larger areas must be used to accommodate the larger run-off volume. These strips function by reducing the velocity of run-off to allow the suspended sediments and other pollutants to settle and partially infiltrate into the underlying soils.

### *Other Names*

Vegetated Sediment Filtration Areas, Buffer Strips, Vegetated Strips

### *Applicability*

Vegetation Buffer strips can be used at numerous locations over a project but are best suited if installed at locations where the soil is well drained and where the water table and bedrock are well below the surface. Vegetation Buffers may also be effectively used on the top and bottom of slopes. They can be used either temporarily or as permanent installations.

### *Selection Considerations*

During the design phase of a project any area specified to be a natural Vegetation Buffer area should be identified. The type of vegetation, soil conditions, and the estimated volume of stormwater run-off should be considered when selecting a natural Vegetation Buffer.

Vegetation Buffer areas that are installed (or planted) should be located directly adjacent to where construction activities will occur. These areas should be graded and planted to establish a healthy vigorous stand of vegetation prior to any construction occurring. Other erosion and sediment control measures should be installed to help protect and stabilize the Vegetation Buffer while the planted vegetation becomes established.

When retaining existing vegetation as a Vegetative Buffer, minimize the disturbed areas by locating temporary roadways to avoid stands of vegetation and following the existing contours to reduce cutting and filling. To avoid disturbing the root-zone of existing trees, the edge of the tree canopy or drip-line should be noted when locating these temporary roadways.

Vegetated Buffers must be on land controlled by the project. If in wetlands, they must be recognized in the wetland permit.

### *Design*

The designer should consider the type of Vegetation Buffer (Type I or II) and the slope of the proposed Vegetation Buffer area, the soil type and infiltration rate, the water table level, the type of proposed or existing vegetation, the estimated stormwater flow in the area, and the protection of sensitive areas. There may be site specific constraints that dictate alternate widths for a Vegetation Buffer or require the use of a different perimeter control measure.

Vegetation Buffer areas should be fully established with vegetation prior to construction occurring. A fully established Vegetation Buffer should be composed of species that are capable of growing a sod forming mass that covers 90 percent of the selected area. New Vegetation Buffers with planted vegetation should be composed of more than just one species and be hardy to the area. The

combination of species should capable of creating a perennial stand of vegetation and be able to withstand frequent inundation from run-off. See BMP-53 Permanent Seeding.

All Vegetation Buffer areas with either naturally-occurring or planted stands of vegetation should be delineated prior to and throughout construction to prevent damage to the vegetation and its roots. All Vegetation Buffer areas should be inspected for impacts from soil deposited by construction related activities, damage from channelized run-off, excess accumulation of sediment, and disturbance or damage from construction activities. It may be necessary to employ other erosion and sediment control measures upstream to support existing Vegetation Buffer areas. Do not include the acreage of Vegetation Buffers in the acreage of disturbed areas for the purpose of the Notice of Intent (NOI) acreage.

The two types of buffers for Vegetation Buffer landscaping include the following:

Type I Perimeter Control Vegetation Buffers are used to help filter sediments from run-off before it leaves the job site. These can be composed of existing or newly planted vegetation. The length of these buffers should be determined by the steepness of the slope.

Type II Natural Buffer Vegetation Buffers are used when required by the Alaska CGP to protect sensitive areas (such as waters of the U.S. or riparian areas). The minimum width shall be 25 feet unless found to be infeasible. However, in some cases the governing local ordinance may specify an alternate minimum width. In such cases, it is the responsibility of the designer and the contractor to review and adhere to the specific requirements for a Vegetation Buffer in the local ordinance. Local ordinances governing nonpoint source pollution in Alaska can be found here: http://www.commerce.state.ak.us/dca/nonpoint/ordinances.cfm?type=Hy

### *Relationship to Other Erosion and Sediment Control Measures*

Vegetation Buffers areas with existing vegetation may not require other erosion and sediment control measures; however, installing or planting new Vegetation Buffer areas will require other erosion and sediment control measures during the establishment period of the specified vegetation.

### *Common Failures or Misuses*

Common failures are generally due to faulty application and maintenance. These failures include:

- Damage to the roots or stalks of the vegetation from construction activities.
- Overwhelming the buffer with excessive quantities of stormwater run-off, sediments, channelized run-off, and pollutants.
- Inadequate subsurface soil, vegetation, and size of Vegetation Buffer strip
- Non-observance of delineated Vegetation Buffer areas.
- Designer does not visit site and fails to take site specific conditions into account.

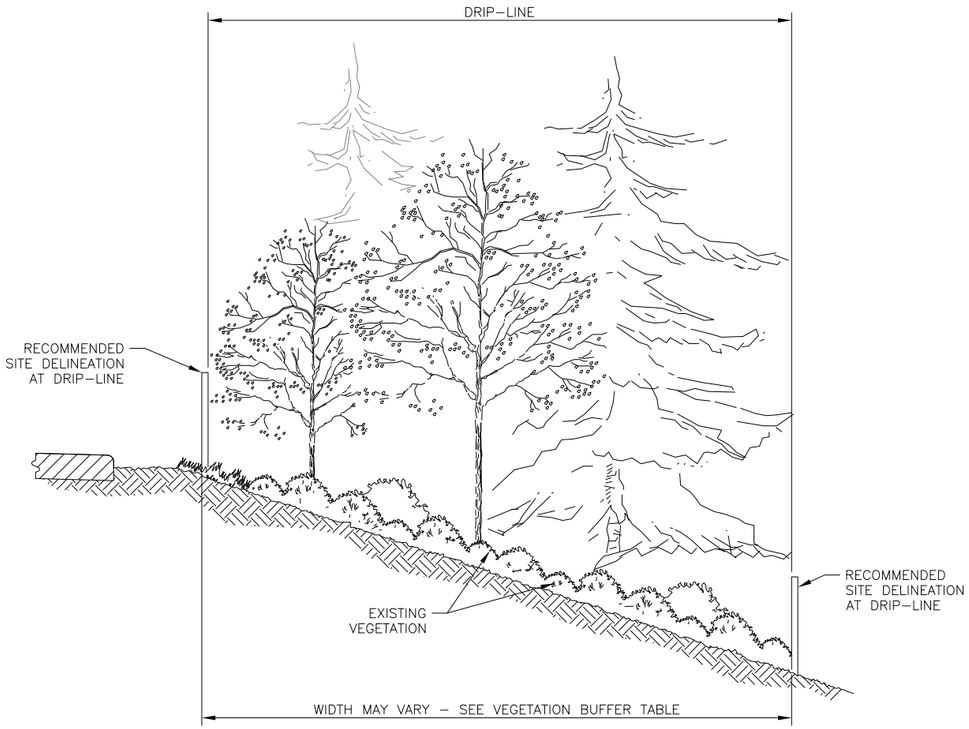
## *SPECIFICATIONS*

Standard Specifications

- 688 – Vegetation Buffer
- 201 – Clearing and Grubbing
- 203 – Excavation and Embankment
- 620 – Topsoil
- 651 – Hydraulic Erosion Control Product
- 652 – Soil Amendments
- 655 – Site Delineation
- 712-2.01 – Water
- 724 – Seed
- 725 – Fertilizer
- 726 – Topsoil
- 751 – Hydraulic Erosion Control Products
- 752 – Tackifier
- 753 – Soil Amendments

Drawing

- BMP-38.00 Vegetation Buffer




SECTION

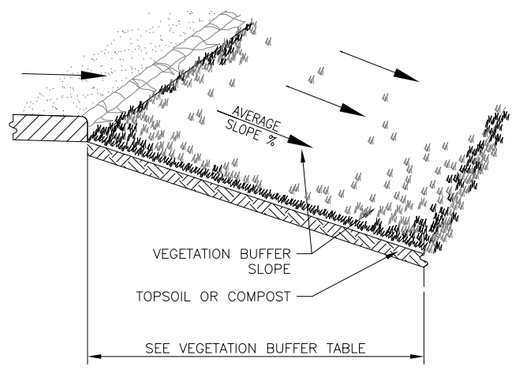
## EXISTING VEGETATION BUFFER

NOT TO SCALE

EXISTING VEGETATION BUFFER AREA NOTES:

INSTALLATION

1. DELINEATE UNDISTURBED NATURAL AREAS OF VEGETATION IDENTIFIED IN THE PLANS WITH METHODS CONSISTENT WITH THE SITE DELINEATION SPECIFICATION PRIOR TO COMMENCEMENT OF CLEARING AND GRUBBING OPERATIONS OR OTHER SOIL DISTURBING ACTIVITIES.
2. ENSURE ALL OTHER SEDIMENT CONTROL MEASURES USED IN CONJUNCTION WITH THE VEGETATION BUFFER AREAS ARE IN PLACE AND FUNCTIONING PROPERLY.
3. DO NOT ALLOW CONSTRUCTION MATERIALS, EQUIPMENT, OR PARKING ON THE VEGETATION BUFFER AREAS OR WHERE THE ROOT–ZONE OF THE VEGETATION MAY BE DAMAGED.




PERSPECTIVE

## NEW VEGETATION BUFFER

NOT TO SCALE

NEW VEGETATION BUFFER AREA NOTES:

THIS BMP IS NOT APPROPRIATE FOR PROJECTS LASTING LESS THAN 30 DAYS. THIS BMP IS NOT APPROPRIATE FOR ALL CLIMATE ZONES IN ALASKA.

MATERIAL

TOPSOIL OR COMPOST

SEED, FERTILIZER, MULCH

INSTALLATION

1. ENSURE ALL SEDIMENT CONTROL MEASURES IDENTIFIED IN THE SWPPP (SUCH AS SILT FENCE AND DIVERSIONS) ARE IN PLACE TO PROTECT WATERS OF THE U.S. UNTIL THE VEGETATION BUFFER AREA IS ESTABLISHED.
2. ESTABLISH VEGETATION USING SPECIFIED SEED, FERTILIZER, AND MULCH. IF SEED MIX IS NOT SPECIFIED, USE PERMANENT SEED MIX FOR PERMANENT, POST–CONSTRUCTION BUFFERS AND FAST GROWING ANNUAL RYE FOR TEMPORARAY BUFFERS.
3. MAINTAIN VEGETATION AND PROVIDE IRRIGATION AS NECESSARY TO ENSURE VIGOROUS GROWTH AND TO PREVENT DIEBACK.
4. DELINEATE VEGETATION BUFFER AREAS WITH METHODS CONSISTENT WITH THE SITE DELINEATION SPECIFICATION AT THE EDGE OF THE NEW VEGETATION BUFFER.
5. AVOID DAMAGE TO THE VEGETATION BUFFER OR ROOT–ZONE BY NOT ALLOWING CONSTRUCTION MATERIALS, EQUIPMENT OR PARKING ON THEM.

VEGETATION BUFFER NOTES:

MATERIAL

SITE DELINEATION MATERIAL: SEE SPECIFICATION SECTION 655 SITE DELINEATION.

INSPECTION

1. INSPECT NATURAL EXISTING VEGETATION BUFFER AREAS TO ENSURE THAT THE SITE DELINEATION TO MARK THE NON–DISTURBANCE AREAS IS IN PLACE.
2. CHECK FOR DAMAGE BY EQUIPMENT AND VEHICLES.
3. INSPECT NEW VEGETATION BUFFER AREAS FOR THE PROGRESS OF GERMINATION AND PLANT GROWTH.
4. ENSURE STORMWATER FLOWING THROUGH THE AREA IS NOT FORMING PONDS, RILLS, OR GULLIES.
5. INSPECT FOR SEDIMENT DEPOSITION THROUGHOUT THE BUFFER.

MAINTENANCE

1. REPLACE OR REPAIR SITE DELINEATION (SUCH AS FENCING, STAKING, OR FLAGGING) AS NECESSARY TO DELINEATE THE VEGETATION BUFFER AREAS.
2. REPAIR ANY DAMAGE BY EQUIPMENT OR VEHICLES.
3. PROVIDE ADDITIONAL SEED, FERTILIZER, AND WATER TO REPAIR SEEDED AREAS DAMAGED BY EROSION OR PONDING OF WATER.
4. IF SEDIMENT IS DEPOSITING IN THE BUFFER, INSTALL IMPROVED EROSION CONTROL MEASURES UPSLOPE OF THE BUFFER.

REMOVAL

1. PROVIDE THE NECESSARY PERMANENT STABILIZATION TO AREAS WITH TEMPORARY VEGETATION BUFFER AS REQUIRED BY PLANS.
2. REMOVE SITE DELINEATION MATERIAL AFTER FINAL STABILIZATION OF WORK AREAS. WORK TO REMOVE THE SITE DELINEATION MATERIAL SHALL NOT DAMAGE THE EXISTING VEGETATION OR ANY STABILIZATION MEASURE.

### VEGETATION BUFFER TABLE

| AVERAGE SLOPE | BUFFER WIDTH (MIN.) |
|---|---|
| 0%–2% | 25 FEET |
| 3%–5% | 29–37 FEET |
| 5%–10% | 37–57 FEET |
| 10%–20% | 57–100 FEET |
| 20% MAXIMUM | 100 FEET |

VEGETATION BUFFER TABLE NOTES:

1. THE MINIMUM WIDTH FOR ANY VEGETATION BUFFER IS 25 FEET. FOR EVERY 1% INCREASE OF THE SLOPE ADD 4 FEET TO THE VEGETATION BUFFER WIDTH.
2. INSTALL VEGETATION BUFFERS ENTIRELY WITHIN THE RIGHT–OF–WAY.
3. FOR VEGETATION BUFFERS THAT ARE USED AS PERIMETER CONTROL (TYPE 1):
   a. THE MINIMUM WIDTH FOR ANY VEGETATION BUFFER IS 25 FEET WHEN BUFFER WIDTHS LISTED IN THE TABLE ABOVE ARE NOT FEASIBLE.
   b. USE ADDITIONAL BMPS WHEN THE MINIMUM BUFFER WIDTH CANNOT BE ACHIEVED.
4. THE WIDTH OF VEGETATION BUFFERS THAT ARE NATURAL BUFFER AREAS AS REQUIRED BY THE CGP (TYPE II) MUST ALSO COMPLY WITH THE WIDTH REQUIRED BY LOCAL ORDINANCES, IF GREATER THAN 25 FEET.

| REVISIONS | | |
|---|---|---|
| Date | Description | By |
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| | | |

State of Alaska DOT&PF

VEGETATION BUFFER

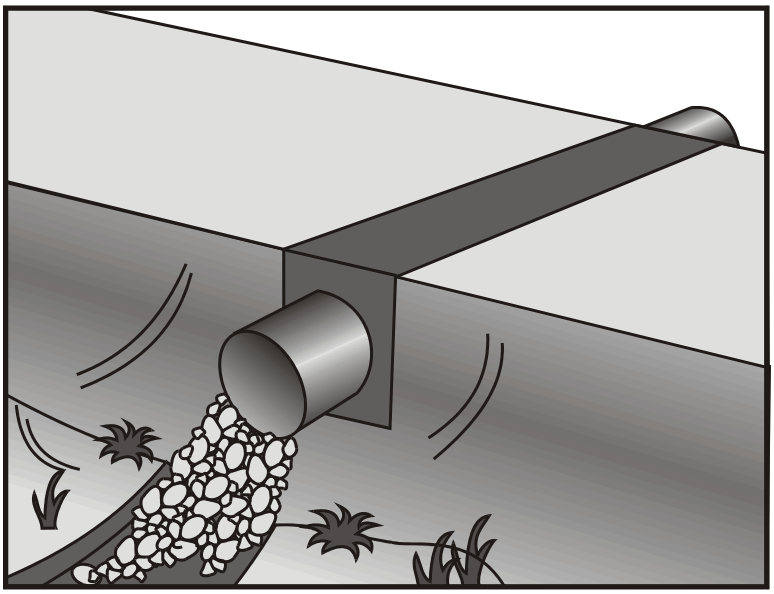
APPROVED

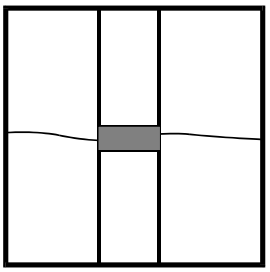
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BMP–38.00

# Temporary Stream Crossing

**NS-4**





Standard Symbol

**BMP Objectives**

- ● Soil Stabilization
- ○ Sediment Control
- ○ Tracking Control
- ○ Wind Erosion Control
- ● Non-Storm Water Management
- ○ Materials and Waste Management

## Definition and Purpose

A temporary stream crossing is a structure placed across a waterway that allows vehicles to cross the waterway during construction, minimizing, reducing, or managing erosion and downstream sedimentation caused by the vehicles.

## Appropriate Applications

Temporary stream crossings are installed at sites:

- Where appropriate permits have been secured (1601 Agreements, 404 Permits, and 401 Certification).
- Where construction equipment or vehicles need to frequently cross a waterway.
- When alternate access routes impose significant constraints.
- When crossing perennial streams or waterways causes significant erosion.
- Where construction activities will not last longer than one year.

## Limitations

- Will usually disturb the waterway during installation and removal.
- May require Regional Water Quality Control Board (RWQCB) 401 Certification, U.S. Army Corps of Engineers 404 permit and approval by California Department of Fish and Game. If numerical-based water quality standards are mentioned in any of these and other related permits, testing and sampling may be required. If monitoring related to these numerical-based water quality standards is not addressed in the contract documents, contact the Resident Engineer (RE).
- Installation may require dewatering or temporary diversion of the stream. See BMP NS-2, “Dewatering Operations” and NS-5, “Clear Water Diversion.”
- May become a constriction in the waterway, which can obstruct flood flow and cause flow backups or washouts. If improperly designed, flow backups can increase the pollutant load through washouts and scouring.

- Use of natural or other gravel in the stream for construction of Cellular Confinement System (CCS) (refer to figure at the end of the section) ford crossing will be contingent upon approval by fisheries agencies.
- Ford crossings may degrade water quality due to contact with vehicles and equipment.
- CCS should not be used in excessively high or fast flows.
- Upon completion of construction activities, CCS blocks must be removed from stream.

## Standards and Specifications

### *General Considerations*

Location of the temporary stream crossing shall address:

- Site selection where erosion potential is low.
- Areas where the side slopes from highway runoff will not spill into the side slopes of the crossing.

The following types of temporary stream crossings shall be considered:

- Culverts - Used on perennial and intermittent streams.
- Fords - Appropriate during the dry season in arid areas. Used on dry washes and ephemeral streams, and low flow perennial streams. CCS, a type of ford crossing is also appropriate for use in streams.
- Bridges - Appropriate for streams with high flow velocities, steep gradients and/or where temporary restrictions in the channel are not allowed.

Design and installation requires knowledge of stream flows and soil strength. Designs shall be prepared under direction of, and approved by, a registered civil and/or structural engineer. Both hydraulic and construction loading requirements shall be considered with the following:

- Comply with the requirements for culvert and bridge crossings, as contained in the Caltrans Highway Design Manual, particularly if the temporary stream crossing will remain through the rainy season.
- Provide stability in the crossing and adjacent areas to withstand the design flow. The design flow and safety factor shall be selected based on careful evaluation of the risks due to over topping, flow backups, or washout.
- Avoid oil or other potentially hazardous waste materials for surface treatment.

### *Construction Considerations:*

- Stabilize construction roadways, adjacent work area and stream bottom against erosion.

- Construct during dry periods to minimize stream disturbance and reduce costs.
- Construct at or near the natural elevation of the stream bed to prevent potential flooding upstream of the crossing.
- Install temporary sediment control BMPs in accordance with sediment control BMPs presented in Section 4 to minimize erosion of embankment into flow lines.
- Vehicles and equipment shall not be driven, operated, fueled, cleaned, maintained, or stored in the wet or dry portions of a water body where wetland vegetation, riparian vegetation, or aquatic organisms may be destroyed, except as authorized by the RE, as necessary to complete the work.
- Temporary water body crossings and encroachments shall be constructed to minimize scour. Cobbles used for temporary water body crossings or encroachments shall be clean, rounded river cobble.
- The exterior of vehicles and equipment that will encroach on the water body within the project shall be maintained free of grease, oil, fuel, and residues.
- Disturbance or removal of vegetation shall not exceed the minimum necessary to complete operations. Precautions shall be taken to avoid damage to vegetation by people or equipment. Disturbed vegetation shall be replaced with the appropriate soil stabilization measures.
- Riparian vegetation, when removed pursuant to the provisions of the work, shall be cut off no lower than ground level to promote rapid re-growth. Access roads and work areas built over riparian vegetation shall be covered by a sufficient layer of clean river run cobble to prevent damage to the underlying soil and root structure. The cobble shall be removed upon completion of project activities.
- Any temporary artificial obstruction placed within flowing water shall only be built from material, such as clean gravel, that will cause little or no siltation.
- Drip pans shall be placed under all vehicles and equipment placed on docks, barges, or other structures over water bodies when the vehicle or equipment is planned to be idle for more than one hour.
- Conceptual temporary stream crossings are shown in figures at the end of this section.

***Specific Considerations:***

- Culverts are relatively easy to construct and able to support heavy equipment loads.
- Fords are the least expensive of the crossings, with maximum load limits.
- Temporary fords are not appropriate if construction will continue through the rainy season, if thunderstorms are likely, or if the stream is perennial.

- CCS crossing structures consist of clean, washed gravel and cellular confinement system blocks. CCS are appropriate for streams that would benefit from an influx of gravel; for example, salmonid streams, streams or rivers below reservoirs, and urban, channelized streams. Many urban stream systems are gravel-deprived due to human influences, such as dams, gravel mines, and concrete channels.
- CCS allow designers to use either angular or naturally-occurring, rounded gravel, because the cells provide the necessary structure and stability. In fact, natural gravel is optimal for this technique, because of the habitat improvement it will provide after removal of the CCS.
- A gravel depth of 152 to 305 mm (6 to 12 inches) for a CCS structure is sufficient to support most construction equipment.
- An advantage of a CCS crossing structure is that relatively little rock or gravel is needed, because the CCS provides the stability.
- Bridges are generally more expensive to design and construct, but provides the least disturbance of the stream bed and constriction of the waterway flows.

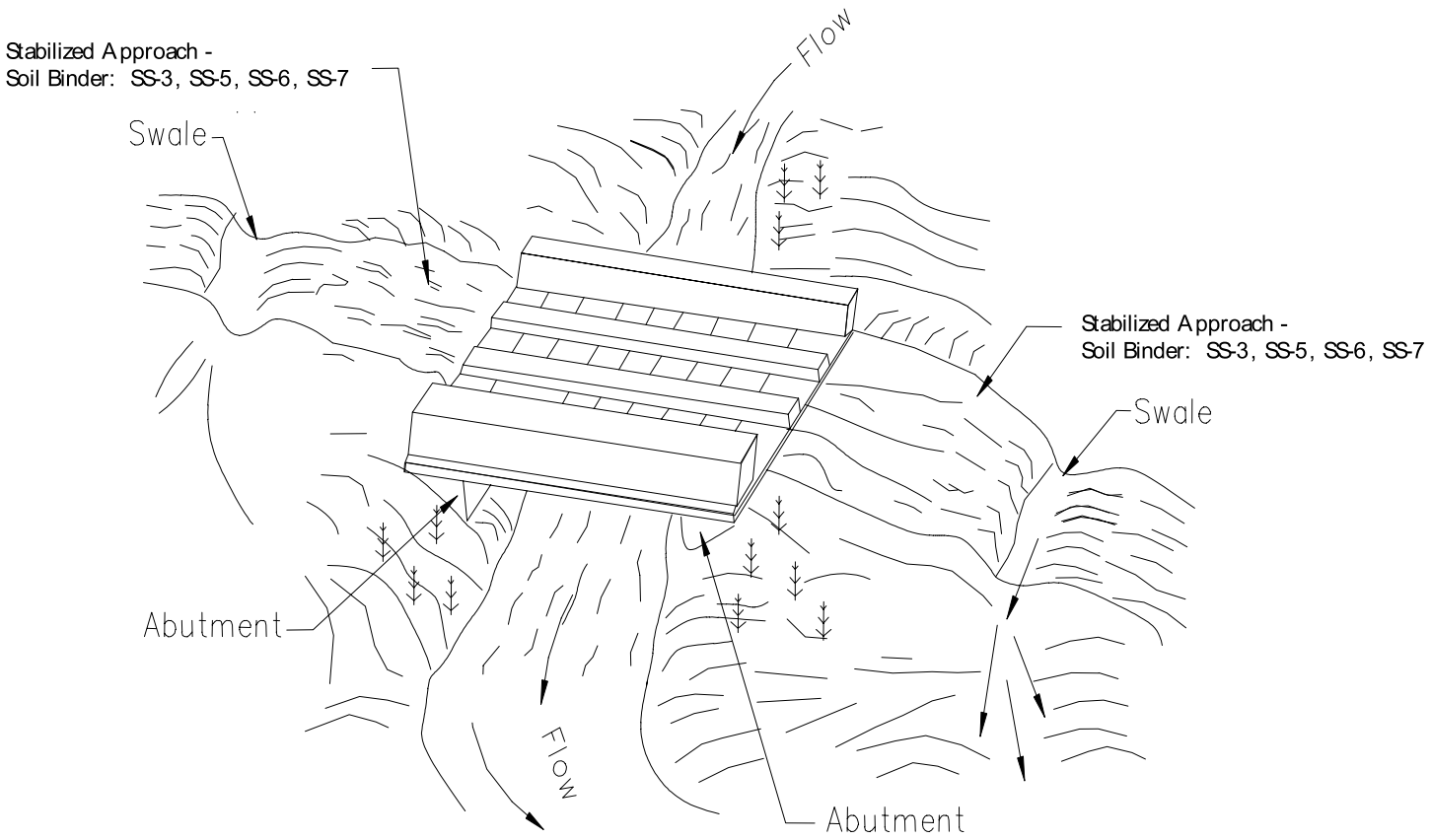
## Maintenance and Inspection

Maintenance provisions shall include:

- Periodic removal of debris behind fords, in culverts, and under bridges.
- Replacement of lost protective aggregate from inlets and outlets of culverts.
- Removal of temporary crossing promptly when it is no longer needed.
- Inspection shall, at a minimum, occur weekly and after each significant rainfall, and include:
  - Checking for blockage in the channel, debris buildup in culverts or behind fords, and under bridges.
  - Checking for erosion of abutments, channel scour, riprap displacement, or piping in the soil.
  - Checking for structural weakening of the temporary crossing, such as cracks, and undermining of foundations and abutments.

# Temporary Stream Crossing

**NS-4**

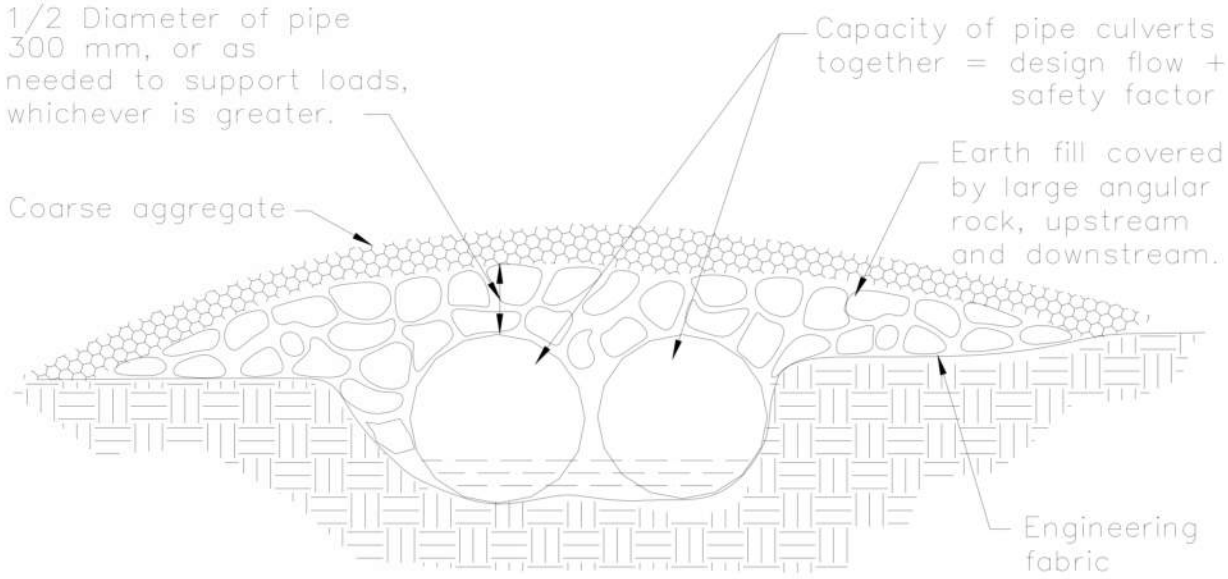



NOTE:
Surface flow of road diverted by swale and/or dike.

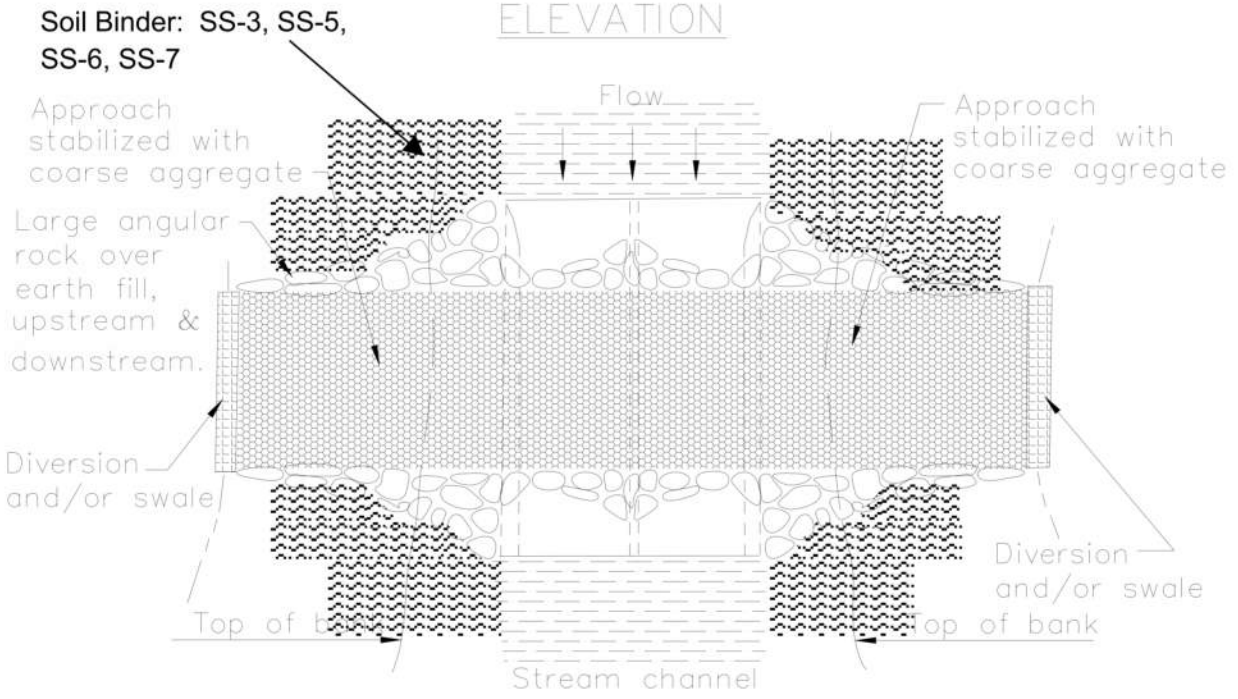
TYPICAL BRIDGE CROSSING
NOT TO SCALE

# Temporary Stream Crossing

**NS-4**




ELEVATION

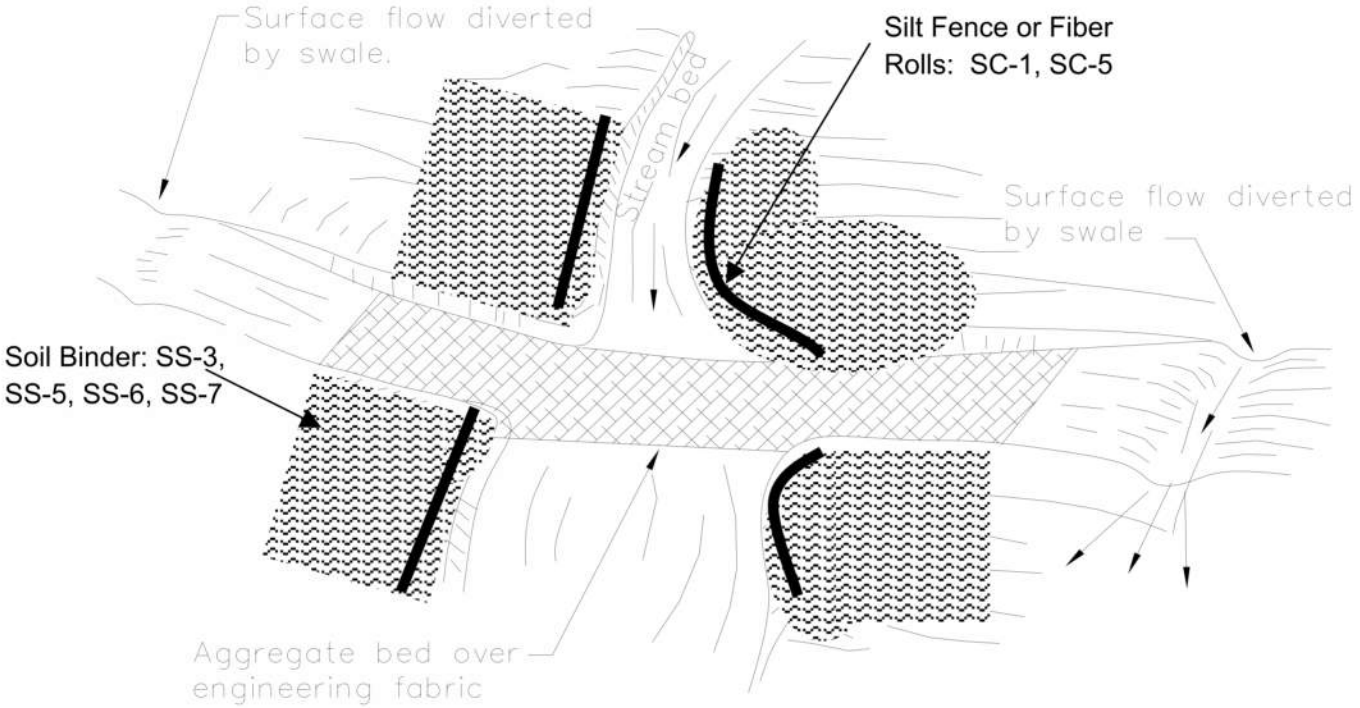


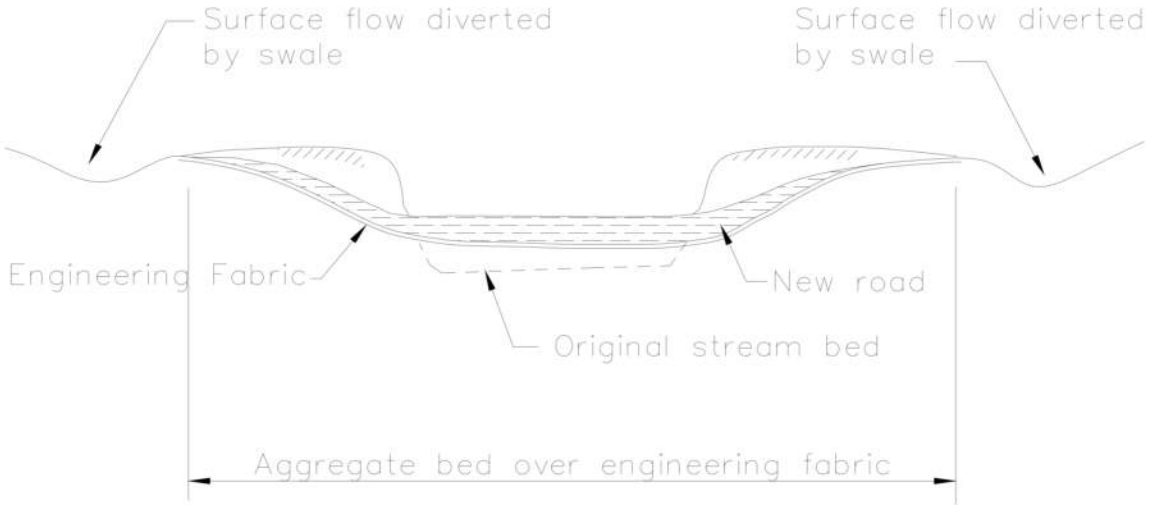

PLAN VIEW

TYPICAL CULVERT CROSSING
NOT TO SCALE

# Temporary Stream Crossing

**NS-4**




TYPICAL FORD CROSSING

NOT TO SCALE



CELLULAR CONFINEMENT SYSTEM

# BMP 14.00. Prefabricated Driving Ground Protection Mat

## *DESIGN CONSIDERATIONS*

### *Objectives*

The purpose of a Prefabricated Driving Ground Protection Mat is to prevent rutting, minimize sediment tracking, protect wetlands from equipment damage, and avoid equipment getting stuck when driving through soft or muddy ground.

### *Description*

Prefabricated Ground Protection Mats are flexible, sturdy fabric mats with ribs, or solid or flexible plastic mats or tiles.

### *Other Names*

Mud Mats, Tundra Mats, Portable Access Mats, Temporary Roadway System.

### *Applicability*

Prefabricated Driving Ground Protection Mats can be used to protect the ground surface from eroding when equipment is driving on it or to protect sensitive areas.

### *Selection Considerations*

Prefabricated Driving Ground Protection Mats come in light- and heavy-duty grades. The grade of the mat needed should be determined based on the size and type of equipment that will use the mat, the frequency of use, and the type of ground the mat is protecting. Mats that are placed over a ground surface that requires preservation may require a heavier grade than mats placed on dirt surfaces without vegetation.

Prefabricated Driving Ground Protection Mats surfaces can be smooth or cleated to provide traction for vehicular traffic or pedestrians. When placed with the cleated side down, the cleats provide additional protection for solid surfaces such as concrete or asphalt surfaces.

- Prefabricated Driving Ground Protection Mats have the ability to interlock to form custom sizes.
- Ground pressure from vehicles may be reduced, causing minimal ground disturbance.
- Prefabricated Driving Ground Protection Mats can be rolled up or stacked for easy transport, storage, and reuse.
- Prefabricated Driving Ground Protection Mats can be washed and reused depending on the amount of wear.

### *Common Failures or Misuses*

- Placement of reinforcing ribs in fabric mats parallel to the direction of traffic.
- Unless properly secured, mats can be dislodged or transported by traffic or high winds.

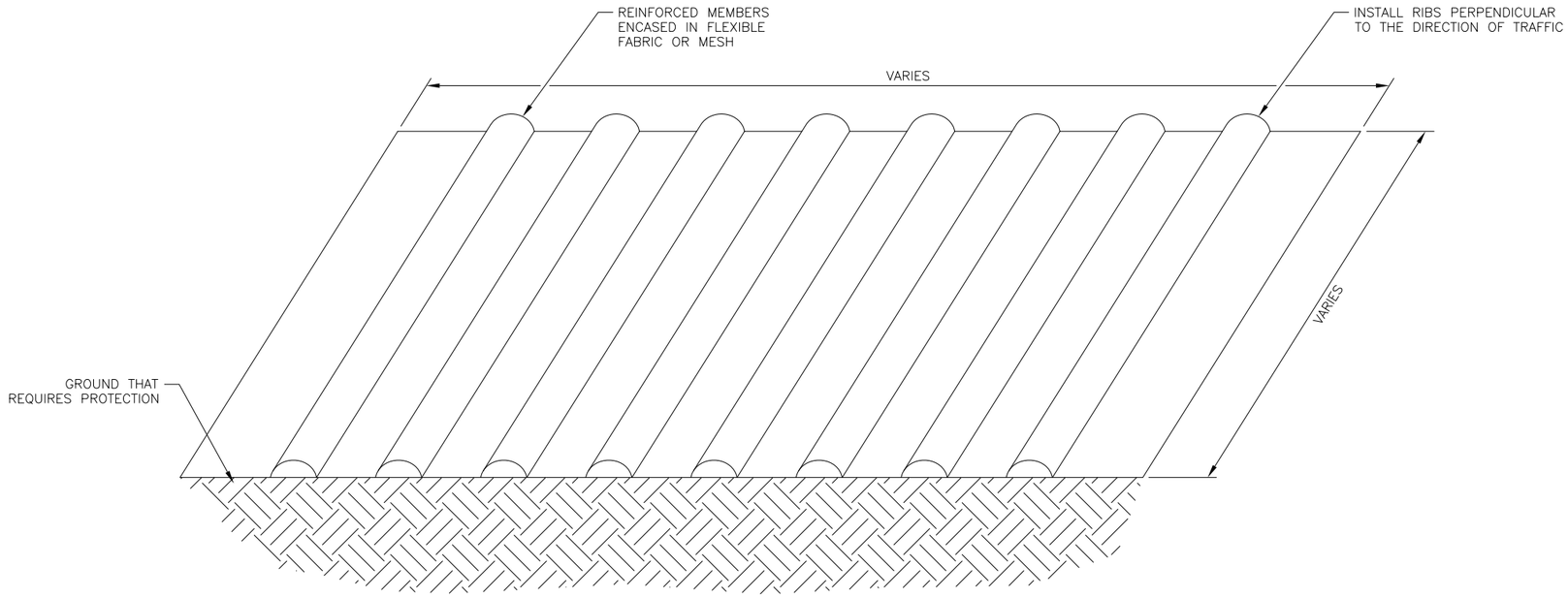
## *SPECIFICATIONS*

Standard Specification

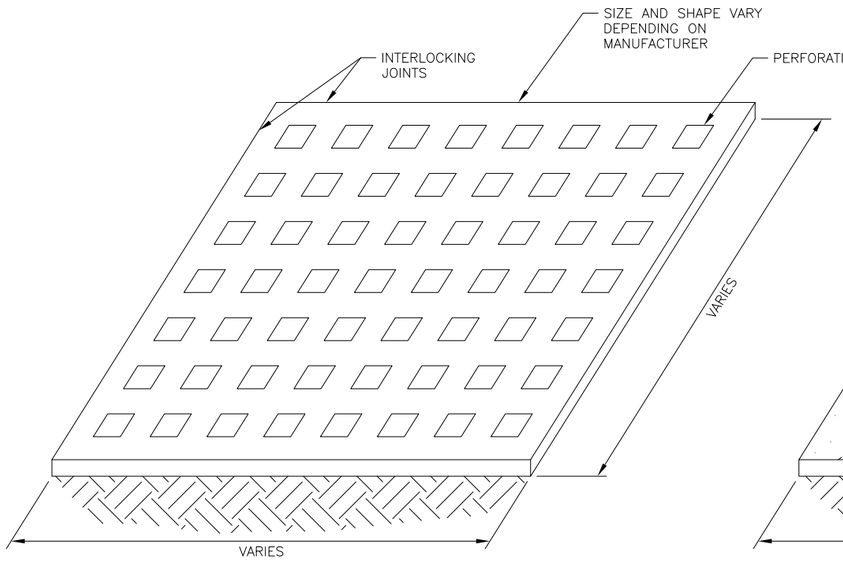
- 676 – Prefabricated Driving Ground Protection Mat

Drawing

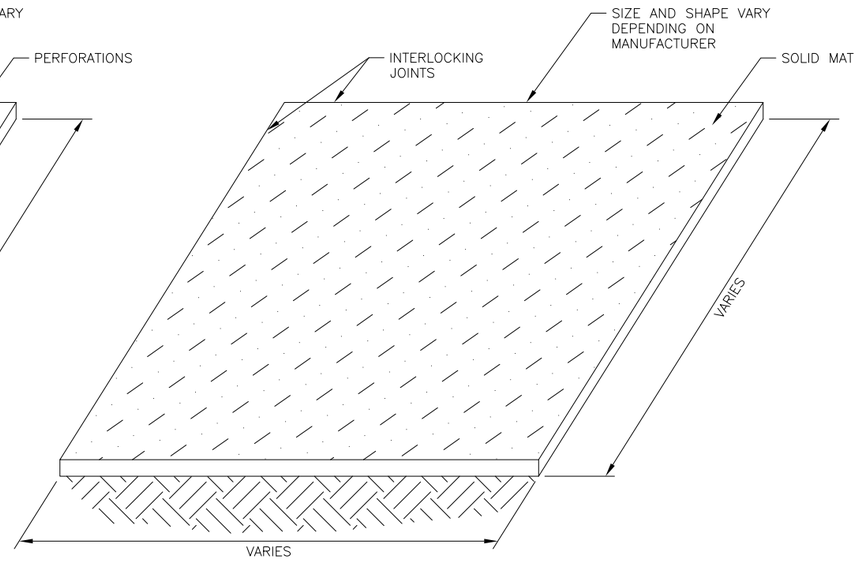
- BMP-14.00 Prefabricated Driving Ground Protection Mat




FABRIC MATS
NOT TO SCALE




PERFORATED PLASTIC MATS
NOT TO SCALE




NON-PERFORATED PLASTIC MATS
NOT TO SCALE

PREFABRICATED DRIVING GROUND PROTECTION MAT NOTES:

MATERIALS
PREFABRICATED GROUND PROTECTION MAT

INSTALLATION
1. ENSURE THAT THE GROUND IS CLEAR OF LARGE ROCKS OR OBJECTS.
2. LAY THE MAT FLAT ONTO SURFACE.
3. INTERLOCK MULTIPLE MATS TO COVER AREAS THAT REQUIRE PROTECTION.
4. CONNECT THE MATS ACCORDING TO MANUFACTURER'S SPECIFICATIONS.

INSPECTION
1. LOOK FOR SPLIT, TORN, OR UNRAVELLING FABRIC OR BROKEN UNITS.
2. ENSURE THAT THE MATS ARE COVERING AREAS THAT REQUIRE PROTECTION.
3. ENSURE VEHICLES DO NOT DRIVE ON SURFACES OUTSIDE OF THE MATS.
4. INSPECT FOR TRACKOUT.

MAINTENANCE
1. REPLACE DAMAGED MATS.
2. REMOVE SEDIMENT THAT ACCUMULATES ON THE MATS.
3. CLEAN OR REPLACE MATS IF THERE IS EVIDENCE OF TRACKOUT.

REMOVAL
1. REMOVE AND DISPOSE OF THE ACCUMULATED SEDIMENT THEN REMOVE THE MAT.
2. AFTER REMOVAL OF THE MAT AND IF NOT IN WETLANDS, FILL DISTURBED GROUND TO BLEND WITH THE ADJACENT GROUND AND REVEGETATE AS NECESSARY.

| REVISIONS | | |
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State of Alaska DOT&PF

# PREFABRICATED DRIVING GROUND PROTECTION MAT

APPROVED
Date 12/2015 x/xx/xx

BMP-14.00

# BMP 10.00.a. Fiber Rolls for Erosion Control

## *DESIGN CONSIDERATIONS*

### *Objectives*

The purpose of Fiber Rolls for Erosion Control is to shorten the slope and help to slow, filter, and spread overland flows. They capture sediment, organic matter, and seeds that might otherwise be washed downslope.

### *Description*

Fiber Rolls are long rolls of material such as wood excelsior, rice or wheat straw, flax, coconut fibers, or compost, which is rolled or bound in a tight tubular roll and wrapped in plastic or biodegradable netting. They are typically about 8 inches in diameter and under 30 feet long.

They may come pre-fabricated or they can be fabricated on-site.

### *Other Names*

Wattles, Straw Wattles, Straw Rolls, Coir Logs, Excelsior Log, Straw Log, Filter Logs, Fiber Logs.

### *Applicability*

Fiber Rolls can be applied to steep or long slopes and slopes that are susceptible to freeze/thaw activity, sheet and rill erosion, or dry ravel. They can be placed along the toe, top, face, and at grade-breaks on disturbed or erodible slopes. They can be used as a temporary berm to direct flow around exposed soils or to a sediment trap and as a check dam in unlined ditches. They can be used at other locations at the project site for sediment control.

### *Selection Considerations*

- Use in areas of low shear stress.
- Avoid use on slopes that could build up ice; for instance, where seepage occurs.
- They are effective for one to two seasons.
- Fiber Rolls can be staked to the ground using willow cuttings to increase the revegetation effort. Since the fiber roll will retain moisture, it will provide a good site for the willow cuttings to root. The Alaska Department of Fish and Game (ADF&G) has prepared guidance for willow cuttings and dormant cuttings in the *Streambank Revegetation and Protection: A Guide for Alaska* at: http://www.adfg.alaska.gov/index.cfm?adfg=streambankprotection.staking

  and

  http://www.adfg.alaska.gov/index.cfm?adfg=streambankprotection.cuttings
- The quantity of sediment that a roll can capture prior to maintenance is limited to one-half the exposed height of the roll.
- Rolls will be difficult to move once they are saturated. Determine whether Fiber Rolls must be removed at the end of the project based on the use of the area. If removal is required, specify in the plan set and require removal of netting upon final stabilization.

### *Relationship to Other Erosion and Sediment Control Measures*

Fiber Rolls are best used in combination with seeding, mulch, hydraulic erosion control products (HECPs), and/or rolled erosion control products (RECPs). They can be used to stabilize slopes until the permanent vegetation becomes established.

### *Common Failures or Misuses*

- Unless they are placed in a trench, run-off can flow underneath Fiber Rolls and cause failure.
- Unless they are properly staked, Fiber Rolls can be transported by high flows.
- Water can flow between Fiber Rolls if they are not overlapped.
- Fiber Rolls must be placed perpendicular to flow (parallel to the slope contour).
- Fiber Rolls will not work if the slope is slumping, creeping, or sliding.

## *SPECIFICATIONS*

Standard Specification

- 669 – Fiber Rolls for Erosion and Sediment Control

Drawings

- BMP-10.00 Fiber Rolls for Erosion and Sediment Control

- BMPs -31.00, 32.00 and 33.00 Temporary Check Dam

# BMP 10.00.b. Fiber Rolls for Sediment Control

## *DESIGN CONSIDERATIONS*

### *Objectives*

The purpose of Fiber Rolls for Sediment Control is to trap sediment and prevent it from being transported out of the project area, to another area, or to waters of the U.S.

### *Description*

Fiber Rolls are long rolls of material such as wood excelsior, rice or wheat straw, flax, coconut fibers, or compost, which is rolled or bound in a tight tubular roll and wrapped in plastic or biodegradable netting. They are typically about 8 inches in diameter and under 30 feet long.

They may come pre-fabricated or they can be fabricated on-site.

### *Other Names*

Wattles, Straw Wattles, Straw Rolls, Coir Logs, Excelsior Log, Straw Log, Filter Logs, Fiber Logs.

### *Applicability*

Fiber Rolls can be placed at the perimeter of a project, below the toe of exposed and erodible slopes, and around temporary stockpiles. They may also be used for inlet protection. They can be used at other locations at the project site for erosion control.

### *Selection Considerations*

- Use in areas of low shear stress.
- Avoid use on slopes that could build up ice; for instance, where seepage occurs.
- They are effective for one to two seasons.
- Fiber Rolls can be staked to the ground using willow cuttings to increase revegetation efforts. Since the Fiber Roll will retain moisture, it will provide a good site for the willow cuttings to root. The Alaska Department of Fish and Game has prepared guidance for willow cuttings and dormant cuttings in the *Streambank Revegetation and Protection: A Guide for Alaska* at: http://www.adfg.alaska.gov/index.cfm?adfg=streambankprotection.staking and http://www.adfg.alaska.gov/index.cfm?adfg=streambankprotection.cuttings
- The quantity of sediment that a roll can capture prior to maintenance is limited to one-half the exposed height of the roll.
- Rolls will be difficult to move once they are saturated. Determine whether Fiber Rolls must be removed at the end of the project based on the use of the area. If removal is required, specify in the plan set and require removal of netting upon final stabilization.

### *Relationship to Other Erosion and Sediment Control Measures*

Fiber Rolls are best used in combination with seeding, mulch, hydraulic erosion control products (HECPs), and/or rolled erosion control products (RECPs).

- Fiber Rolls can be used in place of silt fence. The advantage of fiber rolls over silt fence is that installation is much easier, they do not have to be removed, and hydroseeding can be done after their installation.
- Compost socks can be used in place of Fiber Rolls and do not require trenching. Compost socks are also heavy enough that they can be placed on paved surfaces.
- A prefabricated barrier system can be used in place of fiber rolls and requires a smaller trench. A prefabricated barrier system can also be adhered to paved surfaces.

### *Common Failures or Misuses*

- Unless they are placed in a trench and have tamped backfill in the trench on the uphill side, runoff can flow underneath Fiber Rolls and cause failure.
- Unless they are properly staked, Fiber Rolls can be transported by high flows.
- Water can flow between Fiber Rolls if they are not overlapped.

- Fiber Rolls must be placed perpendicular to flow (parallel to the slope contour).
- Fiber Rolls will not work if the slope is slumping, creeping, or sliding.

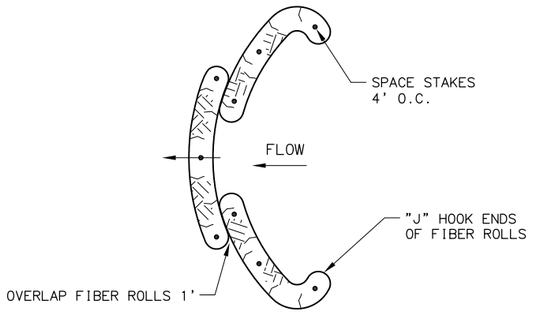
*SPECIFICATIONS*

Standard Specification

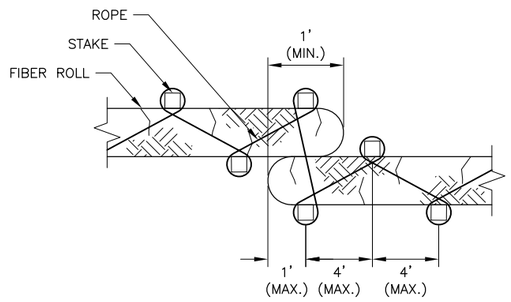
- 669 – Fiber Rolls for Erosion and Sediment Control

Drawings

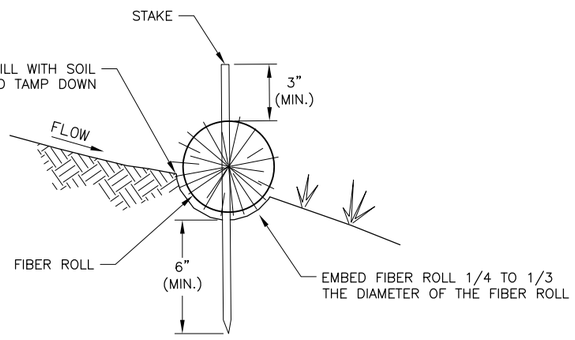
- BMP-10.00 Fiber Rolls for Erosion and Sediment Control
- BMP-08.00 Culvert Inlet Protection
- BMPs -25.00, 26.00, 27.00, 28.00 and 29.00 Storm Drain Inlet Sediment Protection




PLAN



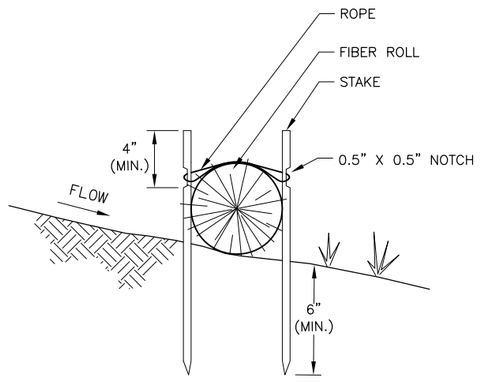

PLAN




SECTION

## TRENCHED INSTALLATION

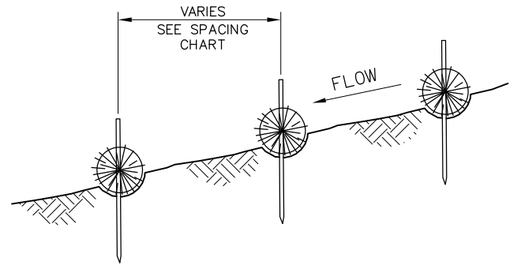
NOT TO SCALE




SECTION

## ROPE INSTALLATION

NOT TO SCALE




| TYPICAL SPACING CHART | |
|---|---|
| SLOPE | SPACING (FEET) |
| 1:1 | 10 |
| 2:1 | 20 |
| 3:1 | 30 |

## SLOPE INSTALLATION

NOT TO SCALE

### TRENCHED INSTALLATION NOTES:

1. DIG TRENCHES AND PLACE FIBER ROLLS IN THE TRENCHES.
2. CURVE BACK THE UPSLOPE END OF THE FIBER ROLL IN A "J" HOOK.
3. SPREAD EXCAVATED MATERIAL EVENLY ALONG THE UPHILL SLOPE AND COMPACT USING HAND TAMPING OR OTHER METHODS.
4. STAKE THE ROLL EVERY 4 FEET AND WITHIN 1-FOOT OF THE ENDS. LEAVE 3 INCHES OF THE STAKE ABOVE THE ROLL.
5. DRIVE STAKES THROUGH THE MIDDLE OF THE FIBER ROLL.
6. IF REQUIRED, PILOT HOLES FOR THE STAKES MAY BE CREATED BY DRIVING A STRAIGHT BAR THROUGH THE ROLL.

### SLOPE INSTALLATION NOTES:

1. INSTALL ON A SLOPE TO SHORTEN THE SLOPE LENGTH.
2. START INSTALLATION DOWNSLOPE.
3. SPACE ROLLS ACCORDING TO THE SPACING CHART AND DECREASE SPACING ON MORE ERODIBLE SOILS AND INCREASE SPACING ON ROCKY SOILS.

### FIBER ROLL GENERAL NOTES:

#### MATERIALS

FIBER ROLLS: THE NETTING MAY BE UV-DEGRADABLE POLYPROPYLENE, BIODEGRADABLE BURLAP, JUTE OR COIR. THE FILLINGS MAY BE STRAW, FLAX, RICE, OR COCONUT-FIBER. MINIMUM DIAMETER OF 6 INCHES.

STAKES: 1-INCH BY 1-INCH WOODEN STAKES 24 INCHES LONG (18 INCHES IF SOILS ARE ROCKY) OR ⅜-INCH REBAR WITH SAFETY CAPS OR ¾-INCH TO 1 ½-INCH DIAMETER LIVE WILLOW CUTTINGS. IF USING LIVE WILLOW CUTTINGS, DO NOT INSTALL ROPE.

#### INSTALLATION

1. PLACE FIBER ROLLS PERPENDICULAR TO FLOW AND PARALLEL TO THE SLOPE CONTOUR.
2. AT THE END OF THE ROLL, TURN THE END UPSLOPE TO PREVENT RUN-OFF FROM GOING AROUND THE ROLL END.

#### INSPECTION

1. ENSURE THAT THE ROLLS ARE IN CONTACT WITH THE SOIL AND THOROUGHLY ENTRENCHED.
2. LOOK FOR SCOURING UNDERNEATH THE ROLLS.
3. LOOK FOR SPLIT, TORN, UNRAVELING, OR SLUMPING FIBER ROLLS.
4. ENSURE EQUIPMENT HAS NOT DRIVEN OVER THE INSTALLED FIBER ROLLS.

#### MAINTENANCE

1. REPLACE DAMAGED SECTIONS OF FIBER ROLL.
2. REMOVE ACCUMULATED SEDIMENT UPSLOPE OF THE ROLL BEFORE IT REACHES ONE-HALF THE DISTANCE BETWEEN THE TOP OF THE FIBER ROLL AND THE GROUND SURFACE. WHEN PROTECTING A WATER BODY OR STORM DRAIN INLET, REMOVE ACCUMULATED SEDIMENT UPSLPE OF THE ROLL WHEN IT REACHES ONE-THIRD OF THE DISTANCE BETWEEN THE TOP OF THE FIEBER ROLL AND THE GROUND SURFACE.

#### REMOVAL

1. REMOVE FIBER ROLLS WHEN THE AREA IS STABILIZED OR WHEN THEY ARE NO LONGER NECESSARY.
2. COLLECT AND DISPOSE OF THE ACCUMULATED SEDIMENT.
3. REMOVE AND DISPOSE OF FIBER ROLLS.
4. FILL THE TRENCHES AND STAKE HOLES TO BLEND WITH THE ADJACENT GROUND AND REVEGETATE AS NECESSARY.

#### RETENTION

1. LEAVE FIBER ROLLS IN PLACE WHEN THE AREA IS STABILIZED OR WHEN THEY ARE NOT NECESSARY.
2. COLLECT AND DISPOSE OF THE ACCUMULATED SEDIMENT.
3. REMOVE AND DISPOSE OF THE NETTING, STAKES, AND ROPE.

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State of Alaska DOT&PF

# FIBER ROLLS FOR EROSION AND SEDIMENT CONTROL

APPROVED

Date 12/2015 X/XX/XX

BMP-10.00

# BMP 20.00. Silt Fence

## DESIGN CONSIDERATIONS

### *Objectives*

The purpose of Silt Fence is to trap sediment and prevent it from being transported out of the project area to another area, or to a water body.

### *Description*

Silt Fence is geotextile fabric secured to posts and secured in a trench, and/or with sandbags or drain rock.

### *Other Names*

Geotextile for Sediment Control, Sediment Barrier.

### *Applicability*

Silt Fence is used downslope from erosion-susceptible terrain to trap sheet flow run-off before the drainage exits the project site. Adequate space must be provided for pooled water on the uphill side of the fence.

Barrier locations are chosen based on site features and conditions (e.g. soil types, climate, terrain features, sensitive areas, etc.), design plans, existing and anticipated drainage courses, and other available erosion and sediment controls. Typical barrier sites are catchpoints beyond the toe of fill, or on sideslopes above waterways or drainage channels.

Although drainage in contact with the fence is to some degree filtered by the geotextile, the fabric's small pores not only block larger-sized eroded particles but also severely restrict water exfiltration rates and behaves like a dam. For this reason, Silt Fences are not to be used for concentrated flows in continuous flow streams or ditches; or as check dams.

Silt Fence can be installed in standing water to provide time for particles to settle.

Silt Fences are used to encircle stockpiled erodible material to prevent off-site sediment transport.

Since Silt Fence installation can cause significant damage, alternative best management practices (BMPs) should be considered for installation instead of Silt Fence. Use Fiber Rolls, compost socks, brush bundles to filter small amounts of sediment in shallow gullies or ditches. Temporary settlement basins, gravel berms, or foam barriers can be used as alternatives to Silt Fence.

Do not use Silt Fence on airport runways, taxiways, aprons, or within the Runway Safety Areas.

### *Selection Considerations*

Use of sediment control measures and the level of effort should be commensurate with the potential problem. Silt Fence is not to be used solely as a project delineator (see Site Delineation, BMP-55).

- Use of a Silt Fence sediment control measure is usually more complex, expensive, and maintenance-prone than other sediment control measures.
- Consider impacts of the fence installation, maintenance, and removal on sensitive areas needing protection (e.g. avoid equipment encroachment on wetlands).
- Consider potential undesirable effects of fence placement (e.g. a trench in ground that will not readily "heal" after fence removal; undesirable effects of extent or depth of ponded water, etc.)
- An equipment access route and space for fence installation, maintenance, and removal must be available without encroaching into sensitive areas or off the project limits.
- Wire reinforcement can be used with Silt Fence by backing the geotextile fabric with chain link, polymeric mesh, or welded wire fencing. Below is a list of considerations for adding wire reinforcement to Silt Fence installation:
    - Consider using wire reinforcement and longer posts to resist overturn.
    - Consider using wire reinforcement in areas of high wind.
    - Consider using wire reinforcement for standing water installations.

*Types of Silt Fence for Purchase:*

- *With Pockets:* Sewn-in pocket Silt Fence is geotextile that has factory-sewn pockets for the posts and does not require post fasteners.
- *Without Pockets:* Silt Fence without pockets is geotextile fabric that requires fasteners to attach

the fabric to the posts or Silt Fence that is available with posts pre-attached.

- *Wire Reinforcement:* When Silt Fence is wire reinforced, the geotextile fabric is backed with chain link or welded wire fencing.

*Methods of Installation:*

- *Trenchless:* Drive support posts into the ground, attach geotextile on the upslope side of the line of stakes with a portion lying flat on the ground, and place clean rock or sandbags on the geotextile. Using sandbags to anchor the fence bottom is a less desirable method because of the tendency for undermining. Require removal of the rock or sandbags when the fence is removed.
- *Trench Key:* Drive support posts into the ground, excavate a trench on the uphill side along the line of the stakes, attach geotextile, and bury fence bottom. Use soil to backfill trench and compact to secure fence bottom. Compacted soil is preferred to gravel fill.
- *Machine Slice:* This method requires a Silt Fence installation machine or attachment. The machine utilizes a blade that plows or slices the fabric directly into the soil minimizing soil disturbance. Displaced soil must be manually backfilled into the slice before the tractor is used to mechanically compact the soil.

*Design*

Locate Silt Fence at a distance from the base of the slope or pile such that there is space for temporary storage of potential accumulated material. Consider a space of 4 feet for worker access if feasible. The grade and length of slope as well as soil erodibility must be considered when specifying silt fence. If the slope is steep or long, consider intermediate slope breaks.

Below are design considerations for Silt Fence that is not wire-reinforced:

- *Design Life*: 1 season (6 months) or less.
- *Contributing Sheet Flow Drainage Area*: Not to exceed 0.25 acres/100 ft. of fence.
- Maximum Height of Ponding Water: 18 in.

*Guidelines for Maximum Slope Length for Silt Fence*:

| Slope (H:V) | Length of Slope Above Fence, Assumes 30 In High Fence |
|---|---|
| 10:1 | 150 ft. |
| 6:1 | 85 ft. |
| 5:1 | 70 ft. |
| 4:1 | 55 ft. |
| 3:1 | 40 ft. |
| 2:1 | 25 ft. |
| 1:1 | 15 ft. |

*Relationship to Other Erosion and Sediment Control Measures*

Sediment control measures are secondary to erosion prevention or soil stabilizing measures. Silt Fence may be used as part of a sequential system with other temporary or permanent measures such as vegetation, check dams, settling ponds, etc. Occasional flow velocity increases may be offset using corrective measures such as rock berms or other redirecting energy absorbers.

*Common Failures or Misuses*

- Inappropriate for intended function (e.g. used for check dam, flow diversion, diversion dam, etc.).
- Installation of Silt Fence in streams or concentrated flow.
- Use as a mid-slope protection on slopes greater than 4:1.
- Use as a perimeter control in high flow areas.
- Field-sewn seams.
- Use of incorrect type of fabric.
- Loose or sagging fabric between posts.
- Fence improperly attached or fastened to posts.
- Posts not driven deep enough into the ground.
- Posts spaced too far apart.
- Posts installed on incorrect side of fence.
- Placement of overlapped joints across pooled drainage areas.
- Fence allows spillover or bypass.
- Soil is not compacted next to fence after backfilling trench, allowing water to flow underneath.

- Trenches are too shallow to anchor the Silt Fence below ground or trenchless construction failure.
- Slope erosion occurs below the fenceline due to drainage that bypasses the barrier end, or water build-up that "blows out" a poorly-secured fence bottom.
- Fence function impairment due to sediment build-up, maintenance neglect, etc.
- Fence topples due to poor installation and/or high levels of impounded backup water or sediment.
- Uneven distribution of pooled drainage along non-level fenceline surface reduces efficiency.
- End of fence is not "J-hooked" upslope allowing water to run around the end.
- Poor support system (e.g. soil too rocky to secure posts, fabric stapled to trees, etc.).
- Installation of Silt Fence in a long continuous run.

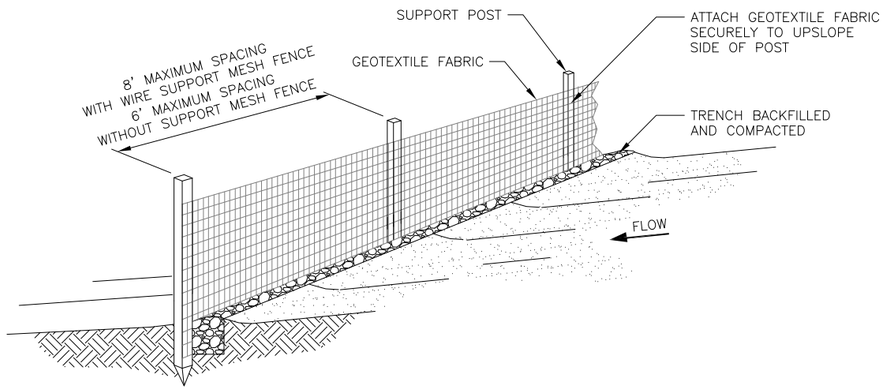
*SPECIFICATIONS*

Standard Specification

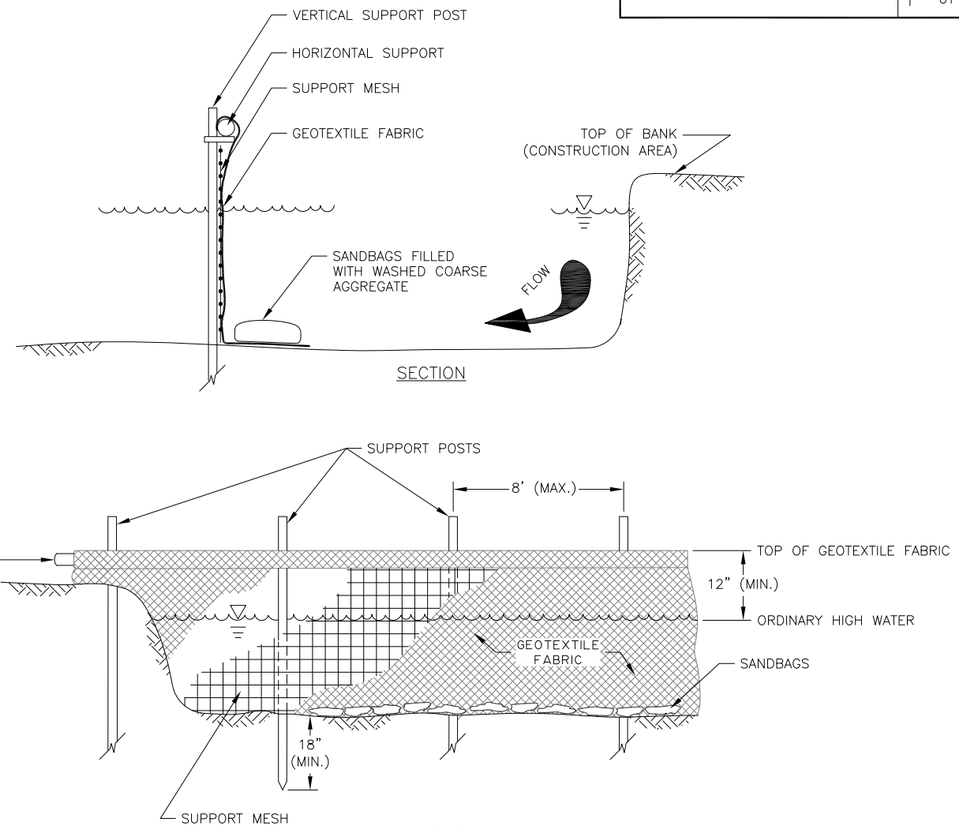
- 633 – Silt Fence
- 729-2.04 - Geosynthetics

Drawing

- BMP-20.00 Silt Fence (Sheets 1 and 2)




GENERAL INSTALLATION
NOT TO SCALE




STANDING WATER INSTALLATION
NOT TO SCALE

SILT FENCE GENERAL NOTES:

MATERIALS

SILT FENCE: SEE SPECIFICATION SECTION 633, SILT FENCE.

INSTALLATION

1. INSTALL FENCELINE ALONG A LEVEL CONTOUR AND PERPENDICULAR TO ANTICIPATED SHEET FLOW DRAINAGE PATH(S).
2. ORIENT END SECTIONS UPHILL SLIGHTLY IN A J-HOOK TO PREVENT WATER FROM GOING AROUND THE SILT FENCE.
3. DO NOT EXCEED 100 FEET FOR EACH 1/4-ACRE OF DRAINAGE AREA AND DO NOT EXCEED 500 FEET REGARDLESS OF DRAINAGE AREA.
4. THE DIFFERENCE IN ELEVATION BETWEEN THE HIGHEST AND LOWEST POINT ALONG THE TOP OF THE SEDIMENT FENCE SHALL NOT EXCEED ONE-THIRD THE FENCE HEIGHT.
5. WHERE GROUND SURFACES ARE UNEVEN, INSTALL SHORTER FENCES FOLLOWING CONTOURS (RATHER THAN INSTALLING ONE LONG, CONTOUR-CROSSING FENCE THAT DIRECTS DRAINAGE TO ACCUMULATE IN LOW SPOTS).
6. LOCATE FENCE 3 TO 10 FEET BEYOND TOE OF FILL TO LEAVE ROOM FOR A BROAD, SHALLOW SEDIMENTATION POOL AND FOR EQUIPMENT ACCESS DURING FENCE MAINTENANCE AND REMOVAL.
7. IF FEASIBLE, LEAVE A MINIMUM OF 3.5-FOOT BUFFER BETWEEN FENCING AND SENSITIVE RECEIVING AREAS.
8. PLACE GEOTEXTILE ON THE UPSLOPE SIDE OF POSTS OR, WHEN USING SILT FENCE WITH SEWN-IN POCKETS, PLACE POCKETS ON THE UPSLOPE SIDE OF THE FENCE.
9. EXCAVATE TRENCHES NOT WIDER OR DEEPER THAN NECESSARY FOR PROPER INSTALLATION OF THE SILT FENCE. DO NOT EXCAVATE TRENCHES IN PERMAFROST.
10. AT JOINTS, ROLL ENOUGH OF THE ENDS OF SECTIONS TOGETHER AT SUPPORT POST SUCH THAT THE JOINT PREVENTS SILT-LADEN WATER FROM ESCAPING THROUGH THE FENCE.
11. IF USING THE FRONT WHEEL OF A TRACTOR OR ROLLER, COMPACT THE UPSTREAM SIDE FIRST, THEN EACH SIDE TWICE (A TOTAL OF FOUR TRIPS).
12. KEEP FENCE FABRIC TAUT.
13. WHEN USING SUPPORT MESH, ATTACH GEOTEXTILE TO THE SUPPORT MESH WITH FASTENERS SPACED EVERY 24 INCHES AT THE TOP AND MIDSECTION.

MACHINE SLICE INSTALLATION (NOT IN PERMAFROST)

1. USE A SILT FENCE INSTALLATION MACHINE OR ATTACHMENT TO PLOW OR SLICE THE FABRIC DIRECTLY INTO THE SOIL.
2. BACKFILL SOIL LOOSENED BY THE BLADE INTO THE SLICE AND USE THE TRACTOR TO MECHANICALLY COMPACT THE SOIL.
3. TUCK FABRIC DEEPER INTO THE GROUND WHERE NECESSARY.
4. INSTALL SUPPORT POSTS ALONG THE LENGTH OF THE FENCE FOLLOWING SIMILAR PROCEDURES FOR THE TRENCH METHOD.

WINTER INSTALLATION (NOT IN PERMAFROST)

1. DIG A TRENCH.
2. BACKFILL TRENCH WITH THE LOOSENED SOIL AND COMPACT SOIL PRIOR TO POST INSTALLATION.
3. MOISTEN THE BACKFILLED SOIL SO IT WILL FREEZE UP AND GRIP THE SILT FENCE FABRIC IN PLACE.
4. DO NOT LEAVE LARGE FROST CHUNKS AS THE BACKFILL.

INSPECTION

1. INSPECT FENCELINE FOR CONTINUITY, COLLAPSE, UNDERMINED AREAS, AND DAMAGE. DO NOT EXCAVATE TRENCHES IN PERMAFROST.
2. INSPECT FABRIC FOR TEARS, PUNCTURES, FRAYING, WEATHERING, AND COMPROMISED INTEGRITY.
3. CONFIRM THAT THE FENCE POSTS ARE SECURE.
4. ENSURE THE FENCE IS KEYED IN AND THAT THERE IS NO UNDERCUTTING.
5. LOOK FOR EVIDENCE OF SEDIMENT OR EROSION FLOW LEADING OFF THE DOWNHILL EDGE OF THE FENCE. (THIS MAY BE AN INDICATOR OF DRAINAGE BYPASS OR FENCE UNDERMINE.)
6. NOTE DEPTH OF SEDIMENT BUILD UP AT THE FENCE.
7. LOOK FOR SIGNS OF INADEQUATE PROTECTION OF OFF-SITE SENSITIVE AREAS.
8. CHECK FOR SEDIMENT FLOWING THROUGH THE FENCE.
9. CHECK FOR HOLES IN FENCE WHERE WIRE TIES ARE USED TO SECURE GEOTEXTILE FABRIC TO THE SUPPORT POST.

MAINTENANCE

1. INSTALL ALTERNATE OR ADDITIONAL BMPS AS NEEDED TO PREVENT UNDESIRABLE SEDIMENTATION OF SENSITIVE AREAS.
2. REPLACE DAMAGED FABRIC.
3. REMEDY FENCE SAGS AS NEEDED.
4. REMOVE ACCUMULATED SEDIMENT BEFORE IT ACCUMULATES TO ONE-HALF THE CAPACITY, OR ONE-THIRD OF THE AVAILABLE STORAGE IF PROTECTING A WATER BODY OR STORM DRAIN INLET.
5. DISPOSE OF SILT WASTE IN APPROVED MANNER/LOCATION (TYPICALLY IN A NON-EROSION AREA).
6. IF THERE IS EVIDENCE OF EXCESSIVE SEDIMENTATION AGAINST THE SILT FENCE, PROVIDE INCREASED EROSION CONTROL UPSLOPE.

REMOVAL

1. WHEN DISTURBED AREAS ARE PERMANENTLY STABILIZED OR SEDIMENT PROTECTION IS NO LONGER NEEDED, COLLECT AND PROPERLY DISPOSE OF ACCUMULATED SEDIMENT OR SEED IN PLACE.
2. CUT FABRIC AT GROUND LEVEL AND REMOVE SUPPORTS.
3. DISCARD FILTER FENCE AS APPROVED. AVOID DAMAGE TO SENSITIVE AREAS (E.G. WETLAND OR SURFACE WATER).

STANDING WATER NOTES:

INSTALLATION

1. DRIVE SUPPORT POSTS INTO THE GROUND AND ATTACH A HORIZONTAL SUPPORT MEMBER.
2. ATTACH SUPPORT MESH AND GEOTEXTILE ON THE UPSLOPE SIDE OF THE STAKES, EXTEND GEOTEXTILE ON THE GROUND UPSLOPE OF THE FENCE, AND ANCHOR THE GEOTEXTILE WITH SANDBAGS OR EQUIVALENT TO PREVENT GAPS.
3. SPACE SUPPORT POSTS A MAXIMUM OF 8 FEET APART.
4. KEEP FENCE FABRIC TAUT.

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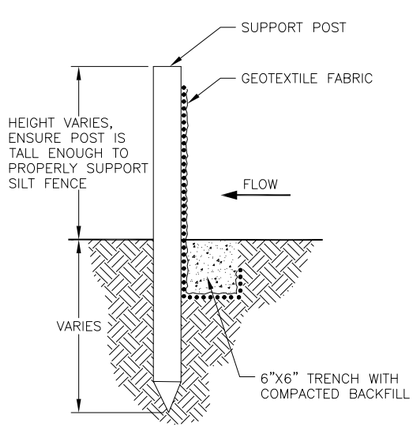
State of Alaska DOT&PF

SILT FENCE (NOTES, GENERAL INSTALLATION, & STANDING WATER INSTALLATION)

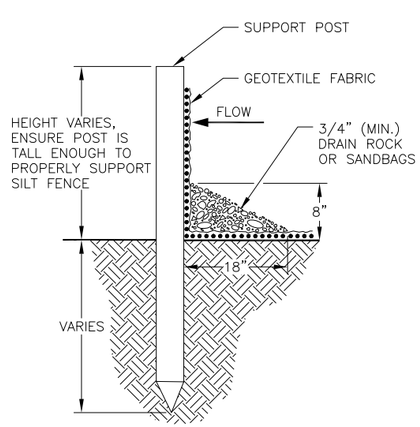
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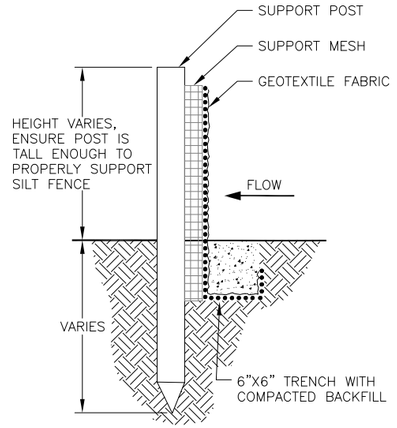
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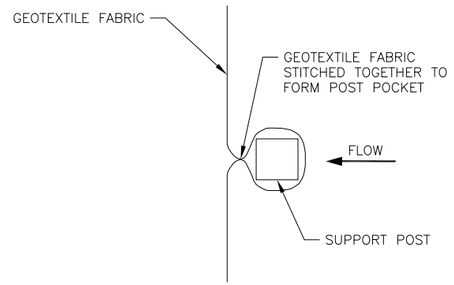

TRENCH DETAIL
NOT TO SCALE




TRENCHLESS DETAIL
NOT TO SCALE




SUPPORT MESH REINFORCED FABRIC DETAIL
NOT TO SCALE




SEWN-IN POCKET DETAIL
NOT TO SCALE

TRENCH NOTES:
INSTALLATION
1. DRIVE SUPPORT POSTS INTO THE GROUND.
2. FOLLOW MANUFACTURER'S SPECIFICATIONS FOR POST BURIAL DEPTH.
3. EXCAVATE A TRENCH ON THE UPHILL SIDE ALONG THE LINE OF THE STAKES.
4. ATTACH GEOTEXTILE TO STAKES AND BURY GEOTEXTILE BOTTOM.
5. BACKFILL TRENCH AND COMPACT TO SECURE FENCE BOTTOM.

TRENCHLESS NOTES:
MATERIALS
CLEAN ROCK OR SANDBAGS.

INSTALLATION
1. DRIVE SUPPORT POSTS INTO THE GROUND.
2. ATTACH GEOTEXTILE ON THE UPHILL SIDE ALONG THE LINE OF THE STAKES.
3. EXTEND GEOTEXTILE ON THE GROUND UPHILL OF THE FENCE.
4. PLACE DRAIN ROCK ON GEOTEXTILE.

REMOVAL
1. WHEN SILT FENCE IS LOCATED IN WETLANDS OR SENSITIVE AREAS, REMOVE CLEAN ROCK OR SANDBAGS WHEN THE SILT FENCE IS REMOVED.

SUPPORT MESH REINFORCED FABRIC NOTES:
INSTALLATION
1. DRIVE SUPPORT POSTS INTO THE GROUND.
2. EXCAVATE A TRENCH ON THE UPHILL SIDE ALONG THE LINE OF THE STAKES. DO NOT EXCAVATE TRENCHES IN PERMAFROST.
3. EXTEND SUPPORT MESH A MINIMUM OF 3 INCHES INTO THE TRENCH.
4. ATTACH GEOTEXTILE TO STAKES AND BURY GEOTEXTILE BOTTOM.
5. BACKFILL TRENCH AND COMPACT TO SECURE FENCE BOTTOM.

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State of Alaska DOT&PF

# SILT FENCE (DETAILS)

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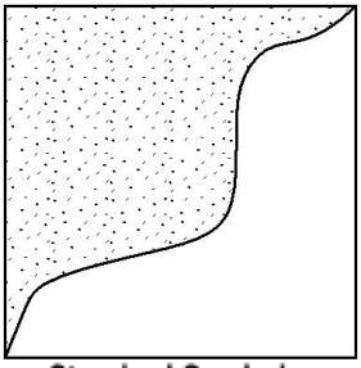
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# EC-11 GEOTEXTILES, PLASTIC COVERS & EROSION CONTROL BLANKETS/MATS

Refer to: ITD Standards and Specifications for Highway Construction, Sections 212, 621, and 711.
ITD Standard Drawing P-2-C.
QPL Category: 621 Erosion Blanket – Rolls (RECPs)






## Definition and Purpose

This BMP involves the placement of geotextiles, mats, plastic covers, or erosion control blankets to temporarily stabilize disturbed soil areas and protect soils from erosion by wind or water.

**BMP Objectives**

- ☐ **Perimeter Control**
- ☒ **Slope Protection**
- ☒ **Borrow and Stockpiles**
- ☒ **Drainage Areas**
- ☐ **Sediment Trapping**
- ☐ **Stream Protection**
- ☒ **Temporary Stabilizing**
- ☒ **Permanent Stabilizing**

## Appropriate Applications

These measures are used when disturbed soils may be particularly difficult to stabilize, including the following situations:

- Steep slopes, generally steeper than 3:1
- Slopes with loose soils or non-cohesive sandy and/or silty material.
- Slopes and disturbed soils where mulch must be anchored.
- Disturbed areas where plants are slow to develop.
- Channels with flows exceeding 3 feet/second.
- Channels to be vegetated
- Stockpiles
- Slopes adjacent to water bodies of environmentally sensitive areas (ESAs).

## Limitations

- Blankets and mats are more expensive than other erosion control measures, due to labor and material costs. This usually limits their application to areas inaccessible to hydraulic equipment or where other measures are not applicable, such as channels.

- Blankets and mats are generally not suitable for excessively rocky sites or areas where the final vegetation will be mowed (because staples and netting can catch in mowers).
- Plastic sheeting is easily vandalized, easily torn, photodegradable, and must be disposed of at a landfill.
- Non-degradable fabrics must generally be removed when permanent stabilization measures are ready to be installed. Failure to move these materials creates trash that may be environmentally harmful and may result in littering fines.
- Plastic results in 100 percent runoff, which may cause serious erosion problems in the areas receiving the concentrated sheet flow.
- The use of plastic should be limited to covering stockpiles, or very small graded areas for short periods of time (such as through one imminent storm event), until alternative measures, such as seeding and mulching, may be installed.
- Geotextiles, mats, plastic covers, and erosion control covers have maximum flow rate limitations. The manufacturer shall be consulted for proper selection.

**Material Selection**

There are many types of erosion control blankets and mats, and selection of the appropriate type shall be based on the specific type of application and site conditions.

***Geotextiles***

- A wide variety of Geotextiles are available, dependent on their intended uses which range from separation of different materials (such as road bedding and underlying soils) to lining ponds and landfills. For temporary erosion control, geotextile fabrics typically consist of woven or non-woven fabrics that are used to line channels or slopes and are usually used in combination with rock or other mulches or riprap.
- Geomembrane is a more impervious type of geotextile and can be used to cover stockpiles or bare soil areas, where a more durable material (as compared to plastic sheeting) is desired. The use of geomembranes for this application will likely be very limited due to their higher costs.
- Geotextiles should be secured in place with wire staples or sandbags and by keying into tops of slopes and edges to prevent infiltration of surface waters under Geotextile. Staples shall be made of 0.12-inch steel wire and shall be U-shaped with 8-inch legs and 2-inch crown.
- Geotextiles may be reused if, in the opinion of the Engineer, they are suitable for the use intended.

***Plastic Covers***

- Plastic sheeting shall have a minimum thickness of 6 millimeters and shall be keyed in at the top of slope and firmly held in place with sandbags or other weights placed no more than 10 feet apart. Seams are typically taped or weighted down their entire length, and there shall be at least a 12 to 24 inches overlap of all seams. Edges shall be embedded a minimum of 6 inches in soil.

- Any sheeting failures shall be repaired immediately. If washout or breakages occur, the material shall be re-installed after repairing the damage to the slope.

***Erosion Control Blankets/Mats (Rolled Erosion Control Products)***

Degradable rolled erosion control products (RECPs) are typically composed of jute fibers, curled wood fibers, straw, coconut fiber, or a combination of these materials. In order for an RECP to be considered 100 percent degradable, the netting, sewing or adhesive system that holds the biodegradable mulch fibers together must also be degradable.

- **Jute** is a natural fiber that is made into a yarn that is loosely woven into a biodegradable mesh. It is designed to be used in conjunction with vegetation and has longevity of approximately 1 year. The material is supplied in rolled strips, which shall be secured to the soil with U-shaped staples or stakes in accordance with manufacturers' recommendations.
- **Excelsior (curled wood fiber)** blanket material shall consist of machine-produced mats of curled wood excelsior. The excelsior blanket shall be of consistent thickness. The wood fiber shall be evenly distributed over the entire area of the blanket. The top surface of the blanket shall be covered with a photodegradable extruded plastic mesh. The blanket shall be smolder-resistant without the use of chemical additives and shall be non-toxic and non-injurious to plant and animal life. Excelsior blanket shall be furnished in rolled strips.
- **Straw blanket** shall be machine-produced mats of straw with a lightweight degradable netting top layer. The straw shall be attached to the netting with degradable thread or glue strips. The straw blanket shall be of consistent thickness. The straw shall be evenly distributed over the entire area of the blanket. Straw blanket shall be furnished in rolled strips.
- **Wood fiber blanket** is composed of biodegradable fiber mulch with extruded plastic netting held together with adhesives. The material is designed to enhance revegetation. The material is furnished in rolled strips, which shall be secured to the ground with U-shaped staples or stakes in accordance with manufacturers' recommendations.
- **Coconut fiber blanket** shall be machine-produced mats of 100 percent coconut fiber with degradable netting on the top and bottom. The coconut fiber shall be attached to the netting with degradable thread or glue strips. The coconut fiber blanket shall be of consistent thickness. The coconut fiber shall be evenly distributed over the entire area of the blanket. Coconut fiber blanket shall be furnished in rolled.
- **Coconut fiber mesh** is a thin permeable membrane made from coconut or corn fiber that is spun into a yarn and woven into a degradable mat. It is designed to be used in conjunction with vegetation and typically has longevity of several years. The material is supplied in rolled strips, which shall be secured to the soil with U-shaped staples or stakes in accordance with manufacturers' recommendations.
- **Straw coconut fiber blanket** shall be machine-produced mats of 70 percent straw and 30 percent coconut fiber with a degradable netting top layer and a degradable bottom net. The straw and coconut fiber shall be attached to the netting with degradable thread or glue strips. The straw coconut fiber blanket shall be of consistent thickness and shall be

evenly distributed over the entire area of the blanket. Straw coconut fiber blanket shall be furnished in rolled strips.

Non-degradable RECPs are typically composed of polyethylene, polypropylene, nylon, or other synthetic fibers. In some cases, a combination of degradable and synthetic fibers is used to construct the RECP. Netting used to hold these fibers together is typically non-degradable as well.

- **Plastic netting** is a lightweight biaxially-oriented netting designed for securing loose mulches like straw or paper to soil surfaces to establish vegetation. The netting is photodegradable. The netting is supplied in rolled strips, which shall be secured with U-shaped staples or stakes in accordance with manufacturers' recommendations.
- **Plastic mesh** is an open-weave geotextile that is composed of an extruded synthetic fiber woven into a mesh with an opening size of less than 2 inches. It is used with revegetation or may be used to secure loose fiber such as straw to the ground. The material is supplied in rolled strips, which shall be secured to the soil with U-shaped staples or stakes in accordance with manufacturers' recommendations.
- **Synthetic fiber with netting** is a mat that is composed of durable synthetic fibers treated to resist chemicals and ultraviolet light. The mat is a dense, three-dimensional mesh of synthetic (typically polyolefin) fibers stitched between two polypropylene nets. The mats are designed to be revegetated and provide a permanent composite system of soil, roots, and geomatrix. The material is furnished in rolled strips, which shall be secured with U-shaped staples or stakes in accordance with manufacturers' recommendations.
- **Bonded synthetic fibers** consist of a three-dimensional geomatrix nylon (or other synthetic) matting. Typically, it has more than 90 percent open area, which facilitates root growth. Its tough root-reinforcing system anchors vegetation and protects against hydraulic lift and shear forces created by high volume discharges. It can be installed over prepared soil, followed by seeding into the mat. Once vegetated, it becomes an invisible composite system of soil, roots, and geomatrix. The material is furnished in rolled strips that shall be secured with U-shaped staples or stakes in accordance with manufacturers' recommendations.
- **Combination synthetic and biodegradable RECPs** consist of biodegradable fibers, such as wood fiber or coconut fiber, with a heavy polypropylene net stitched to the top and a high-strength continuous-filament geomatrix or net stitched to the bottom. The material is designed to enhance revegetation. The material is furnished in rolled strips, which shall be secured with U-shaped staples or stakes in accordance with manufacturers' recommendations.

**Qualified Products List Criteria**

All rolled erosion control products shall meet the State of Idaho State Department of Agriculture Seed Laboratory or the North American Weed Management Association (NAWMA) noxious weed-free certification requirements prior to approval.

All RECPs shall:

- Have independents test results submitted shall be from either the National Transportation Product Evaluation Program (NTPEP) or an approved equivalent laboratory.

### Site Preparation

- Prepare the site properly to ensure complete contact of the blanket or matting with the soil.
- Grade and shape the area of installation.
- Remove all rocks, clods, vegetation, or other obstructions so that the installed blankets or mats will have complete, direct contact with the soil.
- Prepare seedbed by loosening 2 to 3 inches of topsoil. When using a fabric or mat that is designed to be used in conjunction with seeding or revegetation, follow the manufacturer's guidelines for proper seedbed preparation, seed application, and/or planting.

### Seeding

Seed the area before blanket installation for erosion control and revegetation. Seeding after mat installation is often specified for turf reinforcement application. When seeding prior to blanket installation, all check slots and other areas disturbed during installation must be re-seeded. Where soil filling is specified, seed the matting and the entire disturbed area after installation and prior to filling the mat with soil.

### Anchoring

- U-shaped wire staples, metal geotextile stake pins, or triangular wooden stakes can be used to anchor mats and blankets to the ground surface.
- Wire staples and metal stakes shall be driven flush to the soil surface.
- All anchors shall be a minimum of 6 inches long and have sufficient penetration to resist pullout. Longer anchors may be required for loose soils as determined by the responsible party or by manufacturer's installation guidelines.

### Installation on Slopes

Installation shall be in accordance with the manufacturer's recommendations or ITD Standard Drawing P-2-C.

### Installation in Channels

Installation shall be in accordance with the manufacturer's recommendations or ITD Standard Drawing P-2-C.

### Soil Filling (if specified for turf reinforcement)

- Always consult the manufacturer's recommendations for installation.
- Do not drive tracked or heavy equipment over mat.
- Avoid any traffic over matting if loose or wet soil conditions exist.
- Use shovels, rakes, or brooms for fine grading and touch up.
- Smooth out soil filling, just exposing top netting of mat.

### Blanket Removal

When no longer required for work, non-degradable temporary blankets shall be removed from the site and disposed.

### Maintenance and Inspection

- Inspections shall be conducted as required by the NPDES permit or contract specifications.
- Areas treated with temporary geotextiles, mats, blankets, and other covers shall be maintained to provide adequate erosion control. Any failures shall be repaired immediately.
- If washout or breakage occurs, reinstall the material after repairing the damage to the slope or channel.

# Earth Dikes and Drainage Swales (ED/DS) EC-10

## Description

Earth dikes and drainage swales are temporary storm conveyance channels constructed either to divert runoff around slopes or to convey runoff to additional sediment control BMPs prior to discharge of runoff from a site. Drainage swales may be lined or unlined, but if an unlined swale is used, it must be well compacted and capable of resisting erosive velocities.



**Photograph ED/DS-1.** Example of an earth dike used to divert flows at a construction site. Photo courtesy of CDOT.

## Appropriate Uses

Earth dikes and drainage swales are typically used to control the flow path of runoff at a construction site by diverting runoff around areas prone to erosion, such as steep slopes. Earth dikes and drainage swales may also be constructed as temporary conveyance features. This will direct runoff to additional sediment control treatment BMPs, such as sediment traps or basins.

## Design and Installation

When earth dikes are used to divert water for slope protection, the earth dike typically consists of a horizontal ridge of soil placed perpendicular to the slope and angled slightly to provide drainage along the contour. The dike is used in conjunction with a swale or a small channel upslope of the berm to convey the diverted water. Temporary diversion dikes can be constructed by excavation of a V-shaped trench or ditch and placement of the fill on the downslope side of the cut. There are two types of placement for temporary slope diversion dikes:

- A dike located at the top of a slope to divert upland runoff away from the disturbed area and convey it in a temporary or permanent channel.
- A diversion dike located at the base or mid-slope of a disturbed area to intercept runoff and reduce the effective slope length.

Depending on the project, either an earth dike or drainage swale may be more appropriate. If there is a need for cut on the project, then an excavated drainage swale may be better suited. When the project is primarily fill, then a conveyance constructed using a berm may be the better option.

**All dikes or swales receiving runoff from a disturbed area should direct stormwater to a sediment control BMP such as a sediment trap or basin.**

| Earth Dikes and Drainage Swales | |
|---|---|
| **Functions** | |
| Erosion Control | Yes |
| Sediment Control | Moderate |
| Site/Material Management | No |

# EC-10 Earth Dikes and Drainage Swales (ED/DS)

**Unlined dikes or swales should only be used for intercepting sheet flow runoff and are not intended for diversion of concentrated flows.**

Details with notes are provided for several design variations, including:

ED-1. Unlined Earth Dike formed by Berm

DS-1. Unlined Excavated Swale

DS-2. Unlined Swale Formed by Cut and Fill

DS-3. ECB-lined Swale

DS-4. Synthetic-lined Swale

DS-5. Riprap-lined Swale

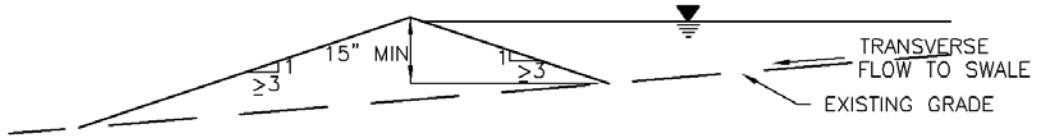
The details also include guidance on permissible velocities for cohesive channels if unlined approaches will be used.

## Maintenance and Removal

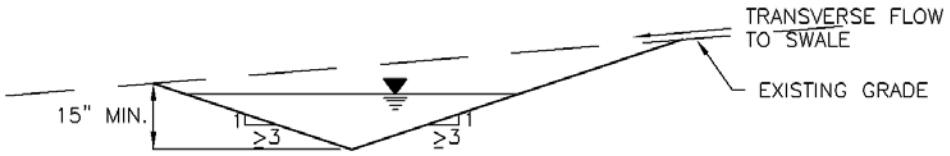
Inspect earth dikes for stability, compaction, and signs of erosion and repair. Inspect side slopes for erosion and damage to erosion control fabric. Stabilize slopes and repair fabric as necessary. If there is reoccurring extensive damage, consider installing rock check dams or lining the channel with riprap.

If drainage swales are not permanent, remove dikes and fill channels when the upstream area is stabilized. Stabilize the fill or disturbed area immediately following removal by revegetation or other permanent stabilization method approved by the local jurisdiction.

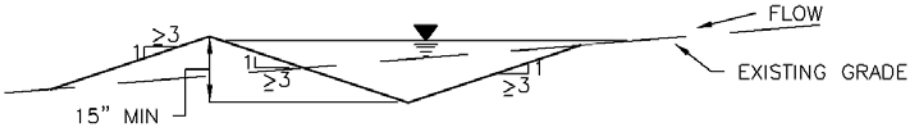


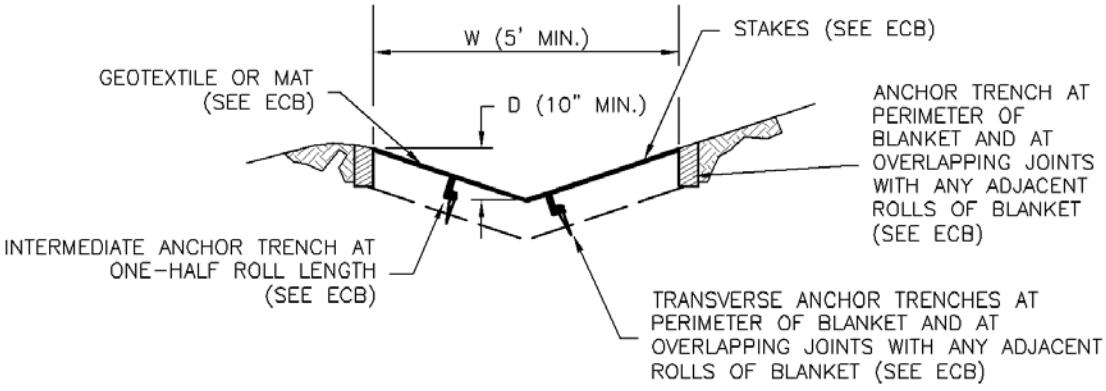

ED–1. COMPACTED UNLINED EARTH DIKE FORMED BY BERM



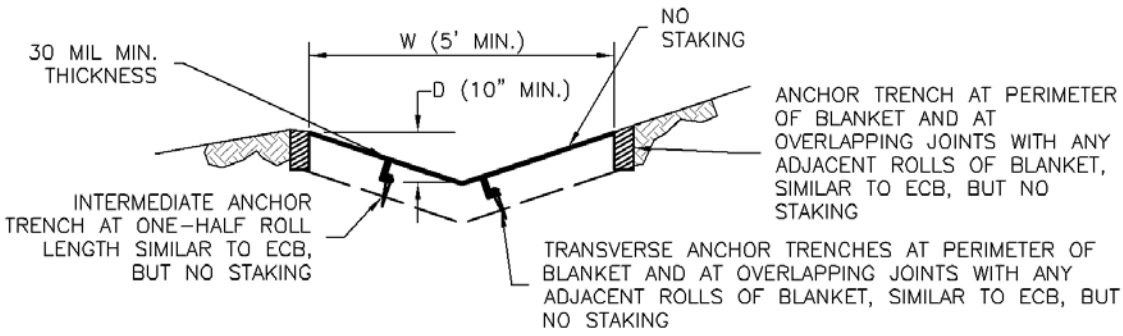

DS–1. COMPACTED UNLINED EXCAVATED SWALE



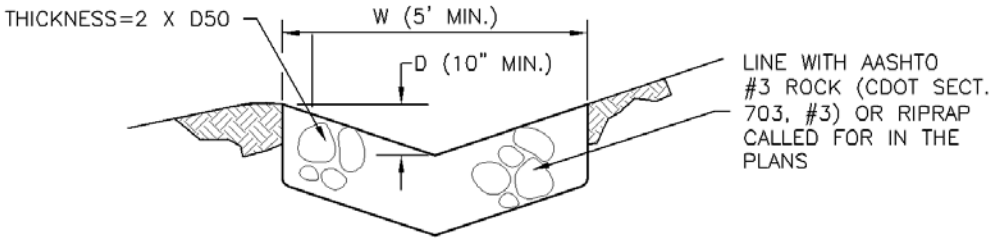

DS–2. COMPACTED UNLINED SWALE FORMED BY CUT AND FILL




DS–3. ECB LINED SWALE (CUT AND FILL OR BERM)




DS-4. SYNTHETIC LINED SWALE




DS-5. RIPRAP LINED SWALE

EARTH DIKE AND DRAINAGE SWALE INSTALLATION NOTES

1. SEE SITE PLAN FOR:
   - LOCATION OF DIVERSION SWALE
   - TYPE OF SWALE (UNLINED, COMPACTED AND/OR LINED).
   - LENGTH OF EACH SWALE.
   - DEPTH, D, AND WIDTH, W DIMENSIONS.
   - FOR ECB/TRM LINED DITCH, SEE ECB DETAIL.
   - FOR RIPRAP LINED DITCH, SIZE OF RIPRAP, D50.

2. SEE DRAINAGE PLANS FOR DETAILS OF PERMANENT CONVEYANCE FACILITIES AND/OR DIVERSION SWALES EXCEEDING 2-YEAR FLOW RATE OR 10 CFS.

3. EARTH DIKES AND SWALES INDICATED ON SWMP PLAN SHALL BE INSTALLED PRIOR TO LAND-DISTURBING ACTIVITIES IN PROXIMITY.

4. EMBANKMENT IS TO BE COMPACTED TO 90% OF MAXIMUM DENSITY AND WITHIN 2% OF OPTIMUM MOISTURE CONTENT ACCORDING TO ASTM D698.

5. SWALES ARE TO DRAIN TO A SEDIMENT CONTROL BMP.

6. FOR LINED DITCHES, INSTALLATION OF ECB/TRM SHALL CONFORM TO THE REQUIREMENTS OF THE ECB DETAIL.

7. WHEN CONSTRUCTION TRAFFIC MUST CROSS A DIVERSION SWALE, INSTALL A TEMPORARY CULVERT WITH A MINIMUM DIAMETER OF 12 INCHES.

EARTH DIKE AND DRAINAGE SWALE 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. SWALES SHALL REMAIN IN PLACE UNTIL THE END OF CONSTRUCTION; IF APPROVED BY LOCAL JURISDICTION, SWALES MAY BE LEFT IN PLACE.

5. WHEN A SWALE IS REMOVED, THE DISTURBED AREA SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.

(DETAIL ADAPTED FROM DOUGLAS COUNTY, COLORADO AND THE CITY OF COLORADO SPRINGS, 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.

# BMP 04.00. Compost Berm

## *DESIGN CONSIDERATIONS*

### *Objectives*

Compost Berms are intended to intercept and slow sheet flow runoff, allowing suspended sediments to settle or be filtered out by the compost material.

### *Description*

Compost Berms are composed of trapezoidal shaped berms made with compost. The berms can be temporary or permanent installations.

### *Other Names*

Filtration Berm

### *Applicability*

Compost Berms can be used in place of sediment (silt) fences and fiber rolls. They can be a good choice near streams since compost is an organic, biodegradable, renewable material and is not required to be removed at the end of a project. Removal of other types of best management practices (BMPs) can disturb soil by dislodging vegetation and exposing soil. Compost Berms can also be easily reshaped if they become damaged. However, repeated damage may require replacement or the addition of more compost material. Compost Berms are not intended to be installed in areas with concentrated flow.

### *Selection Considerations*

Compost used for berms needs to be stable and mature. It should consist of both small and larger particle sizes, which will affect the filtration performance and longevity. Coarser grade compost is better for filtration and is less likely to be disturbed by rainfall or runoff. Finer grade compost is better for vegetation establishment. For Compost Berms, the ratio of coarse to fine grades should be 1:1. No compost should have particle sizes larger than 3 inches. All permanent compost berm installations should be seeded (see BMP 53, Permanent Seeding). All compost used should conform to U.S. Composting Council (USCC) standards.

### *Design*

Compost Berms can be installed on slopes 2H:1V or flatter. Compost Berms should be installed no less than 1 to 2 feet high with a 4- to 6-foot wide base, the specified height and width depend on the slope (see table on the drawing BMP – 04.00). For maximum filtration, install berms with a 4- to 6-foot wide base and a 2- to 3-foot wide top. Larger berms can be constructed if they are required on steeper slopes. The general shape for any compost berm should be that the base is twice as wide as the height of the berm. Providing seeding or plantings in conjunction with the compost helps to break up sediments and creates root pathways for storm water to penetrate into the compost. This helps to prevent the compost from becoming plugged with sediment.

### *Relationship to Other Erosion and Sediment Control Measures*

Compost Berms can be used in place of sediment fences, and fiber rolls. Compost filters sediment and allows the runoff to pass through relatively more easily than silt fence, which acts as a dam to create ponding and settling. Tackifiers can be applied to compost installations to enhance performance if needed.

### *Common Failures or Misuses*

Common failures are generally due to faulty application and maintenance. These failures include:

- Non-certified compost used.
- Can become plugged with fines and sediments.
- Inadequate shape and size of berms constructed.
- Used in highly concentrated flow areas.
- Damaged by construction-related activities.
- Ends of berms are not pointed upwards towards the top of the slope.

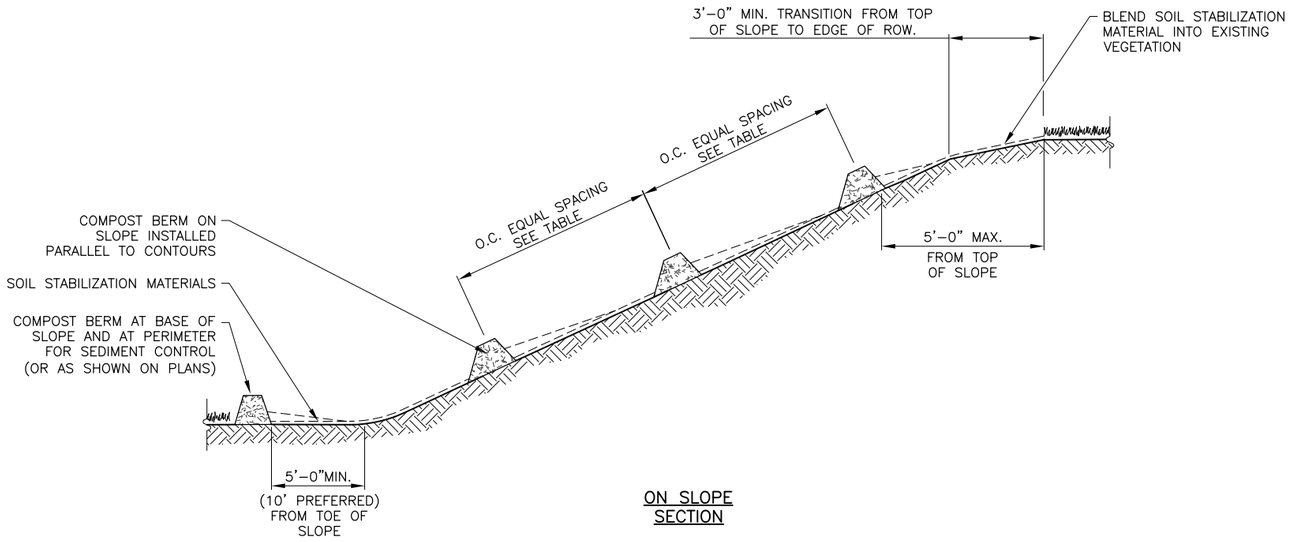
## *SPECIFICATIONS*

Drawing

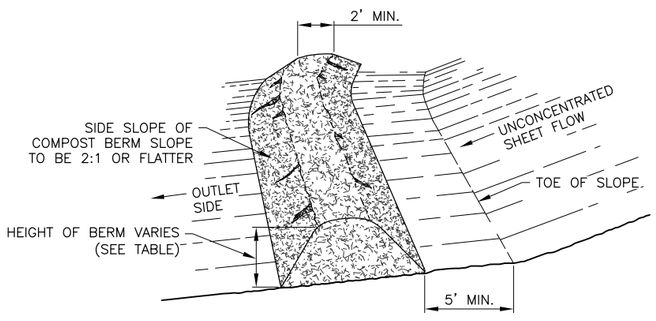
- BMP-04.00 – Compost Berm

Standard Specification

- 659 – Compost Berm
- 750 – Compost




ON SLOPE SECTION




PERSPECTIVE

## COMPOST BERM
NOT TO SCALE

### COMPOST BERM NOTES:

**MATERIALS**
COMPOST PER SECTION 750

**INSTALLATION**
1. INSTALL COMPOST BERMS AS SPECIFIED IN THE TABLE.
2. CONSTRUCT LARGER BERMS WHEN REQUIRED ON STEEPER SLOPES.
3. SHAPE ANY COMPOST BERM SO THE BASE IS TWICE AS WIDE AS THE HEIGHT OF THE BERM.
4. PROVIDE PERMANENT SEEDING FOR PERMANENT BERMS THAT ARE NOT BLADED SMOOTH.
5. SOIL STABILIZTION MATERIALS INCLUDE ROLLED EROSION CONTROL PRODUCTS, MULCH OR OTHER TEMPORARY GROUND COVER TO STABILIZE UNTIL VEGETATION IS ESTABLISHED.

**INSPECTION**
1. INSPECT FOR DAMAGE, CHANGES IN PRESCRIBED DIMENSIONS, SEDIMENT DEPTH, UNDERMINING, AND/OR OVERTOPPING.

**MAINTENANCE**
1. RESHAPE OR ADD ADDITIONAL COMPOST TO DAMAGED SECTIONS OF BERM TO PRESCRIBED DIMENSIONS.
2. REMOVE ACCUMULATED SEDIMENT BEFORE IT REACHES ONE–HALF OF THE BERM HEIGHT OR ONE–THIRD OF THE AVAILABLE STORAGE IF PROTECTING A WATER BODY OR STORM DRAIN INLET.
3. REPAIR DAMAGE DUE TO AND CORRECT FOR UNDERMINING AND OVERTOPPING.

**REMOVAL**
1. BLADE SMOOTH AND SEED ALL BERMS TO PREVENT POOLING UPON COMPLETION OF THE PROJECT. UNLESS THE CONTRACT OR ENGINEER DIRECTS THEY MAY BE LEFT AS PERMANENT BERMS.

**COMPOST BERM DIMENSIONS AND SPACING BASED ON SLOPE**

| SLOPE (H: V) | BERM O.C. SPACING | BERM DIMENSIONS | | |
|---|---|---|---|---|
| | | HEIGHT | BOTTOM WIDTH | TOP WIDTH |
| 5:1 – 2:1 | 50 FT | 1.3 FT | 5.5 FT (MIN.) | 2 FT |
| > 2:1 | 25 FT | 1.5 FT | 6 FT (MIN.) | 2 FT |

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State of Alaska DOT&PF

COMPOST BERM

APPROVED

Date 12/2015 X/XX/XX

BMP–04.00

# Stormwater Best Management Practice

# Brush Barrier

**Minimum Measure:** Construction Site Stormwater Runoff Control
**Subcategory:** Sediment Control

## Description

Brush barriers are coarse sediment and flow velocity control structures constructed of material such as small tree branches, root mats, stone or other debris left over from site clearing and grubbing. A filter cloth cover on a brush barrier can stabilize the structure and improve its efficiency.

## Applicability

Brush barriers filter sediment in small drainage areas with a primary flow regime that is sheet flow. They also provide temporary on-site storage for sites that have large amounts of vegetation from clearing and grubbing activities.

## Siting and Design Considerations

The drainage area for brush barriers should be no greater than one-quarter acre per 100 feet of barrier length (DOWL, 2015). In addition, the drainage slope leading down to a brush barrier should be no greater than 2:1. The barrier mound should be at least 2 feet high and 2 feet wide at its base and only installed parallel to slope contours. The material used to create the barrier may consist of site vegetation, composted mulch or wood-based mulch ~~with a diameter smaller than 6 inches~~ (WDE, 2014). ~~Construction staff should not use material larger than 6 inches, as it may be too bulky and create voids where sediment and stormwater could flow through the barrier. They should bury the edge of the filter fabric that covers the barrier in a trench 4 inches deep and 4 inches wide on the uphill side of the barrier. This secures the fabric and blocks sediment while allowing stormwater to pass through the permeable filter fabric.~~ Construction staff should extend the filter fabric just over the peak of the brush mound and fasten it on the downslope edge of the fabric using stakes, sandbags or another equally effective method (WDE, 2014).

Any size brush will work; no fabric required - MSE July 2025



A brush barrier at the perimeter of a construction site.
Credit: Hamilton County Soil & Water Conservation District

## Limitations

Brush barriers are not appropriate for high-velocity areas, concentrated-flow areas or areas with significant slopes (WDE, 2014). Additionally, brush barriers have limited durability because their constituent materials decompose. A useful brush barrier involves a large amount of material; therefore, alternative sediment controls may be more appropriate for sites with little material available from clearing. Brush barriers provide temporary storage for large amounts of material cleared from a site, but construction staff should remove this material from the site after construction activities have ceased and the area is stable.

## Maintenance Considerations

Construction staff should inspect brush barriers after each significant rainfall event to ensure their continued effectiveness. If channels form through voids or around the barrier, construction staff should rebuild the barrier to eliminate the channels. They should also remove accumulated sediment from the uphill side of the barrier when sediment height reaches between one-third and one-half the height of the barrier.



EPA-832-F-21-028A
December 2021

## Effectiveness

Brush barriers effectively reduce off-site sediment transport, ~~and the use of a fabric cover greatly increases their effectiveness. Construction staff should cover brush barriers with a filter fabric to hold the material in place and increase efficiency~~.

## Cost Considerations

The cost of creating brush barriers can vary greatly depending on the equipment used, vegetation type (heavy or light), personnel, amount of filter fabric needed (if used) and number of hours needed to construct the barrier. If the right site conditions exist, they can be a low-cost erosion and sediment control practice.

**Additional Information**

Additional information on related practices and the Phase II MS4 program can be found at EPA's National Menu of Best Management Practices (BMPs) for Stormwater website

## References

DOWL. (2015). *Erosion and sediment control best management practices manual*. Montana Department of Transportation.

Washington State Department of Ecology (WDE). (2014). *2012 stormwater management manual for western Washington as amended in December 2014* (Vol. II) (Publication Number 14-10-055).

**Disclaimer**

*This fact sheet is intended to be used for informational purposes only. These examples and references are not intended to be comprehensive and do not preclude the use of other technically sound practices. State or local requirements may apply.*

# BMP 08.00. Culvert Inlet Protection

## *DESIGN CONSIDERATIONS*

### *Objectives*

Culvert Inlet Protection is used to trap sediment and reduce the amount of sediment entering a culvert.

### *Description*

Culvert Inlet Protection is a low barrier, similar to a check dam, placed up-gradient of a culvert inlet to temporarily impound water and trap sediment while still allowing flow to enter the culvert. There are several types of temporary barriers applicable for different conditions:

- Geotextile-wrapped foam barriers
- Sand bags or gravel-filled sand bags
- Fiber rolls
- Geotextile-wrapped wire cage barrier

### *Other Names*

Filter Inlet.

### *Applicability*

Culvert Inlet Protection is applicable when there is potential for sediment to be transported to and through the culvert. Placement in the flowline is applicable for culverts conveying runoff or project drainage that must remain operational before permanent stabilization of the disturbed area. Placement above (all the way around) a culvert inlet is applicable when earth disturbing activities are occurring upslope of the inlet, to prevent sediment and runoff from entering the culvert inlet from above. Culvert Inlet Protection is not generally placed in the flowline of culverts conveying stream flow, since the purpose of the best management practice (BMP) is to treat run-off before it reaches receiving waterbodies such as streams. If placement in the flowline of streams is required, applicable permits must be obtained.

### *Selection Considerations*

- Culvert Inlet Protection should be sited and constructed in a manner that will facilitate cleanout and disposal of trapped sediment.
- Culvert Inlet Protection should be constructed in a manner that will allow flow to pass and minimize ponding after the run-off has ceased.
- Blocking the inlet can cause flooding affecting streets and the construction area. Where flooding would cause a hazard, consider where overflow will go in extreme events and provide emergency overflows with additional treatment.
- Slope Gradient: The slope of the ditch discharging to the culvert inlet should not exceed 5 percent or flow velocity exceeding 2.5 to 3 cubic feet per second. The steeper the slope or the higher the velocity and shear stress, the larger the particle diameter that can be transported. The flatter the slope and the slower the flow, the longer the travel distance and time behind the barrier, allowing for sediment to settle. If Culvert Inlet Protection is required on steeper grades, consider using a series of barriers or a widened channel to provide velocity reduction or barriers of greater depth to lengthen the settling distance.
- Inlet protection should extend all the way around the inlet when upgradient slopes are not stabilized.
- Consider the effects if the barrier were to fail when water is ponded. Provide additional downstream protection if warranted.

### *Design*

*Drainage Area*: The area of the construction drainage area to the culvert inlet should not exceed 1-acre. The total drainage area to the inlet may be larger than 1-acre, provided that the additional area is vegetated and/or permanently stabilized and that the spillway and ponding area is sized to adequately treat, impound, and convey the runoff from the tributary area.

*Depth*: Provide a temporary minimum ponding depth of 6 to 8 inches. The design must specify fiber rolls of adequate diameter, foam barriers, or sandbags of adequate thickness to provide the minimum ponding depth, and spillways with minimum elevations and width must be provided to limit the maximum ponding depth.

*Relationship to Other Erosion and Sediment Control Measures*

Erosion control measures in the contributing areas must be in place to minimize the amount of sediment that must be treated at inlets. Culvert Inlet Protection is installed as a secondary measure to remove residual sediment that was not removed by other measures such as check dams, grassed swales, and sediment traps.

*Common Failures or Misuses*

- Sediment accumulation resulting in reduced settling capacity.
- Improper installation, resulting in sediment bypassing filter and entering the culvert.
- Tearing, undermining, or collapsing of the barrier, resulting in sediment entering the culvert.

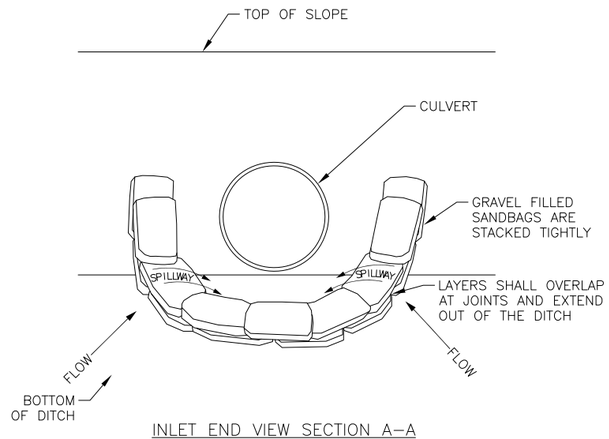
*SPECIFICATIONS*

Standard Specification

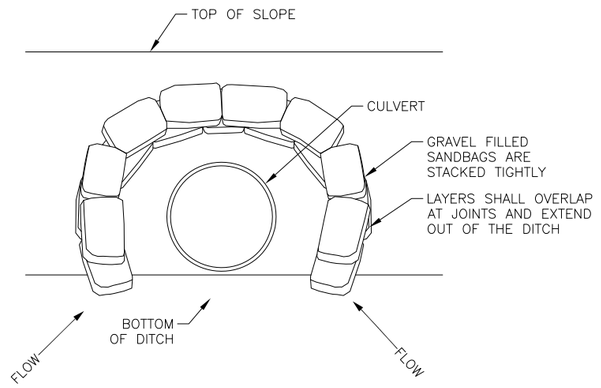
- 667 – Culvert Inlet Protection

Drawing

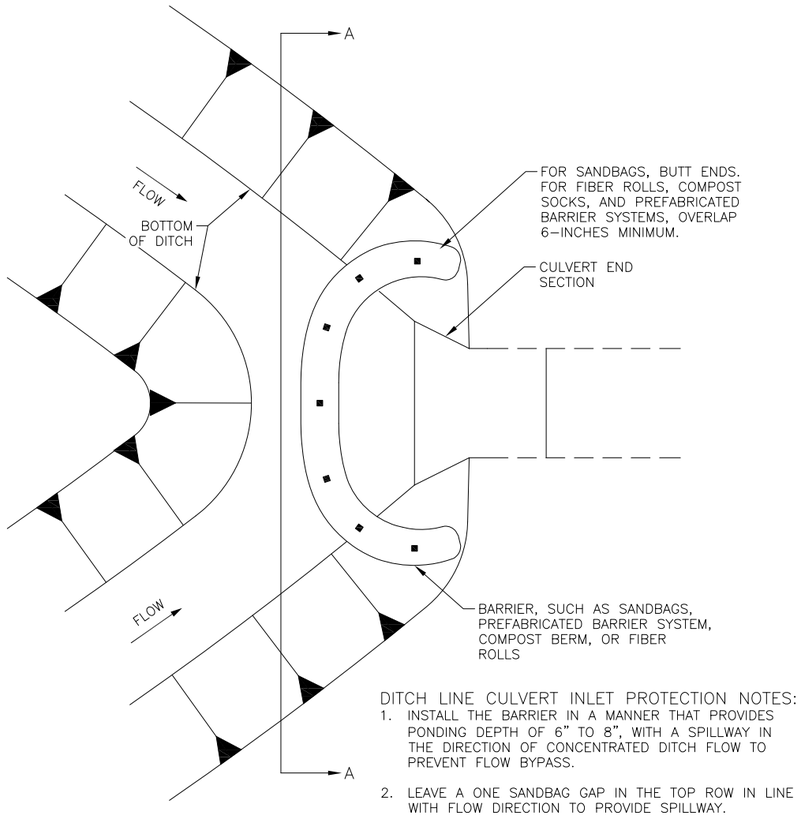
- BMP – 08.00 Culvert Inlet Protection




INLET END VIEW SECTION A–A
TYPICAL SANDBAG INSTALLATION SHOWN



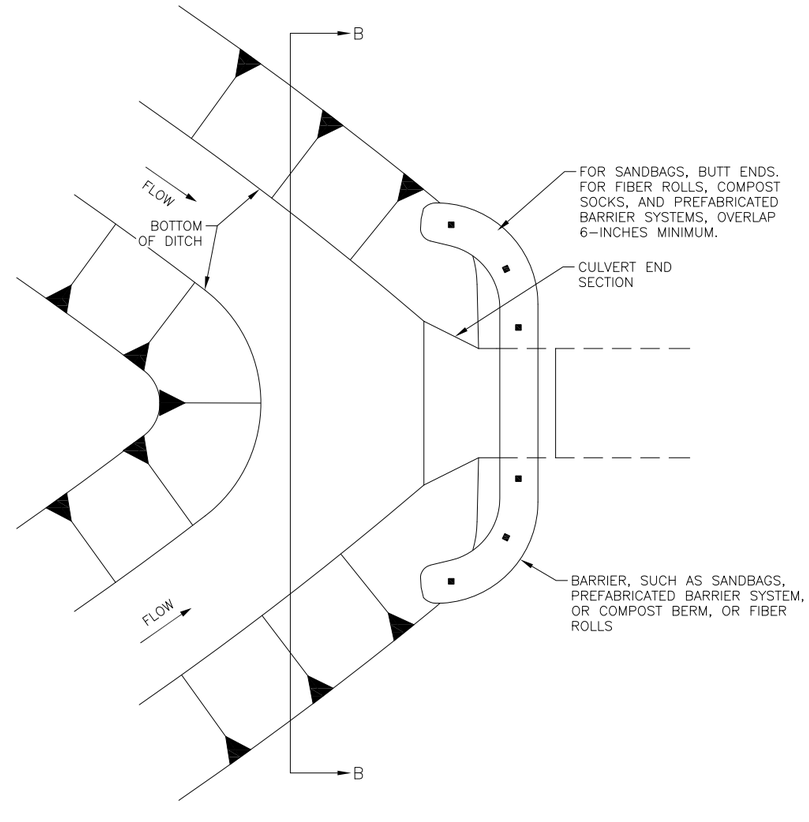

INLET END VIEW SECTION B–B
TYPICAL SANDBAG INSTALLATION SHOWN




DITCH LINE CULVERT INLET PROTECTION NOTES:
1. INSTALL THE BARRIER IN A MANNER THAT PROVIDES PONDING DEPTH OF 6" TO 8", WITH A SPILLWAY IN THE DIRECTION OF CONCENTRATED DITCH FLOW TO PREVENT FLOW BYPASS.
2. LEAVE A ONE SANDBAG GAP IN THE TOP ROW IN LINE WITH FLOW DIRECTION TO PROVIDE SPILLWAY.

PLAN VIEW

DITCH LINE CULVERT INLET PROTECTION
NOT TO SCALE




PLAN VIEW

TOP OF PIPE CULVERT INLET PROTECTION
NOT TO SCALE

## CULVERT INLET PROTECTION NOTES:

### MATERIALS

BARRIER MATERIALS:

1. PREFABRICATED BARRIER SYSTEM, AS SHOWN ON DRAWING BMP–13.00.
2. SANDBAG BARRIER, CONSISTING OF TIGHTLY WOVEN BURLAP OR WOVEN GEOTEXTILE BAG MATERIAL SUFFICIENTLY DURABLE TO REMAIN INTACT FOR THE TIME INTENDED. BAGS 2/3 FULL OF GRAVEL OR SAND WITH A GRADATION SUCH THAT NO FINE SEDIMENT PASSES THROUGH THE BAG. IF THE SANDBAGS ARE NEEDED FOR MORE THAN ONE SUMMER SEASON, PROVIDE BAG MATERIAL THAT HAS ULTRVIOLET STABILITY OF AT LEAST 70% IN CONFORMANCE WITH ASTM D4355 REQUIREMENTS. SECURELY CLOSE THE SANBAGS.
3. FIBER ROLL, AS SHOWN ON DRAWING BMP–10.00, 8 INCHES MINIMUM DIAMETER.
4. COMPOST SOCK, AS SHOWN ON DRAWING BMP–05.00.

### INSTALLATION

1. INSTALL WHERE INDICATED IN THE PLANS OR WHERE APPROVED BY THE ENGINEER.
2. ASSURE THAT BARRIER MAKES FULL CONTACT WITH SOIL ALL AROUND THE INLET.
3. IF PROTECTING BOTH DITCHLINE AND TOP OF PIPE, THE PROTECTION BARRIER CAN BE A SINGLE CONTINOUS CIRCLE.
4. IN ADDITION:
   a. PREFABRICATED BARRIER SYSTEM – ANCHOR WITH WIRE STAPLES ON SOIL, OR ADHESIVE ON PAVEMENT. OVERLAP 6 INCHES.
   b. SANDBAG BARRIER – LAYER AND OVERLAP AT JOINTS.
   c. FIBER ROLL – TRENCH A MINIMUM OF 2 INCHES. SEE STAKING REQUIREMENTS ON DRAWING BMP–10.00.
   d. COMPOST SOCK – SEE STAKING REQUIREMENTS ON DRAWING BMP–05.00. STAKING REQUIRED REQUIRED WHEN PLACED WITHIN FLOWLINE/DITCH.

### INSPECTION

1. CONFIRM THAT BARRIERS ARE IN FULL CONTACT WITH THE SOIL AND THAT BYPASS ROUTES ARE NOT PRESENT.
2. INSPECT FOR SEDIMENT ACCUMULATION, DISPLACEMENT, AND STRUCTURAL DAMAGE.

### MAINTENANCE

1. REMOVE ACCUMULATED SEDIMENT BEFORE IT REACHES ONE–THIRD OF THE DESIGN DEPTH OF SPILLWAY.
2. RESTORE STRUCTURE TO ITS ORIGINAL DIMENSIONS AND FULL CONTACT WITH SOIL AROUND THE INLET AS SOON AS PRACTICABLE.
3. REPAIR ANY STRUCTURAL DAMAGE, INCLUDING REPLACING DAMAGED SANDBAGS, AS SOON AS PRACTICABLE.

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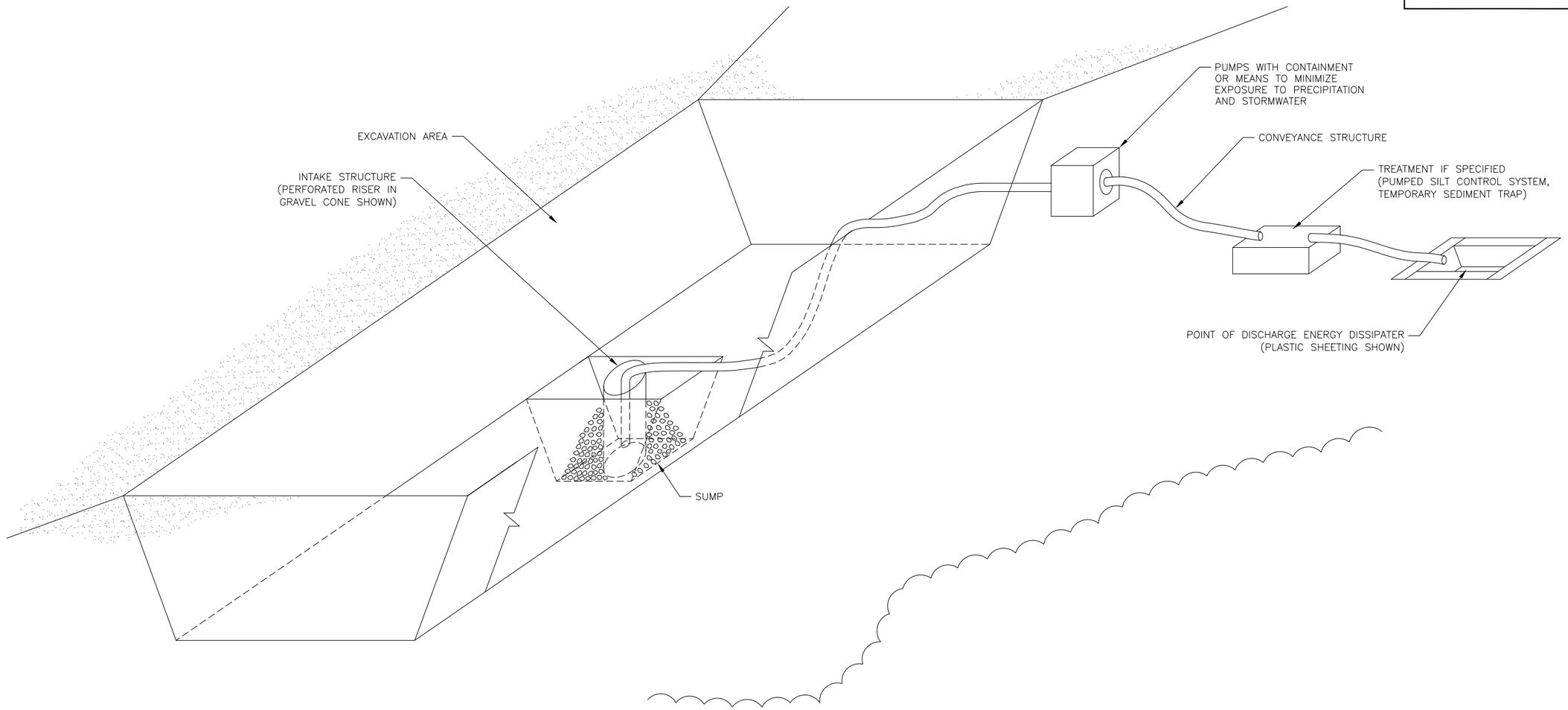
State of Alaska DOT&PF

CULVERT INLET PROTECTION

APPROVED

Date 12/2015 X/XX/XX

BMP–08.00




EXCAVATION DEWATERING
NOT TO SCALE

EXCAVATION DEWATERING NOTES:

MATERIALS

PUMP: SIZED FOR DESIGN FLOW IN CONTRACT, INTAKE LINE, FITTINGS, AND NOZZLES.

INTAKE STRUCTURES: RISERS, SCREENS, GRAVEL CONES, GRAVEL FILTER BERMS, GEOTEXTILE, OR EQUIVALENT,

CONVEYANCE SYSTEM: FLEXIBLE HOSE, WITH PROPER FITTINGS OR EQUIVALENT.

ENERGY DISSIPATER: PLASTIC SHEETING, RIPRAP, SANDBAGS, T-BAR SPREADER, OR EQUIVALENT.

TREATMENT: UPLAND VEGETATIVE AREA, PUMPED SILT CONTROL SYSTEM, OR TEMPORARY SEDIMENT TRAP.

INSTALLATION

1. INSTALL THE CONVEYANCE STRUCTURE. FOR PIPED CONVEYANCE, ENSURE THAT IT IS ADEQUATELY SECURED AGAINST MOVEMENT DURING PUMPING.
2. PLACE THE PUMP IN AN AREA DESIGNED FOR ITS USE AND OPERATION.
3. INSTALL SPILL PREVENTION BMPS PRIOR TO OPERATION.
4. INSTALL THE ENERGY DISSIPATER.
5. CONNECT THE CONVEYANCE STRUCTURE TO THE DOWNSTREAM DISCHARGE POINT.

INSPECTION

1. WHEN PUMPING, MONITOR PUMPS AND INTAKE AND DISCHARGE POINTS.
2. INSPECT THE CONVEYANCE STRUCTURE FOR LEAKS, EROSION, OR OTHER DEFECTS.
3. INSPECT THE TREATMENT CONTROLS FOR BYPASS, CLOGGING, AND SIGNS OF INADEQUATE TREATMENT.
4. INSPECT DISCHARGE POINT FOR EROSION OR FAILURE OF THE ENERGY DISSIPATION MATERIAL.
5. INSPECT THE EQUIPMENT AREA FOR PROPERLY STORED FUEL AND OTHER POTENTIALLY HAZARDOUS SUBSTANCES.

MAINTENANCE

1. REINFORCE, REPAIR, OR RESTORE ANY PORTION OF THE TREATMENT CONTROLS, CONVEYANCE SYSTEM, OR ENERGY DISSIPATER.

REMOVAL

1. REMOVE THE INTAKE HOSE.
2. REMOVE THE ENERGY DISSIPATER AND TREATMENT CONTROLS, IF THEY ARE NOT PART OF THE PERMANENT SITE FEATURES.
3. REMOVE THE CONVEYANCE SYSTEM.
4. AS REQUIRED, BACKFILL OR REGRADE THE CONVEYANCE SYSTEM ALIGNMENT AND TREATMENT AREA AND RESTORE TO ORIGINAL CONTOURS.
5. REGRADE AND SEED OR PERMANENTLY STABILIZE ALL DISTURBED AREAS.

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State of Alaska DOT&PF

EXCAVATION DEWATERING

APPROVED

Date 12/2015 X/XX/XX

BMP-09.00

# BMP 16.00. Rock Filter Berm

## *DESIGN CONSIDERATIONS*

### *Objectives*

A Rock Filter Berm is a perimeter sediment control device designed to prevent sediment in silt-laden sheet flow from leaving the construction site. A properly installed berm intercepts sheet drainage, contains sediment on-site, and does not permit spillover or bypass.

### *Description*

A Rock Filter Berm is a gravel berm placed down slope from erosion-susceptible terrain to trap sheet flow run-off before it exits the project site. Intercepted sheet flow pools along the uphill side of the Rock Filter Berm and standing water promotes settling sediment out of suspension. The Rock Filter Berm blocks suspended particles and restricts water exfiltration.

### *Other Names*

Gravel Filter Berm.

### *Applicability*

Rock Filter Berms are applicable where temporary measures are necessary to retain sediment from sheet flow.

### *Selection Considerations*

Barrier locations are chosen based on site features and conditions (e.g., soil types, climate, terrain features, sensitive areas, etc.), design plans, existing and anticipated drainage courses, and other available erosion and sediment controls. Typical barrier sites are at the toe of fill or on side slopes above waterways or drainage channels.

Rock Filter Berms may be difficult to remove when construction is complete. They may be incorporated into stabilized rock embankments or other permanent stabilized features.

Use of this sediment control measure and the level of effort should be commensurate to the potential problem. A Rock Filter Berm is not to be used solely as a project delineator.

Allow room for equipment access during installation, maintenance, and removal that will avoid encroachment on sensitive areas such as wetlands.

### *Design*

*Berm Placement*: Berms should be placed on level contours at the toe of slope. Provide sufficient area for ponded water on the upgradient side of the berm.

The standard drawing includes a rock type that is typically sufficient and is intended to keep fine soil particles from migrating through the berm.

### *Relationship to Other ESC Measures*

Sediment control measures are secondary to erosion prevention or soil stabilization measures. Rock Filter Berms may be used as part of a sequential system with other temporary or permanent measures such as soil stabilization or revegetation.

### *Common Failures or Misuses*

- Incidents in which berm height is affected, such as vehicular traffic over the berm.
- Berm wash-out due to high levels of impounded water or sediment.
- Berm function impairment due to sediment build-up or other lack of maintenance.
- Release of sediment-laden water through a bypass or gap in the Rock Filter Berm.

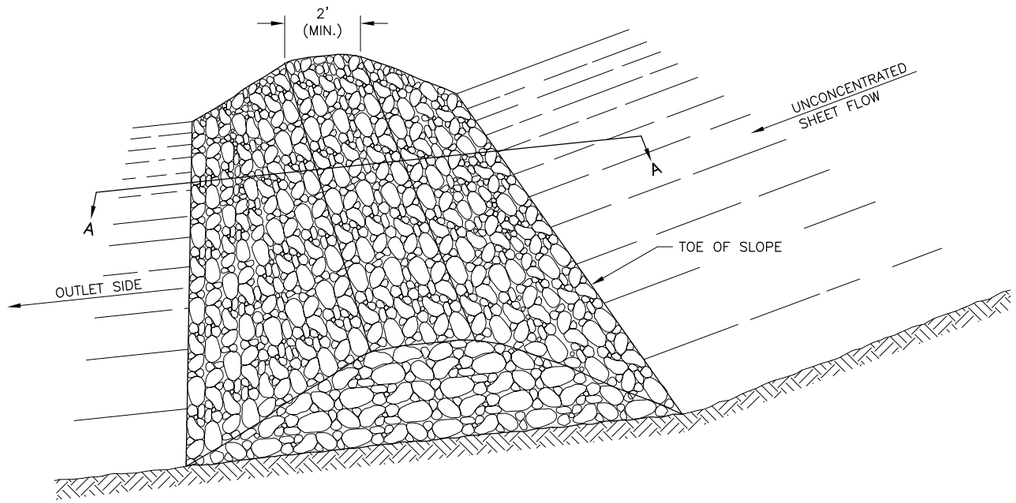
## *SPECIFICATIONS*

Standard Specification

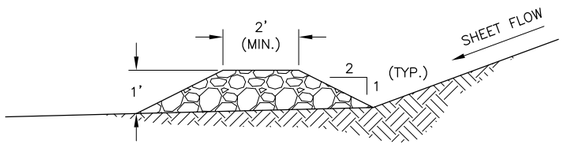
- 678 – Rock Filter Berm

Drawing

- BMP-16.00 -- Rock Filter Berm




PLAN
NOT TO SCALE




SECTION A–A
NOT TO SCALE

## ROCK FILTER BERM NOTES:

### MATERIALS
ROCK: WELL GRADED 3–INCH MINUS THAT WILL NOT RELEASE SEDIMENT AND HAS LESS THAN 5 PERCENT PASSING THE #200 SIEVE.

### INSTALLATION
1. PLACE THE ROCK BERM AS SHOWN ON THE PLANS WITHIN 24 HOURS AFTER GRUBBING.

### INSPECTION
1. OBSERVE FOR BERM CONTINUITY INCLUDING COLLAPSE, DAMAGE, COMPROMISED INTEGRITY, OR OTHER FUNCTIONAL INADEQUACIES.
2. LOOK FOR EVIDENCE OF SEDIMENT FLOW OR EROSION ON THE DOWNHILL EDGE OF THE BERM.
3. NOTE DEPTH OF SEDIMENT BEHIND BERM TO SEE IF SEDIMENT IS CLOSE TO ONE–HALF THE BERM HEIGHT.
4. LOOK TO SEE IF THE BERM IS FILTERING OR WHETHER IT HAS BECOME CLOGGED OR OTHERWISE NON–FUNCTIONING.

### MAINTENANCE
1. REPAIR OR RESTORE ANY BERM DISCONTINUITIES, DAMAGE, OR POINTS OF FAILURE.
2. REMOVE ACCUMULATED SEDIMENT BEFORE IT REACHES ONE–HALF OF THE BERM HEIGHT OR ONE–THIRD OF THE AVAILABLE STORAGE IF PROTECTING A WATER BODY OR STORM DRAIN INLET.

### REMOVAL
1. INCORPORATE THE ROCK BERM INTO THE SLOPE, UNLESS DIRECTED OTHERWISE. STABILIZE BARE GROUND AND THE FILL SLOPE.

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State of Alaska ADOT&PF

# ROCK FILTER BERM

APPROVED

Date 12/2015 X/XX/XX

BMP–16.00

# BMP 23.00 & 24.00. Stabilized Construction Exit

## *DESIGN CONSIDERATIONS*

### *Objectives*

Stabilized Construction Exits are used to clean mud and sediment from vehicle tires, minimizing the amounts transported off-site from construction projects.

### *Description*

A Stabilized Construction Exit provides a stabilized rock area or pad underlined with a geotextile and located where traffic exits the construction site.

### *Other Names*

Vehicle Tracking Exit/ Entrance, Construction Exit, Construction Entrance

### *Applicability*

Stabilized Construction Exits are necessary for projects where sediment or mud can be tracked off-site. Stabilized Construction Exits are also applicable for projects adjacent to waters of the U.S., where poor soils have been encountered, or where dust is a problem during dry weather conditions.

### *Selection Considerations*

Stabilized Construction Exits should be installed at project access points prior to commencing major grading operations.

- Limit exits to the project.
- Avoid exits that have steep grades or are located where sight distance may be a problem.
- Slope exit towards the project where possible to retain sediment on-site.
- Provide drainage to carry water to sediment trap or other suitable outlet.
- Design exit for heaviest/longest vehicles and equipment to be used on-site.
- Exit shall be a minimum length to provide for three complete revolutions of the largest vehicle tires and 12 feet wide.
- Use fencing as necessary to direct traffic to the exit.
- Construct exit on a firm compacted subgrade when practicable.
- Avoid crossing sidewalks or back-of-walk drains.
- Avoid constructing exits at curves in public roads.
- Separation geotextile may be placed under the Stabilized Construction Exit to prevent fine sediment from pumping up into the exit structure.
- If project conditions determine the need for Stabilized Construction Exits at specific locations, provide the location on the plans.

### *Relationship to Other Erosion and Sediment Control Measures*

Stabilized Construction Exits may be used in combination with street sweeping and tire washing to minimize the amount of sediment transported off-site.

### *Common Failures or Misuses*

- Failure to periodically "top dress" (provide additional rock) when sediment accumulates on the surface.
- Failure to repair and/or clean out any structures used to trap sediment.
- Failure to provide adequate depth and length of rock.
- Not having a Stabilized Construction Exit and using street sweeping as a substitute.
- Use of asphalt concrete grindings, crushed concrete, cement, or calcium chloride resulting in an increase in pH levels in stormwater.

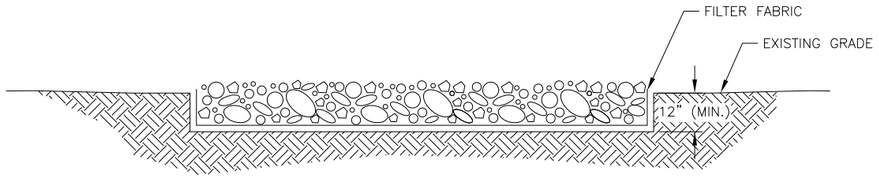
## *SPECIFICATIONS*

Standard Specification

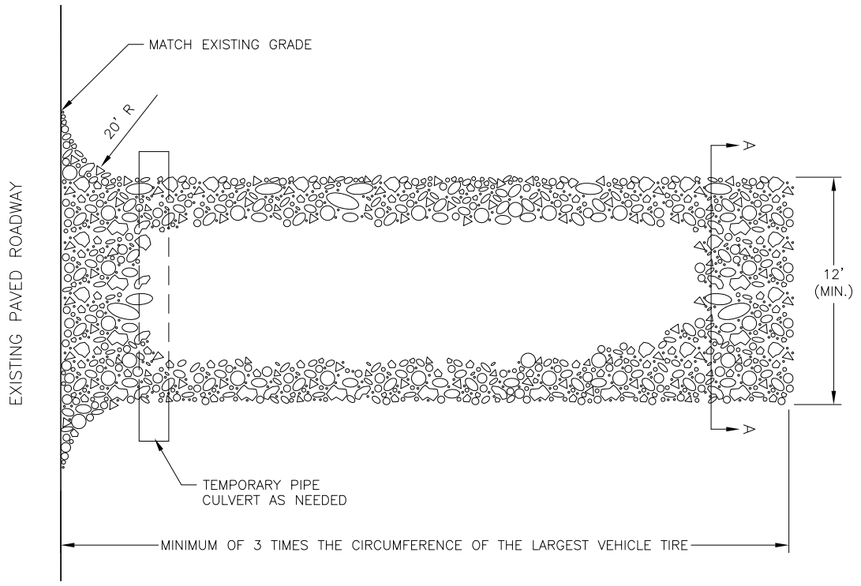
- 682 – Stabilized Construction Exit

Drawing:

- BMP-23.00 Stabilized Construction Exit (Sheets 1 of 2)
- BMP-24.00 Stabilized Construction Exit (Metal Plate, Sheet 2 of 2)




SECTION A–A




PLAN

## ROCK CONSTRUCTION EXIT

NOT TO SCALE

ROCK CONSTRUCTION EXIT NOTES:

MATERIALS

ROCK: 2– TO 3–INCH COARSE AGGREGATE OR 3– TO 6–INCH QUARRY SPALL OR ANGULAR ROCK, WHICHEVER IS APPROPRIATE TO THE PROJECT FLEET.

INSTALLATION

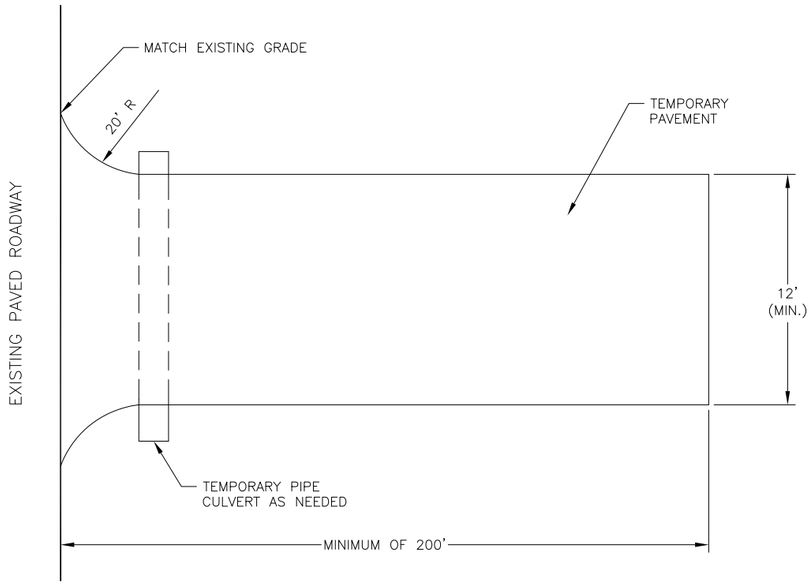
1. PLACE THE FILTER FABRIC AND ROCK TO THE SPECIFIC GRADE SHOWN ON THE PLANS.

MAINTENANCE

1. REMOVE ACCUMULATED SEDIMENT OR MUD.
2. REPLACE ROCK MATERIAL WHEN SURFACE VOIDS ARE FILLED WITH SEDIMENT. REPLACE FABRIC AS NEEDED.
3. TOP DRESS WITH 2 TO 3 INCHES OF COARSE AGGREGATE OR 3– TO 6–INCH COARSE ROCK WHEN THE PAD BECOMES LADEN WITH SEDIMENT.

INSPECTION

1. INSPECT FOR ROCK THAT HAS BEEN DISPLACED FROM THE PAD.




PLAN

## TEMPORARY PAVEMENT CONSTRUCTION EXIT

NOT TO SCALE

TEMPORARY PAVEMENT CONSTRUCTION EXIT NOTES:

INSPECTION

1. INSPECT TEMPORARY PAVEMENT FOR DAMAGE.

MAINTENANCE

1. SWEEP DESIGNATED PAVED EXIT TO PREVENT SEDIMENT TRACK–OUT.
2. REPAIR DAMAGED TEMPORARY PAVEMENT.

STABILIZED CONSTRUCTION EXIT GENERAL NOTES:

INSTALLATION

1. INSTALL STABILIZED CONSTRUCTION EXIT PRIOR TO EARTH WORK.
2. CLEAR THE EXIT AREA OF ALL VEGETATION, ROOTS, AND OTHER MATERIAL.
3. PROVIDE DRAINAGE TO CARRY WATER TO A SEDIMENT TRAP, VEGETATIVE SEDIMENT FILTER OR OTHER PROTECTED OUTLET.
4. EXCAVATE AND GRADE THE AREA FOR ROCK PLACEMENT.
5. INSTALL SIGNS, FENCING OR BARRICADES TO CHANNEL OUTGOING TRAFFIC TO THE STABILIZED CONSTRUCTION EXIT.

INSPECTION

1. INSPECT STABILIZED CONSTRUCTION EXIT FOR SEDIMENT ACCUMULATION AND MATERIAL DISPLACEMENT.
2. INSPECT ROADWAY FOR SEDIMENT TRACK–OUT.
3. INSPECT DITCHES TO ENSURE NO SEDIMENT ACCUMULATION.

MAINTENANCE

1. MAINTAIN EACH EXIT IN A CONDITION THAT WILL PREVENT TRACKING OF MUD OR SEDIMENT ONTO PUBLIC RIGHT–OF–WAY.
2. REPAIR AND/OR CLEAN OUT ANY STRUCTURES USED TO TRAP SEDIMENT.
3. REMOVE ALL MUD AND SEDIMENT DEPOSITED ON PAVED ROADWAYS.
4. ADD MORE SIGNS, FENCING OR BARRICADES WHEN VEHICLES ARE EXITING THE PROJECT WITHOUT USING THE STABILIZED CONSTRUCTION EXIT. INSTALL ADDITIONAL STABILIZED CONSTRUCTION EXITS IF NEEDED, YET USE SIGNS AND BARRICADES TO MINIMIZE THE NUIMBER OF STABILIZED CONSTRUCTION EXITS.
5. PREVENT TRACK–OUT BY USING ADDITIONAL BMPs, SUCH AS A TIRE WASH.

REMOVAL

1. REMOVE THE STABILIZED CONSTRUCTION EXIT AND ANY SEDIMENT TRAPPING STRUCTURES AFTER THEY ARE NO LONGER NEEDED, OR WITH FINAL SITE STABILIZATION.
2. REGRADE AND PERMANENTLY STABILIZE THE REMAINING DISTURBED AREAS ACCORDING TO THE PLANS.

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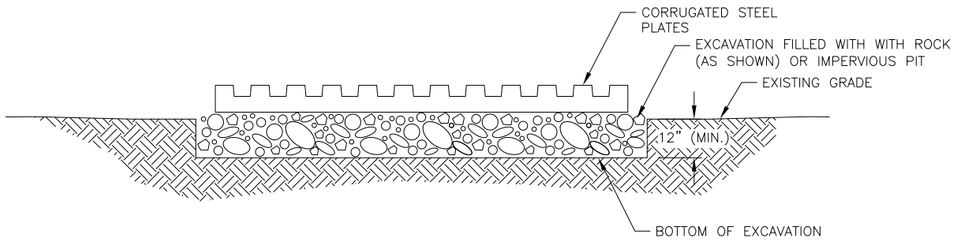
State of Alaska DOT&PF

# STABILIZED CONSTRUCTION EXIT (NOTES, ROCK & TEMPORARY PAVEMENT)

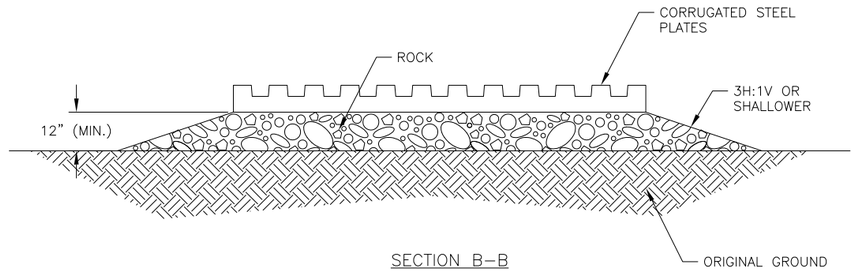
APPROVED

Date 12/2015 X/XX/XX

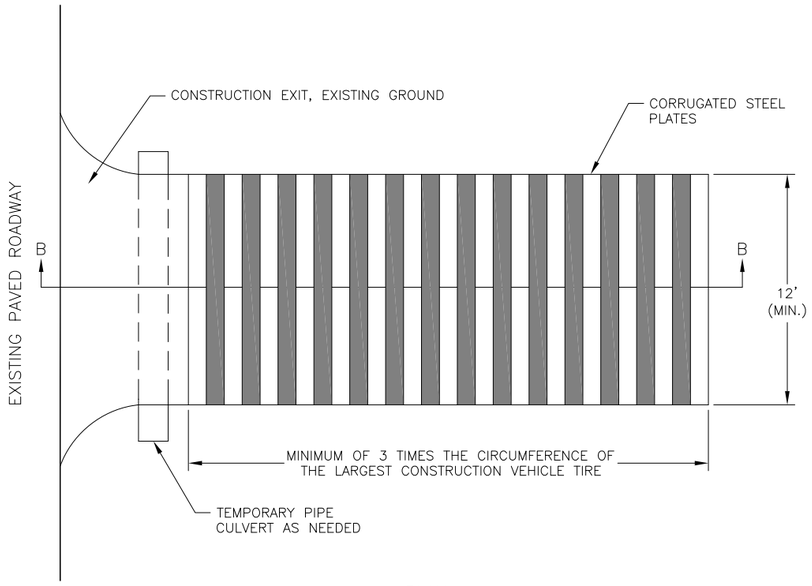
BMP–23.00




SECTION B–B
OPTION 1




SECTION B–B
OPTION 2




PLAN

## METAL PLATE CONSTRUCTION EXIT

NOT TO SCALE

METAL PLATE CONSTRUCTION EXIT NOTES:

MATERIALS

CORRUGATED STEEL PLATES: SHAKER/RUMBLE PLATES, CORRUGATED STEEL PLATES, OR EQUIVALENT DESIGNED FOR ANTICIPATED TRAFFIC LOADS.

ROCK: 2– TO 3–INCH COARSE AGGREGATE.

INSTALLATION

1. IF CORRUGATED STEEL PLATES ARE OPEN TO THE SURFACE BELOW, INSTALL GRAVEL OR IMPERVIOUS PIT.
2. PLACE CORRUGATED STEEL PLATES.

INSPECTION

1. INSPECT CORRUGATED STEEL PLATES FOR DAMAGE.

MAINTENANCE

1. REPLACE DAMAGED CORRUGATED STEEL PLATES AS NECESSARY.
2. LIFT PLATE AND REMOVE ACCUMULATED SEDIMENT.
3. WHEN SURFACE VOIDS FILL WITH SEDIMENT, REPLACE ROCK MATERIAL.

ADDITIONAL NOTES:

SEE STABILIZED CONSTRUCTION EXIT GENERAL NOTES ON BMP 23.00 STABILIZED CONSTRUCTION EXIT (NOTES, ROCK & TEMPORARY PAVEMENT).

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State of Alaska DOT&PF

# STABILIZED CONSTRUCTION EXIT (METAL PLATE)

APPROVED

Date 12/2015 X/XX/XX

BMP-24.00

# BMP 55.00. Street Sweeping and Vacuuming for Sediment Control

## *DESIGN CONSIDERATIONS*

### *Objectives*

Street Sweeping and Vacuuming for Sediment Control is used to remove sediment from paved surfaces to prevent it from entering storm drain systems or waters of the U.S.

### *Description*

Sediment is removed from roads and paved surfaces by power sweepers or manual methods and disposed of in a controlled sediment disposal area.

### *Applicability*

Sweeping is implemented anywhere sediment is tracked from the project area onto public or private paved roads and other paved surfaces. Street Sweeping and Vacuuming for Sediment Control should be conducted when sediment accumulation is visible on paved surfaces. Typically, this will be concentrated at the exit to the construction site

### *Selection Considerations*

- Sweepers that pick up sediment and control dust emissions should be specified. Of the four types of mechanical power sweepers available, three (vacuum, regenerative air, and high efficiency sweepers) are acceptable. Prohibit the use of methods that use only mechanical kick brooms. Conventional mechanical broom sweepers have been found to have a negative effect on the amount of stormwater runoff pollution. Mechanical sweepers may only be used if followed by a vacuum-assisted sweeper.
- Manual broom sweeping with pickup is acceptable. On smaller construction sites and in areas not accessible by power sweepers, sweeping can be conducted manually using a broom and shovel.
- The use of leaf blowers and other similar equipment for sweeping is unacceptable.
- Reasonable measures must be employed to prevent dust from becoming airborne during any operation where material that may create dust is handled, transported, or stored.
- If the sediment or soil is wet or muddy, paved surfaces will need to be scraped manually or mechanically.

### *Relationship to Other Erosion and Sediment Control Measures*

Erosion and sediment control measures in the contributing areas must be in place to minimize the amount of sediment that must be swept. Stabilized Construction Exit (BMP-23 and BMP-24) or Tire Wash (BMP-36 and BMP-37) should be included in the contract. Street Sweeping and Vacuuming for Sediment Control is a secondary measure to remove residual sediment that was not removed by other measures. Well-maintained stabilized construction exits, vehicle tracking controls, and tire wash facilities can help reduce the necessary frequency of Street Sweeping and Vacuuming for Sediment Control.

### *Common Failures or Misuses*

- Insufficient erosion controls in the contributing disturbed area.

## *SPECIFICATIONS*

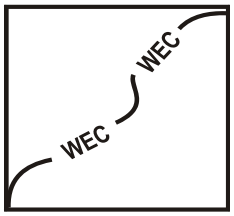
Standard Specifications

- 656 Street Sweeping and Vacuuming for Sediment Control

# Wind Erosion Control

WE-1






Standard Symbol

**BMP Objectives**

| | |
|---|---|
| Soil Stabilization | ☑ |
| Sediment Control | ☑ |
| Tracking Control | ☐ |
| Wind Erosion Control | ☑ |
| Non-Stormwater Management | ☐ |
| Materials and Waste Management | ☐ |

## Definition and Purpose

- Wind erosion control consists of applying water or other dust palliatives as necessary to prevent or alleviate erosion by the forces of wind. Dust control must be applied in accordance with Caltrans standard practices. Covering of small stockpiles or areas is an alternative to applying water or other dust palliatives; see SS-7 for "Temporary Cover and Rolled Erosion Control Products"
- Must comply with local agencies such as Air Quality Management District's requiring dust control plans or dust control permits as well as any Air Clean Act requirements.

## Appropriate Applications

This practice is generally implemented on all exposed soils subject to wind erosion.

## Limitations

- Effectiveness depends on soil, temperature, humidity and wind velocity.
- Chemically treated subgrades could cause soil to become water repellant, preventing infiltration or the long-term re-vegetation of the site.

## Standards and Specifications

Standard Specification Section 10-5 contains general requirements for "Dust Control."

- Effective dust control is accomplished by applying dust palliatives, temporary Soil Stabilization BMPs, Tracking Controls and managing stockpiles.
- "Dust Palliatives" are covered under Section 18 of the Standard Specifications. Acceptable dust palliatives include water, dust control binders, and dust suppressants. Dust control binders must comply with specifications for tackifier. Dust suppressants include petroleum-based organic product, nonpetroleum-based organic product, hygroscopic product, and synthetic polymer emulsion.

- If a dust suppressant or tackifier is used, submit a Dust Treatment Plan. Submit a certificate of compliance for dust suppressants, tackifiers, and fibers.
- Identify and stabilize key access points with the use of Tracking Control BMPs.
- Minimize the impact of dust by anticipating the direction of prevailing winds.
- Temporary soil stabilization BMPs, such as SS-3 "Hydraulic Mulch", SS-4 "Hydroseed, SS-5 "Soil Binders, also provide wind erosion control benefits.
- Ensure proper implementation of BMPs WM-3, "Stockpile Management," and SC-7, "Street Sweeping," as these BMPs provide wind erosion control benefits.
- Ensure that water is applied by means of pressure-type distributors or pipelines equipped with a spray system or hoses and nozzles to ensure even distribution.
- All distribution equipment should be equipped with a positive means of shutoff.
- Chemical dust suppression products could have environmental water quality impacts. Depending on the product and the time of application, water quality sampling for non-visible pollutants should be assessed when a storm even is forecasted.
- For chemical or petroleum based organics stabilization, there are many products available. These products should not create any adverse effects on stormwater, plant life, groundwater and should meet all applicable regulatory requirements including inspection, documentation, monitoring and reporting requirements.
- Unless water is applied by means of pipelines, at least one mobile unit should be available at all times to apply water or dust palliative to the project.
- If reclaimed water is used, the sources and discharge must meet California Department of Health Services water reclamation criteria and the RWQCB requirements. Non-potable water must not be conveyed in tanks or drain pipes that will be used to convey potable water and there must be no connection between potable and non-potable supplies. Non-potable tanks, pipes and other conveyances must be marked "NON-POTABLE WATER - DO NOT DRINK."
- Appendix B of this Manual includes additional information on selecting temporary soil stabilization products that could be used for Wind Erosion Control.

## Maintenance and Inspection

- Check areas where wind erosion controls have been implemented daily for erosion and visible dust.
- Most water-based dust control measures require frequent application. Obtain vendor or independent information on longevity of chemical dust suppression.

SWPPP or WPCP

- Wind Erosion Control must be discussed in Section 500.3.5 of the SWPPP or Section 30.2.4 of the WPCP.

# BMP 07.00. Contained Silt Control System

## *DESIGN CONSIDERATIONS*

### *Objectives*

The purpose of a Contained Silt Control System is to trap sediment in construction site water and prevent it from being transported out of the project area to another area, or to a water body, while allowing water to flow through the geotextile fabric.

### *Description*

A Contained Silt Control System is a bag made of non-woven geotextile fabric that is attached to a dewatering hose. Construction site water is intercepted, diverted, and pumped or gravity fed into one side of the filtration bag; gravel, sand, silt, and fines are collected in the bag while filtered water percolates through the bag.

### *Other Names*

Gravity Bag Filter, Sediment Filter Bag, Filter Bag, Dirt Bag, Silt Bag, Dewatering Tube, Dewatering Bag

### *Applicability*

Contained Silt Control Systems are applicable for treating sediment-laden water at a construction site. They are often used during excavation dewatering. The filtration bag causes minimal damage to the ground where it is located and requires a small footprint when compared to sedimentation basins.

### *Selection Considerations*

- Contained Silt Control Systems are temporary filtration systems.
- Filtration bags are designed for one-time use.
- Filtration bags are available in an array of sizes and materials depending on site specifics.
- Filtration bags require less space and cause less damage to existing vegetation than sedimentation basins.
- Discharge rates on the filtration bags decrease as the bag collects sediment.
- An equipment access route and space for Contained Silt Control System installation, maintenance, and removal must be available without encroaching into sensitive areas or off the project limits.

### *Design*

Use manufacturer's specifications to determine the size of the filtration bag appropriate for the flow rate and expected volume. Place the filtration bag on a level, well-drained surface and provide high-flow bypass for the system. If the soil does not allow percolation, provide a non-erodible bed constructed from rock, straw, or other non-erodible material.

After water has percolated through the filtration bag, the filtration bag filled with sediment can be removed and disposed of off-site, or the bag can be cut open and the sediment can be mixed with the on-site soil and seeded for stabilization. The designer should indicate the conditions or restrictions that will be required for locating and removing the bag depending on the project and site.

### *Relationship to Other Erosion and Sediment Control Measures*

Secondary barriers, such as silt fence or fiber rolls, may be placed around the filtration bag to provide additional sediment trapping. When there is limited space available, Contained Silt Control Systems can be used in place of sedimentation basins.

### *Common Failures or Misuses*

- The bag becomes too heavy to remove with available equipment.
- The bag becomes too full to contain silt.
- Improperly sized mesh openings in the bag for the site soils and flow rate.
- Placement on a slope or uneven ground.
- Improperly sized bag for the flow rate.
- Overfilling the filtration bag with sediment.
- Use as a permanent filtration system.
- Reusing a filtration bag.

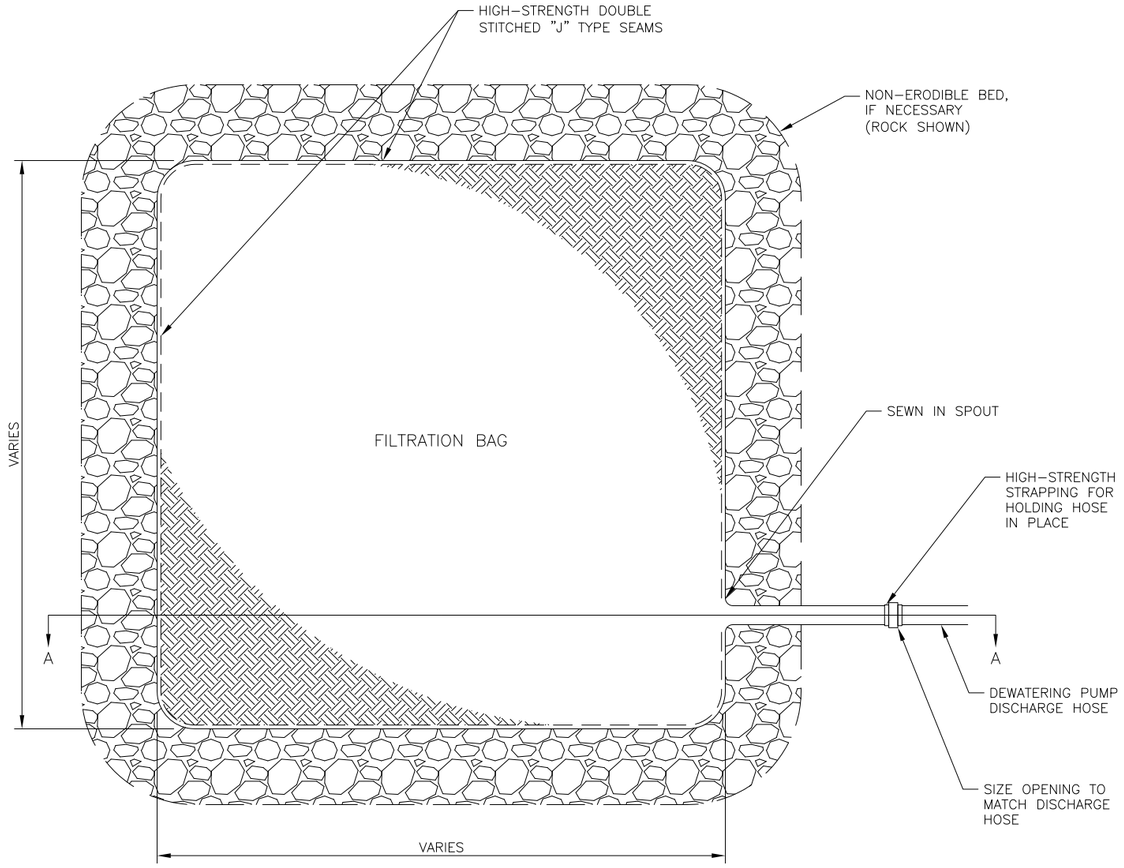
## *SPECIFICATIONS*

Standard Specification

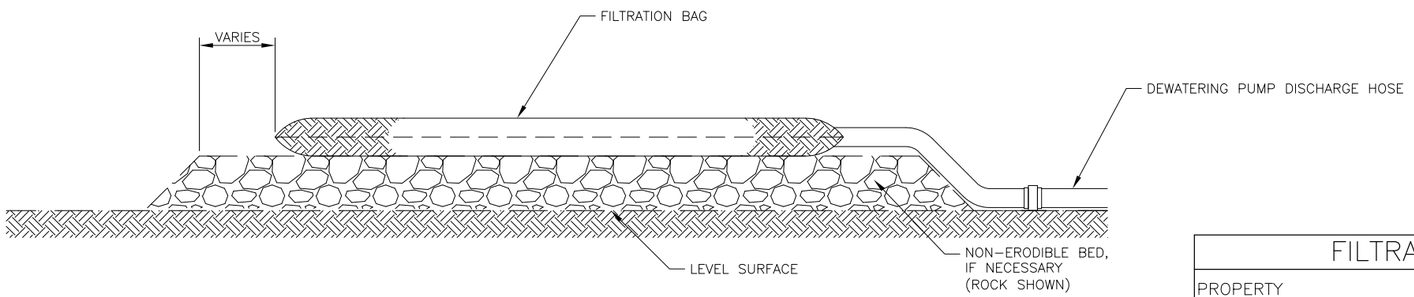
- 666 – Contained Silt Control System

Drawing

- BMP-07.00 Contained Silt Control System




PLAN




SECTION A–A

## PUMPED SILT CONTROL SYSTEM

NOT TO SCALE

### CONTAINED SILT CONTROL SYSTEM NOTES:

#### MATERIALS

FILTRATION BAG: SEE FILTRATION BAG REQUIREMENTS TABLE.

DISCHARGE HOSE

STRAPPING: HIGH–STRENGTH STRAPPING TO HOLD HOSE IN PLACE.

NON–ERODIBLE BED: WELL GRADED CLEAN 4–INCH MINUS ROCK, STRAW, OR OTHER NON–ERODIBLE BARRIER.

#### INSTALLATION

1. PROVIDE A LEVEL AREA SUCH THAT THE DISCHARGE WILL NOT CAUSE EROSION.
2. IF NECESSARY, PLACE A NON–ERODIBLE BED WITH AN APRON ON ALL SIDES OF THE FILTRATION BAG.
3. ENSURE THE AREA DOES NOT HAVE MATERIAL THAT MIGHT PUNCTURE THE FILTRATION BAG.
4. LAY FILTRATION BAG FLAT ON THE GROUND OR BED.
5. SECURE THE DISCHARGE HOSE WITH HIGH–STRENGTH STRAPPING.
6. CONNECT THE DISCHARGE HOSE TO THE FILTRATION BAG.

#### INSPECTION

3. INSPECT FABRIC FOR TEARS, PUNCTURES, FRAYING, WEATHERING, AND COMPROMISED INTEGRITY.
4. CHECK FOR FABRIC BLOCKAGE, BLINDING OR A REDUCTION IN THE AMOUNT OF CLEAN WATER BEING DISCHARGED.
5. CONFIRM THAT THE HOSE IS SECURE.
6. CHECK FOR SIGNS OF EXCESSIVE LEAKAGE AROUND THE DISCHARGE HOSE.
7. LOOK FOR EVIDENCE OF SEDIMENT OR EROSION AROUND THE SYSTEM.
8. LOOK FOR SIGNS OF INADEQUATE PROTECTION OF OFF–SITE SENSITIVE AREAS DUE TO DISCHARGES FROM THE FILTRATION BAG.
9. CHECK FOR CHANNEL FORMATION AROUND THE SYSTEM.
10. INSPECT THE CAPACITY OF THE FILTRATION BAG.

#### MAINTENANCE

1. REPLACE DAMAGED FILTRATION BAGS.
2. REPLACE BAG WHEN IT NO LONGER FILTERS SEDIMENT OR PASSES WATER AT A REASONABLE RATE.
3. REPLACE BAG WHEN IT BLINDS OUT AND CLEAN DISCHARGE IS REDUCED BY AN ESTIMATED 50% TO MINIMIZE POTENTIAL FOR PRODUCT FAILURE AND UNPLANNED DISCHARGE.
4. REPAIR EROSION AND CHANNELS AND CORRECT THE SITUATION CAUSING THESE TO OCCUR.

#### REMOVAL

1. PLACE AN ENERGY DISSIPATION DEVICE PRIOR TO DISCONNECTING THE HOSE.
2. ALLOW THE FILTRATION BAG TO DRAIN AND ENSURE THE PRESSURE HAS DROPPED BEFORE DISCONNECTING INTAKE AND DISCHARE HOSES AFTER THE DISTURBED AREA IS PERMANENTLY STABILIZED, EXCAVATION DEWATERING HAS CEASED, OR THE PUMPED SILT CONTROL SYSTEM IS NO LONGER NEEDED.
3. EITHER REMOVE THE SEDIMENT LADEN BAG AND DISPOSE OF PROPERLY, OR OPEN THE FILTRATION BAG, SPREAD THE SEDIMENT MIX WITH ON–SITE SOIL AND SEED, AS DIRECTED BY THE PLANS.
4. REGRADE AND SEED OR PERMANENTLY STABILIZE REMAINING DISTURBED AREAS.
5. AVOID DAMAGE TO SENSITIVE AREAS (E.G. WETLAND OR WATERS OF THE U.S.).

### FILTRATION BAG REQUIREMENTS

| PROPERTY | TEST | VALUE |
|---|---|---|
| GRAB BREAKING LOAD, LB, 1–INCH GRIP MINIMUM, IN EACH DIRECTION. | ASTM D 4632 | 255 |
| WATER FLOW RATE, GAL PER MINUTE/SQ FT MINIMUM AND MAXIMUM AVERAGE ROLL VALUE. | ASTM D 4491 | 80–200 |
| PERMITTIVITY, SEC–1 MINIMUM. | ASTM D 4491 | 1 |
| APPARENT OPENING SIZE, INCHES MAXIMUM AVERAGE ROLL VALUE. | ASTM D 4751 | 0.0083 |
| ULTRAVIOLET RESISTANCE, PERCENT MINIMUM RETAINED GRAB BREAKING LOAD, 500 HOURS. | ASTM D 4355 | 70 |

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State of Alaska DOT&PF

CONTAINED SILT CONTROL SYSTEM

APPROVED

Date 12/2015 X/XX/XX

BMP–07.00

# BMP 08.00. Culvert Inlet Protection

## *DESIGN CONSIDERATIONS*

### *Objectives*

Culvert Inlet Protection is used to trap sediment and reduce the amount of sediment entering a culvert.

### *Description*

Culvert Inlet Protection is a low barrier, similar to a check dam, placed up-gradient of a culvert inlet to temporarily impound water and trap sediment while still allowing flow to enter the culvert. There are several types of temporary barriers applicable for different conditions:

- Geotextile-wrapped foam barriers
- Sand bags or gravel-filled sand bags
- Fiber rolls
- Geotextile-wrapped wire cage barrier

### *Other Names*

Filter Inlet.

### *Applicability*

Culvert Inlet Protection is applicable when there is potential for sediment to be transported to and through the culvert. Placement in the flowline is applicable for culverts conveying runoff or project drainage that must remain operational before permanent stabilization of the disturbed area. Placement above (all the way around) a culvert inlet is applicable when earth disturbing activities are occurring upslope of the inlet, to prevent sediment and runoff from entering the culvert inlet from above. Culvert Inlet Protection is not generally placed in the flowline of culverts conveying stream flow, since the purpose of the best management practice (BMP) is to treat run-off before it reaches receiving waterbodies such as streams. If placement in the flowline of streams is required, applicable permits must be obtained.

### *Selection Considerations*

- Culvert Inlet Protection should be sited and constructed in a manner that will facilitate cleanout and disposal of trapped sediment.
- Culvert Inlet Protection should be constructed in a manner that will allow flow to pass and minimize ponding after the run-off has ceased.
- Blocking the inlet can cause flooding affecting streets and the construction area. Where flooding would cause a hazard, consider where overflow will go in extreme events and provide emergency overflows with additional treatment.
- Slope Gradient: The slope of the ditch discharging to the culvert inlet should not exceed 5 percent or flow velocity exceeding 2.5 to 3 cubic feet per second. The steeper the slope or the higher the velocity and shear stress, the larger the particle diameter that can be transported. The flatter the slope and the slower the flow, the longer the travel distance and time behind the barrier, allowing for sediment to settle. If Culvert Inlet Protection is required on steeper grades, consider using a series of barriers or a widened channel to provide velocity reduction or barriers of greater depth to lengthen the settling distance.
- Inlet protection should extend all the way around the inlet when upgradient slopes are not stabilized.
- Consider the effects if the barrier were to fail when water is ponded. Provide additional downstream protection if warranted.

### *Design*

*Drainage Area*: The area of the construction drainage area to the culvert inlet should not exceed 1-acre. The total drainage area to the inlet may be larger than 1-acre, provided that the additional area is vegetated and/or permanently stabilized and that the spillway and ponding area is sized to adequately treat, impound, and convey the runoff from the tributary area.

*Depth*: Provide a temporary minimum ponding depth of 6 to 8 inches. The design must specify fiber rolls of adequate diameter, foam barriers, or sandbags of adequate thickness to provide the minimum ponding depth, and spillways with minimum elevations and width must be provided to limit the maximum ponding depth.

*Relationship to Other Erosion and Sediment Control Measures*

Erosion control measures in the contributing areas must be in place to minimize the amount of sediment that must be treated at inlets. Culvert Inlet Protection is installed as a secondary measure to remove residual sediment that was not removed by other measures such as check dams, grassed swales, and sediment traps.

*Common Failures or Misuses*

- Sediment accumulation resulting in reduced settling capacity.
- Improper installation, resulting in sediment bypassing filter and entering the culvert.
- Tearing, undermining, or collapsing of the barrier, resulting in sediment entering the culvert.

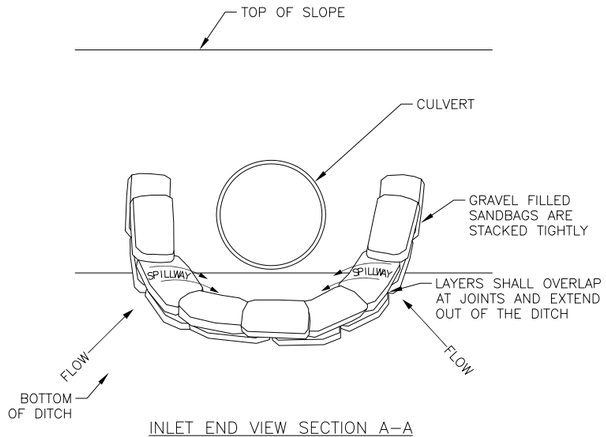
*SPECIFICATIONS*

Standard Specification

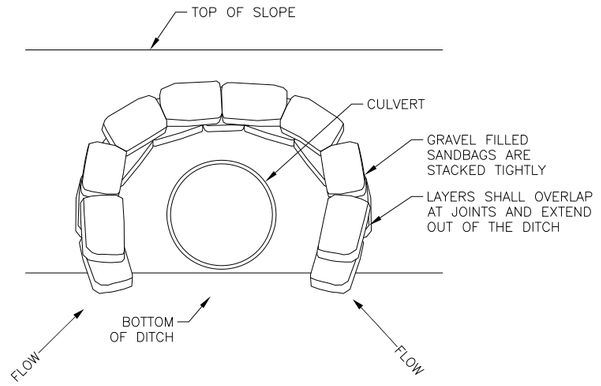
- 667 – Culvert Inlet Protection

Drawing

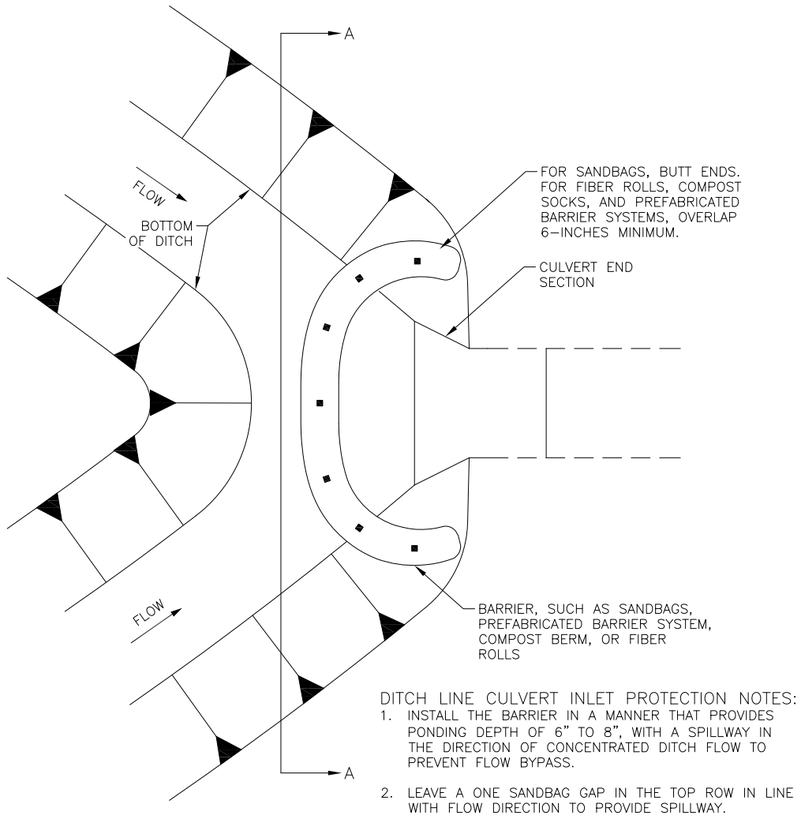
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INLET END VIEW SECTION A–A
TYPICAL SANDBAG INSTALLATION SHOWN



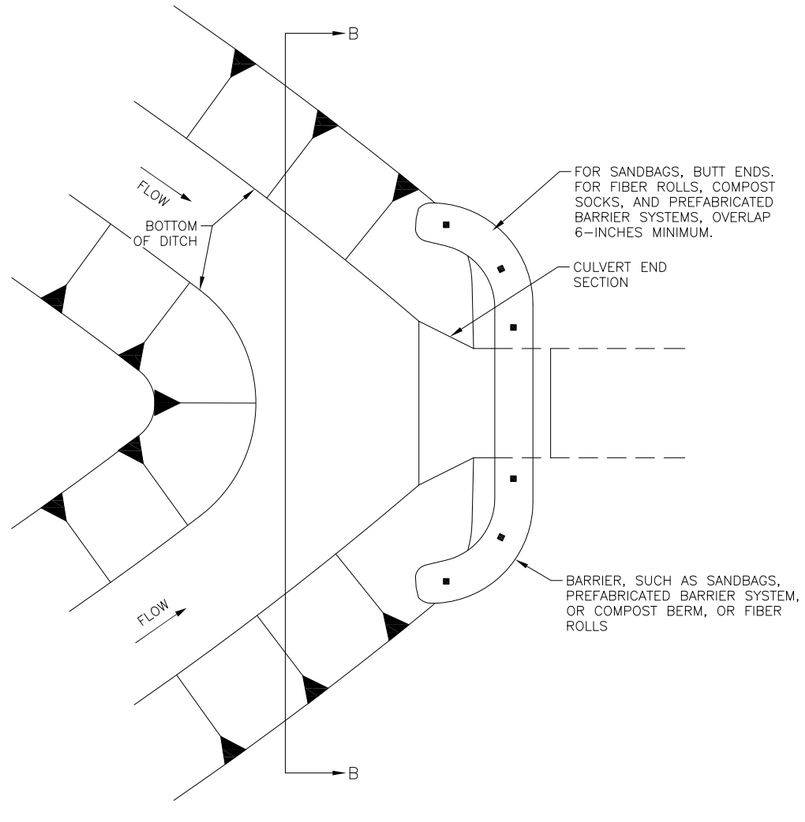

INLET END VIEW SECTION B–B
TYPICAL SANDBAG INSTALLATION SHOWN




DITCH LINE CULVERT INLET PROTECTION NOTES:
1. INSTALL THE BARRIER IN A MANNER THAT PROVIDES PONDING DEPTH OF 6" TO 8", WITH A SPILLWAY IN THE DIRECTION OF CONCENTRATED DITCH FLOW TO PREVENT FLOW BYPASS.
2. LEAVE A ONE SANDBAG GAP IN THE TOP ROW IN LINE WITH FLOW DIRECTION TO PROVIDE SPILLWAY.

PLAN VIEW

DITCH LINE CULVERT INLET PROTECTION
NOT TO SCALE




PLAN VIEW

TOP OF PIPE CULVERT INLET PROTECTION
NOT TO SCALE

## CULVERT INLET PROTECTION NOTES:

### MATERIALS

BARRIER MATERIALS:

1. PREFABRICATED BARRIER SYSTEM, AS SHOWN ON DRAWING BMP–13.00.
2. SANDBAG BARRIER, CONSISTING OF TIGHTLY WOVEN BURLAP OR WOVEN GEOTEXTILE BAG MATERIAL SUFFICIENTLY DURABLE TO REMAIN INTACT FOR THE TIME INTENDED. BAGS 2/3 FULL OF GRAVEL OR SAND WITH A GRADATION SUCH THAT NO FINE SEDIMENT PASSES THROUGH THE BAG. IF THE SANDBAGS ARE NEEDED FOR MORE THAN ONE SUMMER SEASON, PROVIDE BAG MATERIAL THAT HAS ULTRVIOLET STABILITY OF AT LEAST 70% IN CONFORMANCE WITH ASTM D4355 REQUIREMENTS. SECURELY CLOSE THE SANBAGS.
3. FIBER ROLL, AS SHOWN ON DRAWING BMP–10.00, 8 INCHES MINIMUM DIAMETER.
4. COMPOST SOCK, AS SHOWN ON DRAWING BMP–05.00.

### INSTALLATION

1. INSTALL WHERE INDICATED IN THE PLANS OR WHERE APPROVED BY THE ENGINEER.
2. ASSURE THAT BARRIER MAKES FULL CONTACT WITH SOIL ALL AROUND THE INLET.
3. IF PROTECTING BOTH DITCHLINE AND TOP OF PIPE, THE PROTECTION BARRIER CAN BE A SINGLE CONTINOUS CIRCLE.
4. IN ADDITION:
   a. PREFABRICATED BARRIER SYSTEM – ANCHOR WITH WIRE STAPLES ON SOIL, OR ADHESIVE ON PAVEMENT. OVERLAP 6 INCHES.
   b. SANDBAG BARRIER – LAYER AND OVERLAP AT JOINTS.
   c. FIBER ROLL – TRENCH A MINIMUM OF 2 INCHES. SEE STAKING REQUIREMENTS ON DRAWING BMP–10.00.
   d. COMPOST SOCK – SEE STAKING REQUIREMENTS ON DRAWING BMP–05.00. STAKING REQUIRED REQUIRED WHEN PLACED WITHIN FLOWLINE/DITCH.

### INSPECTION

1. CONFIRM THAT BARRIERS ARE IN FULL CONTACT WITH THE SOIL AND THAT BYPASS ROUTES ARE NOT PRESENT.
2. INSPECT FOR SEDIMENT ACCUMULATION, DISPLACEMENT, AND STRUCTURAL DAMAGE.

### MAINTENANCE

1. REMOVE ACCUMULATED SEDIMENT BEFORE IT REACHES ONE–THIRD OF THE DESIGN DEPTH OF SPILLWAY.
2. RESTORE STRUCTURE TO ITS ORIGINAL DIMENSIONS AND FULL CONTACT WITH SOIL AROUND THE INLET AS SOON AS PRACTICABLE.
3. REPAIR ANY STRUCTURAL DAMAGE, INCLUDING REPLACING DAMAGED SANDBAGS, AS SOON AS PRACTICABLE.

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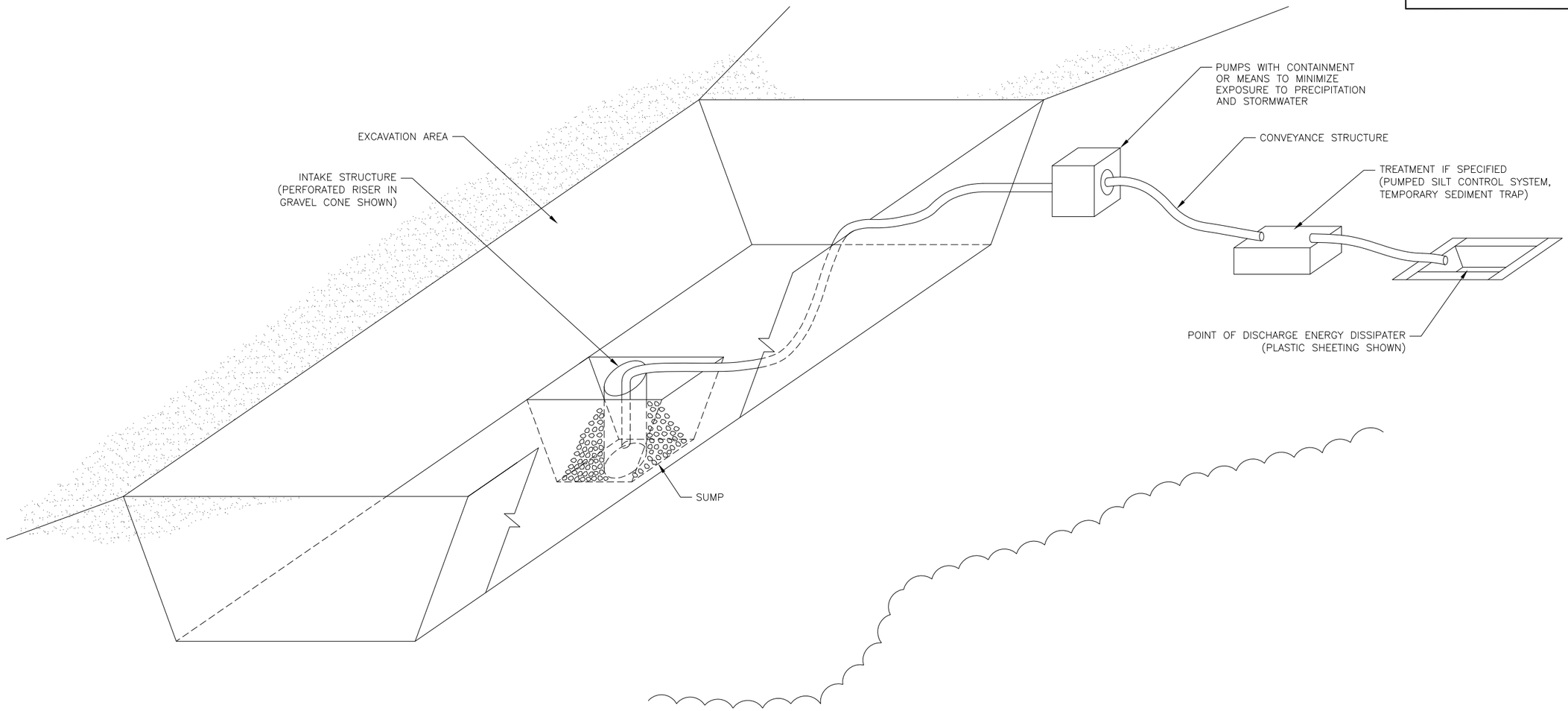
State of Alaska DOT&PF

CULVERT INLET PROTECTION

APPROVED

Date 12/2015 X/XX/XX

BMP–08.00




EXCAVATION DEWATERING
NOT TO SCALE

EXCAVATION DEWATERING NOTES:

MATERIALS

PUMP: SIZED FOR DESIGN FLOW IN CONTRACT, INTAKE LINE, FITTINGS, AND NOZZLES.

INTAKE STRUCTURES: RISERS, SCREENS, GRAVEL CONES, GRAVEL FILTER BERMS, GEOTEXTILE, OR EQUIVALENT,

CONVEYANCE SYSTEM: FLEXIBLE HOSE, WITH PROPER FITTINGS OR EQUIVALENT.

ENERGY DISSIPATER: PLASTIC SHEETING, RIPRAP, SANDBAGS, T-BAR SPREADER, OR EQUIVALENT.

TREATMENT: UPLAND VEGETATIVE AREA, PUMPED SILT CONTROL SYSTEM, OR TEMPORARY SEDIMENT TRAP.

INSTALLATION

1. INSTALL THE CONVEYANCE STRUCTURE. FOR PIPED CONVEYANCE, ENSURE THAT IT IS ADEQUATELY SECURED AGAINST MOVEMENT DURING PUMPING.
2. PLACE THE PUMP IN AN AREA DESIGNED FOR ITS USE AND OPERATION.
3. INSTALL SPILL PREVENTION BMPS PRIOR TO OPERATION.
4. INSTALL THE ENERGY DISSIPATER.
5. CONNECT THE CONVEYANCE STRUCTURE TO THE DOWNSTREAM DISCHARGE POINT.

INSPECTION

1. WHEN PUMPING, MONITOR PUMPS AND INTAKE AND DISCHARGE POINTS.
2. INSPECT THE CONVEYANCE STRUCTURE FOR LEAKS, EROSION, OR OTHER DEFECTS.
3. INSPECT THE TREATMENT CONTROLS FOR BYPASS, CLOGGING, AND SIGNS OF INADEQUATE TREATMENT.
4. INSPECT DISCHARGE POINT FOR EROSION OR FAILURE OF THE ENERGY DISSIPATION MATERIAL.
5. INSPECT THE EQUIPMENT AREA FOR PROPERLY STORED FUEL AND OTHER POTENTIALLY HAZARDOUS SUBSTANCES.

MAINTENANCE

1. REINFORCE, REPAIR, OR RESTORE ANY PORTION OF THE TREATMENT CONTROLS, CONVEYANCE SYSTEM, OR ENERGY DISSIPATER.

REMOVAL

1. REMOVE THE INTAKE HOSE.
2. REMOVE THE ENERGY DISSIPATER AND TREATMENT CONTROLS, IF THEY ARE NOT PART OF THE PERMANENT SITE FEATURES.
3. REMOVE THE CONVEYANCE SYSTEM.
4. AS REQUIRED, BACKFILL OR REGRADE THE CONVEYANCE SYSTEM ALIGNMENT AND TREATMENT AREA AND RESTORE TO ORIGINAL CONTOURS.
5. REGRADE AND SEED OR PERMANENTLY STABILIZE ALL DISTURBED AREAS.

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EXCAVATION DEWATERING

APPROVED

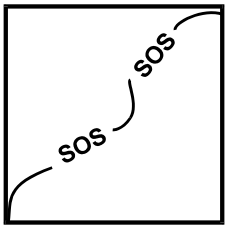
Date 12/2015 X/XX/XX

BMP-09.00

# Soil Binders

**SS-5**






**Standard Symbol**

**BMP Objectives**

| | |
|---|---|
| Soil Stabilization | ☑ |
| Sediment Control | ☐ |
| Tracking Control | ☑ |
| Wind Erosion Control | ☑ |
| Non-Stormwater Management | ☐ |
| Materials and Waste Management | ☐ |

## Definition and Purpose

Soil binders consist of applying and maintaining a soil stabilizer to exposed soil surfaces. Soil binders are materials applied to the soil surface to temporarily prevent water-induced erosion of exposed soils on construction sites. Soil binders also provide temporary dust, wind, and soil stabilization (erosion control) benefits. This is one of five temporary soil stabilization alternatives to consider.

## Appropriate Applications

Soil binders are typically applied to disturbed areas requiring short-term temporary protection. Because soil binders can often be incorporated into the work, they may be a good choice for areas where grading activities will soon resume. Application on stockpiles to prevent water and wind erosion.

## Limitations

- Soil binders are temporary in nature and may need reapplication.
- Soil binders require a minimum curing time until fully effective, as prescribed by the manufacturer. Soil binders may need reapplication after a storm event.
- Soil binders will generally experience spot failures during heavy rainfall events. If runoff penetrates the soil at the top of a slope treated with a soil binder, it is likely that the runoff will undercut the stabilized soil layer and discharge at a point further down slope.
- Soil binders do not hold up to pedestrian or vehicular traffic across treated areas.
- Soil binders may not penetrate soil surfaces made up primarily of silt and clay, particularly when compacted.
- Some soil binders may not perform well with low relative humidity. Under rainy conditions, some agents may become slippery or leach out of the soil.
- May not cure if low temperatures occur within 24 hours of application.

Standards and Specifications

### *General Considerations*

- Site-specific soil types will dictate appropriate soil binders to be used.
- A soil binder must be environmentally benign (non-toxic to plant and animal life), easy to apply, easy to maintain, economical, and shall not stain paved or painted surfaces, refer to Standard Specifications Section 13,18 and 21.
- Some soil binders are compatible with existing vegetation.
- Performance of soil binders depends on temperature, humidity, and traffic across treated areas.
- Avoid over-spray onto the traveled way, sidewalks, lined drainage channels, and existing vegetation.
- Storm water quality runoff sampling is required for many soil binders. Per table 5-1, footnote 7, of the 2013 Construction Site Monitoring Program Guidance Manual the following copolymers/polymers do not discharge pollutants and water quality sampling and analysis is not required Super Tak, M-binder, Fish Stik, Pro40dc, Fisch-Bond, Soil Master WR and EarthGuard.

### *Soil Binders Applications*

After selecting an appropriate soil binder, the untreated soil surface must be prepared before applying the soil binder. The untreated soil surface must contain sufficient moisture to assist the agent in achieving uniform distribution. In general, the following steps shall be followed:

- Follow manufacturer's recommendations for application rates, pre-wetting of application area, and cleaning of equipment after use.
- Prior to application, roughen embankment and fill areas by rolling with a crimping or punching type roller or by track walking. Track walking shall only be used where rolling is impractical.
- Consider the drying time for the selected soil binder and apply with sufficient time before anticipated rainfall. Soil binders shall not be applied during or immediately before rainfall.
- Avoid over-spray onto the traveled way, sidewalks, lined drainage channels, sound walls, and existing vegetation.
- Soil binders shall not be applied to frozen soil, areas with standing water, under freezing or rainy conditions, or when the air temperature is below 4°C (40°F) during the curing period.
- More than one treatment is often necessary, although the second treatment may be diluted or have a lower application rate.
- Generally, soil binders require a minimum curing time of 24 hours before they are fully effective. Refer to manufacturer's instructions for specific cure times.

- For liquid agents:
  - Crown or slope ground to avoid ponding.
  - Uniformly pre-wet ground at0.03 to 0.3 gal/yd$^2$ or according to manufacturer's recommendations.
  - Apply solution under pressure. Overlap solution 6 to 12 in.
  - Allow treated area to cure for the time recommended by the manufacturer; typically, at least 24 hours.
  - In low humidities, reactivate chemicals by re-wetting with water at 0.1 to 0.2 gal/yd$^2$.

### *Selecting a Soil Binder*

Properties of common soil binders used for erosion control are provided in Table 1 and Appendix B. Use Table 1 to select an appropriate soil binder.

**Table 1**
**Properties of Soil Binders for Erosion Control**

| Chemicals | Plant Material Based (Short Lived) | Plant Material Based (Long Lived) | Polymeric Emulsion Blends | Cementitious-Based Binders |
|---|---|---|---|---|
| Relative Cost | Low | Low | Low | Low |
| Resistance to Leaching | High | High | Low to Moderate | Moderate |
| Resistance to Abrasion | Moderate | Low | Moderate to High | Moderate to High |
| Longevity | Short to Medium | Medium | Medium to Long | Medium |
| Minimum Curing Time before Rain | 9 to 18 hours | 19 to 24 hours | 0 to 24 hours | 4 to 8 hours |
| Compatibility with Existing Vegetation | Good | Poor | Poor | Poor |
| Mode of Degradation | Biodegradable | Biodegradable | Photodegradable/ Chemically Degradable | Photodegradable/ Chemically Degradable |
| Labor Intensive | No | No | No | No |
| Specialized Application Equipment | Water Truck or Hydraulic Mulcher | Water Truck or Hydraulic Mulcher | Water Truck or Hydraulic Mulcher | Water Truck or Hydraulic Mulcher |
| Liquid/Powder | Powder | Liquid | Liquid/Powder | Powder |
| Surface Crusting | Yes, but dissolves on rewetting | Yes | Yes, but dissolves on rewetting | Yes |
| Clean-Up | Water | Water | Water | Water |
| Erosion Control Application Rate | Varies (1) | Varies (1) | Varies (1) | 4,500 to 13,500 kg/ha |

(1) Dependant on product, soil type, and slope inclination

Factors to consider when selecting a soil binder include the following:

- Suitability to situation - Consider where the soil binder will be applied; determine if it needs a high resistance to leaching or abrasion, and whether it needs to be compatible with any existing vegetation. Determine the length of time soil stabilization will be needed, and if the soil binder will be placed in an area where it will degrade rapidly. In general, slope steepness is not a discriminating factor for the listed soil binders.

- Soil types and surface materials - Fines and moisture content are key properties of surface materials. Consider a soil binder's ability to penetrate, likelihood of leaching, and ability to form a surface crust on the surface materials.

- Frequency of application - The frequency of application can be affected by subgrade conditions, surface type, climate, and maintenance schedule. Frequent applications could lead to high costs. Application frequency may be minimized if the soil binder has good penetration, low evaporation, and good longevity. Consider also that frequent application will require frequent equipment clean-up.

After considering the above factors, the soil binders in Table 1 will be generally appropriate as follows:

### *Plant-Material Based (Short Lived)*

-*Guar:* Guar gum based tackifier must be derived from the ground endosperm of the guar plant, *Cyanmopsis tetragonolobus*. It must be treated with dispersing agents for easy mixing.. It shall be diluted at the rate of 1 to 5 lb per 100 gallons of water, depending on application machine capacity. Recommended minimum application rates are as follows:

**Application Rates for Guar Soil Stabilizer**

| Slope (V:H): | Flat | 1:4 | 1:3 | 1:2 | 1:1 |
|---|---|---|---|---|---|
| Kg/Ha: | 45 | 50 | 56 | 67 | 78 |
| lb/ac | 40 | 45 | 50 | 60 | 70 |

-*Psyllium:* Psyllium is composed of the finely ground muciloid coating of plantago seeds that is applied as a dry powder or in a wet slurry to the surface of the soil. It dries to form a firm but rewettable membrane that binds soil particles together but permits germination and growth of seed. Psyllium requires 12 to 18 hours drying time. Psyllium shall be applied at a rate of 80 to 200 lb/ac, with enough water in solution to allow for a uniform slurry flow.

-*Starch:* Starch is non-ionic, water soluble granular cornstarch. The material is mixed with water and applied at the rate of 150 lb/ac. Approximate drying time is 9 to 12 hours.

### *Plant-Material Based (Long Lived)*

-*Pitch and Rosin Emulsion:* Generally, a non-ionic pitch and rosin emulsion has a minimum solids content of 48%. The rosin shall be a minimum of 26% of the total solids content. The soil stabilizer shall be non-corrosive, water-dilutable emulsion that upon application cures to a water insoluble binding and cementing agent. For soil erosion control applications, the emulsion is diluted and shall be applied as follows:

For clayey soil: 5 parts water to 1 part emulsion

For sandy soil: 10 parts water to 1 part emulsion

Application can be by water truck or hydraulic seeder with the emulsion/product mixture applied at the rate specified by the manufacturer. Approximate drying time is 19 to 24 hours.

### *Polymeric Emulsion Blends*

-*Acrylic Copolymers and Polymers:* Polymeric soil stabilizers shall consist of a liquid or solid polymer or copolymer with an acrylic base that contains a minimum of 55% solids. The polymeric compound shall be handled and mixed in a manner that will not cause foaming or shall contain an anti-foaming agent. The polymeric emulsion shall not exceed its shelf life or expiration date; manufacturers shall provide the expiration date. Polymeric soil stabilizer shall be readily miscible in water, non-injurious to seed or animal life, non-flammable, shall provide surface soil stabilization for various soil types without totally inhibiting water infiltration, and shall not re-emulsify when cured. The applied compound shall air cure within a maximum of 36 to 48 hours. Liquid copolymer shall be diluted at a rate of 10 parts water to 1 part polymer and applied to soil at a rate of 1,175 gal/ac.

-*Liquid Polymers of Methacrylates and Acrylates:* This material consists of a tackifier/sealer that is a liquid polymer of methacrylates and acrylates. It is an aqueous 100% acrylic emulsion blend of 40% solids by volume that is free from styrene, acetate, vinyl, ethoxylated surfactants or silicates. For soil stabilization applications, it is diluted with water in accordance with manufacturer's recommendations, and applied with a hydraulic seeder at the rate of 20 gal/ac. Drying time is 12 to 18 hours after application.

-*Copolymers of Sodium Acrylates and Acrylamides:* These materials are non-toxic, dry powders that are copolymers of sodium acrylate and acrylamide. They are mixed with water and applied to the soil surface for erosion control at rates that are determined by slope gradient:

| Slope Gradient (V:H) | kg/ha (lb/ac) |
|---|---|
| Flat to 1:5 | 3-5 |
| 1:5 to 1:3 | 5-10 |
| 1:2 to 1:1 | 10-20 |

-*Poly-Acrylamide and Copolymer of Acrylamide:* Linear copolymer polyacrylamide is packaged as a dry-flowable solid. When used as a stand-alone stabilizer, it is diluted at a rate of 1 lb/100 gal of water and applied at the rate of 5 lb/ac.

-*Hydro-Colloid Polymers:* Hydro-Colloid Polymers are various combinations of dry-flowable poly-acrylamides, copolymers and hydro-colloid polymers that are mixed with water and applied to the soil surface at rates of 53 to 62 lb/ac. Drying times are 0 to 4 hours.

### *Cementitious-Based Binders*

-*Gypsum:* This is a formulated gypsum-based product that readily mixes with water and mulch to form a thin protective crust on the soil surface. It is composed of high purity gypsum that is ground, calcined and processed into calcium sulfate hemihydrate with a minimum purity of 86%. It is mixed in a hydraulic seeder and applied at rates 4,000 to 12,000 lb/ac. Drying time is 4 to 8 hours.

- Additional guidance on the selection of soil stabilization BMPs can be found in Appendix B of this Manual.

Maintenance and Inspection

- Reapplying the selected soil binder may be needed for proper maintenance. High traffic areas shall be inspected daily, and lower traffic areas shall be inspected weekly.
- A certificate of compliance under Standard Specifications Section 21-2.01C(4) must be submitted to the RE prior to application.
- It is recommended that a small test area/mock-up occurs prior to large area application to verify sufficient cover for the approved mix.
- After any rainfall event, the Contractor is responsible for maintaining all slopes to prevent erosion.
- Maintain an unbroken, temporary stabilized area while DSAs are inactive. Repair any damaged stabilized area and re-apply soil binder to exposed areas.
- Cleaning of equipment must be done in a designated area that can collect the water to prevent triggering of non-visible and non-stormwater requirements.

SWPPP or WPCP

- Soil Binders must be discussed in Section 500.3.2 of the SWPPP or Section 30.2 of the WPCP.

# BMP 52.00 & 53.00. Permanent Seeding and Soil Amendments

## *DESIGN CONSIDERATIONS*

### *Objectives*

Permanent Seeding is an erosion control measure intended to establish a perennial vegetation cover and provide full stabilization of a disturbed area. Protecting the soil with well-established perennial stands of grass, or other forms of vegetation, is one of the most effective methods of reducing erosion.

Soil amendments are commonly used in conjunction with Permanent Seeding to improve the soil. Application of the appropriate soil amendment(s) should reduce the potential for soil erosion and restore the health of the soil by improving soil structure. Amending the soil structure will improve the soil's water-holding capacity; and improve the infiltration rate and the ability to support vegetation.

### *Description*

Permanent Seeding is applied to areas where construction has permanently ceased. The seed mix should be composed of several species and designed to establish a permanent perennial stand of vegetation that can survive in the area. Permanent Seeding should be accompanied by surface preparation, surface roughening, fertilizers, and mulch. Surface preparation and roughening enhance seed retention and germination, fertilizer boosts initial growth, and mulch retains moisture.

Soil amendments include topsoil, compost, shredded bark or wood chips, peat, biofertilizers, and mycorrhizae. Most soil amendments, except biofertilizers and mycorrhizae, should be tilled or blended into the soil.

### *Other Names*

Permanent Seed Stabilization, Seeding with Soil Amendments, Compost Blanket with Seeding, Bonded Fiber Matrix with Seeding, Topsoil, and Seed.

### *Applicability*

Permanent Seeding is a final stabilization measure that is generally required for all disturbed areas that are not otherwise stabilized (by paving, structures, landscaping, etc.). It should be completed in areas where ground disturbing activities have permanently ceased.

Seeding with soil amendments provides an additional control where the soil needs to be treated to support a stabilized vegetative mat. Soil amendments should be provided in areas where the soil is highly erodible and/or has poor nutrient content or structure. For example, a sandy soil needs organic matter added in order to increase the water and nutrient holding capacity.

### *Selection Considerations*

- *Seed*: The designer should specify appropriate seed species based on the climatic and environmental conditions. The Alaska Department of Natural Resources (DNR) Plant Material Center manuals provide guidance for revegetation in Alaska, and include the *Revegetation Manual for Alaska*, *Interior Alaska Revegetation and Erosion Control Guide*, and the *Coastal Revegetation and Erosion Control Guide*. These manuals give recommended seeding species and planting dates. The dates to apply seed are dependent on the climatic conditions of the project location. These dates should be provided in the special provisions for each project.
- *Soil Amendments*: Soil amendments should be selected to increase the infiltration rate of water; improve the soil's fertility, texture, and structure; aid in the uptake of nutrients; help to stabilize the soil; aid in seed germination; increase microbial activity; and promote vegetation establishment.

  When considering a soil amendment, the designer should consider how the amendment will improve the soil properties; such as the organic content and textural class, how long the amendment must remain in the soil, and the climate and ecology of the area

### *Relationship to Other Erosion and Sediment Control Measures*

With or without soil amendments, seeding can be used alone but it is likely that other measures should be considered to protect and support seed establishment. Construction stormwater management control measures should be used up-gradient to prevent potential washouts. Sediment

control measures should be used to prevent the release of sediments to and from the treated area.

### *Design*

*Seed Selection and Application Rate:* Seed mix species should be carefully considered for each project. Several mixes may be applicable for a project depending on proximity to wetlands, roadways, and various microclimates in the general environment. The Alaska Plant Materials Center can assist with selecting species for all types of environments found in Alaska. Typically, seeds are applied at 20 - 40 lbs./acre, although site-specific conditions can affect how much seed needs to be applied. Add 30 percent to the quantity if surface roughening is required.

*Fertilizer and Application Rate:* Fertilizer should be used when establishing new seed. It is best to test the soils for existing nutrient content and pH to determine the appropriate fertilizer. If testing cannot be done until slopes are finished, then require a fertilizer application rate of 450 lb./acre of 20-20-10 (percent nitrogen-phosphorus-potassium) as an interim placeholder in the bid documents and the Engineer should adjust the fertilizer rate based on the test results.

*Mulch:* Mulch should be used when establishing new seed. Mulch helps to hold the seed to the soil surface and helps to retain moisture during seed germination. The application rate for mulching during seeding is approximately 2,000 to 4,500 lbs./acre, depending on the steepness of slopes. On slopes steeper than 3:1, tackifier should be added to the mulch (BMP 57).

*Soil Stabilizer*. For steeper slopes or more erodible soils, hydraulic erosion control products (HECP, BMP 51) can be considered for additional soil stabilization.

*Soil Testing:* This is recommended when there is uncertainty regarding the fertilizer application rate or when there are risk factors for successful grass growth. It is possible to require the contractor to sample soils, but it may be preferable to have trained Alaska Department of Transportation & Public Facilities (ADOT&PF) staff collect soil samples for laboratory analyses. If it is feasible to test the soils for their pH and nutrients, then the Project Engineer is able to change the fertilizer requirement according to the test results. The existing soil or imported topsoil can be tested to identify the soil's composition of organic matter, macro nutrients, soil texture, and pH. For more information, contact the regional stormwater specialist. Add a special provision if you determine that the contractor should test the soil once graded.

*Soil Amendment Options:* There are many different soil amendments in addition to fertilizer that can be applied to a project. Selecting a soil amendment can depend on location of a project and availability of the amendment. These soil amendments include the following:

- *Topsoil:* When used as a soil amendment, topsoil should be tilled or blended into the existing soil.
- *Compost:* Compost should comply with the U.S. Composting Council Testing Methods and with specified gradation for each project. Compost can be applied to almost any soil. Compost can be used in wet climates or in the wet season, whereas topsoil or other soil amendments may be prone to erosion. When used as a soil amendment, compost should be tilled or blended into the existing soil.
- *Shredded Bark or Wood Chips:* Although the composition of bark or wood chip will vary per application, material should not contain any materials that would inhibit or stunt vegetation growth. All material should be kept moist prior to the application of seed. When used as a soil amendment, shredded bark or wood chips should be tilled or blended into the existing soil before seeding.
- *Peat:* Peat can be used as a soil amendment when the existing soil texture is sandy. Application of peat will enhance the existing soil by providing organics and increase the water holding capacity. Peat may be applied to the surface or tilled or blended into the soil. It should be applied at a thickness of 1 to 2 inches and, if specified, tilled or blended into the top 4 to 6 inches of the existing soil. When tilled or blended in, the peat composition should be approximately 15 to 25 percent of the soil.

  Peat is naturally acidic. The existing soil should be tested for pH levels so the appropriate quantities of peat can be applied. Over-

application could result in limited growth of some seed species.

- Biofertilizers and Mycorrhizae: Biofertilizers and mycorrhizae are soil amendments that can be used to increase the success and shorten the establishment period of vegetation. When applied, biofertilizers and mycorrhizae help to rebuild living soil that has become damaged during earthwork. Biofertilizers and mycorrhizae help to increase microbial activity in soil resulting in increased nutrient availability to plant roots.

*Common Failures or Misuses*

Common failures are generally due to faulty application and maintenance. These failures include:

- Seed and slurry mix is not applied with a multi-directional flow or is applied at an inadequate application rate, resulting in non-uniform coverage or stabilization.
- The mulch, tackifier, or HECP (including bonded fiber matrix) used is inadequate to hold seed on slopes, resulting in erosion and washouts.
- Temporary seed, if not appropriately removed, may inhibit growth of permanent grass.
- Seed is not properly or adequately irrigated.
- Seed is floated away due to over-irrigation or by excessive rainfall.
- Seeded areas are disturbed by foot traffic and/or equipment after installation.
- Treated areas are compacted after the seed and amendments are applied.
- Soil amendments are inadequate to support seed growth.
- Supportive Construction Water Management or Sediment Control best management practices (BMPs) are not installed or maintained correctly.
- Fertilizer application is inadequate.
- Fertilizers with high, or quick-release, phosphorus content are used with biofertilizer and mycorrhizal soil amendments.
- Fungicides are used on or around areas that have received biofertilizers and mycorrhizal amendments.
- Inadequate quantities of amendments containing biofertilizers and mycorrhizae are applied.
- Seeding is applied too late in the season, resulting in limited growth and germination prior to freeze up.

*SPECIFICATIONS*

Standard Specifications

- 652 - Soil Amendments
- 650 - Compost Blanket
- 651 - Hydraulic Erosion Control Products
- 620 - Topsoil
- 712.201 - Water
- 724 - Seed
- 725 - Fertilizer
- 752 – Tackifier
- 750 – Compost
- 753 – Soil Amendments
- 751 Hydraulic Erosion Control Products

| **Soil Group** *(Refer to Soil Type Chart)* | **Seed Rate** *(Refer to Directions)* | **Species/Cultivar Selection** *(Refer to Species/Cultivar Characteristic Chart For Category Ratings)* | | |
|---|---|---|---|---|
| **High Organic** | | Suggest fertilizer only. If seeding is stipulated use suggestions for MH, CH, OH Mesic or Xeric depending on site. | | |
| **GW, GP** | | Suggest scarification and fertilizer only. If seeding is stipulated use suggestions for GM, GC and soil moisture. | | |
| | | **Soil Moisture Characteristics** | | |
| | | **Saturated (Hydric)** | **Average (Mesic)** | **Very Dry (Xeric)** |
| **GM, GC** | **20** | **1** 'Norcoast' Bering hairgrass<br>**1** 'Egan' American sloughgrass<br>**1** 'Kenai' polargrass<br>**1** 'Arctared' red fescue<br>**2** 'Nortran' tufted hairgrass<br>**2** 'Boreal' red fescue<br>**2** 'Alyeska' polargrass<br>**3** 'Sourdough' bluejoint reedgrass | **1** 'Norcoast' Bering hairgrass<br>**1** 'Arctared' red fescue<br>**1** 'Gruening' alpine bluegrass<br>**2** 'Boreal' red fescue<br>**2** 'Kenai' polargrass<br>**2** 'Nortran' tufted hairgrass<br>**2** Wainwright slender wheatgrass<br>**3** 'Caiggluk' Tilesy sagebrush<br>**3** 'Sourdough' bluejoint reedgrass<br><br>*Note: If the area to be revegetated is adjacent to a coast line, consider using beach wildrye transplants.* | **1** 'Arctared' red fescue<br>**1** Wainwright slender wheatgrass<br>**1** 'Nortran' tufted hairgrass<br>**1** 'Gruening' alpine bluegrass<br>**2** 'Norcoast' Bering hairgrass<br>**2** 'Boreal' red fescue<br><br>*Note: If the area to be revegetated is adjacent to a coast line, consider using beach wildrye transplants.* |
| **SW, SP, SM, SC** | **40** | | | |
| **ML, CL, OL** | | | | |
| **MH, CH, OH** | **30** | **1** 'Norcoast' Bering hairgrass<br>**1** 'Arctared' red fescue<br>**1** 'Egan' American sloughgrass<br>**2** 'Alyeska' polargrass<br>**2** 'Gruening' alpine bluegrass | | |

# BMP 57.00. Temporary Seeding

## DESIGN CONSIDERATIONS

### Objectives

Temporary Seeding is intended to temporarily stabilize the soil of a disturbed area to prevent the erosion and the discharge of soil and/or sediments.

Temporary Seeding is used in areas where permanent cover is not necessary or appropriate. By protecting bare soil from raindrop impact and binding the soil with roots, a well-established vegetative cover is one of the most effective methods of reducing erosion.

### Other Names

Temporary Stabilization.

### Applicability

Temporary Seeding is applicable to exposed areas subject to erosion that are not actively being worked. Temporary Seeding can be used where permanent covering is not necessary or where future ground disturbing activities will occur.

By itself, Temporary Seeding is not soil stabilization because the seeds are not effective until they sprout and create a stabilizing root mat. Temporary Seeding should be accompanied by surface preparation, surface roughening, fertilizer, mulch, and maintenance to encourage seed establishment. Temporary Seeding can remain and be left to winter over only if ground-disturbing activities are scheduled to resume the following spring. Prior to application of permanent stabilization measures, Temporary Seeding should be removed from, or plowed/tilled into, the existing soil

### Selection Considerations

- Consider application rate, regional climate, environment, and duration of required vegetation coverage prior to application. Temporary Seeding is intended to be used for a maximum of one growing season.
- Temporary Seeding should be applied soon after ground-disturbing activities cease in the area and in compliance with highway Section 641 (airport Section P-157). The use of fertilizers is advised to promote rapid and healthy seed growth. Fertilizer should be applied at the application rate specified by the manufacturer or per the recommendations from a soil analysis

### Design

*Seed Selection:* Annual Ryegrass (*Lolium multiflorum*) should be used for short periods lasting no more than one growing season.

*Seed Application Rate:* Typical rate of 20 lbs/acre (per Plant Material Center recommendation), although the rate may be varied based on site-specific conditions.

*Fertilizer Application Rate:* Typical rate of 200 lbs/acre of 20-20-10 (percent nitrogen-phosphorus-potassium) fertilizer (per Plant Material Center recommendation).

*Other Soil Amendments:* In certain cases, in addition to fertilizer, specifying compost or topsoil may enhance vegetative growth. However, note that in some cases a layer of topsoil on gravel surfaces can increase erosion potential.

*Soil Stabilization Methods:* Hydraulic erosion control products (HECPs), including bonded fiber matrix, mulch, and tackifiers; and rolled erosion control products (RECPs) for slopes should be considered on a site-specific basis in conjunction with Temporary Seeding to decrease soil erosion potential

### Relationship to Other Erosion and Sediment Control Measures

Seeding should be performed in conjunction with surface roughening, soil stabilization methods, and grading practices. Concentrated flows or runoff should be directed away from the seeded areas using diversions.

### Common Failures or Misuses

Common failures are generally due to faulty installation and maintenance. These failures include:

- Ground or growth medium is insufficient to support seed.
- Seed is not applied at an adequate application rate.

- Mulch or HECP used is inadequate to hold seed on slopes.
- Seed is not applied uniformly and/or adequate ground coverage is not achieved.
- Seed is not properly or adequately irrigated.
- Seeded areas are disturbed by foot traffic and/or equipment after installation.
- Seeding is applied too close to freeze-up

*SPECIFICATIONS*

Standard Specifications

- 658 – Temporary Seeding
- 620 – Topsoil
- 657 – Tackifier
- 650 – Compost Blanket
- 653 – Permanent Seeding
- 652 – Soil Amendments
- 753 – Soil Amendments
- 725 – Fertilizer
- 651– Hydraulic Erosion Control Products
- 751—Hydraulic Erosion Control Products
- 654– Rolled Erosion Control Products for Slopes
- 754-- Rolled Erosion Control Products

## *BMP AK-9*
## *Mulching*

### *Objectives and Applications*

Mulching is the application of a uniform protective layer of straw, wood fiber, wood chips, or other acceptable material on or incorporated into the soil surface of a seeded area to allow for the immediate protection of the seed bed.

The purpose of mulching is to protect the soil surface from the forces of raindrop impact and overland flow, foster the growth of vegetation, increase infiltration, reduce evaporation, insulate the soil, and suppress weed growth. Mulching also helps hold fertilizer, seed, and topsoil in place in the presence of wind, rain, and runoff, and reduces the need for watering. Mulching may be utilized in areas that have been seeded either for temporary or permanent cover.

Mulches include straw, hay, wood fiber, paper fiber, wood/ paper fiber blends, peat moss, wood chips, bark chips, shredded bark, manure, compost and corn stalks. This type of mulch is usually spread by hand or by machine (mulch blower) after seed, water, and fertilizer have been applied. Soil binders or tackifiers, composed of a variety of synthetic and organic materials, including emulsions or dispersions of vinyl compounds, rubber, asphalt, or plastics mixed with water are often added to commercial mulch products. Tackifiers aid in the stabilization process, and are not used as a mulch alone, except in cases where temporary dust and erosion control is required. Hydroseeding, sometimes referred to as hydromulching, consists of mixing a tackifier, specified organic mulch, seed, water, and fertilizer together in a hydroslurry and spraying a layer of the mixture onto a surface or slope with hydraulic application equipment. The choice of materials for mulching should be based on soil conditions, season, type of vegetation, and the size of the area.

### *Common Failures - Generally due to faulty installation or maintenance.*

- Mulches are not properly watered after application, resulting in drying out and possible blowing or washing away of materials.
- Depth of mulching material is either insufficient or excessive, resulting in low seed germination rates.
- Hydroseeding slurry not applied uniformly, resulting in spotty germination and inadequate ground cover.

### *Other Considerations*

- Mulch should be applied immediately after seeding to improve seed germination.
- Hydroseeding can be performed in one step, and is effective provided that materials are properly mixed and equipment is in good working order.
- Depth of the applied mulch should be not less than 1 in. and not more than 2 in.
- Chemical soil stabilizers or soil binders, when used alone, are less effective than other types of mulches. These products are primarily useful for tacking organic mulches.
- A tackifier should be used in conjunction with seeding, fertilizing, and mulching or hydro-seeding on any slopes steeper than 3:1.
- Check labels on chemical mulches and binders for environmental concerns. Take precautions to avoid damage to fish, wildlife, and water resources.
- Some materials such as wood chips may absorb nutrients necessary for plant growth.

### *Relationship to Other ESC Measures*

Mulching may be performed in conjunction with seeding, fertilizing, surface roughening, and grading practices. Concentrated flows of runoff should be directed away from mulched areas.

### *Alternate Sediment Control Measures*

Erosion Control Blankets; Sodding

### *Other Names*

Hydromulching; Chemical Stabilization

### *Design*

**Design life**: *1 season (6 months) or less*

**Site applicability**: *Areas which have been disturbed and require temporary or permanent cover*

**Materials and application rates**: *as per Section 619 and Section 727 of Alaska Standard Specifications for Highway Construction, and Special Provisions for project*

### *Materials*

Most Commonly Specified Mulches – Wood Fiber, Paper Fiber, Wood/Paper Fiber Combination Blends, Peat Moss

Other Mulches – Straw, Hay, Wood Chips, Bark Chips, Shredded Bark, Corn Stalks, Compost, Manure

Tackifiers – Vinyl Compounds, Rubber, Asphalt, or Plastics mixed with water

### *Installation*

Complete the required grading as shown on the plans and ensure that erosion control measures intended to minimize runoff over the area to be mulched are in place. Apply mulch at the rates specified in the special provisions either by hand or by machinery immediately after the seed and fertilizer have been applied (two step method), or as part of the hydroslurry incorporating seed, fertilizer, mulch, and water (one step method). Apply specified tackifier if not already incorporated into the mulch matrix or hydroslurry. Provide additional watering as specified to ensure optimal seed germination conditions.

### *Inspection*

Inspect all mulches weekly, and after each rainstorm to check for rill erosion, dislocation, or failure.

### *Maintenance*

Replace mulch that has been loosened or dislodged. In addition, reseed areas if necessary. Water mulched areas periodically to ensure that moisture content will be maintained and seed germination and grass growth will continue.

### *Removal*

Mulching is usually left in place to naturally decompose and become part of the soil structure.

# BMP 42.00. Vehicle/Equipment Storage, Maintenance and Fueling

## *SPECIFICATIONS*

### *Objectives*

Minimize or eliminate the discharge of pollutants and hazardous materials into storm drain systems, waters of the U.S., or groundwater.

### *Applicability*

- Procedures and practices are used where on-site storage, maintenance, and fueling takes place.
- When practical, storage, maintenance, and fueling must be done off-site.

## *GENERAL VEHICLE/EQUIPMENT PRACTICES*

- Designate areas to be used for storage, washing, maintenance, and fueling of equipment and vehicles. Locate these areas as far away from stormwater drainage systems and waters of the U.S. as practicable. Use paved surfaces if practicable.
- Provide appropriate perimeter best management practices (BMPs) to divert clean stormwater run-on from the storage, maintenance, or fueling area and to protect stormwater from maintenance area run-off (i.e. berms, silt fence or fiber rolls.)
- Place drip pans or absorbent pads under vehicles or equipment to contain potential drips or leaks that may develop during storage, maintenance, or fueling.
- Have drip pans, absorbent pads, and spill kits located near or within the storage, maintenance or fueling area.
- Properly dispose of any used absorbent pads or any wastes collected in drip pans.
- Check ground under vehicles and equipment for evidence of leaks or drips.
- Clean up any leaks, spills, or contaminated surfaces immediately. Use absorbent pads to clean small spills and properly dispose of used pads.
- Make sure spill kit is adequately stocked and replace used supplies promptly.
- Check perimeter BMPs according to their specified inspection guidelines.

## *VEHICLE/EQUIPMENT STORAGE*

### *Description*

If overnight storage of vehicles and equipment on-site is necessary, follow these procedures:

### *Procedures*

- Inspect vehicles and equipment to be stored on-site for leaks. If leaks are found, either immediately repair the leak or contain the leak and repair as soon as possible.

## *VEHICLE/EQUIPMENT MAINTENANCE*

### *Description*

If maintenance or washing of vehicles and equipment on-site is necessary, follow these procedures:

### *Procedures*

Store waste fluids in labeled, sealable, leak-proof containers. Check containers used to store waste fluids and other liquids used for maintenance to make sure they are sealed and free of leaks.

- Properly dispose of fuels, lubricants, and other materials used for maintenance in accordance with manufacturer's instructions and state, federal, and local regulations.
- Any maintenance materials stored on-site must be protected from exposure to precipitation. Use secondary containment designed to prevent spills or leaked chemicals from mixing with stormwater.
- Detergents, soaps and solvents are prohibited from use by the CGP for any equipment washing.
    - All wash water must be treated through an appropriate control measure (i.e. sediment basin or equivalent) prior to discharge to stormwater drainage systems or waters of the U.S.

- Check vehicles and equipment for excess buildup of oil and grease. Clean vehicle or equipment and properly dispose of excess oil and grease.

*VEHICLE/EQUIPMENT FUELING*

*Description*

If fueling on-site is necessary, follow these procedures:

*Procedures*

- Fuel on a level grade area as far away from stormwater drainage systems and waters of the U.S., as practicable.
- Place drip pans or absorbent pads under vehicles or equipment to contain drips or leaks.
- Have drip pans, absorbent pads, and spill kits located nearby.
- During mobile fueling of equipment, properly protect the fueling hose from any damage.
- Fueling operations shall be attended at all times.
- Automatic shut-off nozzles are preferred. Do not "top off" fuel tanks. Leave adequate space for fuel expansion and movement in the tank while equipment is in operation.

# BMP 06.00. Concrete Washout

## DESIGN CONSIDERATIONS

### Objectives

Concrete Washout Containment prevents the discharge of concrete waste pollutants to stormwater by providing on-site washout containment in a designated and contained area.

### Description

Concrete Washout Containment contains concrete and fluids from the chutes of concrete mixers and hoppers of concrete pumps when they are rinsed out after delivery. Containment areas allow for easier disposal of consolidated solids and prevent pollution from run-off or infiltration to groundwater. A washout facility can consist of a pre-fabricated container or self-installed (fabricated on-site) lined containment area, which can be above- or below-grade. Containment areas require sufficient volume to completely contain all liquid and waste concrete materials.

### Applicability

Concrete Washout Containment is required on projects where concrete, stucco, mortar, grout, and/or cement are used as construction materials.

### Selection Considerations

The number and size of containment areas provided should be based on the expected demand for storage capacity.

- *Pre-fabricated Washout Containers:* Pre-fabricated washout containments can be any watertight unit that can contain all liquids and solid waste generated by washout operations. When available, pre-fabricated containers are delivered to the site and minimize installation efforts. They are also resistant to damage and protect against spills and leaks. Some companies will also offer complete service with their product, such as providing maintenance and regular disposal of waste materials. Such full-service options could relieve the superintendent of these responsibilities. However, when a contractor selects a company that provides such an option, they must also ensure that the company is properly disposing of materials and it would be prudent to give preference to companies that recycle collected materials.
- *Below-grade Containment:* Use of below-grade containment areas helps prevent breaches and reduces the likelihood of run-off. This option is recommended for projects expecting extensive concrete work or for airport projects. However, this option is not recommended for areas with high water tables or shallow groundwater; such as near natural drainages, springs, or wetlands.
- *Above-grade Containment:* Above-grade containment areas must be sized and installed correctly, and diligently maintained in order to be effective. However, particularly if a pre-fabricated container is unavailable, this option is better suited in areas with potentially high water tables to prevent leaching of wash water into groundwater, or in areas where excavation is not practical.

### Design

*Location:* Concrete Washout Containment should be placed in a location that provides convenient access for concrete trucks, preferably near the area where the concrete is being poured. Place Concrete Washout Containment a minimum of 50 feet from storm drains, open ditches, or waterbodies, or provide secondary containment for the Concrete Washout Containment.

*Number of Containments:* Larger sites with extensive concrete work should have Concrete Washout Containment at multiple locations for ease of use. Multiple Washout Containments are also required if a single containment unit is not adequate for the volume of waste material generated before the containment structure is cleaned.

*Capacity:* Concrete Washout Containment should provide sufficient capacity to handle the expected volume of solids, wash water, and rainfall to prevent overflow and allow 12 inches of freeboard. To estimate capacity, assume 7 gallons of wash water and solids are generated from washing one truck chute, and 50 gallons are generated in washing out the hopper of a concrete ready-mix or pump truck. Estimate the number of trucks based on the total volume of concrete in the project, the hopper capacity of each concrete pump truck, the expected number of loads, and the planned maintenance interval.

*Containment Area*: For larger sites, it is recommended that self-installed containment (both above- and below-grade) areas be at least 10 feet wide with sufficient length and depth to provide the required capacity. Above-grade self-installed containment areas shall be limited to a size and capacity for which the selected outside barrier is designed to remain structurally sound when filled with waste materials.

*Cover:* A temporary cover should be provided to prevent rain or other precipitation from filling the containment area and causing wash water overflow. The cover should be a secure, non-collapsing, non-water collecting cover.

*Signage:* Each on-site facility must have highly visible signage to indicate washout containment locations. Signs should be at least 48 by 24 inches and have 6-inch high contrasting letters, placed at a height of at least 3 feet above ground level and within 30 feet of the facility.

### *Relationship to Other Erosion and Sediment Control Measures*

*Operator Education:* Use of Concrete Washout Containment as a best management practice (BMP) is only successful if concrete truck operators utilize them. Operators need to be made aware of the presence of these containments. All concrete truck operators, including those of subcontractors, should be trained on the importance of managing concrete waste, washout procedures, and washout locations.

### *Common Failures or Misuses*

- Overflow and discharge of waste when the containment area is not covered prior to anticipated rainfall and/or when accumulated liquid wastes have not been removed.
- Leaking resulting from torn or damaged liners going unnoticed or not being replaced, with consequent discharge of washout liquid or slurry to waterways, storm drains, or directly onto the ground.
- Lack of communication to truck drivers of the necessity of using the containment area for washout.
- Compromised structural integrity due to miscalculated capacity and installation, particularly for self-installed, above-grade containment.
- Insufficient quantity and/or size to contain all liquid and concrete waste generated by washout operations.

### *SPECIFICATIONS*

Standard Specification

- 665 – Concrete Washout

Drawing

- BMP – 06.00 Concrete Washout, Sheets 1 & 2

## CONCRETE WASHOUT GENERAL NOTES:

### MATERIALS

PRE-FABRICATED CONTAINERS: MADE OF STURDY MATERIALS THAT ARE WATER TIGHT.

FABRICATED ON-SITE CONTAINMENT:

1. BARRIER/SIDEWALLS: MAKE SIDEWALLS OF AN ABOVE-GRADE CONTAINMENT AREA FROM EARTHEN BERMS, BARRIER WALLS, WOOD PLANKS, OR OTHER MATERIALS THAT WILL BE STRUCTURALLY SOUND WHEN FILLED WITH WASTE MATERIALS.
2. LINER: IMPERMEABLE PLASTIC SHEETING OF AT LEAST 10 MIL THICKNESS, AND FREE OF HOLES, TEARS, AND OTHER DEFECTS THAT COMPROMISE THE IMPERMEABILITY OF THE MATERIAL.
3. ANCHORS: SECURE THE LINER FOR ABOVE-GRADE CONTAINMENT AREAS AND SIDEWALL MATERIALS OTHER THAN BERMS WITH ANCHORS. USE SANDBAGS, 6-INCH WIRE STAPLES, AND WOOD OR METAL STAKES AS ANCHORS, BUT NOT LIMITED TO ONLY THEM.

SIGNS: DURABLE, RIGID MATERIAL WITH 6-INCH HIGH CONTRASTING LETTERS, PLACED AT A HEIGHT OF AT LEAST 3 FEET ABOVE GROUND LEVEL.

RAIN COVER: SECURE, NON-COLLAPSING, NON-WATER COLLECTING RAIN COVER, REQUIRED PRIOR TO PREDICTED WET WEATHER TO PREVENT ACCUMULATION AND OVERFLOW OF PRECIPITATION.

### INSTALLATION

1. INSTALL SIGNS WITHIN 30 FEET OF THE WASHOUT.
2. IF THE WASHOUT IS LOCATED ON UNDEVELOPED PROPERTY OR OFF-PAVEMENT, PROVIDE A STABILIZED CONSTRUCTION EXIT.
3. PLACE CONCRETE WASHOUT CONTAINMENT A MINIMUM OF 50 FEET FROM STORM DRAINS, OPEN DITCHES, OR WATERBODIES, OR PROVIDE SECONDARY CONTAINMENT FOR THE WASHOUT.
4. PROVIDE SUFFICIENT CAPACITY TO HANDLE THE EXPECTED VOLUME OF SOLIDS AND WASH WATER AT 50% MAX CAPACITY AND ALLOW 12 INCHES MINIMUM OF FREEBOARD.
5. PRE-FABRICATED WASHOUT CONTAINERS ARE USUALLY DELIVERED ASSEMBLED. IF ASSEMBLY IS REQUIRED, FOLLOW MANUFACTURER'S INSTRUCTIONS.
6. SELF-INSTALLED CONTAINMENT:
   a. ABOVE-GRADE WASHOUT: CONSTRUCT THE SIDEWALLS TO THE DIMENSIONS SHOWN ON THE DRAWINGS. IF NOT USING AN EARTHEN BERM FOR THIS PURPOSE, ENSURE THAT THE SIDEWALL MATERIAL IS SECURE AND EACH UNIT IS BUTTED TIGHTLY END TO END. LINE THE ENTIRE AREA WITH THE LINING MATERIAL, BRINGING THE SHEETING UP OVER THE SIDEWALLS AND SECURING THE ENDS WITH SANDBAGS, STAPLES OR OTHER APPROPRIATE ANCHORS.
   b. BELOW-GRADE WASHOUT: EXCAVATE A FLAT, SUBSURFACE PIT TO THE DESIRED SIZE AND CAPACITY FOR THE CONTAINMENT AREA. THE RESULTING SIDEWALL SHOULD NOT EXCEED 3:1 SLOPES. PREVENT DAMAGE TO THE LINER BY KEEPING THE BASE OF THE PIT FREE OF ROCKS AND DEBRIS. USE THE EXCAVATED MATERIAL TO CREATE A BERM ALONG THREE SIDES OF THE PIT, LEAVING THE SIDE PROVIDING ACCESS RELATIVELY FLAT. IT IS RECOMMENDED THAT THE BERM BE AT LEAST 1-FOOT HIGHER THAN EXISTING GROUND. LINE THE ENTIRE AREA WITH THE LINING MATERIAL, BRINGING THE SHEETING UP OVER THE SIDEWALLS AND BERM, AND SECURING THE ENDS WITH SANDBAGS OR OTHER APPROPRIATE ANCHORS.

### INSPECTION

1. INSPECT AND VERIFY THAT CONCRETE WASHOUT BMPS ARE IN PLACE PRIOR TO THE COMMENCEMENT OF CONCRETE WORK.
2. DETERMINE IF THE CONCRETE WASHOUT IS FILLED TO 50 PERCENT CAPACITY.
3. FOR SELF-INSTALLED CONTAINMENT:
   a. INSPECT THE PLASTIC LINER TO ENSURE IT IS SECURELY ANCHORED AND INTACT.
   b. INSPECT THE SIDEWALLS FOR LEAKS. ENSURE THE CONSTRUCTION DOESN'T DAMAGE THE SIDEWALLS.
4. FOR PRE-FABRICATED CONTAINMENT, INSPECT THE UNIT FOR LEAKS AND POTENTIAL DAMAGE.
5. CHECK TO ENSURE THAT EACH WASHOUT SIGN IS STILL SECURE AND VISIBLE.
6. IF THERE IS EVIDENCE THAT WASHOUTS ARE OCCURRING IN LOCATIONS OTHER THAN THE DESIGNATED WASHOUT: IMPROVE EXISTING SIGNAGE, INSTALL ADDITIONAL SIGNAGE, INCREASE COMMUNICATION WITH CONCRETE TRUCK DRIVERS, AND PROVIDE CONCRETE TRUCK DRIVERS WITH MAPS OF WASHOUT LOCATIONS WITH RESPECT TO POUR LOCATIONS.

### MAINTENANCE

1. CLEAN EXISTING WASHOUTS BEFORE THE WASHOUT IS 50 PERCENT FULL. SOLIDIFY WITH BAGGED GROUT, VACUUM AND DISPOSE OF LIQUIDS IN AN APPROVED MANNER, OR ALLOW FOR EVAPORATION (CHECK WITH THE LOCAL SANITARY SEWER AUTHORITY TO DETERMINE IF THERE ARE SPECIAL DISPOSAL REQUIREMENTS FOR CONCRETE WASH WATER).
2. IF NECESSARY, PROVIDE AN ALTERNATE WASHOUT DURING EXISTING WASHOUT CLEANING.
3. RELINE SELF-INSTALLED CONTAINERS AFTER EACH CLEANING, BECAUSE EQUIPMENT CAN DAMAGE THE LINER. BEFORE RELINING, INSPECT THE CONTAINMENT STRUCTURE FOR SIGNS OF WEAKENING OR DAMAGE AND MAKE ANY NECESSARY REPAIRS. THEN LINE THE STRUCTURE WITH NEW PLASTIC SHEETING, CHECKING THAT IT IS FREE OF HOLES, TEARS, AND OTHER DAMAGE.
4. REPAIR DAMAGED WASHOUTS BEFORE THE NEXT CONCRETE POUR. IF NECESSARY, PROVIDE NEW WASHOUTS UNTIL THE EXISTING WASHOUTS ARE OPERATIONAL.
5. CONTAIN ANY SPILL OR DISCHARGE OF CONCRETE WASTE MATERIALS.
6. REPLACE OR INSTALL NEW SIGNAGE AS NEEDED.

### REMOVAL

1. AN OPERATIONAL CONCRETE WASHOUT SHOULD REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT (OR PHASE OF THE PROJECT) IS POURED. WHEN THE CONCRETE WASHOUT IS NO LONGER NEEDED, THE LIQUID MUST BE EVAPORATED OR VACUUMED FOR DISPOSAL AND THE HARDENED SOLIDS MUST BE BROKEN UP, REMOVED, AND PROPERLY DISPOSED OF. DISPOSAL LOCATION TO BE APPROVED BY ENGINEER.
2. REMOVE FROM THE SITE PRE-FABRICATED WASHOUTS AND MATERIALS USED TO CONSTRUCT ABOVE-GRADE CONTAINMENT AREA AND PROPERLY DISPOSE OF THEM.
3. BACKFILL AND STABILIZE HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCE CAUSED BY THE CREATION OR REMOVAL OF THE WASHOUT WITH AN APPROVED BMP.

| REVISIONS | | |
|---|---|---|
| Date | Description | By |
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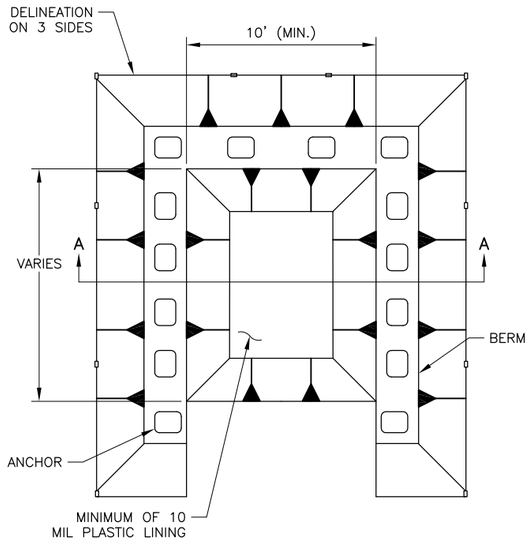
State of Alaska DOT&PF

CONCRETE WASHOUT (NOTES)

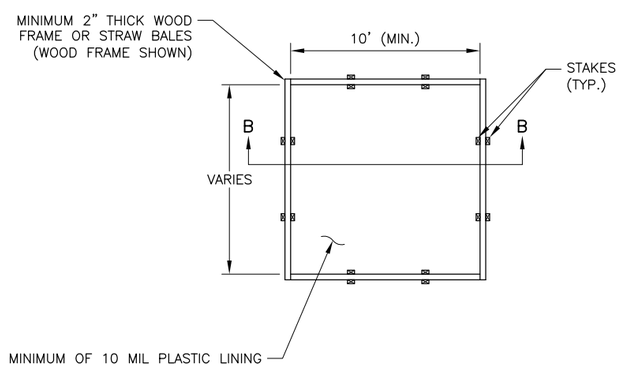
APPROVED

Date 12/2015 XXXXXX

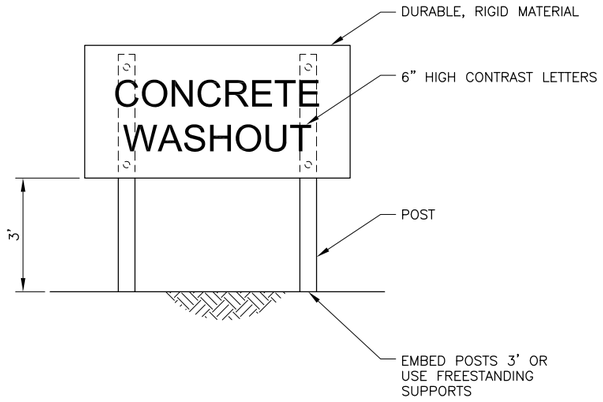
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PLAN

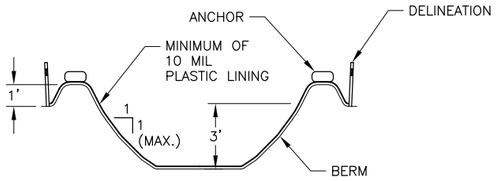



PLAN

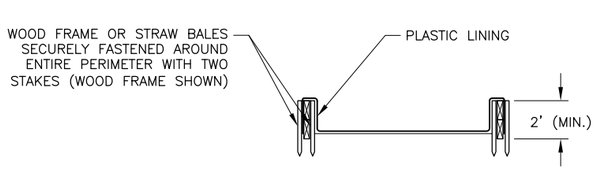



WASHOUT SIGN

NOT TO SCALE



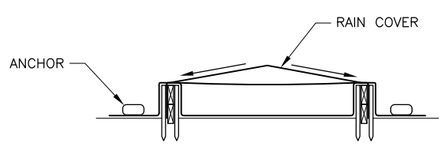

SECTION A–A




SECTION B–B

BELOW–GRADE CONCRETE WASHOUT
FABRICATED ON–SITE

NOT TO SCALE




SECTION B–B
WITH PLASTIC RAIN COVER

ABOVE GRADE CONCRETE WASHOUT
FABRICATED ON–SITE

NOT TO SCALE

| REVISIONS | | |
|---|---|---|
| Date | Description | By |
| | | |
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State of Alaska DOT&PF

CONCRETE WASHOUT
(FABRICATED ON–SITE)

APPROVED

Date X/XX/XX

BMP–06.00

# WM-6 SOLID WASTE MANAGEMENT



**BMP Objectives**

- ☐ **Perimeter Control**
- ☐ **Slope Protection**
- ☐ **Borrow and Stockpiles**
- ☐ **Drainage Areas**
- ☐ **Sediment Trapping**
- ☒ **Stream Protection**
- ☐ **Temporary Stabilizing**
- ☐ **Permanent Stabilizing**

## Definition and Purpose

Solid waste management procedures and practices are designed to minimize or eliminate the discharge of pollutants to the drainage system or to watercourses as a result of the creation, stockpiling, or removal of construction site and domestic wastes.

## Appropriate Applications

Solid waste management procedures and practices are implemented on all construction projects that generate solid wastes.

Solid wastes include but are not limited to:

- Construction wastes including brick, mortar, timber, steel and metal scraps, sawdust, pipe and electrical cuttings, non-hazardous equipment parts, and Styrofoam and other materials used to transport and package construction materials.
- Highway planting wastes, including vegetative material, plant containers, and packaging materials.
- Litter, including food containers, beverage cans, coffee cups, paper bags, plastic wrappers, and smoking materials, including litter generated by the public.

## Limitations

It may be difficult to schedule waste disposal at projects located in remote areas.

## General Considerations

The Contractor's Water Pollution Control Manager (WPCM) shall oversee, schedule, and enforce proper solid waste procedures and practices.

### ***Education***

- Instruct employees and subcontractors on identification of solid and hazardous waste.
- Educate employees and subcontractors on solid waste storage and disposal procedures.
- Hold regular meetings (or incorporate into regular safety meetings) to discuss and reinforce disposal procedures.

- Require that employees and subcontractors follow solid waste handling and storage procedures.
- Prohibit littering by employees, subcontractors, and visitors.
- Promote good housekeeping practices on all sites.
- Wherever possible, minimize production of solid waste materials.

***Collection, Storage, and Disposal***

- Dumpsters of sufficient size and number shall be provided to contain the solid waste generated by the project and properly serviced.
- Littering is prohibited.
- To prevent clogging of the storm drainage system, litter and debris removal from drainage grates, trash racks, and ditch lines shall be a priority.
- Trash receptacles shall be provided in the Contractor's yard, field trailer areas, and at locations where workers congregate for lunch and break periods.
- Construction debris and litter from work areas within the construction limits of the project site shall be collected and placed in dumpsters at least weekly regardless of whether the litter was generated by the Contractor, the public, or others. Collected litter and debris shall not be placed in or next to drain inlets, stormwater drainage systems, or watercourses.
- Full dumpsters shall be removed from the project site and the contents shall be disposed of properly. Clean up immediately if containers overflow.
- Litter stored in collection areas and containers shall be handled and disposed of by trash-hauling contractors.
- Construction debris and non-hazardous waste shall be removed from the site regularly or as directed by the Engineer.
- Construction material visible to the public shall be stored or stacked in an orderly manner to the satisfaction of the Engineer.
- Stormwater run-on shall be prevented from contacting stored solid waste through the use of berms, dikes, or other temporary diversion structures or through the use of measures to elevate waste from site surfaces.
- Solid waste storage areas shall be located at least 50 feet from drainage facilities and watercourses and shall not be located in areas prone to flooding or ponding.
- Except during fair weather, construction and highway planting waste not stored in dumpsters shall be securely covered with tarps or plastic sheeting. .
- Dumpster washout on the project site is not allowed.
- Trash-hauling contractors shall be notified that only dumpsters are acceptable for use on-site.

- Additional containers and more frequent pickups will likely be needed during the demolition phase of construction.
- Construction waste shall be stored in a designated area approved by the Engineer.
- Potentially hazardous waste shall be segregated from non-hazardous construction site waste.
- The site shall be kept clean of litter debris through good housekeeping practices.
- Toxic liquid wastes (e.g., used oils, solvents, and paints) and chemicals (e.g., acids, pesticides, additives, and curing compounds) shall not be disposed of in dumpsters designated for construction debris.
- WM-7 (Hazardous Waste Management) contains information on disposal of hazardous waste. Hazardous waste shall be removed to an appropriate disposal and/or recycling facility by a licensed contractor.
- Useful vegetation debris, packaging, and/or surplus building materials shall be salvaged or recycled when practical. For example, trees and shrubs from land clearing can be converted into wood chips, then used as mulch on graded areas. Wood pallets, cardboard boxes, and construction scraps can also be recycled.

**Maintenance and Inspection**

- Inspections shall be conducted as required by the NPDES permit or contract specifications.
- The WPCM shall monitor on-site solid waste storage and disposal procedures.
- The site shall be policed for litter and debris.

# WM-10 SANITARY/ SEPTIC WASTE MANAGEMENT



**BMP Objectives**

- ☐ **Perimeter Control**
- ☐ **Slope Protection**
- ☐ **Borrow and Stockpiles**
- ☒ **Drainage Areas**
- ☐ **Sediment Trapping**
- ☒ **Stream Protection**
- ☐ **Temporary Stabilizing**
- ☐ **Permanent Stabilizing**

## Definition and Purpose

Procedures and practices to minimize or eliminate the discharge of construction site sanitary/septic waste materials to the storm drain system or to watercourses by providing convenient, well-maintained facilities, and arranging for regular service and disposal.

## Appropriate Applications

Sanitary/septic waste management practices are implemented on all construction sites that use temporary or portable sanitary/septic waste systems.

## Limitations

- Must provide regular access for service contractor.
- Must provide sufficient number of units to accommodate all personnel on site.

## Education

- Educate employees, subcontractors, and suppliers on sanitary/septic waste storage and disposal procedures.
- Educate employees, subcontractors, and suppliers of potential dangers to humans and the environment from sanitary/septic wastes.
- Instruct employees, subcontractors, and suppliers in identification of sanitary/septic waste.
- Hold regular meetings, or incorporate into regular safety meetings the requirement to utilize sanitary facilities.
- Establish a continuing education program.

**Storage and Disposal Procedures**

- Temporary sanitary facilities shall be located as far away as practicable from drainage facilities given site/traffic conditions and watercourses, but still conveniently located for personnel.
- Temporary sanitary facilities shall be positioned to be secure to prevent overturning.
- Wastewater shall not be discharged or buried within the highway right-of-way.
- If an on-site disposal system, such as a septic system, is used, local health agency requirements shall be complied with.
- Temporary sanitary facilities that discharge to the sanitary sewer system shall be properly connected to avoid illicit discharges.
- Sanitary/septic facilities shall be maintained in good working order and serviced by a licensed provider.
-

**Maintenance and Inspection**

- Conduct inspections as required by the NPDES permit or contract specifications.
- Arrange for regular waste collection.

# APPENDIX C

## PROJECT SCHEDULE

# APPENDIX D

## SUPPORTING DOCUMENTS

**IPaC** **U.S. Fish & Wildlife Service**

# IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

NOT FOR CONSULTATION

## Location

Anchorage County, Alaska




## Local office

Anchorage Fish & Wildlife Field Office

(907) 271-2888
(907) 271-2786

4700 Blm Road

Anchorage, AK 99507

NOT FOR CONSULTATION

# Endangered species

**This resource list is for informational purposes only and does not constitute an analysis of project level impacts.**

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

NOT FOR CONSULTATION

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

There are no listed species or critical habitats expected to occur at this location.

# Bald & Golden Eagles

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act [2] and the Migratory Bird Treaty Act (MBTA) [1]. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

There are Bald Eagles and/or Golden Eagles in your project area.

**Measures for Proactively Minimizing Eagle Impacts**
For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the National Bald Eagle Management Guidelines. You may employ the timing and activity-specific distance recommendations in this document when designing your project/activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to Bald Eagle Nesting and Sensitivity to Human Activity.

The FWS does not currently have guidelines for avoiding and minimizing disturbance to nesting Golden Eagles. For site-specific recommendations regarding nesting Golden Eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

If disturbance or take of eagles cannot be avoided, an incidental take permit may be available to authorize any take that results from, but is not the purpose of, an otherwise lawful activity. For assistance making this determination for Bald Eagles, visit the Do I Need A Permit Tool. For assistance making this determination for golden eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

**Ensure Your Eagle List is Accurate and Complete**

NOT FOR CONSULTATION

If your project area is in a poorly surveyed area in IPaC, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to bald or golden eagles on your list, see the "Probability of Presence Summary" below to see when these bald or golden eagles are most likely to be present and breeding in your project area.

Please refer to Alaska's Bird Nesting Season for recommendations to minimize impacts to migratory birds, including eagles.

**Review the FAQs**

The FAQs below provide important additional information and resources.

| NAME | BREEDING SEASON |
|---|---|
| Bald Eagle Haliaeetus leucocephalus<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. | Breeds Mar 1 to Aug 31 |
| Golden Eagle Aquila chrysaetos<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br>https://ecos.fws.gov/ecp/species/1680 | Breeds Mar 1 to Aug 31 |

NOT FOR CONSULTATION

# Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

**Probability of Presence** (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see

below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

**Breeding Season** (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

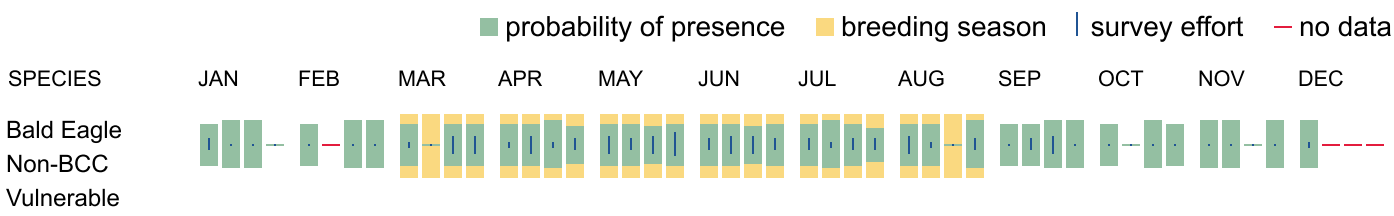
**Survey Effort** (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

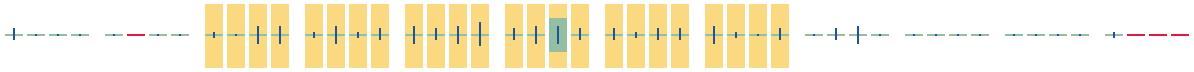
**No Data** (–)
A week is marked as having no data if there were no survey events for that week.

**Survey Timeframe**
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

NOT FOR CONSULTATION



Golden Eagle
Non-BCC
Vulnerable



# Bald & Golden Eagles FAQs

**What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?**

The potential for eagle presence is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are an eagle (Bald and Golden Eagle Protection Act requirements may apply).

**Proper interpretation and use of your eagle report**

On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort line or no data line (red horizontal) means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide you in knowing when to implement avoidance and minimization measures to eliminate or reduce potential impacts from your project activities or get the appropriate permits should presence be confirmed.

**How do I know if eagles are breeding, wintering, or migrating in my area?**

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the RAIL Tool and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If an eagle on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your “IPaC PROBABILITY OF PRESENCE SUMMARY” at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

**Interpreting the Probability of Presence Graphs**

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

***How is the probability of presence score calculated? The calculation is done in three steps:***

The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability

NOT FOR CONSULTATION

of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

**Breeding Season ()**
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

**Survey Effort ()**
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

**No Data ()**
A week is marked as having no data if there were no survey events for that week.

**Survey Timeframe**
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

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# Migratory birds

The Migratory Bird Treaty Act (MBTA) [1] prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service).

**There are migratory birds in your project area. Please refer to Alaska's Bird Nesting Season for recommendations to minimize impacts to migratory birds, including eagles.**

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

### Measures for Proactively Minimizing Migratory Bird Impacts

Your IPaC Migratory Bird list showcases birds of concern, including Birds of Conservation Concern (BCC), in your project location. This is not a comprehensive list of all birds found in your project area. However, you can help proactively minimize significant impacts to all birds at your project location by implementing the measures in the Nationwide avoidance and minimization measures for birds document, and any other project-specific avoidance and minimization measures suggested at the link Measures for avoiding and minimizing impacts to birds for the birds of concern on your list below.

**Ensure Your Migratory Bird List is Accurate and Complete**

If your project area is in a poorly surveyed area, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles document, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

**Review the FAQs**

The FAQs below provide important additional information and resources.

| NAME | BREEDING SEASON |
|---|---|
| Bald Eagle Haliaeetus leucocephalus<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. | Breeds Mar 1 to Aug 31 |
| Cassin's Finch Haemorhous cassinii<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9462 | Breeds May 15 to Jul 15 |
| Chestnut-backed Chickadee Poecile rufescens rufescens<br>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA | Breeds Mar 1 to Jul 31 |
| Golden Eagle Aquila chrysaetos<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br>https://ecos.fws.gov/ecp/species/1680 | Breeds Mar 1 to Aug 31 |

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| | |
|---|---|
| Lesser Yellowlegs Tringa flavipes<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9679 | Breeds elsewhere |
| Olive-sided Flycatcher Contopus cooperi<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/3914 | Breeds May 20 to Aug 31 |
| Rufous Hummingbird Selasphorus rufus<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/8002 | Breeds Apr 15 to Jul 15 |
| Short-billed Dowitcher Limnodromus griseus<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9480 | Breeds Jun 1 to Aug 10 |
| Western Screech-owl Megascops kennicottii cardonensis<br>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA | Breeds Mar 1 to Jun 30 |

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# Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

**Probability of Presence** (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that

week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

**Breeding Season** (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

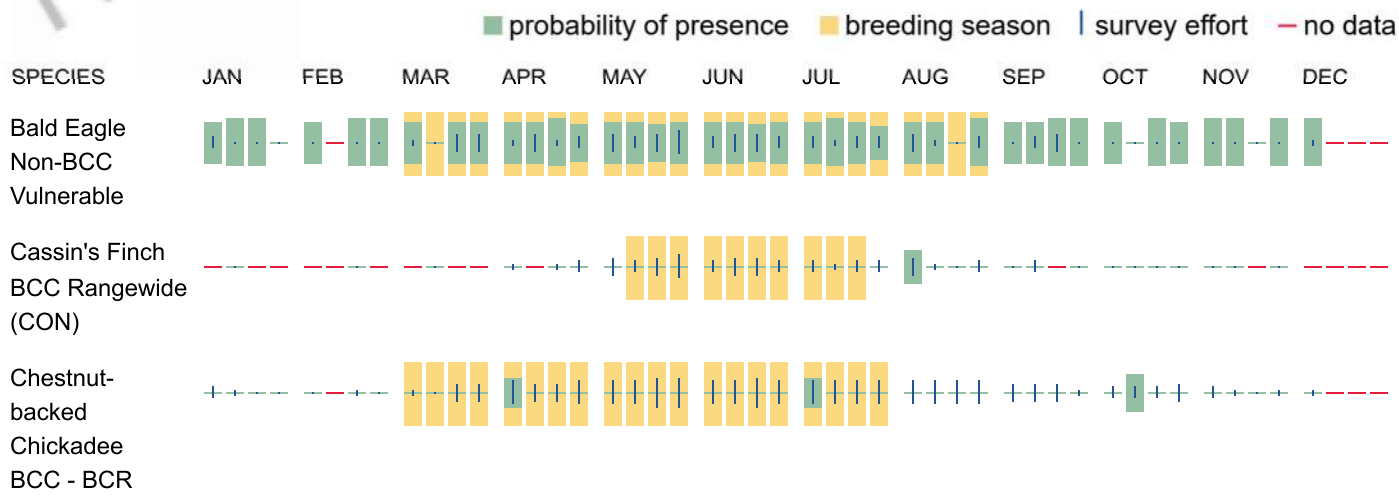
**Survey Effort** (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

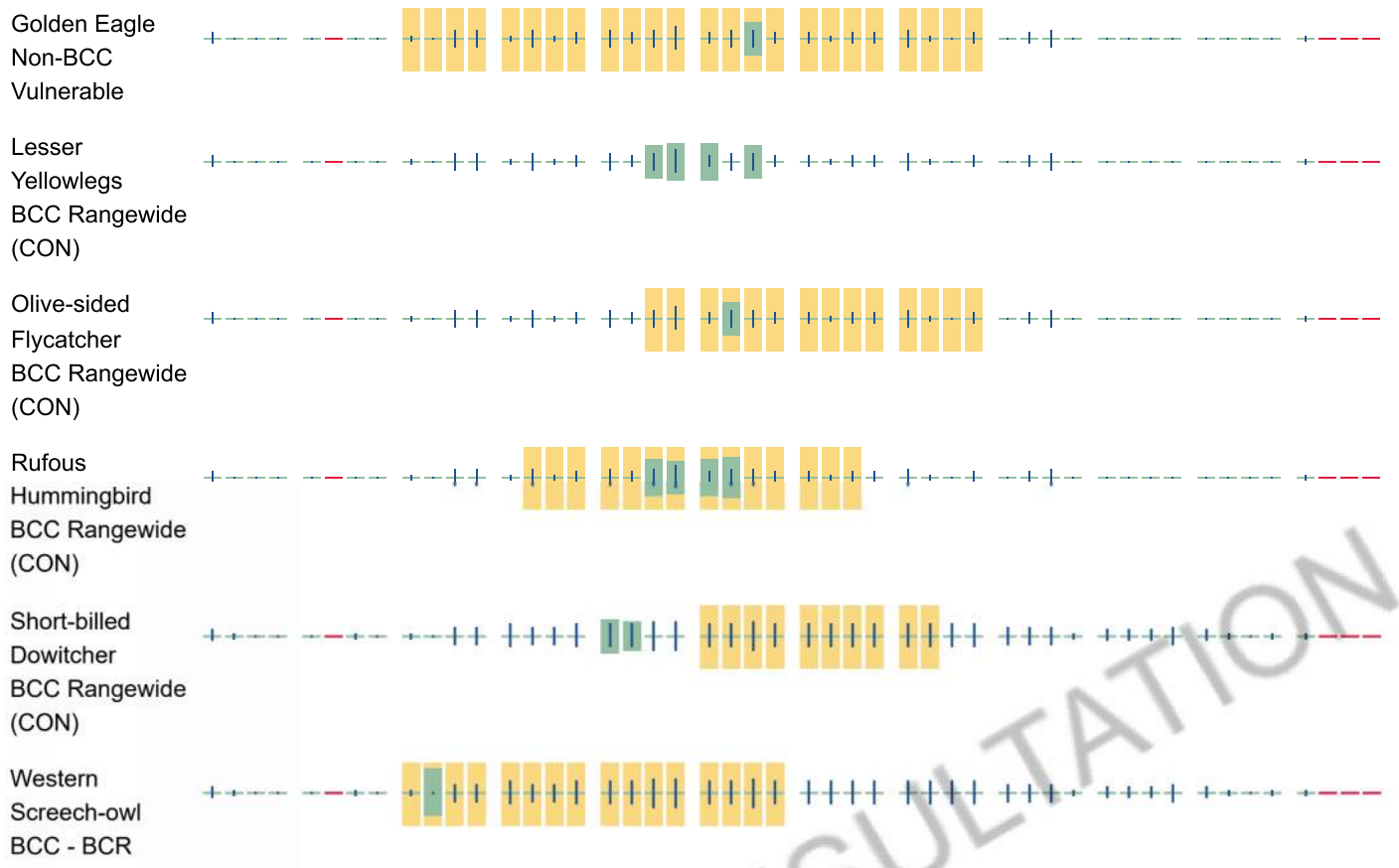
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

**No Data** (–)
A week is marked as having no data if there were no survey events for that week.

**Survey Timeframe**
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

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## Migratory Bird FAQs

**Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds.**

Nationwide Avoidance & Minimization Measures for Birds describes measures that can help avoid and minimize impacts to all birds at any location year-round. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is one of the most effective ways to minimize impacts. To see when birds are most likely to occur and breed in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

**What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?**

The Migratory Bird Resource List is comprised of Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location, such as those listed under the Endangered Species Act or the Bald and Golden Eagle Protection Act and those species marked as “Vulnerable”. See the FAQ “What are the levels of concern for migratory birds?” for more information on the levels of concern covered in the IPaC migratory bird species list.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) with which your project intersects. These species have been identified as warranting special attention because they are BCC species in that area, an eagle (Bald and Golden Eagle Protection Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, and to verify survey effort when no results present, please visit the Rapid Avian Information Locator (RAIL) Tool.

**Why are subspecies showing up on my list?**

Subspecies profiles are included on the list of species present in your project area because observations in the AKN for **the species** are being detected. If the species are present, that means that the subspecies may also be present. If a subspecies shows up on your list, you may need to rely on other resources to determine if that subspecies may be present (e.g. your local FWS field office, state surveys, your own surveys).

**What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?**

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

**How do I know if a bird is breeding, wintering, or migrating in my area?**

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the RAIL Tool and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your “IPaC PROBABILITY OF PRESENCE SUMMARY” at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

**What are the levels of concern for migratory birds?**

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Bald and Golden Eagle Protection Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially BCC species. For more information on avoidance and minimization measures you can implement to help avoid and minimize migratory bird impacts, please see the FAQ “Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds”.

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**Details about birds that are potentially affected by offshore projects**

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

**Proper interpretation and use of your migratory bird report**

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list does not represent all birds present in your project area. It is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide implementation of avoidance and minimization measures to eliminate or reduce potential impacts from your project activities, should presence be confirmed. To learn more about avoidance and minimization measures, visit the FAQ "Tell me about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds".

**Interpreting the Probability of Presence Graphs**
Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

***How is the probability of presence score calculated? The calculation is done in three steps:***
The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

**Breeding Season ()**
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

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**Survey Effort ()**
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

**No Data ()**
A week is marked as having no data if there were no survey events for that week.

**Survey Timeframe**
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

# Facilities

## National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

## Fish hatcheries

There are no fish hatcheries at this location.

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# Wetlands in the National Wetlands Inventory (NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND

- PEM1F
- PEM1T
- PEM1Fx
- PEM1C

FRESHWATER FORESTED/SHRUB WETLAND

- PSS1/EM1B
- PFO1/SS1A
- PSS1A
- PSS1/USR
- PSS1C
- PFO1/SS1S
- PSS1/EM1C
- PFO5F
- PSS1/EM1A
- PSS1B
- PSS1F

FRESHWATER POND

- PUBHx
- PUBHb
- PUBH

LAKE

- L1UBHx
- L1UBH

RIVERINE

- R3UBH
- R5UBH

A full description for each wetland code can be found at the National Wetlands Inventory website

**NOTE:** This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

**Data limitations**

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The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

**Data exclusions**

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

**Data precautions**

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

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# APPENDIX E

## DELEGATION OF AUTHORITY AND SUBCONTRACTOR CERTIFICATIONS

# APPENDIX F

## PERMIT CONDITIONS

**ALASKA POLLUTANT DISCHARGE ELIMINATION SYSTEM**

**GENERAL PERMIT FOR DISCHARGES FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES**
**(Construction General Permit) – Final**

Permit Number: **AKR100000**

DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Wastewater Discharge Authorization Program
555 Cordova Street
Anchorage, AK 99501

In compliance with the provisions of the Clean Water Act (CWA), 33 U.S.C. §1251 et. seq., as amended by the Water Quality Act of 1987, P.L. 100-4, this permit is issued under provisions of Alaska Statutes 46.03, the Alaska Administrative Code (AAC) as amended, and other applicable State laws and regulations.

Operators of large and small construction activities described in Part 1.4 of this Alaska Pollutant Discharge Elimination System (APDES) general permit, except for those activities excluded from authorization to discharge in Part 1.4.4 of this permit, are authorized to discharge storm water associated with construction activity to waters of the U.S., in accordance with the conditions and requirements set forth herein. Permit authorization is required from the "commencement of construction activities" until "final stabilization" as defined in Appendix C.

This permit shall become effective on 2/1/2021.

This permit and the authorization to discharge shall expire at midnight, 1/31/2026.

| | |
|---|---|
| Signature | December 17, 2020<br>Date |
| Gene McCabe | Program Manager |

# TABLE OF CONTENTS

**1.0 COVERAGE UNDER THIS PERMIT ..... 9**
1.1 Introduction ..... 9
1.2 Person(s) Responsible for Obtaining Authorization under this Permit ..... 9
1.3 Permit Area ..... 10
1.4 Eligibility ..... 10
- *Allowable Storm Water Discharges ..... 10*
- *Authorized Non-Storm Water Discharges ..... 11*
- *Limitations on Coverage ..... 11*
- *Emergency Repairs or Reconstruction of a Facility ..... 12*

1.5 Waivers for Certain Small Construction Activities ..... 12

**2.0 AUTHORIZATION UNDER THIS GENERAL PERMIT ..... 13**
2.1 Submittal Requirements Prior to Construction ..... 13
2.2 How to Obtain Authorization ..... 16
2.3 How to Submit an Notice of Intent (NOI) ..... 17
2.4 Submission Deadlines ..... 17
- *New Projects ..... 17*
- *Permitted Ongoing Projects ..... 17*
- *Change of Permittee for a Permitted Ongoing Project ..... 18*
- *Unpermitted Ongoing Project ..... 18*

2.5 Date of Authorization to Begin Discharge ..... 18
2.6 Continuation of Expired General Permit ..... 18
2.7 Submittal of a Modification to Original NOI ..... 19
2.8 Alternative Permits ..... 19
- *DEC Requiring Authorization under an Alternative Permit ..... 19*
- *Operator Requesting Authorization under an Alternative Permit ..... 20*

**3.0 COMPLIANCE WITH STANDARDS AND LIMITS ..... 20**
3.1 Requirements for all Projects ..... 20
3.2 Discharge to Impaired Water Body ..... 20
- *Discharging into a Receiving Water Body with an Approved or Established TMDL (Category 4a or 4b) (e.g., Turbidity or Sediment) ..... 21*

3.3 Protection of Endangered Species ..... 22

**4.0 CONTROL MEASURES ..... 22**
4.1 Control Measure Selection and Design Considerations ..... 22
4.2 Erosion Control Measures ..... 24
- *Delineation of Site ..... 24*
- *Minimize the Amount of Soil Exposed during Construction Activity ..... 24*
- *Maintain Natural Buffer Areas ..... 24*
- *Clearing Vegetation ..... 24*
- *Control Storm Water Discharges and Flow Rates ..... 25*
- *Protect Steep Slopes ..... 25*

4.3 Sediment Control Measures ..... 25
- *Storm Water Inlet Protection Measures ..... 26*

- *Water Body Protection Measures* ..... *26*
- *Down-Slope Sediment Controls* ..... *26*
- *Stabilized Construction Vehicle Access and Exit Points* ..... *26*
- *Vehicle Trackout* ..... *26*
- *Dust Generation* ..... *26*
- *Stockpile Management* ..... *26*
- *Authorized Non-Storm Water Discharges* ..... *26*
- *Sediment Basins* ..... *26*

4.4 Dewatering ..... 27
4.5 Soil Stabilization ..... 28

- *Minimum Requirements for Soil Stabilization* ..... *28*
  - *Deadline to Initiate Stabilization* ..... *28*
  - *Deadline to Complete Temporary Stabilization Activities* ..... *29*
  - *Exceptions to the Deadlines for Initiating and Completing Stabilization* ..... *29*
  - *Deadline to Complete Final Stabilization* ..... *30*
- *Stabilization Requirements for Terminating Permit Authorization* ..... *30*

4.6 Treatment Chemicals ..... 30
4.7 Prohibited Discharge ..... 32
4.8 Good Housekeeping Measures ..... 32

- *Washing of Equipment and Vehicles and Wheel Wash-Down* ..... *32*
- *Fueling and Maintenance Areas* ..... *32*
- *Staging and Material Storage Areas* ..... *33*
- *Washout of Applicators/Containers used for Paint, Concrete, and Other Materials* ..... *33*
- *Fertilizer or Pesticide Use* ..... *33*
- *Storage, Handling, and Disposal of Construction Waste* ..... *33*

4.9 Spill Notification ..... 34
4.10 Projects near a Public Water System (PWS) ..... 34
4.11 Permanent Storm Water Management Control ..... 34
4.12 Winter Considerations ..... 35

- *Winter Shutdown* ..... *35*
- *Winter Construction* ..... *35*

4.13 Maintenance of Control Measures ..... 35
4.14 Storm Water Lead and Training of Employees ..... 36
4.15 Applicable Federal, State, Tribal, or Local Requirements ..... 36

**5.0 STORM WATER POLLUTION PREVENTION PLAN ..... 36**
5.1 Storm Water Pollution Prevention Plan (SWPPP) ..... 36
5.2 Deadlines for SWPPP Preparation ..... 36
5.3 SWPPP Contents ..... 36

- *Permittee* ..... *37*
- *Storm Water Contact(s)* ..... *37*
- *Project Site-Specific Conditions* ..... *37*
- *Nature of Construction Activity* ..... *37*
- *Site Map(s)* ..... *37*
- *Control Measures* ..... *38*
- *Construction and Waste Materials* ..... *39*
- *Locations of Other Industrial Storm Water Discharges* ..... *39*

- *Non-Storm Water Discharges* ..... *39*

5.4 Inspections ..... 39
5.5 Monitoring Plan (if applicable) ..... 40
5.6 Documentation of Permit Eligibility Related to a Total Maximum Daily Load ..... 40
5.7 Documentation of Permit Eligibility Related to Endangered Species ..... 40
5.8 Post-Authorization Records ..... 41

- *Copy of Permit Requirements* ..... *41*
- *Additional Documentation Requirements* ..... *41*

5.9 Maintaining an Updated SWPPP ..... 41

- *SWPPP Modifications* ..... *41*
- *SWPPP Amendment Log* ..... *42*
- *Deadlines for SWPPP Modifications* ..... *42*

5.10 Additional SWPPP Requirements ..... 42

- *Retention of the SWPPP* ..... *42*
- *Main Entrance Signage* ..... *42*
- *Availability of SWPPP* ..... *42*
- *Signature and Certification* ..... *43*

5.11 Requirements for Different Types of Operators ..... 43

**6.0 INSPECTIONS ..... 44**
6.1 Inspection Frequency ..... 44
6.2 Case-by-Case Reductions in Inspection Frequency ..... 44
6.3 Qualified Person ..... 45
6.4 Site Inspection ..... 45

- *Location of Inspections* ..... *45*
- *Scope of Inspection* ..... *45*

6.5 Linear Project Inspections ..... 46
6.6 Inspections by DEC or Applicable Government Authority ..... 46
6.7 Inspection Report ..... 46

**7.0 MONITORING ..... 47**
7.1 General Requirements ..... 47
7.2 Qualified Person ..... 47
7.3 Discharge Monitoring Requirements ..... 47

- *Sampling Parameter* ..... *47*
- *Sampling Frequency* ..... *47*
- *Sampling Locations* ..... *48*
- *Representative Discharge Point for a Linear Project* ..... *48*
- *Commingled Discharges* ..... *48*
- *Sample Type* ..... *48*
- *Sampling and Analysis Methods* ..... *48*
- *Rainfall Monitoring* ..... *49*
- *Recording Monitoring Data* ..... *49*
- *Reporting Monitoring Results* ..... *49*

7.4 Visual Monitoring for a Linear Project ..... 49

- *Visual Monitoring Frequency* ..... *49*
- *Visual Monitoring Locations* ..... *50*

- *Visual Monitoring Parameters* ..... *50*
- *Recording Visual Monitoring Data* ..... *50*

**8.0 CORRECTIVE ACTIONS ..... 50**
8.1 Corrective Action Conditions ..... 50
8.2 Deadlines for Corrective Actions ..... 51
8.3 Corrective Action Log ..... 51
8.4 Corrective Action Report ..... 51
8.5 Substantially Identical Outfalls ..... 52

**9.0 REPORTING AND RECORDKEEPING ..... 52**
9.1 Annual Report ..... 52
9.2 Corrective Action Report ..... 52
9.3 Spill of Hazardous Substances Report ..... 52
9.4 Retention of Records ..... 53
9.5 Request for Submittal of Records ..... 53

**10.0 TERMINATION OF PERMIT AUTHORIZATION ..... 53**
10.1 Submitting a Notice of Termination (NOT) ..... 53
10.2 When to Submit a Notice of Termination ..... 53
10.3 Submitting a Notice of Termination ..... 54

**11.0 PERMIT REOPENER CLAUSE ..... 54**
11.1 Procedures for Modification or Revocation ..... 54
11.2 Water Quality Protection ..... 54
11.3 Timing of Permit Modification ..... 55

**Appendix A Standard Permit Conditions**
**Appendix B Acronyms**
**Appendix C Definitions**
**Appendix D Small Construction Waivers and Instructions**
**Appendix E Forms**

- Notice of Intent (NOI)
- Notice of Termination (NOT)
- Notice of Intent Modification
- Low Erosivity Waiver
- Annual Report


## TABLES


Table 1: Schedule of Submissions ..... 6
Table 2: Summary of Permit Required On-Site Documentation ..... 8
Table 3: SWPPP Submittal within Municipality of Anchorage MS4 area. ..... 15
Table 4: Recommended Experience or Required Training for Specific Roles ..... C-13

## SCHEDULE OF SUBMISSIONS

The Schedule of Submissions (Table 1) summarizes the required submissions and activities the permittee must complete and/or submit to the Alaska Department of Environmental Conservation (DEC or the Department) during the terms of this permit. The operator is responsible for all submissions and activities even if they are not summarized below.

Table 1: Schedule of Submissions

| Permit Part | Type of Project | Submittal Requirement | Frequency | Due Date | Submit to [1] |
|---|---|---|---|---|---|
| **Prior to Construction** | | | | | |
| 1.4.4.7, 2.1.1, 2.1.2, and 4.11 | Projects that will construct Permanent Storm Water Management Controls | Engineering Plans | Once | At least 30 calendar days before the start of construction or as required by the MS4 Operator | Permitting Program or MS4 Operator |
| 1.5 | Small construction activities that use a waiver in lieu of CGP authorization | Waiver Certification | Once | At least five business days before proposed start of construction | Permitting Program |
| 2.1.3 | Projects that disturb greater than or equal to 5 acres of land and are outside an MS4 area | SWPPP [2] | Once | With NOI | Permitting Program |
| 2.1.4 | Projects inside an MS4 area | SWPPP | Once | Depends on requirements of MS4 operator | MS4 Operator |
| 2.1.5 and 4.6.7 | Project that use Cationic Treatment Chemicals | Engineering Plans and Project Details | Once | At least 14 calendar days before use of the system | Permitting Program |
| 2.1.6 | Projects that discharge to an Outstanding Natural Resource Water | Site-Specific Antidegradation Analysis | Once | At least 14 calendar days before filing NOI | Permitting Program |
| 2.3 | Projects that disturb greater than or equal to 1 acre of land | Notice of Intent | Once | At least five business days before the start of construction | Permitting Program |

Table 1: Schedule of Submissions

| Permit Part | Type of Project | Submittal Requirement | Frequency | Due Date | Submit to [1] |
|---|---|---|---|---|---|
| **During Construction** | | | | | |
| 2.4.2<br>2.6 | For an authorized permittee if the permittee intends to continue operations and discharges beyond the term of this permit | Submit a complete and accurate new NOI according to Part 2.3 | Once | Within 90 calendar days of the effective date of this permit | Permitting Program |
| 2.7 | To update or correct information on the original NOI | NOI Modification | As needed | As needed | Permitting Program |
| 3.2, 8.4, and 9.2 | If the difference between upstream and downstream samples exceed WQS for turbidity | Corrective Action Report | As necessary | At least 14 calendar days after receiving monitoring results | Compliance Program |
| 9.1 | Projects that disturb greater than or equal to 20 acres of land | Annual Report | As needed for sites meeting Part 3.2 | By December 31st or with NOT | Compliance Program |
| 9.5 | All projects with an active NOI | Request for Submittal of Records | As requested by DEC | At least 30 calendar days after receipt of request | As requested by DEC |
| **Post Construction** | | | | | |
| 10.2 | All projects with an active NOI | Notice of Termination (NOT) | Once | Within 30 calendar days of completion of the project | Permitting Program |

Note:
1 See Appendix A, Part 1.1 for Permitting and Compliance Program contact information and addresses
2 All projects that require an NOI must prepare a SWPPP. However, only operators who are developing projects that disturb greater than or equal to five (5) acres of land and are outside an MS4 area are required to submit a SWPPP to DEC.

## REQUIRED ON-SITE DOCUMENTATION

The Summary of Required On-Site Documentation (Table 2) lists the documents the permittee must have available at the project site or the project management office. The permittee is responsible for all documentation even if they are not summarized below.

Table 2: Summary of Permit Required On-Site Documentation

| Permit Part | Document | Frequency | Purpose of Document |
|---|---|---|---|
| 2.3 | NOI | Once at start of project | Applicant request for authorization to discharge under permit coverage |
| 2.5 | DEC NOI Reply Letter | Once at start of project | To provide permittee with DEC project tracking number indicating project is covered by CGP |
| 2.7 | NOI Modification | As needed | To modify the original NOI if project conditions, personnel, or SWPPP location change |
| 5.0 | SWPPP | Developed prior to submitting the NOI. Updated as necessary. | To describe the project and the control measures to minimize the discharge of pollutants into waters of the U.S. |
| 5.4; 6.7 | Inspection Reports | Conducted at frequency specified in SWPPP | To monitor compliance with SWPPP and CGP |
| 5.5; 7.0 | Monitoring Plan (if required) | As needed | To describe monitoring of storm water discharge for those projects that disturb more than threshold requirement |
| 5.6 | Permit Eligibility related to Total Maximum Daily Load (TMDL) | Once at start of project | To document compliance with TMDL requirements |
| 5.7 | Permit Eligibility related to Endangered Species Act (ESA) | Once at start of project | To document compliance with ESA requirements |
| 5.8.1 | Copy of this permit | Once at start of project | To include in SWPPP |
| 5.8.2 | Additional Documentation in the SWPPP | Updated as necessary | To maintain summaries of various specific activities at the site to document they were accomplished. |
| 8.3 | Corrective Action Log (if necessary) | Updated as necessary | To list the corrective actions taken at a site |
| 8.4; 9.2 | Corrective Action Report (if necessary) | As needed | To report exceeding the turbidity requirement and describe |
| 9.1 | Annual Report (if required) | Annually or at NOT | To report result of discharge monitoring |
| 9.4 | Records | As needed | To maintain project records |
| 10.2 | NOT | Once at completion of project | To notify DEC that the permittee is terminating permit coverage |

# 1.0 COVERAGE UNDER THIS PERMIT

## 1.1 Introduction

The Alaska Construction General Permit (CGP) authorizes storm water discharges from large and small construction-related activities that result in a total land disturbance of equal to or greater than one acre and where those discharges enter waters of the U.S. (directly or through a storm water conveyance system) or a municipal separate storm sewer system (MS4) leading to waters of the U.S. subject to the conditions set forth in this permit. This permit also authorizes storm water discharges from certain construction support activities and some non-storm water discharges commonly associated with construction sites.

The goal of this permit is to minimize erosion and reduce or eliminate the discharge of pollutants, such as sediment carried in storm water runoff from construction sites through implementation of appropriate control measures. Polluted storm water runoff can adversely affect fish, animals, plants, and humans. In order to ensure protection of water quality and human health, this permit describes control measures that must be used to manage storm water runoff during construction activities. This permit replaces the CGP that became effective February 1, 2016 and expired on January 31, 2021.

## 1.2 Person(s) Responsible for Obtaining Authorization under this Permit

1.2.1 All operators of large or small construction activities that meet the conditions in Part 1.4 must obtain authorization under this permit. For the purposes of this permit, an "operator" is any party associated with a construction project that meets either of the following two criteria:

1.2.1.1 The party has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications, or

1.2.1.2 The party has day-to-day operational control of those activities at a project that are necessary to ensure compliance with the permit conditions (e.g., they are authorized to direct workers at a site to carry out activities required by the permit)

*Note: Subcontractors generally are not considered operators for the purposes of this permit.*

*Note: Where there are multiple operators associated with the same project, all operators are required to obtain permit authorization. The following applies in these situations:*

- *If one operator has control over plans and specifications and a different operator has control over activities at the project site, they may divide responsibility for compliance with the terms of this permit as long as they develop a group storm water pollution prevention plan (SWPPP) (see Part 5.1), which documents which operator has responsibility for each requirement of the permit.*
- *If an operator only has operational control over a portion of a larger project (e.g., one of four homebuilders in a subdivision), the operator is responsible for compliance with all applicable effluent limits, terms, and conditions of this permit as it relates to the activities on their portion of the construction site, including protection of endangered species, critical habitat, and historic properties, and implementation of control measures described in the SWPPP in the areas under their control.*
- *An operator must ensure either directly or through coordination with other permittees, that their activities do not render another permittee's pollutant discharge controls ineffective.*

## 1.3 Permit Area

This general permit covers the State of Alaska, except lands within the Metlakatla Indian Reservation and the Denali National Park and Preserve.

## 1.4 Eligibility

1.4.1 **Eligibility Requirements**. To be authorized under this permit, the project must meet the following conditions or be notified by DEC that the site is eligible for permit coverage.

1.4.1.1 The project will disturb one or more acres of land, or will disturb less than one acre of land but is part of a common plan of development or sale that will ultimately disturb one or more acres of land;

1.4.1.2 The site will discharge storm water to waters of the U.S. (directly or through a storm water conveyance system) or a MS4 leading to a waters of the U.S.;

1.4.1.3 The project area is located in an area where DEC is the permitting authority;

1.4.1.4 The project is not already covered under a different APDES permit;

1.4.1.5 The project does not discharge to an impaired waterway with an EPA-approved or established Total Maximum Daily Load (TMDL) that specifically precludes such discharges; and

1.4.1.6 The project is not likely to jeopardize the continued existence or cause a take of any threatened or endangered species protected under the Endangered Species Act (ESA) or their designated critical habitat.

**1.4.2 Authorized Storm Water Discharges.** Subject to compliance with the terms and conditions of this permit, the following discharges are authorized under this permit:

1.4.2.1 Storm water discharges associated with large and small construction activities, including those that are part of a common plan of development or sale that will ultimately disturb one or more acres of land.

1.4.2.2 Storm water discharges designated by DEC as needing a storm water permit under 40 CFR §122.26(a)(1)(v) or §122.26(b)(15)(ii).

1.4.2.3 Storm water discharges from support activities (such as concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, borrow areas) (as defined in Appendix C), whether on-site, adjacent to, or off-site, provided:

1.4.2.3.1 The support activity is directly related to the construction site required to have permit authorization for discharges of storm water associated with construction activity under this permit:

1.4.2.3.2 The support activity is not a commercial operation serving multiple unrelated construction projects by different permittees;

1.4.2.3.3 The support activity does not operate beyond the completion of the construction activity at the project it supports; and

1.4.2.3.4 Appropriate control measures are identified in the Storm Water Pollution Prevention Plan (SWPPP) and pollutant discharges are minimized in compliance with Parts 3.0 and 4.0 of the permit.

1.4.2.4 Discharges composed of allowable discharges listed in Parts 1.4.2 and 1.4.3 commingled with a discharge authorized by a different APDES permit and/or a discharge that does not require APDES permit authorization.

**1.4.3 Authorized Non-Storm Water Discharges.** Subject to compliance with the terms and conditions of this permit, the following non-storm water discharges are authorized under this general permit, provided the non-storm water component of that the discharge is in compliance with the SWPPP requirements in Part 5.3.9:

1.4.3.1 Discharges from fire-fighting activities;

1.4.3.2 Fire hydrant flushings;

1.4.3.3 Waters used to wash vehicles where detergents are not used;

1.4.3.4 Water used to control dust;

1.4.3.5 Potable water including uncontaminated water line flushings;

1.4.3.6 Routine external building wash down where detergents are not used;

1.4.3.7 Pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used;

1.4.3.8 Uncontaminated air conditioning or compressor condensate;

1.4.3.9 Uncontaminated, non-turbid discharges of ground water or spring water;

1.4.3.10 Foundation or footing drains where flows are not contaminated with process materials such as solvents or contaminated groundwater;

1.4.3.11 Uncontaminated construction dewatering waters that are treated by an appropriate control measure in compliance with Part 4.4.2, or have been treated with treatment chemicals in compliance with Part 4.6; and

1.4.3.12 Landscape irrigation.

**1.4.4 Limitations on Coverage.** The following discharges are <u>not authorized</u> under this permit:

1.4.4.1 **Post-Construction Discharges**. Discharges that originate from the project after construction activities have ceased and a Notice of Termination (NOT) has been submitted in accordance to Part 10.0, including any temporary support activity.

1.4.4.2 **Discharges that May Exceed Water Quality Standards.** Discharges that DEC, prior to authorization under this permit, determines will cause, have the reasonable potential to cause, or contribute to an excursion above any applicable water quality standard (WQS). Where such a determination is made prior to authorization, DEC may notify the applicant that an individual permit application is necessary in accordance with Part 2.8. However, DEC may provide permit authorization after the applicant has included appropriate controls and implementation procedures designed to bring the discharge into compliance with WQS's in accordance with Part 3.1.

1.4.4.3 **Discharges to Water Quality Impaired Waters.** Discharges into receiving waters that are listed as impaired waters in the report *Alaska's Final 2018 Integrated Water Quality Monitoring and Assessment Report*, dated March 26, 2020 (or the most current EPA-approved version), or with an approved or established TMDL analysis, unless the discharges are in accordance with Part 3.2.

1.4.4.4 **Comingled Discharges.** Discharges that are mixed with non-storm water, unless they are listed as allowable non-storm water discharges in Part 1.4.3.

1.4.4.5 **Discharges Currently or Previously Covered by another Permit.** Unless the permittee received written notification from DEC specifically allowing these discharges to be authorized under this permit, the permittee is not eligible for coverage under this permit for any of the following:

1.4.4.5.1 Storm water discharges associated with construction activity that have been covered under an individual permit, an alternative APDES general permit, or are required to obtain authorization under an alternative general permit in accordance with Part 2.8.

1.4.4.5.2 Discharges from sites where any APDES permit has been or is in the process of being denied, terminated, or revoked by DEC (*this does not apply to the routine reissuance of permits every five years*).

1.4.4.6 **Discharges of Dredged or Fill Material.** Discharges of dredged or fill material into waters of the U.S. requiring federal authorization through the U.S Army Corps of Engineers CWA Section 404 Regulatory Program.

1.4.4.7 **Discharges from Nondomestic Treatment Works.** Discharges of storm water to the land or groundwater from a nondomestic wastewater treatment works (as defined in 18 AAC 72) using permanent storm water management controls unless they are in compliance with 18 AAC 72.600 and EPA Underground Injection Control regulations[1].

### 1.4.5 Emergency Repairs or Reconstruction of a Facility

1.4.5.1 Discharges from construction activities conducted in response to a disaster (as defined in Alaska Statute 26.23.900) are conditionally authorized, provided that the operator does the following:

1.4.5.1.1 Submits a Notice of Intent (NOI) and SWPPP (if project disturbs five or more acres in accordance with Part 2.1) to the Department in accordance with Part 2.3 and 2.4 within 30 calendar days of initiating construction activities.

1.4.5.1.2 Implements appropriate control measures as soon as possible after initiating construction activities. For discharges occurring during the initial 30 day period, the permittee must demonstrate compliance with the terms and conditions of this permit to the extent practicable depending on the disaster.

## 1.5 Waivers for Certain Small Construction Activities

1.5.1 **Waiver Criteria.** An operator of a small construction activity may qualify for a waiver in lieu of obtaining authorization under this permit if one of the following three criteria are met. Details of the three waiver options and procedures for requesting a waiver are provided in Appendix D:

1.5.1.1 The project has a low rainfall erosivity factor;

1.5.1.2 DEC or EPA has established or approved a TMDL that addresses the pollutant(s) of concern and has determined storm water control measures are not needed to protect water quality;

1.5.1.3 The operator develops an equivalent analysis that determined allocations for pollutant(s) of concern are not needed to protect water quality. This waiver is only available for non-impaired waters.

[1] For additional information refer to DEC's Engineered Wastewater Disposal System web page at http://dec.alaska.gov/water/wastewater/engineering/engineered-systems and EPA's Underground Injection Control web page at http://www.epa.gov/uic/underground-injection-control-region-10-ak-id-or-and-wa

# 2.0 AUTHORIZATION UNDER THIS GENERAL PERMIT

**2.1 Submittal Requirements Prior to Construction** Depending on the type and location of the project, the operator may be required to submit information to the DEC and/or an MS4 operator for review prior to filing the NOI and commencement of construction activities. The following is a summary of the information to be submitted to each agency by project type and area of jurisdiction.

2.1.1 **Permanent Storm Water Management Controls** (Outside MS4)**.** An operator installing permanent storm water management controls in accordance with Part 4.11 and where the project is located outside of an APDES permitted MS4, must submit information required by the DEC in Part 4.11 at least thirty (30) calendar days prior to filing the NOI for the project. The operator must receive the DEC's written reply prior to the commencement of construction activities.

2.1.2 **Permanent Storm Water Management Controls** (Inside MS4)**.** An operator installing permanent storm water management controls in accordance with Part 4.11 and where the project is located inside the area of an APDES permitted MS4 must submit information required by the MS4 operator for the project and must receive the MS4 operator's approval prior to the commencement of construction activities. Check with the respective MS4 operator for their particular submittal requirements. *(See http://dec.alaska.gov/water/wastewater/stormwater/swppp-submittal-rqmts for further MS4 operator contact information.)*

2.1.2.1 Operators of construction activity within the Municipality of Anchorage (with the exception of ADOT&PF, see 2.1.2.2) shall submit information to:

Municipality of Anchorage
Public Works Department
4700 South Elmore Rd.
P.O. Box 196650
Anchorage, AK 99519-6650

2.1.2.2 Operators of construction activities for Alaska Department of Transportation & Public Facilities (ADOT&PF) construction projects within the Municipality of Anchorage shall submit information to:

ADOT&PF
Construction and Operations, Central Region
4111 Aviation Ave.
P.O. Box 196900
Anchorage, AK 99519

2.1.2.3 Operators of construction activity within the Fairbanks North Star Borough shall submit information to:

Fairbanks North Star Borough
Department of Public Works
P.O. Box 71267
Fairbanks, AK 99707

2.1.2.4 Operators of construction activity within the City of Fairbanks shall submit information to:

City of Fairbanks
Engineering Division
800 Cushman St.
Fairbanks, AK 99701

2.1.2.5 Operators of construction activity within the City of North Pole shall submit information to:

City of North Pole
Department of Public Works
125 Snowman Lane
North Pole, AK 99705

2.1.2.6 Operators of construction activity within the Joint Base Elmendorf-Richardson shall submit information to:

Storm Water Lead
673rd CES/CEIEC
724 Quartermaster Drive
Joint Base Elmendorf-Richardson

2.1.2.7 Operators of construction activity within the Port of Anchorage shall submit information to:

Port of Anchorage
Operations and Maintenance
2000 Anchorage Port Road
Anchorage, AK 99501

2.1.2.8 Operators of construction activity within Fort Wainwright shall submit information to:

Water Quality Program
US Army Garrison, Alaska DPW, Environmental Division
3023 Engineer Place
Fort Wainwright, AK 99703

2.1.3 **SWPPP Submittal to DEC**. An operator developing a project that disturbs five or more acres of land must submit a copy of the SWPPP to the DEC (Appendix A, Part 1.1.1) at the time the NOI is filed (electronic attachments to the eNOI are preferred).

2.1.4 **SWPPP Submittal to MS4**. An operator developing a project that is located inside the area of an APDES permitted MS4 must submit a copy of the SWPPP to the respective MS4 operator. Check with the respective MS4 operator for their particular submittal requirements. *(http://dec.alaska.gov/water/wastewater/stormwater/swppp-submittal-rqmts for further MS4 operator contact information.)*

2.1.4.1 Within the Municipality of Anchorage

2.1.4.1.1 An operator of construction projects disturbing one or more acres of land shall submit a copy of the SWPPP to either DEC or the Municipality based on the project type and operator as shown in the following table.

**Table 3: SWPPP Submittal within Municipality of Anchorage MS4 area.**

| Project Type | Submit SWPPP to |
|---|---|
| Government (Federal, state, or Port of Anchorage) road projects and other government sponsored transportation projects such as ports, railroads, or airports | DEC |
| Government (municipal) road projects and other government transportation projects | Municipality |
| Public or private utility projects when the utility is initiating the work | Municipality |
| Work that requires a building permit | Municipality |
| Non-publicly funded transportation projects | Municipality |

2.1.4.1.2 Submittal of the SWPPP to the Municipality shall be made according to the most recent Municipality requirements and be submitted to the address given in Part 2.1.2.1

2.1.4.1.3 Submittal of the SWPPP to the DEC shall be to the address in Appendix A, Part 1.1.1.

2.1.4.2 Within the road service areas of the Fairbanks North Star Borough, check with the Borough for the latest SWPPP submittal requirements at the address given in Part 2.1.2.3. An operator of a publicly-funded project disturbing one or more acres of land shall submit a copy of the SWPPP to the DEC for review at the address in Appendix A, Part 1.1.1.

2.1.4.3 Within the City of Fairbanks, check with the City for the latest SWPPP submittal requirements at the address given in Part 2.1.2.4. An operator of a public-funded project disturbing one or more acres of land shall submit a copy of the SWPPP to the DEC for review at the address in Appendix A, Part 1.1.1.

2.1.4.4 Within the City of North Pole**,** check with the City for the latest SWPPP submittal requirements at the address given in Part 2.1.2.5. An operator of a public-funded project disturbing one or more acres of land shall submit a copy of the SWPPP to the DEC for review at the address in Appendix A, Part 1.1.1.

2.1.4.5 Within the Joint Base Elmendorf-Richardson, check with the latest SWPPP submittal requirements at the address given in Part 2.1.2.6.

2.1.4.6 Within the Port of Anchorage, check with the latest SWPPP submittal requirements at the address given in Part 2.1.2.7.

2.1.4.7 Within the Fort Wainwright installation boundary, check with the latest SWPPP submittal requirements at the address given in Part 2.1.2.8.

2.1.5 **Projects Using Cationic Treatment Chemicals or an Active Treatment System**. Submit engineering plans and projects details listed in Part 4.6.7 to DEC (Appendix A, Part 1.1.1) at least 14 calendar days prior to use at the construction site.

2.1.6 **Projects that Discharge to an Outstanding Natural Resource Water**. Contact DEC at least 30 calendar days prior to commencement of construction activities that may discharge to a high quality water that constitutes an outstanding national resource, such as a water of a national or state park or wildlife refuge or a water of "exceptional recreational or ecological significance" (as described in Appendix C), to discuss the need to conduct a site-specific antidegradation analysis. If an antidegradation analysis is required, it must be submitted at least 14 calendar days prior to filing the NOI. Before beginning construction activities, operators must receive a written approval of the analysis from the DEC.

*Note: No Outstanding Natural Resource Waters are designated in Alaska as of the date of this permit issuance.*

## 2.2 How to Obtain Authorization

2.2.1 To obtain authorization under this permit, an operator must:

2.2.1.1 Be responsible for a project located in the area where DEC is the permitting authority;

2.2.1.2 Meet the eligibility requirements of Part 1.4;

2.2.1.3 Develop a SWPPP according to the requirements in Part 5.0 prior to filing for an NOI and submit a copy of the SWPPP as specified in Part 2.1;

2.2.1.4 Select, design, install, and implement control measures in accordance with Part 4.0 to meet non-numeric effluent limits;

2.2.1.5 Submit a complete and accurate NOI either using DEC's electronic system or using a paper form in accordance with Part 2.3 prior to commencing construction activities;

2.2.1.6 Pay the general permit authorization fees in accordance with 18 AAC 72.956;

2.2.1.7 Submit any additional information requested by the DEC or MS4 Operator (if applicable); and

2.2.1.8 Be granted authorization to discharge by the DEC.

2.2.2 Submission of the NOI demonstrates the operator's intent to be covered by this permit; it is not a determination by DEC that the operator meets the eligibility requirements for the permit. A discharge is **not authorized** if:

2.2.2.1 The operator's NOI is incomplete or inaccurate;

2.2.2.2 DEC requires the operator to obtain authorization under an individual permit or an alternative general permit; or

2.2.2.3 The discharge does not meet the eligibility requirements under Part 1.4.

2.2.3 If the information on the NOI is incorrect or is missing, the NOI will be deemed incomplete and permit authorization will not be granted. A complete NOI shall include the following information:

2.2.3.1 **Operator**: organization name, contact person and title, complete mailing address, telephone number, fax number (optional), and email address;

2.2.3.2 **Billing Contact**: organization name, contact person and title, complete mailing address, telephone number and fax number and email address. If the billing contact information is the same as the operator information, check the box on the NOI indicating that it is the same;

2.2.3.3 **Project/site**: project/site name, a physical location, the nearest city and zip code, the borough, latitude and longitude, how the latitude and longitude were determined, and estimated project start date and completion date, and an estimate of the area to be disturbed;

2.2.3.4 **SWPPP**: acknowledgement of whether a SWPPP has been prepared in advance of filing the NOI, the location of the SWPPP – either with the operator, the project/site, or other location, SWPPP contact if different than the operator contact;

2.2.3.5 **Discharge**: the name(s) of the waterbody to which the project discharges, identification if the project/site discharges to a waterbody that is impaired or has a TMDL, if so, confirmation that the discharge is consistent with the assumptions and requirements of the TMDL;

2.2.3.6 Signatory information in compliance with Appendix A, Part 1.12.

## 2.3 How to Submit an Notice of Intent (NOI)

2.3.1 **Submittal Options.** Each operator must submit an NOI to be authorized to discharge under this permit at least five business days prior to commencement of construction activities. DEC may need additional time for manual processing of NOIs. The complete and accurate NOI can be submitted either:

2.3.1.1 Electronically (*strongly encouraged*): Go to DEC's Water Online Application System (OPA) web page at http://dec.alaska.gov/water/oasys/index.html to prepare and submit electronic NOI (eNOI). *Note the eNOI will likely be processed more quickly and result in faster receipt of an authorization to discharge*.

2.3.1.2 Paper NOI Form: Complete the CGP NOI form on DEC's APDES Storm Water Forms web page at http://dec.alaska.gov/water/wnpspc/stormwater/2016CGPForms.htm. Once the form is complete, scan and email the entire form (5 pages) to the permitting email address in Appendix A, Section 1.1.1 or submit a paper copy to DEC at the address listed in Appendix A, Section 1.1.1.

2.3.1.3 Applicants must pay the general permit authorization fee (in accordance with 18 AAC 72.956) before their NOI is considered complete.

## 2.4 Submission Deadlines

2.4.1 **New Projects.** The operator must submit a complete and accurate NOI and SWPPP (if project disturbs five or more acres in accordance with Part 2.1) prior to commencement of construction activities consistent with Parts 2.2.1 and 2.3 to obtain authorization under this permit.

2.4.2 **Permitted Ongoing Projects.**

2.4.2.1 An ongoing permitted project is one that commenced construction activities prior to the effective date of this permit and where the discharges from that project were authorized under the 2016 CGP (AKR100000). To continue coverage, a permittee must:

2.4.2.1.1 Continue to comply with the terms and conditions of the 2016 CGP until the permittee has been granted authorization under this permit or an alternative APDES permit, or submits a NOT;

2.4.2.1.2 Update the existing SWPPP as necessary to comply with the requirements of Part 3.0, Part 4.0 and Part 5.0 before submitting a new NOI, as described in Part 2.4.2.1.3; and

2.4.2.1.3 Submit a complete and accurate new NOI within 90 calendar days of the effective date of this permit according to Part 2.3. A copy of the updated SWPPP and permit fee is not required to be submitted with the NOI to DEC for permitted ongoing projects.

2.4.2.2 If the permittee is eligible to submit a NOT (e.g., construction is finished and final stabilization has been achieved) before the 90th day, a new NOI is not required to be submitted provided a NOT is submitted within 90 calendar days after the effective date of this permit.

2.4.3 **Change of Permittee for an Authorized Ongoing Project.**

2.4.3.1 A permittee of an ongoing project who transfers ownership of the project, or a portion thereof, to a different operator, the new operator will be required to submit a complete and accurate new NOI for a new project in accordance with Part 2.3.1 and the original permittee must file a NOT in accordance with Part 2.7.5.

2.4.4 **Unpermitted Ongoing Project/Late Notification.**

An operator who commences construction activities without authorization to discharge for a project that requires submission of a NOI consistent with Part 2.2 must develop and/or update a project-specific SWPPP and submit a complete and accurate NOI consistent with Part 2.3 as soon as practicable. The applicant is authorized to discharge in accordance with Part 2.5. The DEC reserves the right to take enforcement action for any unpermitted discharges or permit non-compliance that occurs between the commencement of construction and discharge authorization.

## 2.5 Date of Authorization to Begin Discharge

Authorization to discharge under this general permit requires the operator seeking authorization to submit to DEC a complete and accurate NOI and payment of fee. If the project disturbs five or more acres, a copy of the SWPPP must be submitted in accordance with Part 2.1 prior to commencement of construction activities consistent with Parts 2.2.1 and 2.3.. The operator must receive written notification of authorization from DEC that coverage has been granted, and that a specific authorization number has been assigned prior to construction activities.

A permittee is authorized to discharge storm water from construction activities under the terms and conditions of this general permit upon the date specified in the issuance of the DEC authorization letter, which is posted on DEC's water permit search website (http://dec.alaska.gov/Applications/Water/WaterPermitSearch/Search.aspx).

## 2.6 Continuation of Expired General Permit

If this permit is not reissued prior to the expiration date, it will be administratively continued in accordance with 18 AAC 83.155(c) and remain in force and effect for discharges that were covered prior to expiration.

2.6.1 The permittee is required to abide by all limitations, monitoring, and reporting included herein if the permit enters administrative extension until such time a permit is reissued authorizing the discharge or an NOT is submitted by the permittee.

2.6.2 A permittee who is authorized to discharge under this permit prior to the expiration date, any discharges authorized will automatically remain covered by this permit until the earliest of:

2.6.2.1 Authorization for coverage under a reissued permit or replacement of this permit following a permittee's timely and appropriate submittal of a complete NOI requesting authorization to discharge under the new permit and compliance with the requirements of the new permit;

2.6.2.1.1 If a permittee fails to submit a timely NOI for coverage under the reissued or replacement permit, the permittee's coverage will expire at midnight on the date that the NOI is due.

2.6.2.2 Submittal of a NOT;

2.6.2.3 Issuance of an individual permit for the project's discharges; or

2.6.2.4 A formal permit decision by DEC to not reissue this general permit or not cover a particular discharger previously covered by the general permit, at which time DEC will identify a reasonable time period for covered dischargers to seek coverage under an alternative general permit or an individual permit. Coverage under this permit will cease at the end of this time period.

## 2.7 Submittal of a Modification to Original NOI

2.7.1 **Modification.** A permittee must file an NOI modification form to DEC (see Part 2.3) to update or correct the following information on the original NOI within 30 calendar days of the change:

2.7.1.1 Owner/Operator address and contact information;

2.7.1.2 Site information;

2.7.1.3 Estimated start or end dates;

2.7.1.4 Number of acres to be disturbed; or

2.7.1.5 SWPPP location and contact information.

2.7.2 Continuation of expired permit in accordance with Part 2.6.

2.7.3 If the original project disturbance was between one and less than five acres, and will now disturb five acres or more, a SWPPP must be submitted with the NOI modification.

2.7.4 No general permit authorization fee is required when submitting an NOI modification.

2.7.5 **NOT Instead of Modification.** The permittee must submit a NOT instead of an NOI modification form to DEC within 30 calendar days when the operator has changed. A change of operator in this case means when an organization changes control of the project. It does not mean when a corporate officer of the organization changes while the organization continues with the project. The new owner/operator must file a new NOI to obtain coverage under the CGP. Coverage is not transferrable.

## 2.8 Alternative Permits

2.8.1 **DEC Requiring Authorization under an Alternative Permit**

DEC may terminate or revoke a permittee's authorization under this permit and may require a permittee to apply for and/or obtain authorization to discharge under an alternative permit (i.e., an APDES individual permit or an alternative APDES general permit in accordance with 40 CFR §122.64 and §124.5). If DEC requires a permittee to apply for an alternative permit, DEC will notify the permittee in writing that a permit application is required. This notification will include a brief statement of the reasons for this decision, alternative permit application requirements, and an application form. In addition, the notice will set a deadline to file the application, and will include a statement that on the effective date of issuance or denial of the APDES individual permit, or the effective date of authorization or denial of authorization under the alternative general permit as it applies to the permittee, authorization under this general permit will automatically terminate. An application must be submitted to DEC at the address in Appendix A, Section 1.1.1. DEC may grant additional time to submit the application upon a written request by the permittee provided the request is received prior to expiration of the deadline. If the permittee is covered under this permit and fails to submit an alternative permit application in a timely manner as required by DEC, then the authorization under this permit will automatically terminate at the end of the day specified by DEC as the deadline for application submittal. The DEC may take appropriate enforcement action for any unpermitted discharge.

2.8.2 **Operator Requesting Authorization under an Alternative Permit**

An operator may request to be excluded from coverage under this general permit by applying for an individual permit. The operator must submit an individual permit application in accordance with 18 AAC 83.305 – 83.385 to DEC no later than ninety (90) days after publication of the general permit to the address in Appendix A, Part 1.1.1. DEC may grant the request by issuing an individual permit or authorization under an alternative general permit if DEC deems that the reasons cited are adequate to support the request.

2.8.3 When a permittee is issued an APDES individual permit or is authorized to discharge under an alternative APDES general permit, the authorization under this permit is automatically terminated on the effective date of the individual permit or the date of authorization under the alternative general permit, whichever the case may be. If the permittee is denied an APDES individual permit or an alternative APDES general permit, the authorization under this permit is automatically terminated on the date of such denial, unless otherwise specified by DEC.

# 3.0 COMPLIANCE WITH STANDARDS AND LIMITS

## 3.1 Requirements for all Projects

3.1.1 A permittee must select, install, implement, and maintain control measures (described in Part 4.0) at the construction site to minimize the discharge of pollutants as necessary to meet WQS's (18 AAC 70). A permittee must comply with all permit conditions with respect to installation and maintenance of control measures, inspections, monitoring (if necessary), corrective actions, reporting and recordkeeping.

3.1.2 In general, except in situations explained in Part 3.1.3, the storm water controls planned, developed, implemented, maintained, and updated by the permittee that are consistent with the provisions of Parts 3.0 through 9.0 are considered to meet the stringent requirements of this permit to ensure that the discharges do not cause or contribute to an excursion above any WQS (18 AAC 70).

3.1.3 At any time after authorization, DEC may determine that the permittee's storm water discharges will cause, have reasonable potential to cause, or contribute to an excursion above any applicable WQS. If such a determination is made, DEC may require the permittee to:

3.1.3.1 Take corrective actions and modify storm water controls in accordance with Part 8.0 to adequately address the identified water quality concerns;

3.1.3.2 Submit valid and verifiable data and information that are representative of ambient conditions and indicate that the receiving water is attaining WQSs; or

3.1.3.3 Minimize discharges of storm water from the construction project and submit an individual permit application in accordance with Part 2.8.

3.1.4 All written responses required under this part must include a signed certification consistent with Appendix A, Part 1.12.

## 3.2 Discharge to Impaired Water Body

If the permittee is discharging into a water body with an EPA-established or approved TMDL, the permittee must implement measures to ensure that the discharge of pollutants from the site is consistent with the assumptions and requirements of the EPA-established or approved TMDL, including ensuring that the discharge does not exceed specific wasteload or load allocation that has been established that would apply to the discharge. The permittee

must also evaluate the recommendation in the Implementation Section of the TMDL and incorporate applicable measures into the operation.

### 3.2.1 Discharging to an Impaired Water Body for Turbidity or Sediment (Category 5)

3.2.1.1 Permittees who (1) discharge into a water body that is listed on Alaska's 303(d) List of Impaired Waters (Category 5) for turbidity or sediment (http://dec.alaska.gov/water/water-quality/impaired-waters) and (2) disturbs 20 or more acres of land at one time (including non-contiguous land disturbances that take place at the same time and are part of a larger common plan of development or sale) that drains to an impaired water must:

3.2.1.1.1 Develop, implement, and modify as necessary a written site-specific monitoring plan consistent with Part 7.0 that specifies the sampling frequency and location.

3.2.1.1.2 Conduct turbidity sampling at the following locations to evaluate compliance with the WQS for turbidity;

3.2.1.1.2.1 Upstream turbidity in the impaired water at a representative location (upgradient) from the point of storm water discharge into the impaired water or outside the area of influence of the storm water discharge; and

3.2.1.1.2.2 Downstream turbidity at a representative location downstream from the point of discharge into the impaired water, inside the area of influence of the storm water discharge. Alternatively, the discharge turbidity may be measured at the point where the storm water discharge leaves the construction site, rather than when it is in the receiving water body.

3.2.1.1.3 Based on the sampling (as described in Part 3.2.1.1.2), the resulting water quality must meet the state WQS for turbidity, as follows:

3.2.1.1.3.1 The downstream sample may not exceed 5 nephelometric turbidity units (NTU) above the upstream sample when the upstream turbidity is 50 NTU or less; and

3.2.1.1.3.2 The downstream sample may not have more than 10% increase in turbidity when the upstream turbidity is more than 50 NTU, not to exceed a maximum increase of 25 NTU.

3.2.1.1.4 If the difference between the upstream and downstream sample exceeds the WQS for turbidity, the permittee must:

3.2.1.1.4.1 Review the SWPPP and the control measures selected for the project and make appropriate improvements and corrections to the control measures within seven calendar days of the date the discharge exceeds the WQS;

3.2.1.1.4.2 Update the SWPPP with the improvements and changes to the control measures;

3.2.1.1.4.3 Submit a corrective action report consistent with Part 9.2; and

3.2.1.1.4.4 Continue to sample daily until the discharged storm water is less than the WQS for turbidity for the receiving water.

### 3.2.2 Discharging to an Impaired Water Body with an Approved or Established TMDL for Turbidity or Sediment (Category 4a or 4b)

3.2.2.1 Operators are not eligible for authorization under this permit if:

3.2.2.1.1 An EPA-approved or established TMDL specifically precludes such discharges; or

3.2.2.1.2 The project involves a discharge of pollutants of concern (e.g. turbidity, sediment, debris, etc.) to waters with an EPA-approved or established TMDL for turbidity or sediment, unless control measures are implemented as necessary for consistency with the assumptions and requirements of the TMDL.

3.2.2.2 If a specific wasteload or load allocation has been established for turbidity or sediment that would apply to the discharge of storm water from the construction site, the permittee must implement necessary steps to meet that allocation. The permittee must also evaluate the implementation measures recommended in the TMDL and incorporate them as appropriate.

3.2.2.3 In a situation where an EPA-approved or established TMDL for turbidity or sediment has specified a general wasteload or load allocation for a pollutant of concern (e.g. turbidity, sediment, debris, etc.) that is applicable to construction storm water discharges, but no specific requirements for construction sites have been identified in the TMDL, the permittee should consult with DEC to confirm that meeting the standards in Parts 3.0 and 4.0 will be consistent with the approved TMDL.

3.2.2.4 Where an EPA-approved or established TMDL has not specified a wasteload or load allocation applicable to construction storm water discharges, but has not specifically excluded these discharges, compliance with the requirements in Parts 3.0 and 4.0 of this permit will generally be assumed to be consistent with the approved TMDL.

### 3.3 Protection of Endangered Species

A permittee must protect federally-listed endangered or threatened species, or federally-designated critical habitat.

3.3.1 An applicant is not eligible to discharge if the storm water discharges, allowable non-storm water discharges, and storm water discharge-related activities (as defined in Appendix C) are likely to jeopardize the continued existence of any species that are federally-listed as endangered or threatened (listed) under the ESA or result in the adverse modification or destruction of federally-designated critical habitat under the ESA.

3.3.2 An applicant is not eligible to discharge if the storm water discharges, allowable non-storm water discharges, and storm water discharge-related activities (as defined in Appendix C) would cause a prohibited take of federally-listed endangered or threatened species (as defined under Section 3 of the ESA and 50 CFR §17.3), unless such takes are authorized under Sections 7 or 10 of the ESA.

## 4.0 CONTROL MEASURES

### 4.1 Control Measure Selection and Design Considerations

4.1.1 Permittees must select, design, install, and implement the control measures in this Part to the extent practicable. The specific control measures are based on the requirements of the national effluent limitation guidelines (ELG) that apply to the construction and development industry (40 CFR §450).

4.1.2 The selection, design, installation, maintenance, and removal of control measures must be in accordance with good engineering practices manufacturer specifications and address site-specific conditions such as precipitation, site topography, soil characteristics, and growing season. Permittees may deviate from such manufacturer's specifications where the permittee provides justification for such deviation and includes documentation of their rationale in the SWPPP. If a permittee finds that their control measures are not achieving their intended effect of minimizing pollutant discharges, the permittee must modify these control measures in accordance with the corrective action requirements set forth in Part 8.0.

4.1.3 Erosion and Sediment Controls. A permittee must design, install, and maintain effective erosion and sediment controls to minimize the discharge of pollutants. At a minimum, such controls must be designed, installed, and maintained to:

4.1.3.1 Control storm water volume and velocity to minimize soil erosion and pollutant discharges;

4.1.3.2 Control storm water discharges, including both peak flowrates and total storm water volume, to minimize channel and streambank erosion and scour in the immediate vicinity of discharge points;

4.1.3.3 Minimize the amount of soil exposed during construction activity;

4.1.3.4 Minimize the disturbance of steep slopes;

4.1.3.5 Minimize sediment discharges from the site. The design, installation, and maintenance of erosion and sediment controls must address factors such as the amount, frequency, intensity, duration of precipitation; the nature of resulting storm water runoff; and soil characteristics, including the range of soil particle sizes expected to be present on the site;

4.1.3.6 Provide and maintain natural buffers around waters of the U.S., direct storm water to vegetated areas and maximize storm water infiltration to reduce pollutant discharges, unless infeasible;

4.1.3.7 Minimize soil compaction. Minimizing soil compaction is not required where the intended function of a specific area of the site dictates it be compacted.

4.1.3.8 Unless infeasible, preserve topsoil. Preserving topsoil is not required where the intended function of a specific area of the site dictates that the topsoil be disturbed or removed.

4.1.4 Additional Erosion and Sediment Controls Selection and Design Considerations:

4.1.4.1 Preventing storm water from coming into contact with polluting materials is generally more effective, and less costly, than removing pollutants from storm water;

4.1.4.2 Using a combination of control measures is more effective than using control measures in isolation for minimizing pollutants in the storm water discharge;

4.1.4.3 Using technologically available, economically practicable, and achievable methods in light of best industry practices;

4.1.4.4 Assessing the type and quantity of pollutants, including their potential to impact receiving water quality, is critical to designing effective control measures that will achieve the limits in this permit;

4.1.4.5 Minimizing impervious areas at the permittees facility and infiltrating runoff onsite (including bioretention cells, green roofs, and pervious pavement, among other approaches) can reduce runoff and improve groundwater recharge and stream base flows in local streams, although care must be taken to avoid ground water contamination;

4.1.4.6 Dissipate storm water runoff into open vegetated swales and natural depressions to reduce in stream impacts of erosive flows;

4.1.4.7 Conserving and/or restoring of riparian buffers will help protect streams from storm water runoff and improve water quality; and

4.1.4.8 Using treatment interceptors (e.g., sand filters) may be appropriate in some instances to minimize the discharge of pollutants.

## 4.2 Erosion Control Measures

A permittee must comply with the erosion control measures in this Part to minimize soil exposure on the site during construction.

### 4.2.1 **Delineation of Site**

A permittee must generally delineate (e.g., with flags, stakes, signs, silt fence, etc.) the location of any of the following that apply to the site:

4.2.1.1 All areas where soil disturbing construction activities will occur; and

4.2.1.2 Specific areas that will be left undisturbed such as trees, boundaries of sensitive areas, or buffers established under Part 4.2.3.

### 4.2.2 **Minimize the Amount of Soil Exposed during Construction Activity**

A permittee must include the following in the selection of control measures and the sequence of project construction as they apply to the project site:

4.2.2.1 Preserve native topsoil for later use with on-site stockpiles, unless deemed infeasible by space constraints or site design creates impervious surfaces; and

4.2.2.2 Sequence or phase construction activities to minimize the extent and duration of exposed soils.

### 4.2.3 **Maintain Natural Buffer Areas**

A permittee must maintain natural buffer areas at stream crossings and around the edge of any waters of the U.S. that are located within or immediately adjacent to the construction activity in accordance with the following:

4.2.3.1 The buffer must be a minimum of 25 feet wide, or the width as required by local ordinance, unless infeasible based on site dimensions;

4.2.3.2 Exceptions are allowed for water dependent activities, specific water access activities, or necessary water crossings;

4.2.3.3 A permittee should, to the extent practicable, use perimeter controls adjacent to buffers and direct storm water sheet flow to buffer areas to increase sediment removal and maximize storm water infiltration.

### 4.2.4 **Clearing Vegetation**

4.2.4.1 Clearing of vegetation that disturbs the vegetative mat and exposes soil is **prohibited** prior to obtaining authorization under this permit.

4.2.4.2 Cutting of trees and brush while the ground is frozen without disturbing the vegetative mat early in the springtime to avoid adversely affecting migratory birds or their nests in accordance with the U.S. Fish & Wildlife Service's "Nesting Birds: Timing Recommendations to Avoid Land Disturbance & Vegetation Clearing"[2] is allowed prior to the submittal of a project NOI. If vegetation clearing that disturbs the vegetative mat and occurs after the onset of spring thaw (as defined in Appendix C) or conditions that consist of above freezing temperatures that cause melting of snow, the permittee must develop a SWPPP and file an NOI. Operators must receive authorization under this permit and otherwise comply with the terms of this permit prior to such clearing.

### 4.2.5 Control Storm Water Discharges and Flow Rates

A permittee must include the following control measures to handle storm water and total storm water volume discharges as they apply to the site:

4.2.5.1 Divert storm water around the site so that it does not flow onto the project site and cause erosion of exposed soils (diverting storm water around the site can be effective measure as long as it does not cause flooding and/or erosion offsite);

4.2.5.2 Slow down or contain storm water that may collect and concentrate within a site and cause erosion of exposed soils;

4.2.5.3 Avoid placement of structural control measures in active floodplains to the degree technologically and economically practicable and achievable;

4.2.5.4 Place velocity dissipation devices (e.g., check dams, sediment traps, or riprap) along the length of any conveyance channel (of erodible materials) to provide a non-erosive flow velocity. Also place velocity dissipation devices where discharges from the conveyance channel or structure join a water course to prevent erosion and to protect the channel embankment, outlet, adjacent stream bank slopes, and downstream waters; and

4.2.5.5 Install permanent storm water management controls, where practical, so that they are functional prior to construction of site improvements (e.g., impervious surfaces).

### 4.2.6 Protect Steep Slopes

A permittee must consider the following in the selection of control measures as they apply to the project site:

4.2.6.1 Design and construct cut-and-fill slopes in a manner that will minimize erosion. Applicable practices include, but are not limited to, reducing continuous length of slope with terracing and diversions, reducing slope steepness, and roughening slope surfaces (e.g., track walking);

4.2.6.2 Divert concentrated flows of storm water away from and around the disturbed portion of the slope. Applicable practices include, but are not limited to interceptor dikes and swales, grass-lined channels, pipe slope drains, subsurface drains, check dams; and

4.2.6.3 Stabilize exposed areas of the slope in accordance with Part 4.5.

## 4.3 Sediment Control Measures

Sediment control measures (e.g. sediment ponds, traps, filters, etc.) must be constructed as one of the first steps in grading. These control measures must be functional before other land

[2] https://www.fws.gov/alaska/pages/nesting-birds-timing-recommendations-avoid-land-disturbance-vegetation-clearing

disturbing activities take place. A permittee must install, establish, and use any of the following control measures that apply to the project site.

4.3.1 **Storm Water Inlet Protection**

A permittee must install appropriate protection measures (e.g. filter berms, perimeter controls, temporary diversion dikes, etc.) to minimize the discharge of sediment prior to entry into storm water inlets located on site or immediately downstream of the site.

4.3.2 **Water Body Protection**

A permittee must install appropriate protection measures (e.g. velocity dissipation devices in accordance with Part 4.2.5.4) to minimize the discharge of sediment prior to entry into the water body for water bodies located on site or immediately downstream of the site.

4.3.3 **Down-Slope Sediment Controls**

A permittee must establish and use down-slope sediment controls (e.g., silt fence or temporary diversion dike) for any portion of the down-slope and side-slope perimeter where storm water will be discharged from disturbed areas of the site.

4.3.4 **Stabilized Construction Vehicle Access and Exit Points**

A permittee must establish construction vehicle access and exit points. Access and exit points should be limited to one route, if possible. If sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize off-site impacts.

4.3.5 **Vehicle Track-Out**

A permittee must provide an effective way of minimizing off-site vehicle tracking of sediment from wheels to prevent track-out onto paved surfaces. Where sediment has been tracked-out from a site onto paved roads, sidewalks, or other paved areas outside of the site, remove the deposited sediment by the end of the same business day in which the track-out occurs or by the end of the next business day if track-out occurs on a non-business day. Remove the track-out by sweeping, shoveling, or vacuuming these surfaces, or by using other similarly effective means of sediment removal.

4.3.6 **Dust Generation**

A permittee must minimize the generation of dust through the application of water or other dust suppression techniques and prior to vehicle exit.

4.3.7 **Stockpile Management**

In accordance with Part 4.5.1, a permittee must stabilize or cover stockpiles, protect with sediment control measures. Locate soil stockpiles away from storm water inlets, water bodies, and conveyance channels, if possible. Install a sediment control measure along all downgradient perimeter areas.

4.3.8 **Authorized Non-Storm Water Discharges**

A permittee must minimize any non-storm water authorized by this permit.

4.3.9 **Sediment Basins**, where applicable:

4.3.9.1 For common drainage locations that serve an area with 10 or more acres disturbed at one time, a temporary (or permanent) sediment basin that provides storage for a calculated volume of runoff from the drainage area from a 2-year, 24-hour storm, or equivalent sediment control measures, must be installed, maintained, and used where practicable until final stabilization of the site.

4.3.9.1.1 Where no such calculation has been performed, a temporary (or permanent) sediment basin providing 3,600 cubic feet of storage per acre drained, or equivalent sediment control measures, must be installed and used where practicable until final stabilization of the site. When computing the number of acres draining into a common location, it is not necessary to include flows from offsite areas and flows from on-site areas that are either undisturbed or have undergone final stabilization where such flows are diverted around both the disturbed area and the sediment basin.

4.3.9.1.2 In determining whether installing a sediment basin is practicable, the permittee may consider factors such as site soils, slope, available area on-site, etc. In any event, the permittee must consider public safety, especially as it relates to children, as a design factor for the sediment basin, and alternative sediment control measures must be used where site limitations would preclude a safe design.

4.3.9.2 For drainage locations which serve 10 or more disturbed acres at one time and where a temporary sediment basin or equivalent controls is not practicable, smaller sediment basins and/or sediment traps should be used. Silt fences, vegetative buffer strips, or equivalent sediment control measures are required for all down slope boundaries (and for those side slope boundaries deemed appropriate as dictated by individual site conditions).

4.3.9.3 For drainage locations serving less than 10 acres, sediment traps should be used. Silt fences, vegetative buffer strips, or equivalent sediment control measures are required for all down slope boundaries (and for those side slope boundaries deemed appropriate as dictated by individual site conditions) of the construction area unless a sediment trap providing storage for a calculated volume of runoff from a 2-year, 24-hour storm event or 3,600 cubic feet of storage per acre drained is provided.

4.3.9.4 Surface outlets. When discharging from basins and impoundments, utilize outlet structures that withdraw water from the surface, unless infeasible.

*Note: No installation of sediment basins should be installed in permafrost areas. Installing sediment basins in the presence of permafrost is challenging and might not be practicable in some instances because permafrost creates poor surface drainage that hinders the infiltration of runoff. Also, the excavation of permafrost in summer can trigger thawing and instability.*

## 4.4 Dewatering

4.4.1 If a construction activity includes excavation dewatering that may adversely impact a local drinking water well, a DEC-identified contaminated site or groundwater plume, or waters of the U.S., the permittee may be required to obtain authorization under the DEC General Permit for Excavation Dewatering (AKG002000 or most current version) in addition to this permit.

4.4.2 A discharge from eligible dewatering activities, including discharges from dewatering of trenches and excavations, are prohibited unless treated by appropriate control measures. Appropriate control measures include, but are not limited to, sediment basins or traps, dewatering tanks, weir tanks, or filtration systems designed to remove sediment. To the extent feasible, use vegetated, upland areas of the site to infiltrate dewatering water before discharge.

## 4.5 Soil Stabilization

A permittee must stabilize all disturbed areas of the site to minimize erosion and sedimentation and the resulting discharge of pollutants according to the requirements of this Part. A permittee must ensure that existing vegetation is preserved and a natural buffer is maintained wherever possible, and disturbed portions of the site are stabilized (Part 4.2.3). A permittee should avoid using impervious surfaces for stabilization. Applicable stabilization control measures include, but are not limited to:

- Temporary and permanent seeding;
- Sodding;
- Mulching;
- Rolled erosion control product;
- Compost blanket;
- Soil application of Polyacrylamide (PAM);
- Early application of gravel base on areas to be paved; and
- Dust control.

4.5.1 **Minimum Requirements for Soil Stabilization**. A permittee must consider the selection and implementation of control measures and the sequence of project construction as they apply to the project site.

4.5.1.1 **Deadline to Initiate Stabilization**. Stabilization of disturbed areas must, at a minimum, be initiated immediately whenever any clearing, grading, excavating, or other earth disturbing activities have permanently ceased on any portion of the site or temporarily ceased on any portion of the site and will not resume for a period exceeding:

4.5.1.1.1 Seven (7) calendar days for those areas of the state with a mean annual precipitation of forty (40) inches or greater; or

4.5.1.1.2 Fourteen (14) calendar days for those areas of the state with a mean annual precipitation less than forty (40) inches.

*Note: In the context of this provision, "immediately" means no later than the end of the next work day, following the day when the earth-disturbing activities have temporarily or permanently ceased.*

*Note: Earth-disturbing activities have temporarily 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 seven or 14 or more calendar days (dependent on mean annual precipitation from above), but such activities will resume in the future.*

*The timeframe above begins counting as soon as you know that construction work on a portion of your site will be temporarily ceased. In circumstances where you experience unplanned or unanticipated delays in construction due to circumstances beyond your control (e.g., sudden work stoppage due to unanticipated problems associated with construction labor, transportation difficulties delays due to weather and site or soil conditions, funding, or other issues related to the ability to work on the site; weather conditions rendering the site unsuitable for the continuation of construction work) and you do not know at first how long the work stoppage will continue, your requirement to immediately initiate stabilization is triggered as soon as you know with reasonable certainty that work will be stopped for the time period above. At that point, you must comply with Parts 4.5.1.1 and 4.5.1.2.*

4.5.1.1.3 Types of activities considered to constitute initiation of stabilization, but is not limited to:

4.5.1.1.3.1 Prepping the soil for vegetative stabilization by performing all activities necessary to initially seed or plant the area to be stabilized or for non-vegetative stabilization by installing or application of physical, structural, or mechanical measures;

4.5.1.1.3.2 Applying mulch or other non-vegetative product to the exposed area;

4.5.1.1.3.3 Seeding or planting the exposed area;

4.5.1.1.3.4 Starting any of the activities in Part 4.5.1.1.3.1 - 4.5.1.1.3.3 on a portion of the area to be stabilized, but not on the entire area; or

4.5.1.1.3.5 Finalizing arrangements (e.g., delivery of stabilization products, scheduling the installation of the products) to have stabilization product fully installed in compliance with the applicable deadline for completing stabilization in Parts 4.5.1.1 and 4.5.1.2.

4.5.1.2 **Deadline to Complete Temporary Stabilization Activities**. As soon as practicable, but no later than 14 calendar days after the initiation of soil stabilization measures consistent with Part 4.5.1.1, the following are required to be completed:

4.5.1.2.1 For vegetative stabilization, all activities necessary to initially seed or plant the area to be stabilized; and/or

4.5.1.2.2 For non-vegetative stabilization, the installation or application of all such non-vegetative measures.

*Note: DEC may determine, based on an inspection carried out under Part 6.6 and corrective actions required under Part 8.1.1.4 Corrective Action Required by DEC, that the level of sediment discharge on the site makes it necessary to require a faster schedule for completing stabilization. For instance, if sediment discharges from an area of exposed soil that is required to be stabilized are compromising the performance of existing storm water controls, DEC may require stabilization to correct this problem and may take appropriate enforcement action.*

4.5.1.3 **Exceptions to the Deadlines for Initiating and Completing Stabilization**.

4.5.1.3.1 *Projects in Arid or Semi-Arid, or Drought-Stricken Areas*. For those areas of the state with a mean annual precipitation is less than or equal to 20 inches and where initiating perennial vegetative stabilization measures is infeasible within 14 calendar days after construction activity has temporarily ceased, vegetative or non-vegetative stabilization measures must be initiated immediately.

*Note: In the context of this provision, "immediately" means no later than the end of the next work day, following the day when the earth-disturbing activities have temporarily or permanently ceased.*

4.5.1.3.1.1 Immediately initiate, and within 14 calendar days complete, the installation of non-vegetative stabilization measures to prevent erosion.

4.5.1.3.1.2 If construction is occurring during a drought-stricken period, indicate in the SWPPP the beginning and ending dates of the drought-stricken period and your site conditions. Include the schedule for initiating and completing vegetative stabilization.

4.5.1.3.2 *Deadlines for projects that are affected by circumstances beyond the control of the permittee that delay the initiation and/or completion of vegetative stabilization as required in Parts 4.5.1.1 and/or 4.5.1.2*. If the permittee is unable to meet the deadlines in Parts 4.5.1.1 and/or 4.5.1.2 due to circumstances beyond the permittee's control[3], and is using vegetative cover for temporary stabilization, the permittee may comply with the following stabilization deadlines instead:

4.5.1.3.2.1 Immediately initiate, and within 14 calendar days complete, the installation of temporary non-vegetative stabilization measures to prevent erosion;

4.5.1.3.2.2 Complete all soil conditioning, seeding, watering or irrigation installation, mulching, and other required activities related to the planting and initial establishment of vegetation as soon as conditions or circumstances allow it on the site; and

4.5.1.3.2.3 Document the circumstances in the SWPPP that prevent meeting the deadlines required in Parts 4.5.1.1 and/or 4.5.1.2 and the proposed schedule for initiating and completing stabilization.

4.5.1.3.3 Winter Considerations, see Part 4.12.

4.5.1.3.4 In limited circumstances, stabilization may not be required if the intended function of a specific area of the site necessitates that it remain disturbed.

4.5.1.4 **Deadline to Complete Final Stabilization Activities**. A permittee must consider the selection and implementation of control measures and the sequence of project construction as they apply to the project site.

4.5.1.5 The permittee must within seven (7) calendar days of initiating final stabilization complete or continue maintenance for the following on any portion of the site that has reached final grading and for areas where clearing, grading, excavating, or other earth disturbing activities have permanently ceased:

4.5.1.5.1 All soil conditioning, seeding, watering, mulching, and any other required activities for the establishment of vegetative cover;

4.5.1.5.2 The installation or application of all such measures for vegetative cover; and/or

4.5.1.5.3 The placement of non-vegetative final stabilization measures.

4.5.2 **Stabilization Requirements for Terminating Permit Authorization**

To terminate authorization under this permit, final stabilization (as defined in Appendix C), must be achieved on all portions of the site for which a permittee is responsible and all ground disturbing construction activity or use of related support activities must be completed, in accordance with Part 10.2.1.1.

## 4.6 Treatment Chemicals

4.6.1 The use of treatment chemicals to reduce sediment in a storm water discharge is allowed provided that all the requirements of this Part are met. Use conventional sediment controls before and after the application of treatment chemicals. Chemicals may only be applied where storm water is treated upstream and is directed to a sediment control (e.g., sediment trap, sediment basin) before discharge.

[3] Examples include problems with the supply of seed stock or with the availability of specialized equipment, unsuitability of soil conditions due to excessive precipitation and/or flooding.

4.6.2 Select appropriate treatment chemicals. Chemicals must be appropriately suited to the types of soils likely to be exposed during construction and present in the discharges being treated (i.e., the expected turbidity, pH, and flow rate of storm water flowing into the chemical treatment system or area, etc.)

4.6.3 Minimize discharge risk from stored chemicals. Store all treatment chemicals in leak-proof containers that are kept under storm-resistant cover and surrounded by secondary containment structures (e.g., spill berms, decks, spill containment pallets), with adequate spill kits available on-site to respond in the event of a discharge of treatment chemicals.

4.6.4 Use chemicals in accordance with good engineering practices and specifications of the chemical provider/supplier, and with dosing specifications and sediment removal design specifications provided by the provider/supplier of the applicable chemicals, or document in your SWPPP specific departures from these specifications and how they reflect good engineering practice.

4.6.5 Application of treatment chemicals through the use of manufactured products (e.g., gel bars, gel logs, floc blocks, etc.) must be used in combination with adequate ditch check dams, sediment traps, sediment basins, or physical control measure designed to settle out chemically treated storm water and minimize the presence of treatment chemicals before discharges reach waters of the U.S. At a minimum there must be adequate ditch length downstream of the last manufactured product prior to reaching the discharge point into a water of the U.S. to provide a place for sedimentation to occur.

4.6.6 Ensure proper training. Ensure that all persons who handle and use treatment chemicals at the construction site are provided with appropriate product-specific training, including but not limited to proper dosing requirements, handling, storage, and disposal.

4.6.6.1 Document the following in the SWPPP:

4.6.6.1.1 Specific chemicals and chemical treatment systems used;

4.6.6.1.2 Names and titles of person(s) who handle and apply treatment chemicals;

4.6.6.1.3 Title of training conducted, date, instructor name, and attendees.

4.6.7 If the permittee plans to use cationic treatment chemicals or an active treatment system (as defined in Appendix C) they must submit a request to the Department (Permitting Program, Appendix A part 1.1.1) fourteen (14) calendar days in advance of proposed usage. The request must include the following:

4.6.7.1 Operator Name, mailing address, phone number, and email address;

4.6.7.2 Project/Site name, physical address, contact name, phone number, email address and permit authorization number;

4.6.7.3 Site Map with all receiving waterbodies, proposed location of chemical treatment system, and proposed point of discharge into receiving waterbodies;

4.6.7.4 Schematic drawing of the proposed treatment system; and

4.6.7.5 Description of the proposed treatment system including; type of system being used, chemicals being used, estimated start and finish date, sampling and recordkeeping schedule and reporting, and name of treatment system operator or company.

4.6.8 The permittee must perform all additional measures as conditioned by the Department authorization to ensure that the use of such chemicals will not cause an exceedance of water quality standards.

## 4.7 Prohibited Discharge

4.7.1 **A permittee is prohibited from discharging the following from the site**:

4.7.1.1 Wastewater from concrete washout, unless managed by an appropriate control measure;

4.7.1.2 Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other hazardous construction materials;

4.7.1.3 Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance; and

4.7.1.4 Soaps or solvents used in vehicle and equipment washing.

## 4.8 Good Housekeeping Measures

A permittee must design, install, implement, and maintain effective good housekeeping measures to prevent and/or minimize the discharge of pollutants. At a minimum, such measures must be designed, installed, implemented, and maintained to:

- Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other waters. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge;
- Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials present on the site to precipitation and to storm water. Minimization of exposure is not required in cases where the exposure to precipitation and to storm water will not result in a discharge of pollutants, or where exposure of a specific material or product poses little risk of storm water contamination (such as final products and materials intended for outdoor use); and
- Minimize the discharge of pollutants from spills and leaks and implement chemical spill and leak prevention and response procedures.

A permittee must include appropriate measures for any of the following activities that are used at the site.

4.8.1 **Washing of Equipment and Vehicles and Wheel Wash-Down**. If a permittee conducts washing of equipment or vehicles and/or wheel wash-down at the site the permittee must comply with the following requirements:

4.8.1.1 Designate areas to be used for washing of equipment and vehicles and/or wheel wash-down and conduct such activities only in these areas;

4.8.1.2 Locate such activities, to the extent practicable, away from storm water conveyance channels, storm water inlets, and waters of the U.S.;

4.8.1.3 Treat all wash water in a sediment basin or use alternative control measures that provide equivalent or better treatment prior to discharge; and

4.8.1.4 To comply with the prohibition in Part 4.7.1.4, the discharge of soaps and solvents used in equipment and vehicle washing and/or wheel wash-down is strictly prohibited.

4.8.2 **Fueling and Maintenance Areas**. If a permittee conducts fueling and/or maintenance activities for equipment and vehicles at the site the permittee must comply with the following requirements:

4.8.2.1 Designate areas to be used for fueling and/or maintenance of equipment and vehicles and conduct such activities only in these areas (the designated area may move from one location to another on linear projects);

4.8.2.2 Locate such activities, to the extent practicable, away from storm water conveyance channels, storm water inlets, and waters of the U.S.;

4.8.2.3 Minimize the exposure to precipitation and storm water or use secondary containment structures designed to eliminate the potential for spills or leaked chemicals; and

4.8.2.4 To comply with the prohibition in Part 4.7.1.3, a permittee must:

4.8.2.4.1 Clean up spills or contaminated surfaces immediately;

4.8.2.4.2 Ensure adequate clean up supplies are available at all times to handle spills, leaks, and disposal of used liquids;

4.8.2.4.3 Use drip pans or absorbents under or around leaky equipment and vehicles; and

4.8.2.4.4 Dispose of liquid wastes or materials used for fueling and maintenance in accordance with Part 4.8.6.

4.8.3 **Staging and Material Storage Areas**. If a permittee maintains staging and material storage areas at the site the permittee must comply with the following requirements:

4.8.3.1 Designate areas to be used for staging and material storage areas;

4.8.3.2 Locate such activities, to the extent practicable, away from storm water conveyance channels, storm water inlets, and waters of the U.S.; and

4.8.3.3 Minimize the exposure to precipitation and storm water and vandalism for all chemicals, treatment chemicals, liquid products, petroleum products, and other materials that have the potential to pose a threat to human health or the environment.

4.8.4 **Washout of Applicators/Containers used for Paint, Concrete, and Other Materials**. If a permittee conducts washing of applicators and/or containers used for paint, concrete, and other materials at the site, the permittee must comply with the following requirements:

4.8.4.1 Designate areas to be used for washout;

4.8.4.2 Locate such activities, to the extent practicable, away from storm water conveyance channels, storm water inlets, and waters of the U.S.;

4.8.4.3 Direct all concrete, paint, and other material washout activities into a lined, water-tight container or pit to ensure there is no discharge into the underlying soil and onto the surrounding areas;

4.8.4.4 Dispose of liquid wastes in accordance with Part 4.8.6; and

4.8.4.5 For concrete washout areas, remove hardened concrete waste when it has reached one-half (½) the height of the container or pit and dispose of in accordance with Part 4.8.6.

4.8.5 **Fertilizer or Pesticide Use**. If a permittee uses fertilizers or pesticides the permittee must comply with the following requirements:

4.8.5.1 Application of fertilizers and pesticides in a manner and at application rates that will minimize the loss of chemical to storm water runoff. Manufacturers' label requirements for application rates and disposal requirements must be followed; and

4.8.5.2 Use pesticides in compliance with federal, state, and local requirements.

4.8.6 **Storage, Handling, and Disposal of Construction Waste**. If a permittee stores, handles and/or disposes of construction waste at the site, the permittee must comply with the following requirements:

4.8.6.1 Locate areas dedicated for management of construction waste, to the extent practicable, away from storm water conveyance channels, storm water inlets, and waters of the U.S.;

4.8.6.2 Dispose of all collected sediment, asphalt and concrete millings, floating debris, paper, plastic, fabric, construction and demolition debris and other domestic wastes according to federal, state and local requirements;

4.8.6.3 Store hazardous or toxic waste in appropriate sealed containers and dispose of these wastes in accordance with manufacture's recommended method of disposal or federal, state or local requirements; and

4.8.6.4 Provide containment of sanitation facilities (e.g., use of portable toilets) to prevent discharges of pollutants to the storm water drainage system or receiving water. Clean or replace sanitation facilities and inspect them regularly for leaks and spills.

## 4.9 Spill Notification

4.9.1 A permittee is prohibited from discharging hazardous substance or oil from a spill or other release. Upon discovery of a spill of a reportable quantity, a permittee must report the spill in accordance with Part 9.3.

## 4.10 Projects near a Public Water System (PWS)

4.10.1 Where the project intersects a PWS drinking water protection area (DWPA) (see Part 5.3.5.15), notify the PWS contact. PWS contact information can be obtained using the online application, Drinking Water Watch, http://dec.alaska.gov:8080/DWW by entering the appropriate 6-digit PWS ID (e.g., 225025).

4.10.2 Within the identified DWPA, restrict project activities that could significantly change the natural surface water drainage or groundwater gradient.

4.10.3 Immediately notify the nearby PWS of any identified potential contamination, such as spills or excess erosion.

## 4.11 Permanent Storm Water Management Control

A permittee must comply with applicable APDES MS4 permit requirements, local requirements, and the applicable requirements under 18 AAC 72.600 (i.e., Nondomestic Wastewater System Plan Review) regarding the design and installation of permanent storm water management controls. Structural measures should be placed on upland soils to the degree practicable and achievable.

4.11.1 A permittee who constructs, alters, installs, modifies, or operates any part of a permanent storm water management control at a site and is located outside a municipality operating under an APDES MS4 permit must submit a copy of the engineering plans in accordance with 18 AAC 72.600 to DEC for review to the Permitting Program in Appendix A Part 1.1.1 at least 30 calendar days before the commencement of construction.

4.11.2 A permittee who constructs, alters, installs, modifies, or operates any part of a permanent storm water management control measure at a site and is located inside a municipality operating under an APDES MS4 permit must submit a copy of the required submittal information to the respective MS4 operator for review. Permittees must contact the MS4 Operator for submittal deadlines. See http://dec.alaska.gov/water/wastewater/stormwater/sw-municipal for a list of MS4 Operators and their contact information

## 4.12 Winter Considerations

4.12.1 **Winter Shutdown**. A permittee who plans to cease construction during the winter and resume construction the next summer must plan for winter shutdown and prepare their site to manage storm water flows until construction activities resume. The permittee must identify the anticipated dates of fall freeze-up and spring thaw (see Appendix C) for their site and use these dates to plan for winter shutdown. **Frozen ground by itself is not considered an acceptable control measure for stabilization**.

4.12.1.1 A permittee must ensure the following measures are complete prior to fall freeze-up until construction activities resume:

4.12.1.1.1 Temporary or final stabilization for conveyance channels;

4.12.1.1.2 Temporary or final stabilization for disturbed slopes, disturbed soils, and soil stockpiles; and

4.12.1.1.3 Proper installation of erosion and sediment control measures in anticipation of spring thaw.

4.12.1.2 Where temporary stabilization is precluded by snow cover or frozen ground conditions prior to the anticipated date of Fall Freeze-up, stabilization measures must be initiated as soon as practicable following the actual spring thaw.

4.12.2 **Winter Construction**. A permittee conducting winter construction activities that may extend beyond spring thaw must install appropriate control measures to minimize erosion and sediment runoff during spring thaw and summer rainfall[4].

Permit authorization is not required for the construction of ice roads or the placement of sand or gravel on frozen tundra with no excavation or potential to pollute waters of the U.S.

## 4.13 Maintenance of Control Measures

4.13.1 A permittee must maintain all control measures, good housekeeping measures, and other protective measures in effective operating condition. If site inspections required by Part 6.0 identify control measures, good housekeeping measures, or other protective measures that are not operating effectively, the permittee must implement corrective actions in accordance with Part 8.0.

4.13.2 If existing control measures need to be modified or if additional control measures are necessary for any reason, the permittee must complete any corrective action in accordance with the deadlines stated in Part 8.2.

4.13.3 A permittee must remove sediment from silt fences, check dams, berms or other controls before the accumulated sediment reaches:

4.13.3.1 One-third (⅓) the distance up the above-ground height (or it reaches a lower height based on manufacturer's specifications) for silt fences;

4.13.3.2 One-half (½) the distance up the above-ground height (or it reaches a lower height based on manufacturer's specifications or BMP guidance manuals) for storm water inlets, check dams, berms, or other control measure; or

4.13.3.3 For sediment traps or sediment ponds, the permittee must remove accumulated sediment when the design capacity has been reduced by fifty (50%) percent.

[4] The Alaska Storm Water Guide, Chapters 3 and 4, provide guidance on the selection, design, and installation of winter construction practices and controls.

### 4.14 Storm Water Lead and Training of Employees

A permittee must identify one "qualified person" (as defined in Appendix C) as the storm water lead/SWPPP Manager to ensure the control measures described in the SWPPP are implemented as written, or modified as necessary, during construction. The qualifications and training for the storm water lead/SWPPP Manager, SWPPP preparer, storm water inspector, and monitoring person for a site varies with the size of the project. A permittee must ensure that employees and subcontractors receive adequate training to ensure proper installation, maintenance, and removal of the control measures described in the SWPPP for the project.

### 4.15 Applicable Federal, State, Tribal, or Local Requirements

A permittee must ensure that the storm water control measures implemented at the site are consistent with all applicable federal, state, tribal, or local requirements for soil and erosion control and storm water management.

## 5.0 STORM WATER POLLUTION PREVENTION PLAN

### 5.1 Storm Water Pollution Prevention Plan (SWPPP)

5.1.1 A permittee must prepare a SWPPP for each site before submitting their NOI for permit coverage and document the control measures implemented at the site. The SWPPP is intended to document the selection, design, installation, and implementation of control measures that are being used to comply with the requirements set forth in Parts 3.0 and 4.0.

5.1.2 The SWPPP must, at a minimum:

5.1.2.1 Include the information described in Part 5.3.

5.1.2.2 Be implemented as written, including any modifications for changes in design or field conditions, until the submittal of the NOT.

5.1.2.3 Be developed by a "qualified person" (as defined in Appendix C).

5.1.2.4 Be signed, dated, and certified in accordance with Appendix A, Part 1.12.

### 5.2 Deadlines for SWPPP Preparation

5.2.1 An operator must prepare a SWPPP before submitting the NOI for authorization under this permit.

5.2.2 A permittee with an ongoing project with authorization under a previous construction general permit and a SWPPP that was developed based on that permit must review and update the SWPPP prior to submitting the NOI for authorization under this permit (see Part 2.4.2.1.2).

5.2.3 A permittee must provide a copy of the applicable portions of the SWPPP, or site–specific training to each subcontractor who engages in soil disturbing activities prior to the subcontractor conducting any soil disturbing activity. Revisions to the SWPPP that affect the subcontractor's soil disturbing activities must be provided to the subcontractor in a timely manner.

### 5.3 SWPPP Contents

At a minimum, the SWPPP must include the following:

5.3.1 **Permittee(s)**

Identify the permittee(s) for the site and any subcontractors that may work on the site, including the areas where the subcontractors may be or are expected to conduct activities covered by this permit.

5.3.2 **Storm Water Contact(s)**

Identify the following qualified person(s) responsible for the following (Note: A small project may have all these responsibilities carried out by one person):

5.3.2.1 Storm Water Lead;

5.3.2.2 Updating the SWPPP according to Part 5.9;

5.3.2.3 Conducting inspections according to Part 6.0;

5.3.2.4 Conducting monitoring (if applicable) according to Part 7.0; and

5.3.2.5 Operating an Active Treatment System (if applicable) according to 4.6.7.

5.3.3 **Project Site-Specific Conditions**. Briefly describe the existing site-specific conditions, including:

5.3.3.1 The mean annual precipitation based on the nearest weather station;

5.3.3.2 Site conditions such as soils, topography, drainage patterns, approximate growing season, and vegetation; and

5.3.3.3 Receiving waters such as impaired waters or waters listed in the Alaska Department of Fish &Game (ADF&G) Anadromous Waters Catalog.

5.3.4 **Nature of Construction Activity**. Briefly describe the nature of the construction activity, including:

5.3.4.1 The function of the project (e.g., low density residential, shopping mall, subdivision, airport, highway, etc.);

5.3.4.2 The intended sequence and timing of activities that disturb soils at the site;

5.3.4.3 Size of the property including support activities described in Part 1.4.2.3 (in acres) and the total area expected to be disturbed by excavation, grading, or other construction activities (in acres);

5.3.4.4 A general location map (e.g., USGS quadrangle map, a portion of a city or county map, or other map) with enough detail to identify the location of the construction site and waters of the U.S. within one mile of the site; and

5.3.4.5 Identification of all potential sources of pollutants that may reasonably be expected to affect the quality of the storm water discharges from the site.

5.3.5 **Site Map(s)**. The SWPPP must contain a legible site map (or set of maps for large projects) showing the entire site and identifying the following site-specific information:

5.3.5.1 North Arrow and bar scale;

5.3.5.2 Boundaries of the property where construction activities will occur;

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

5.3.5.4 Location of areas that will not be disturbed and natural features to be preserved;

5.3.5.5 Location of all storm water conveyances including ditches, pipes, and swales;

5.3.5.6 Locations of storm water inlets and outfalls, with a unique identification code for each outfall;

5.3.5.7 Municipal separate storm sewer systems, if present;

5.3.5.8 Direction(s) of storm water flow and approximate slopes anticipated after grading activities;

5.3.5.9 Locations where control measures will be or have been installed;

5.3.5.10 Locations where exposed soils will be stabilized or have been stabilized;

5.3.5.11 Locations where post-construction storm water controls will be or have been installed;

5.3.5.12 Locations of support activities described in Part 1.4.2.3;

5.3.5.13 Locations where authorized non-storm water will be used, including the types that will be used on-site;

5.3.5.14 Locations of all waters of the U.S. (including significant wetland areas 10,000 square feet or greater) on the site and those located within 2,500 feet of the site boundary that may be affected by storm water discharges from the site;

5.3.5.15 Location of existing public water system (PWS) drinking water protection areas (DWPA) for PWS sources (e.g. springs, wells, or surface water intakes) that intersect the boundary of the proposed project/permit area. The DWPAs can be found using the interactive web map application, "*Alaska DEC Drinking Water Protection Areas*", located at http://dec.alaska.gov/das/GIS/apps.htm.

5.3.5.16 Locations where storm water and/or authorized non-storm water discharges to waters of the U.S. (including wetlands) or an MS4;

5.3.5.17 Sampling Point(s) (if applicable): A permittee subject to the requirements of Parts 3.2 must include the location(s) of the storm water discharge sampling point(s). For a linear project, indicate which sampling points are considered substantially identical, in accordance with Part 7.3.5; and

5.3.5.18 Areas where final stabilization has been accomplished and no further construction-phase permit requirements apply.

5.3.6 **Control Measures**. The SWPPP must describe and document the location of all control measures that will be installed and maintained to meet the requirements in Parts 3.0 and 4.0. For each major activity identified in the project description, the SWPPP must clearly document the following.

5.3.6.1 The type of control measure to be installed and maintained and the location on the site for installation.

5.3.6.2 The general sequence during the construction process in which the control measures will be installed and made operational, as well as the manufacturer's or BMP manual specifications for installation.

5.3.6.3 The general sequence of the stabilization practices that will be used to achieve temporary or final stabilization on exposed portions of the site as required in Part 4.5.

5.3.6.4 The type of treatment chemicals used on the site and a description of the general location of their use at the site, in accordance with in Part 4.6.

5.3.6.5 The information submitted to DEC for an active treatment system, in accordance with Part 4.6.7.

5.3.6.6 The good housekeeping measures that will be used at the site, if any, in accordance with Part 4.8.

5.3.6.7 A description of spill prevention and response measures that will be used at the site, in accordance with Part 4.9. The permittee may reference the existence of other plans for Spill Prevention and Control and Countermeasure (SPCC) for the project, provided that a copy of the other plan(s) is kept with the SWPPP.

5.3.6.8 A description of all permanent storm water management controls that will be installed at the site, including their location, in accordance with Part 4.11.

5.3.6.9 For projects that expect a winter shutdown, the SWPPP must provide a description of the following:

5.3.6.9.1 Anticipated dates of fall freeze-up and spring thaw (as defined in Appendix C); and

5.3.6.9.2 The methods the permittee will use to address winter considerations in accordance with Part 4.12.

5.3.6.10 A description of maintenance procedures for the control measures in accordance with Part 4.13.

5.3.6.11 A description of the training relevant to the construction activity and control measures used at the site in accordance with Part 4.14.

5.3.7 **Construction and Waste Materials**. The SWPPP must describe in general terms the type of construction and waste materials expected to be stored at the site with updates as appropriate and describe the measures for the handling and disposal of all wastes generated at the site, including clearing and demolition debris or other waste soils removed from the site, construction and domestic waste, hazardous or toxic waste, and sanitary waste.

5.3.8 **Locations of Other Industrial Storm Water Discharges**. The SWPPP must describe and identify the location of any storm water discharge associated with support activities described in Part 1.4.2.3. This includes storm water discharges from dedicated asphalt plants and dedicated concrete plants that are covered by this permit.

5.3.9 **Non-Storm Water Discharges**. The SWPPP must identify all authorized sources of non-storm water discharges listed in Part 1.4.3 of this permit, except for flows from fire-fighting activities that are combined with storm water discharges associated with construction activity at the site. The SWPPP must also describe the good housekeeping measures used to control or reduce non-storm water discharges.

## 5.4 Inspections

5.4.1 The SWPPP must document the procedures for performing site inspections specified by Part 6.0 of this permit, and where necessary, procedures for taking corrective actions in accordance with Part 8.0. At a minimum, the SWPPP must document the following:

5.4.1.1 Person(s) or positions of person(s) responsible for conducting site inspections;

5.4.1.2 Schedules to be followed for conducting inspections;

5.4.1.3 Any inspection checklist or form that will be used to collect and summarize data and observations; and

5.4.1.4 How conditions found that require corrective action will be addressed.

5.4.2 A record of each inspection and of any corrective actions taken in accordance with Part 8.0 must be retained with the SWPPP for at least three years from the date that permit authorization expires or is terminated.

## 5.5 Monitoring Plan (if applicable)

5.5.1 A permittee subject to the monitoring requirements in Part 3.2 must include a copy of the monitoring plan that complies with Part 7.0. At a minimum the SWPPP must document the following:

5.5.1.1 Person(s) or positions of person(s) responsible for conducting monitoring;

5.5.1.2 Schedules to be followed for conducting the monitoring;

5.5.1.3 Any monitoring checklist or form that will be used to record monitoring results; and

5.5.1.4 How conditions found that require corrective action will be addressed.

5.5.1.5 A record of each monitoring event,

5.5.1.6 The annual report submitted to DEC in accordance with Part 9.1, and

5.5.1.7 Any corrective actions taken in accordance with Part 8.0.

5.5.2 A record of each monitoring event and of any corrective actions taken in accordance with Part 7.0 and 8.0 must be retained with the SWPPP for at least three years from the date permit authorization expires or is terminated.

## 5.6 Documentation of Permit Eligibility Related to a Total Maximum Daily Load

The SWPPP must include documentation supporting a determination of permit eligibility with regards to waters that have an EPA-established or approved TMDL. See Part 3.2 for additional information to determine eligibility related to a TMDL. The SWPPP must include the following:

5.6.1 Identification of whether the discharge is identified, either specifically or generally, in an EPA-established or approved TMDL and any associated allocations, requirements, and assumptions identified for the discharge;

5.6.2 Summaries of consultation with state or federal TMDL authorities on consistency of SWPPP conditions with the approved TMDL; and

5.6.3 Measures taken by the permittee to ensure that the discharge of pollutants from the site is consistent with the assumptions and requirements of the EPA-established or approved TMDL, including any specific wasteload or load allocation that has been established that would apply to the discharge.

## 5.7 Documentation of Permit Eligibility Related to Endangered Species

The SWPPP must include documentation supporting a determination of permit compliance with regard to the Endangered Species Act (ESA), including:

5.7.1 Information on whether federally-listed endangered or threatened species or designated critical habitat may be in the project area;

5.7.2 Whether such species or critical habitat may be adversely affected by storm water discharges or storm water discharge-related activities from the project;

5.7.3 Results of the listed species and critical habitat screening determinations;

5.7.4 Any correspondence between the U.S. Fish and Wildlife Service (USFWS), EPA, National Marine Fisheries Service (NMFS), or others and the permittee regarding listed species and critical habitat, including any notification that delays the permittee’s authorization to discharge under this permit; and

5.7.5 A summary description of measures necessary to protect federally-listed endangered or threatened species or federally-designated critical habitat.

## 5.8 Post-Authorization Records

5.8.1 **Copy of Permit Requirements**. The SWPPP must contain the following documents:

5.8.1.1 A copy of this permit;

5.8.1.2 A copy of the signed and certified NOI form submitted to DEC; and

5.8.1.3 Upon receipt, a copy of the letter from DEC authorizing permit coverage and providing the permit tracking number.

5.8.2 **Additional Documentation Requirements**. Summaries of the following information, or copies of the reports, must be maintained with the SWPPP by the permittee following authorization under this permit:

5.8.2.1 **Grading and Stabilization Activities Log**

5.8.2.1.1 Date(s) when grading activities occur;

5.8.2.1.2 Description of Grading Activity and Location

5.8.2.1.3 Date(s) when construction activities temporarily or permanently cease on a portion of the site;

5.8.2.1.4 Date(s) when stabilization measures are initiated;

5.8.2.1.5 Description of Stabilization Measure.

5.8.2.2 Date of beginning and ending period for winter shutdown;

5.8.2.3 Copies of inspection reports as required in Part 5.4.2;

5.8.2.4 Copies of rainfall monitoring as required in Part 7.3.9.2;

5.8.2.5 Copies of monitoring reports or annual reports (if applicable) as required in Part 5.5.2 and 9.1.

5.8.2.6 Log of SWPPP modifications;

5.8.2.7 Documentation required in Part 4.6 (i.e. Material Safety Data Sheet, manufacturer and/or supplier test results, or employee training information)

5.8.2.8 Records of employee training, including the date(s) training was received;

5.8.2.9 Documentation of maintenance and repairs of control measures, including date(s) of regular maintenance, date(s) of discovery of areas in need of repair/maintenance, and date(s) that the control measure(s) returned to full function; and

5.8.2.10 Description of any corrective action taken at the site, including the Corrective Action Log (Required in Permit Part 8.3) that records event(s) that caused the need for corrective action and dates when problems were discovered and modifications occurred, in accordance with Part 8.0.

## 5.9 Maintaining an Updated SWPPP

5.9.1 **SWPPP Modifications**. A permittee must modify the SWPPP, including site map(s) in response to any of the following:

5.9.1.1 Whenever changes are made to construction plans, control measures, good housekeeping measures, monitoring plan (if applicable), or other activities at the site that are no longer accurately reflected in the SWPPP. This includes changes made in response to corrective actions triggered under Part 8.0 and notifications by the permittee(s);

5.9.1.2 If inspections or investigations by site staff or by local, state, tribal or federal officials determine that SWPPP modifications are necessary for compliance with this permit; or

5.9.1.3 To reflect any revisions to applicable federal, state, tribal, or local law that affect the control measure implemented at the construction site.

5.9.2 **SWPPP Amendment Log**. A permittee must keep a log showing dates, name of person authorizing the change, and a brief summary of changes for all SWPPP modifications (e.g., adding new control measures, changes in project design, or storm events that cause for the replacement of control measures).

5.9.3 **Deadlines for SWPPP Modifications**. Revisions to the SWPPP must be completed within seven days of the inspection that identified the need for a SWPPP modification or within seven days of substantial modifications to the construction plans or changes in site conditions.

## 5.10 Additional SWPPP Requirements

5.10.1 **Retention of the SWPPP**

5.10.1.1 A copy of the SWPPP (including a copy of the permit), NOI, and acknowledgement letter from DEC must be retained at the construction site or other location easily accessible during normal business hours. If the permittee has day-to-day operational control over SWPPP implementation, the permittee must have a copy of the SWPPP available at a central location at the site for the use of all those identified as having responsibilities under the SWPPP whenever they are on the construction site. If an on-site location is unavailable to store the SWPPP when no personnel are present, notice of the plan's location must be posted near the main entrance at the site.

5.10.2 **Main Entrance Signage**

A sign or other notice must be posted conspicuously near the main entrance of the site. If there is insufficient space near the main entrance to post a sign or notice, the notice can be posted in a local public building such as the town hall or public library. For linear projects (e.g. highways or utilities) the sign or other notice must be posted at a location near the main entrance of the construction project (such as where a pipeline project crosses a public road) where the public may read it during non-business hours. At a minimum, the sign or other notice must contain the following information:

5.10.2.1 Permit authorization number assigned to the NOI,

5.10.2.2 Operator contact name and phone number for obtaining additional construction site information, and

5.10.2.3 The location of the SWPPP or the name and telephone number of the contact person for scheduling SWPPP viewing times. If the location of the SWPPP or the name and telephone number of the contact person for scheduling SWPPP viewing times has changed (i.e., is different than that submitted to DEC in the NOI), the current location of the SWPPP or name and telephone number of a contact person for scheduling viewing times.

5.10.3 **Availability of SWPPP**

5.10.3.1 A permittee is required to keep a current copy of the SWPPP at the site or other location easily accessible during normal business hours.

5.10.3.2 A permittee may move the location where the SWPPP is available during the winter shut down for a site that is expected to have a winter shutdown provided that the winter SWPPP location conforms to the requirements of Part 5.10.2.

5.10.3.3 A permittee must ensure that each subcontractor who engages in soil disturbing activities is provided access to a copy of the SWPPP and is familiar with relevant portion(s) thereof that relate to the subcontractor's activities at the project.

5.10.3.4 The SWPPP must be made available upon request by: DEC; EPA; a state, tribal or local agency approving sediment and erosion plans, grading plans, or storm water management plans; local government officials; the operator of a MS4 receiving discharges from the site; and representatives of the ADF&G, USFWS or the NMFS. An electronic or hard copy of the SWPPP must be made available in its entirety to DEC staff for review and copying upon request.

5.10.3.5 DEC may provide access to portions of the SWPPP to a member of the public upon request. Confidential Business Information (CBI) may be withheld from the public per Appendix A, Part 1.13, but may not be withheld from those staff cleared for CBI review within DEC, EPA, USFWS, or NMFS.

5.10.4 **Signature and Certification**

The SWPPP must be dated, signed, and certified in accordance with the requirements of Appendix A, Part 1.12.

## 5.11 Requirements for Different Types of Operators

The permittee may meet one or both of the operational control components in the definition of operator found in Appendix C. Part 5.11.3 applies to all permittees having control over only a portion of a construction site.

5.11.1 If the permittee has operational control over construction plans and specifications, the permittee must ensure that:

5.11.1.1 The project specifications meet the minimum requirements of this Part and all other applicable permit conditions;

5.11.1.2 The SWPPP indicates the areas of the project where the permittee has operational control over project specifications, including the ability to make modifications in specifications;

5.11.1.3 All other permittees implementing portions of the SWPPP (or their own SWPPP) who may be impacted by a change to the construction plan are notified of such changes in a timely manner; and

5.11.1.4 The SWPPP indicates the name of the party(ies) with day-to-day operational control of those activities necessary to ensure compliance with the SWPPP or other permit conditions.

5.11.2 If the permittee has operational control over day-to-day activities, the permittee must ensure that:

5.11.2.1 The SWPPP meets the minimum requirements of this Part and identifies the parties responsible for implementation of control measures identified in the plan;

5.11.2.2 The SWPPP indicates areas of the project where the permittee has operational control over day-to-day activities; and

5.11.2.3 The SWPPP indicates the name of the parties with operational control over project specifications (including the ability to make modifications in specifications).

5.11.3 If the permittee has operational control over only a portion of a larger common plan of development (e.g., one of four homebuilders in a subdivision), the permittee must ensure that:

5.11.3.1 They comply with all applicable control measures, terms, and conditions of this permit as it relates to the activities on the permittee's portion of the construction site, including, but not limited to: monitoring (if applicable), inspections, and protection of endangered species, and critical habitat..

5.11.3.2 They implement a portion of a comprehensive SWPPP or develop and implement a separate SWPPP that covers only their portion of the project in compliance with Part 5.1.

5.11.3.3 Activities on their portion of the site do not render another party's control measures ineffective.

# 6.0 INSPECTIONS

## 6.1 Inspection Frequency

6.1.1 A permittee must conduct inspections at one of the following schedules:

6.1.1.1 Once every seven calendar days; or

6.1.1.2 Once every 14 calendar days and within 24 hours of the end of a storm event that resulted in a discharge from the site; or

6.1.1.3 For areas of the state where the mean annual precipitation is forty (40) inches or greater, or relatively continuous precipitation or sequential storm events, inspect at least once every seven (7) calendar days.

6.1.2 A permittee must specify in the SWPPP which schedule will be followed.

## 6.2 Case-by-Case Reductions in Inspection Frequency

A permittee may reduce inspection frequency in the following situations:

6.2.1 If the entire site is stabilized in accordance with Part 4.5, a permittee may reduce the frequency of inspections to at least once every calendar month (minimum of 7 days separation between inspections) and within two business days of the end of a storm event at actively staffed sites that resulted in a discharge from the site;

6.2.2 If portions of the site have achieved final stabilization in accordance with Part 4.5 but construction activity remains on other portions of the site, a permittee may suspend inspections for those portions that have achieved final stabilization; however, the permittee must conduct subsequent inspections within two business days of the end of a storm event that results in a discharge from that portion of the site previously considered finally stabilized;

6.2.3 If the project is undergoing winter shutdown (as defined in Appendix C), implemented control measures with Part 4.12 Winter Considerations, and is documented in accordance with Part 5.3.6.9, a permittee may stop inspections 14 calendar days after the anticipated fall freeze-up and must resume inspections in accordance with Part 6.1 at least 21 calendar days prior to the anticipated spring thaw;

6.2.4 If the project is undergoing winter construction the inspection frequency can be reduced to once per month if runoff is unlikely due to continuous frozen conditions that are likely to continue at the site for at least three (3) months based on historic seasonal averages. If unexpected weather conditions (such as above freezing temperatures or rain events) make discharges likely, the permittee must immediately resume a regular inspection frequency; or

6.2.5 If the entire site has achieved final stabilization (as defined in Appendix C) and a NOT has been submitted, no further inspection requirements apply to the site.

## 6.3 Qualified Person

An inspection must be conducted by a qualified person (as defined in the Appendix C) provided by a permittee.

## 6.4 Site Inspection

6.4.1 **Location of Inspections**. During a site inspection, a permittee must at a minimum inspect the following areas of the site:

6.4.1.1 Areas of the site disturbed by construction activity (e.g., areas cleared, graded, or excavated);

6.4.1.2 Areas used for storage of materials that are exposed to precipitation;

6.4.1.3 Areas where control measures are installed and maintained at the site;

6.4.1.4 Areas where sediment and other pollutants have accumulated or been deposited and may have the potential for or are entering the storm water conveyance system;

6.4.1.5 Locations where vehicles enter or exit the site;

6.4.1.6 Areas where storm water typically flows, including the storm water conveyance system;

6.4.1.7 Points of discharge from the site. Where such discharge locations are inaccessible, the nearest downstream location must be inspected to the extent that such inspections are practicable; and

6.4.1.8 Portions of the site where temporary or final stabilization measures have been initiated.

6.4.2 **Scope of Inspection**. At a minimum, the scope of the site inspection must include the following:

6.4.2.1 Check whether all control measures are installed and operating as intended and determine if any control measures need to be replaced, repaired, or maintained;

6.4.2.2 Check for the presence of accumulated sediment near the project area boundary that has a potential for being washed outside of the project boundary on locations such as roadways or parking lots, storm water conveyance systems, storm water inlets, and discharge points;

6.4.2.3 Check for the evidence of, or the potential for spills, leaks, or other accumulations of pollutants on the site entering the storm water conveyance system or waters of the U.S.;

6.4.2.4 Describe visible areas where erosion has occurred near the project area boundary that has a potential for being washed outside of the project boundary;

6.4.2.5 Identify any locations where new or modified control measures are necessary to meet the requirements in Part 4.0;

6.4.2.6 Identify all points where there is a discharge from the site and describe the conditions that are contributing to that discharge (e.g., recent storm event with failure of a control measure); and

6.4.2.7 Any incidents of noncompliance observed and corrective actions taken pursuant to Part 8.0.

## 6.5 Linear Project Inspections

6.5.1 Representative inspections may be performed at linear projects if the areas described in Part 6.4 are inaccessible, unsafe for personnel, would compromise stabilized areas, or would cause additional disturbance of soils.

6.5.2 Representative inspections must be performed by a qualified person (as defined in Appendix C).

6.5.3 To conduct representative inspections, a qualified person must inspect control measures along the site 0.25 mile above and below each access point where a roadway, undisturbed right-of-way, or other similar feature intersects the site and allows access to the areas described in Part 6.4. The conditions of the control measures along each inspected 0.25 mile segment may be considered as representative of the condition of control measures along that reach extending from the end of the 0.25 mile segment to either the end of the next 0.25 mile inspected segment, or to the end of the project, whichever occurs first.

6.5.4 If treatment chemicals are used then inspections must be conducted of all areas using the treatment chemicals.

## 6.6 Inspections by DEC or Applicable Government Authority

6.6.1 A permittee must allow an authorized representative of DEC, EPA, or the MS4 operator at any reasonable time to:

6.6.1.1 Enter onto the site where a regulated construction activity is conducted or where records are kept under the conditions of this permit;

6.6.1.2 Access and copy any records that must be kept under the conditions of this permit;

6.6.1.3 Inspect any portion of the site, including any off-site staging areas or material storage areas and the erosion and/or sediment control measures; and

6.6.1.4 Sample or monitor for the purpose of ensuring compliance.

## 6.7 Inspection Report

For each inspection required by this Part, the permittee must complete an inspection report.

6.7.1 At a minimum, the inspection report must include:

6.7.1.1 The inspection date;

6.7.1.2 Names, titles, and qualifications of personnel conducting the inspection;

6.7.1.3 Weather information for the period since the last inspection (or since commencement of construction activity if the first inspection) including a general estimate of the beginning day of each storm event, duration of each storm event, and whether any discharges occurred (information from the nearest National Weather Service Station within 20 miles may be adequate provided it is representative of the actual site location if the permittee does not maintain a rain gauge on site);

6.7.1.4 Weather information and a description of any discharges occurring at the time of the inspection;

6.7.1.5 Location(s) of discharges of sediment or other pollutants from the site;

6.7.1.6 Location(s) of control measures that need to be maintained;

6.7.1.7 Location(s) of control measures that failed to operate as designed or proved inadequate for a particular location;

6.7.1.8 Location(s) where additional control measures are needed that did not exist at the time of inspection; and

6.7.1.9 Corrective action required, if any, including complete-by dates.

6.7.2 The inspection report must be signed in accordance with Appendix A, Part 1.12.

# 7.0 MONITORING

## 7.1 General Requirements

7.1.1 A permittee whose project is subject to Part 3.2 Discharge to Impaired Water Body is required to develop, implement, and modify a written site-specific plan for analytical monitoring that includes all the requirements of this Part and follows the applicable DEC Quality Assurance Guidance for a Water Quality Monitoring Plan[5].

7.1.2 The DEC may notify the permittee of additional discharge monitoring requirements. Any such notice will briefly state the reasons for the monitoring, locations, and parameters to be monitored, frequency and period of monitoring, sample types, and reporting requirements.

## 7.2 Qualified Person

Monitoring must be conducted by a qualified person (as defined in Appendix C) provided by a permittee.

## 7.3 Discharge Monitoring Requirements

7.3.1 **Sampling Parameter**

A permittee must sample for turbidity if the construction activity meets the requirements of Part 7.1.

7.3.2 **Sampling Frequency**

7.3.2.1 Sampling must be conducted during or immediately following any storm event (as defined in Appendix C) or snowmelt event that results in a discharge from the site. For areas of the state described in Part 6.1.1.3, sample once per week following any storm event that results in a discharge from the site.

7.3.2.2 A permittee must collect at least two representative samples of the discharge. In the monitoring plan the permittee must characterize the number and frequency of samples to be measured/collected per discharge so as to represent the water quality conditions in the discharge (at minimum two samples per day per storm event).

7.3.2.3 A permittee is only required to collect samples during normal business hours and when conditions are safe for sampling personnel. When unsafe conditions (i.e., those that are dangerous or create inaccessibility for personnel) prevent the collection of samples, the permittee must conduct sampling of the discharge from the site as soon as the conditions are safe for sampling.

7.3.2.4 If a permittee is unable to collect a sample of the discharge due to unsafe conditions, the reason must be documented and attached to all required reports and records of the sampling activity.

[5] Detailed requirements can be accessed at the following web page: http://dec.alaska.gov/water/water-quality/quality-assurance/

7.3.3 **Sampling Locations**

7.3.3.1 The permittee is required to conduct sampling at all discharge points where storm water or authorized non-storm water is discharged to an impaired water body or as per Part 7.1.2.

7.3.3.2 Linear Projects are also subject to the visual monitoring requirements in Part 7.4.

7.3.3.3 All sampling locations must be identified on the SWPPP site map and be clearly marked in the field with a flag, tape, stake, or other visible marker.

7.3.4 **Discharging to an Impaired Water body**. If the project is subject to Part 3.2, the permittee is required to conduct sampling at the following locations:

7.3.4.1 At a representative location upstream from the point of discharge into receiving water body or outside the area of influence of the discharge; and

7.3.4.2 At a representative location downstream from the point of discharge into the receiving water body, inside the area of influence of the discharge. Alternatively, the sample may be taken at the point it leaves the construction site, rather than when it is in the receiving water body.

7.3.5 **Representative Discharge Point for a Linear Project.** If a linear project has two or more outfalls that discharge substantially identical effluents, based on similarities of the soil disturbance and construction activity occurring within the drainage areas of the discharge point, the permittee may collect a representative sample of the storm water discharge at one of the discharge points and report that the quantitative data also apply to the substantially identical discharge point(s). For this to be permissible, the permittee must describe the following in the monitoring plan:

7.3.5.1 Locations of the discharge points;

7.3.5.2 Why the discharge points are expected to discharge substantially identical pollutants; and

7.3.5.3 Estimates of the size of the drainage area (in square feet) for each of the discharge points.

7.3.6 **Commingled Discharges**. If, prior to discharging, storm water flow commingles with sources of storm water that originate outside of the construction site or on property that is not owned or operated by the permittee, the following applies:

7.3.6.1 A permittee is required to collect samples of discharges from the construction site that consist in part of storm water that originates outside of the construction site and discharges from the site; or

7.3.6.2 If storm water originates outside of the construction site then discharges from the permittee's property but does not come into contact with the site construction activities, the permittee is not required to sample this discharge.

7.3.7 **Sample Type**. All sampling performed by the permittee must be representative of the flow and characteristics of the discharge.

7.3.8 **Sampling and Analysis Methods**

7.3.8.1 Turbidity analysis must be performed with an EPA-approved field-calibrated nephelometer or turbidity meter (turbidimeter) for water quality measurements.

7.3.8.2 Samples required by this permit should be analyzed immediately.

7.3.8.3 Automatic sampling may be used; however, samples from automatic samplers must be collected no later than the next business day after their accumulation, unless flow through automated analysis is used and analyzed consistent with Part 7.3.8.2.

7.3.8.4 If the permittee cannot conduct field turbidity measurements, then all laboratory analysis must be conducted according to test procedures specified in 40 CFR §136, unless other test procedures have been specified in this permit. Samples must be preserved as required by the appropriate EPA-approved method of analysis and analyzed within specified holding times.

7.3.9 **Rainfall Monitoring**

7.3.9.1 A permittee must use a rain gauge on site or utilize the nearest National Weather Service (NWS) precipitation gauge station to determine the amount of rainfall during a storm event if the NWS gauge used is located within 20 miles of the site.

7.3.9.2 A permittee must maintain daily records of the rainfall amounts and dates of rainfall events as part of the SWPPP, in accordance with Part 9.4.

7.3.10 **Recording Monitoring Data**. A permittee must retain records of all sampling information and reports as part of the SWPPP, in accordance with Part 9.4. For each sample collected, the permittee must record the following:

7.3.10.1 The date, monitoring location, method, and time of sampling;

7.3.10.2 The name and title of the individual(s) who performed the sampling and analyses;

7.3.10.3 The date(s) analyses were performed;

7.3.10.4 The analytical techniques or methods used; and

7.3.10.5 The results of such analyses in nephelometric turbidity units (NTU) and all calibration and quality control information used to validate the measurement(s).

7.3.11 **Reporting Monitoring Results**

7.3.11.1 All monitoring data collected pursuant to Part 7.0 must be submitted to DEC, in accordance with Part 9.1, Annual Reports. (Note: The monitoring data collected under this Part does not need to conform to Appendix A Part 3.2.)

7.3.11.2 For each discharge point, a permittee must submit the following information:

7.3.11.2.1 Name of discharge point. If the discharge point is on a linear project and is representative of one or more substantially similar discharge points, include the names of the other discharge points;

7.3.11.2.2 Date sample(s) collected;

7.3.11.2.3 Result of each individual sample collected in NTUs, or, if no discharge occurred during the sampling period for that discharge point indicate no discharge;

7.3.11.2.4 The arithmetic mean of all samples collected for each day; and

7.3.11.2.5 If the sample result(s) are from a representative discharge point, indicate representative sample.

7.3.11.3 A permittee is required to report all sampling results, including those that reflect samples collected beyond the minimum frequency required in Part 7.3.2.

## 7.4 Visual Monitoring for a Linear Project

A permittee for a linear project subject to the monitoring requirements in Part 3.2 or Part 7.1 are also required to visually monitor drainage areas and discharge locations in portions of the site where temporary or final stabilization has been initiated and document monitoring activities with the procedures described in this Part.

7.4.1 **Visual Monitoring Frequency**. Visual monitoring must be conducted at least once every seven calendar days, and the permittee may choose to do it more frequently.

7.4.2 **Visual Monitoring Locations**. The inspector must visually observe discharge points in portions of the site where temporary or final stabilization has been initiated and each drainage area associated with the linear project for the presence of current (and indications of prior) discharges and their sources.

7.4.3 **Visual Monitoring Requirements**. During conditions at the project in which a discharge is occurring, the permittee must:

7.4.3.1 Observe and document the visual quality and characteristics of the discharge, including color, odor, floating, settled, or suspended solids, foam, oil sheen, and other obvious indicators of storm water pollutants; and

7.4.3.2 Document whether control measures are operating effectively or are in need of maintenance.

7.4.4 **Recording Visual Monitoring Data**. A permittee must document the results of the visual monitoring and maintain this documentation with the SWPPP as required in Part 9.4. A permittee is not required to submit the visual monitoring findings to DEC, unless specifically requested to do so. At a minimum, the documentation of the visual monitoring must include:

7.4.4.1 The visual monitoring date;

7.4.4.2 Name and title of personnel conducting the visual monitoring;

7.4.4.3 Observations and documentation of the visual monitoring; and

7.4.4.4 Any conditions requiring corrective action and a description of the corrective action.

# 8.0 CORRECTIVE ACTIONS

A permittee must take corrective actions as identified through the inspections conducted under Part 6.0 or as indicated by monitoring conducted under Part 7.0. This includes addressing the performance of control measures, including modifications to the selection, design, installation, and/or implementation of those control measures or to address permit violations.

## 8.1 Corrective Action Conditions

8.1.1 A permittee must review and revise the selection, design, installation, and implementation of their control measures whenever any of the following conditions are identified, discovered, or made aware of at the site:

8.1.1.1 An unauthorized release or prohibited discharge (e.g., spill, leak, or discharge of non-storm water not authorized by this or another APDES permit);

8.1.1.2 Control measures are not designed, installed, and/or maintained as required in Part 4.0;

8.1.1.3 The permittee becomes aware, or DEC determines that the control measures are not operating as intended or are not effective enough to meet the requirements of Part 3.1.2;

8.1.1.4 An inspection by DEC or EPA official determines that modification to the control measures are necessary to meet the requirements of this permit;

8.1.1.5 The accumulation or tracking of sediment in or near any storm water conveyance channels, storm water inlet, on roadways or parking lots outside the project area and adjacent to the site, in the immediate vicinity of control measures, at discharge points or entry points into the storm sewer system, or in other areas of the site; or

8.1.1.6 Pollutants (other than sediment such as trash or litter) have accumulated in or near any storm water conveyance channels, on roadways or parking lots within and adjacent to the site, in the immediate vicinity of control measures, at discharge points or entry points into the storm sewer system, or in other areas of the site.

## 8.2 Deadlines for Corrective Actions

8.2.1 A permittee must review the design, installation, and maintenance of control measures upon detecting any condition in Part 8.1.1 and document any corrective action(s) to be taken to eliminate or further investigate the deficiency and comply with the following:

8.2.1.1 For conditions that are easily remedied (i.e., removal of tracked sediment, maintenance of control measures, or spill clean-up), the permittee must initiate appropriate steps to correct the problem within 24 hours from the time of discovery and correct the problem as soon as practicable; or

8.2.1.2 If installation of a new control measure is needed or an existing control measure requires redesign and reconstruction or replacement, the permittee must install the new or modified measure and make it operational within seven calendar days from the time of discovery of the need for the corrective action, unless infeasible;

8.2.1.3 If a discharge occurs during a local 2-year, 24-hour storm event, a corrective action as described in Part 8.1.1 must be initiated within 24 hours from the time of discovery of a discharge from the storm event;

8.2.1.4 Monitoring, if required, must continue while corrective actions are being carried out.

8.2.2 Where a permittee takes corrective actions that could affect a subcontractor, the permittee must provide notification to the subcontractor within three calendar days of taking the corrective action.

8.2.3 Subcontractors must notify the permittee within 24 hours of becoming aware of any of conditions listed in Part 8.1.1.

## 8.3 Corrective Action Log

8.3.1 A permittee must document the following information in the corrective action log, within 24 hours of discovery of any condition listed in Part 8.1 or upon notification from a subcontractor:

8.3.1.1 Date the problem was identified;

8.3.1.2 Summary of corrective action taken or to be taken (or, for conditions triggering corrective actions identified in Part 8.1, where the determination is made that action is not necessary, the basis for this determination);

8.3.1.3 Notice of whether SWPPP modifications were required as a result of this discovery or corrective action; and

8.3.1.4 Date corrective action completed.

8.3.2 A permittee must retain a copy of the corrective action log on-site with the SWPPP as required in Part 9.4.

## 8.4 Corrective Action Report

If monitoring pursuant to Part 3.2 Discharge to Impaired Water Body exceeds a WQS, the permittee must submit a corrective action report consistent with Part 9.2; except when there is a discharge that results from a storm event in that same day that is larger than the local 2-year, 24-hour storm.

### 8.5 Substantially Identical Outfalls

8.5.1 If the event triggering correction action is linked to an outfall that represents other substantially identical outfalls, the permittees review must assess the need for corrective action for each outfall represented by the outfall that triggered the review. Any necessary changes to control measures that affect these other outfalls must also be made before the next storm event if possible, or as soon as practicable following that storm event.

## 9.0 REPORTING AND RECORDKEEPING

### 9.1 Annual Report

9.1.1 All water quality monitoring data collected by the permittee pursuant to Part 3.2 Discharge to Impaired Water Body or Part 7.0 Monitoring must be submitted to DEC in an annual report. The annual report form must be submitted to the appropriate address in Appendix A, Part 1.1.2 by December 31 of each year during construction and upon submittal of the NOT (see Part 10.0). (Note: The monitoring data reported under this part does not need to conform to Appendix A Part 3.2.)

9.1.2 Monitoring results must be presented in a clearly legible format in tabular form. Upon written notification, DEC may require the permittee to submit the monitoring results on a more frequent basis. Monitoring and analysis of any storm water discharge(s) or the receiving water(s) beyond the minimum frequency stated in this permit must be reported in a similar manner to DEC.

9.1.3 A permittee must sign and certify all annual reports in accordance with the requirements of Appendix A, Part 1.1.12, Signature Requirement and Penalties. All signed and certified legible original annual reports and all other reports and documents must be submitted to DEC Compliance and Enforcement Program address in Appendix A, Part 1.1.2.

### 9.2 Corrective Action Report

If a corrective action report is required by Part 8.4 or Appendix A, Part 3.5, a permittee must submit a corrective action report to DEC Compliance and Enforcement Program address in Appendix A, Part 1.1.2 no later than 14 calendar days after receiving the monitoring results. The report must include the following:

9.2.1 APDES Permit Tracking Number;

9.2.2 Project name, physical address and location;

9.2.3 Name of receiving water;

9.2.4 Monitoring data from the event that exceeded a WQS;

9.2.5 An explanation of the conditions that caused the excursion;

9.2.6 Steps taken or planned (should corrective actions not yet be complete) to correct the violation; and

9.2.7 An appropriate contact name, telephone number and e-mail address.

### 9.3 Spill of Hazardous Substances Report

9.3.1 A permittee is prohibited from discharging hazardous substances or oil from a spill or other release. Alaska state law (18 AAC 75.300) and Part 4.9 requires all oil and hazardous substance release be reported to DEC Spill Prevention and Response program. Spill reporting placards can be found at the following webpage: http://dec.alaska.gov/spar/ppr/spill-information/reporting.

9.3.2 To report a spill, call the nearest DEC Area Response Team Office and follow their reporting requirements:

- Southeast (Juneau) – 465-5340
- Central (Anchorage) – 269-3063
- Northern (Fairbanks) – 451-2121

9.3.3 Outside of normal business hours, the permittee must call (800) 478-9300 to report the spill as soon as the permittee has knowledge of the discharge.

### 9.4 Retention of Records

A permittee must retain the following records at the site or the records must be readily available at a designated alternate location during the life of the construction activity and for a minimum of three years from the date that authorization under this permit expires or is terminated. This period may be extended by request of DEC at any time.

9.4.1 Records of all data used to complete the NOI to be covered by this permit;

9.4.2 A copy of the SWPPP (including any modifications made during the term of this permit);

9.4.3 A copy of all monitoring information (if applicable) and reports required by this permit;

9.4.4 A copy of all inspection reports generated in accordance with Part 6.0;

9.4.5 Documentation related to noncompliance and corrective actions taken pursuant to Part 8.0; and

9.4.6 Any other reports and certifications required by this permit.

### 9.5 Request for Submittal of Records

The DEC may request copies of all or a portion of the information collected and maintained in the SWPPP. A permittee must provide a response to written requests for records to the Department within 30 calendar days of receipt of a written request.

## 10.0 TERMINATION OF PERMIT AUTHORIZATION

### 10.1 Submitting a Notice of Termination (NOT)

10.1.1 To terminate permit coverage, a permittee must submit a complete and accurate NOT to DEC that certifies that one or more of the conditions in Part 10.2 have been met to terminate permit coverage. A permittee must comply with this permit until an NOT is submitted.

### 10.2 When to Submit a Notice of Termination

10.2.1 A permittee must submit an NOT within 30 calendar days after one or more of the following conditions have been met:

10.2.1.1 Final stabilization has been achieved on all portions of the site, in accordance with Part 4.5.2, for which a permittee is responsible, all ground disturbing construction activity or use of support activities has been completed, and all temporary BMP’s have been removed;

10.2.1.2 A new permittee has assumed control according to Appendix A, Part 2.3, over all areas of the site that have not been finally stabilized;

10.2.1.3 Authorization under an individual permit or alternative APDES general permit has been obtained, unless DEC has required that a permittee obtain such coverage under authority of Part 2.8, in which case authorization under this permit will automatically terminate;

10.2.1.4 For residential construction only, temporary stabilization has been completed and the residence has been transferred to the homeowner; or

10.2.1.5 The planned construction activity identified on the original NOI was never initiated (e.g., no grading or earthwork was ever started) and plans for the construction have been permanently abandoned or indefinitely postponed.

10.2.2 A permittee subject to pending state or federal enforcement actions, including citizen suits brought under state or federal law, may not submit a NOT. The permittee must certify that it is not subject to any pending state or federal enforcement actions, including citizen suites brought under state or federal law[6].

### 10.3 Submitting a Notice of Termination

10.3.1 A permittee must submit a NOT to terminate authorization under this permit. The complete and accurate NOT can be submitted either:

10.3.1.1 Electronically (strongly encouraged): Go to DEC's Water Online Application System (OASys) web page at http://dec.alaska.gov/water/wastewater/stormwater/apdesenoi/ to prepare and submit electronic NOT (eNOT). Note: the eNOT will likely be processed more quickly.

10.3.1.2 Paper NOT Form**:** Complete the form in Appendix E or access the form on DEC's APDES Storm Water Forms web page at http://dec.alaska.gov/water/wastewater/stormwater/forms#CGP. Once the form is complete, scan and email the entire form to DEC OPA. Submit a paper copy to DEC Permitting Program at the address listed in Appendix A, Section 1.1.1.

10.3.2 A permittee's authorization to discharge terminates at 11:59 pm of the day the NOT is signed.

10.3.3 If a permittee submits a NOT without meeting one or more of the conditions identified in Part 10.2, then the NOT is invalid and a permittee remains responsible for meeting the requirements of this permit until authorization is terminated pursuant to Part 10.3.2.

## 11.0 PERMIT REOPENER CLAUSE

### 11.1 Procedures for Modification or Revocation

Permit modification or revocation will be conducted according 18 AAC 83.130, 18 AAC 83.135, 18 AAC 83.140, or 18 AAC 83.145.

### 11.2 Water Quality Protection

If there is evidence indicating that the storm water discharges authorized by this permit cause, have the reasonable potential to cause or contribute to an excursion above any applicable WQS, the permittee may be required to obtain an individual permit in accordance with Part 2.8 of this permit, or the permit may be modified to include different limitations and/or requirements.

[6] 18 AAC 83.130(k).

### 11.3 Timing of Permit Modification

DEC may elect to modify the permit prior to its expiration (rather than waiting for the new permit cycle) to comply with any new statutory or regulatory requirements.

## 12.0 Electronic Reporting (E-Reporting) Rule (Phase II)

Phase II of the E-Reporting rule will integrate electronic reporting for all reports required by the Permit (e.g., Annual Reports and Certifications) and implementation is expected to begin December 2023. Permittees should monitor DEC's E-Reporting Information website (http://dec.alaska.gov/water/compliance/electronic-reporting-rule/) for updates on Phase II of the E-Reporting Rule and will be notified when they must begin submitting all other reports electronically. Until such time, other reports by the Permit may be submitted in accordance with Appendix A – Standard Conditions.

## 13.0 Standard Conditions Applicable to Recording and Reporting

The permittee must comply with the following recording and reporting requirements, as described in Appendix A, Standard Conditions unless specified in the body of the permit:

- Retention of Records, Part 1.11.2;
- Records Contents, Part 1.11.3
- Special Reporting Obligations, Part 2.0; and
- Monitoring, Recording, and Reporting Requirements, Part 3.0.

# **Appendix A** Standard Permit Conditions
## APDES PERMIT
## NONDOMESTIC DISCHARGES

## TABLE OF CONTENTS

**1.0 Standard Conditions Applicable to All Permits ..... A-3**
1.1 Contact Information and Addresses ..... A-3
1.2 Duty to Comply ..... A-3
1.3 Duty to Reapply ..... A-4
1.4 Need to Halt or Reduce Activity Not a Defense ..... A-4
1.5 Duty to Mitigate ..... A-4
1.6 Proper Operation and Maintenance ..... A-4
1.7 Permit Actions ..... A-4
1.8 Property Rights ..... A-4
1.9 Duty to Provide Information ..... A-4
1.10 Inspection and Entry ..... A-5
1.11 Monitoring and Records ..... A-5
1.12 Signature Requirement and Penalties ..... A-6
1.13 Proprietary or Confidential Information ..... A-7
1.14 Oil and Hazardous Substance Liability ..... A-8
1.15 Cultural and Paleontological Resources ..... A-8
1.16 Fee ..... A-8
1.17 Other Legal Obligations ..... A-8

**2.0 Special Reporting Obligations ..... A-8**
2.1 Planned Changes ..... A-8
2.2 Anticipated Noncompliance ..... A-8
2.3 Transfers ..... A-9
2.4 Compliance Schedules ..... A-9
2.5 Corrective Information ..... A-9
2.6 Bypass of Treatment Facilities ..... A-9
2.7 Upset Conditions ..... A-10
2.8 Existing Manufacturing, Commercial, Mining, and Silvicultural Discharges ..... A-10

**3.0 Monitoring, Recording, and Reporting Requirements ..... A-11**
3.1 Representative Sampling ..... A-11
3.2 Reporting of Monitoring Results ..... A-11
3.3 Additional Monitoring by Permittee ..... A-11
3.4 Twenty-four Hour Reporting ..... A-11
3.5 Other Noncompliance Reporting ..... A-12

**4.0 Penalties for Violations of Permit Conditions ..... A-12**
4.1 Civil Action ..... A-12
4.2 Injunctive Relief ..... A-13
4.3 Criminal Action ..... A-13
4.4 Other Fines ..... A-13

Appendix A of the permit contains standard regulatory language that must be included in all APDES permits. These requirements are based on the regulations and cannot be challenged in the context of an individual APDES permit action. The standard regulatory language covers requirements such as monitoring, recording, reporting requirements, compliance responsibilities, and other general requirements. Appendix A, Standard Conditions is an integral and enforceable part of the permit. Failure to comply with a Standard Condition in this Appendix constitutes a violation of the permit and is subject to enforcement.

# 1.0 Standard Conditions Applicable to All Permits

## 1.1 Contact Information and Addresses

### 1.1.1 Permitting Program

Documents, reports, and plans required under the permit and Appendix A are to be sent to the following address:

State of Alaska
Department of Environmental Conservation
Division of Water
Wastewater Discharge Authorization Program
555 Cordova Street
Anchorage, Alaska 99501
Telephone (907) 269-6285
Fax (907) 269-3487
Email: DEC.Water.WQPermit@alaska.gov

### 1.1.2 Compliance and Enforcement Program

Documents and reports required under the permit and Appendix A relating to compliance are to be sent to the following address:

State of Alaska
Department of Environmental Conservation
Division of Water
Compliance and Enforcement Program
555 Cordova Street
Anchorage, Alaska 99501
Telephone Nationwide (877) 569-4114
Anchorage Area / International (907) 269-4114
Fax (907) 269-4604
Email: dec-wqreporting@alaska.gov

## 1.2 Duty to Comply

A permittee shall comply with all conditions of the permittee's APDES permit. Any permit noncompliance constitutes a violation of 33 U.S.C 1251-1387 (Clean Water Act) and state law and is grounds for enforcement action including termination, revocation and reissuance, or modification of a permit, or denial of a permit renewal application. A permittee shall comply with effluent standards or prohibitions established under 33 U.S.C. 1317(a) for toxic pollutants within the time provided in the regulations that establish those effluent standards or prohibitions even if the permit has not yet been modified to incorporate the requirement.

## 1.3 Duty to Reapply

If a permittee wishes to continue an activity regulated by this permit after its expiration date, the permittee must apply for and obtain a new permit. In accordance with 18 AAC 83.105(b), a permittee with a currently effective permit shall reapply by submitting a new application at least 180 days before the existing permit expires, unless the Department has granted the permittee permission to submit an application on a later date. However, the Department will not grant permission for an application to be submitted after the expiration date of the existing permit.

## 1.4 Need to Halt or Reduce Activity Not a Defense

In an enforcement action, a permittee may not assert as a defense that compliance with the conditions of the permit would have made it necessary for the permittee to halt or reduce the permitted activity.

## 1.5 Duty to Mitigate

A permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

## 1.6 Proper Operation and Maintenance

1.6.1 A permittee shall at all times properly operate and maintain all facilities and systems of treatment and control and related appurtenances that the permittee installs or uses to achieve compliance with the conditions of the permit. The permittee's duty to operate and maintain properly includes using adequate laboratory controls and appropriate quality assurance procedures. However, a permittee is not required to operate back-up or auxiliary facilities or similar systems that a permittee installs unless operation of those facilities is necessary to achieve compliance with the conditions of the permit.

1.6.2 Operation and maintenance records shall be retained and made available at the site.

## 1.7 Permit Actions

A permit may be modified, revoked and reissued, or terminated for cause as provided in 18 AAC 83.130. If a permittee files a request to modify, revoke and reissue, or terminate a permit, or gives notice of planned changes or anticipated noncompliance, the filing or notice does not stay any permit condition.

## 1.8 Property Rights

A permit does not convey any property rights or exclusive privilege.

## 1.9 Duty to Provide Information

A permittee shall, within a reasonable time, provide to the Department any information that the Department requests to determine whether a permittee is in compliance with the permit, or whether cause exists to modify, revoke and reissue, or terminate the permit. A permittee shall also provide to the Department, upon request, copies of any records the permittee is required to keep under the permit.

## 1.10 Inspection and Entry

A permittee shall allow the Department, or an authorized representative, including a contractor acting as a representative of the Department, at reasonable times and on presentation of credentials establishing authority and any other documents required by law, to:

1.10.1 Enter the premises where a permittee's regulated facility or activity is located or conducted, or where permit conditions require records to be kept;

1.10.2 Have access to and copy any records that permit conditions require the permittee to keep;

1.10.3 Inspect any facilities, equipment, including monitoring and control equipment, practices, or operations regulated or required under a permit; and

1.10.4 Sample or monitor any substances or parameters at any location for the purpose of assuring permit compliance or as otherwise authorized by 33 U.S.C. 1251-1387 (Clean Water Act).

## 1.11 Monitoring and Records

A permittee must comply with the following monitoring and recordkeeping conditions:

1.11.1 Samples and measurements taken for the purpose of monitoring must be representative of the monitored activity.

1.11.2 The permittee shall retain records in Alaska of all monitoring information for at least three years, or longer at the Department's request at any time, from the date of the sample, measurement, report, or application. Monitoring records required to be kept include:

1.11.2.1 All calibration and maintenance records,

1.11.2.2 All original strip chart recordings or other forms of data approved by the Department for continuous monitoring instrumentation,

1.11.2.3 All reports required by a permit,

1.11.2.4 Records of all data used to complete the application for a permit,

1.11.2.5 Field logbooks or visual monitoring logbooks,

1.11.2.6 Quality assurance chain of custody forms,

1.11.2.7 Copies of discharge monitoring reports, and

1.11.2.8 A copy of this APDES permit.

1.11.3 Records of monitoring information must include:

1.11.3.1 The date, exact place, and time of any sampling or measurement;

1.11.3.2 The name(s) of any individual(s) who performed the sampling or measurement(s);

1.11.3.3 The date(s) and time any analysis was performed;

1.11.3.4 The name(s) of any individual(s) who performed any analysis;

1.11.3.5 Any analytical technique or method used; and

1.11.3.6 The results of the analysis.

1.11.4 Monitoring Procedures

Analyses of pollutants must be conducted using test procedures approved under 40 CFR Part 136, adopted by reference at 18 AAC 83.010, for pollutants with approved test procedures, and using test procedures specified in the permit for pollutants without approved methods.

## 1.12 Signature Requirement and Penalties

1.12.1 Any application, report, or information submitted to the Department in compliance with a permit requirement must be signed and certified in accordance with 18 AAC 83.385. Any person who knowingly makes any false material statement, representation, or certification in any application, record, report, or other document filed or required to be maintained under a permit, or who knowingly falsifies, tampers with, or renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be subject to penalties under 33 U.S.C. 1319(c)(4), AS 12.55.035(c)(1)(B), (c)(2) and (c)(3), and AS 46.03.790(g).

1.12.2 In accordance with 18 AAC 83.385, an APDES permit application must be signed as follows:

1.12.2.1 For a corporation, a responsible corporate officer shall sign the application; in this subsection, a responsible corporate officer means:

1.12.2.1.1 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

1.12.2.1.2 The manager of one of more manufacturing, production, or operating facilities, if

1.12.2.1.2.1 The manager is authorized to make management decisions that 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 statutes and regulations;

1.12.2.1.2.2 The manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and

1.12.2.1.2.3 Authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

1.12.2.2 For a partnership or sole proprietorship, by the general partner or the proprietor, respectively, shall sign the application.

1.12.2.3 For a municipality, state, federal, or other public agency, either a principal executive officer or ranking elected official shall sign the application; in this subsection, a principal executive officer of an agency means:

1.12.2.3.1 The chief executive officer of the agency; or

1.12.2.3.2 A senior executive officer having responsibility for the overall operations of a principal geographic unit or division of the agency.

1.12.3 Any report required by an APDES permit, and a submittal with any other information requested by the Department, must be signed by a person described in Appendix A, Part 1.12.2, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

1.12.3.1 The authorization is made in writing by a person described in Appendix A, Part 1.12.2;

1.12.3.2 The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, including the position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility; or an individual or position having overall responsibility for environmental matters for the company; and

1.12.3.3 The written authorization is submitted to the Department to the Permitting Program address in Appendix A, Part 1.1.1.

1.12.4 If an authorization under Appendix A, Part 1.12.3 is no longer effective because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Appendix A, Part 1.12.3 must be submitted to the Department before or together with any report, information, or application to be signed by an authorized representative.

1.12.5 Any person signing a document under Appendix A, Part 1.12.2 or Part 1.12.3 shall certify as follows:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

## 1.13 Proprietary or Confidential Information

1.13.1 A permit applicant or permittee may assert a claim of confidentiality for proprietary or confidential business information by stamping the words “confidential business information” on each page of a submission containing proprietary or confidential business information. The Department will treat the stamped submissions as confidential if the information satisfies the test in 40 CFR §2.208, adopted by reference at 18 AAC 83.010, and is not otherwise required to be made public by state law.

1.13.2 A claim of confidentiality under Appendix A, Part 1.13.1 may not be asserted for the name and address of any permit applicant or permittee, a permit application, a permit, effluent data, sewage sludge data, and information required by APDES or NPDES application forms provided by the Department, whether submitted on the forms themselves or in any attachments used to supply information required by the forms.

1.13.3 A permittee’s claim of confidentiality authorized under Appendix A, Part 1.13.1 is not waived if the Department provides the proprietary or confidential business information to the EPA or to other agencies participating in the permitting process. The Department will supply any information obtained or used in the administration of the state APDES program to the EPA upon request under 40 CFR §123.41, as revised as of July 1, 2005. When providing information submitted to the Department with a claim of confidentiality to the EPA, the Department will notify the EPA of the confidentiality claim. If the Department provides the EPA information that is not claimed to be confidential, the EPA may make the information available to the public without further notice.

### 1.14 Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any action or relieve a permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject to under state laws addressing oil and hazardous substances.

### 1.15 Cultural and Paleontological Resources

If cultural or paleontological resources are discovered because of this disposal activity, work that would disturb such resources is to be stopped, and the Office of History and Archaeology, a Division of Parks and Outdoor Recreation of the Alaska Department of Natural Resources (http://www.dnr.state.ak.us/parks/oha/), is to be notified immediately at (907) 269-8721.

### 1.16 Fee

A permittee must pay the appropriate permit fee described in 18 AAC 72.

### 1.17 Other Legal Obligations

This permit does not relieve the permittee from the duty to obtain any other necessary permits from the Department or from other local, state, or federal agencies and to comply with the requirements contained in any such permits. All activities conducted and all plan approvals implemented by the permittee pursuant to the terms of this permit shall comply with all applicable local, state, and federal laws and regulations.

## 2.0 Special Reporting Obligations

### 2.1 Planned Changes

2.1.1 The permittee shall give notice to the Department as soon as possible of any planned physical alteration or addition to the permitted facility if:

2.1.1.1 The alteration or addition may make the facility a “new source” under one or more of the criteria in 18 AAC 83.990(44); or

2.1.1.2 The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged if those pollutants are not subject to effluent limitations in the permit or to notification requirements under 18 AAC 83.610.

2.1.2 If the proposed changes are subject to plan review, then the plans must be submitted at least 30 days before implementation of changes (see 18 AAC 15.020 and 18 AAC 72 for plan review requirements). Written approval is not required for an emergency repair or routine maintenance.

2.1.3 Written notice must be sent to the Permitting Program address in Appendix A, Part 1.1.1.

### 2.2 Anticipated Noncompliance

2.2.1 A permittee shall give seven days’ notice to the Department before commencing any planned change in the permitted facility or activity that may result in noncompliance with permit requirements.

2.2.2 Written notice must be sent to the Compliance and Enforcement Program address in Appendix A, Part 1.1.2.

## 2.3 Transfers

2.3.1 A permittee may not transfer a permit for a facility or activity to any person except after notice to the Department in accordance with 18 AAC 83.150. The Department may modify or revoke and reissue the permit to change the name of the permittee and incorporate such other requirements under 33 U.S.C. 1251-1387 (Clean Water Act) or state law.

2.3.2 Written notice must be sent to the Permitting Program address in Appendix A, Part 1.1.1.

## 2.4 Compliance Schedules

2.4.1 A permittee must submit progress or compliance reports on interim and final requirements in any compliance schedule of a permit no later than 14 days following the scheduled date of each requirement.

2.4.2 Written notice must be sent to the Compliance and Enforcement Program address in Appendix A, Part 1.1.2.

## 2.5 Corrective Information

2.5.1 If a permittee becomes aware that it failed to submit a relevant fact in a permit application or submitted incorrect information in a permit application or in any report to the Department, the permittee shall promptly submit the relevant fact or the correct information.

2.5.2 Information must be sent to the Permitting Program address in Appendix A, Part 1.1.1.

## 2.6 Bypass of Treatment Facilities

### 2.6.1 Prohibition of Bypass

Bypass is prohibited. The Department may take enforcement action against a permittee for any bypass, unless:

2.6.1.1 The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

2.6.1.2 There were no feasible alternatives to the bypass, including use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. However, this condition is not satisfied if the permittee, in the exercise of reasonable engineering judgment, should have installed adequate back-up equipment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance; and

2.6.1.3 The permittee provides notice to the Department of a bypass event in the manner, as appropriate, under Appendix A, Part 2.6.2.

### 2.6.2 Notice of bypass

2.6.2.1 For an anticipated bypass, the permittee submits notice at least 10 days before the date of the bypass. The Department may approve an anticipated bypass, after considering its adverse effects, if the Department determines that it will meet the conditions of Appendix A, Parts 2.6.1.1 and 2.6.1.2.

2.6.2.2 For an unanticipated bypass, the permittee submits 24-hour notice, as required in 18 AAC 83.410(f) and Appendix A, Part 3.4, Twenty-four Hour Reporting.

2.6.2.3 Written notice must be sent to the Compliance and Enforcement Program address in Appendix A, Part 1.1.2.

2.6.3 Notwithstanding Appendix A, Part 2.6.1, a permittee may allow a bypass that:

2.6.3.1 Does not cause an effluent limitation to be exceeded, and

2.6.3.2 Is for essential maintenance to assure efficient operation.

## 2.7 Upset Conditions

2.7.1 In any enforcement action for noncompliance with technology-based permit effluent limitations, a permittee may claim upset as an affirmative defense. A permittee seeking to establish the occurrence of an upset has the burden of proof to show that the requirements of Appendix A, Part 2.7.2 are met.

2.7.2 To establish the affirmative defense of upset, the permittee must demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that:

2.7.2.1 An upset occurred and the permittee can identify the cause or causes of the upset;

2.7.2.2 The permitted facility was at the time being properly operated;

2.7.2.3 The permittee submitted 24-hour notice of the upset, as required in 18 AAC 83.410(f) and Appendix A, Part 3.4, Twenty-four Hour Reporting; and

2.7.2.4 The permittee complied with any mitigation measures required under 18 AAC 83.405(e) and Appendix A, Part 1.5, Duty to Mitigate.

2.7.3 Any determination made in administrative review of a claim that noncompliance was caused by upset, before an action for noncompliance is commenced, is not final administrative action subject to judicial review.

## 2.8 Existing Manufacturing, Commercial, Mining, and Silvicultural Discharges

2.8.1 In addition to the reporting requirements under 18 AAC 83.410, an existing manufacturing, commercial, mining, and silvicultural discharger shall notify the Department as soon as that discharger knows or has reason to believe that any activity has occurred or will occur that would result in:

2.8.1.1 The discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in the permit, if that discharge will exceed the highest of the following notification levels:

2.8.1.1.1 One hundred micrograms per liter (100 µg/L);

2.8.1.1.2 Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile, 500 micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol, and one milligram per liter (1 mg/L) for antimony;

2.8.1.1.3 Five times the maximum concentration value reported for that pollutant in the permit application in accordance with 18 AAC 83.310(c)-(g); or

2.8.1.1.4 The level established by the Department in accordance with 18 AAC 83.445.

2.8.1.2 Any discharge, on a non-routine or infrequent basis, of a toxic pollutant that is not limited in the permit, if that discharge will exceed the highest of the following notification levels:

2.8.1.2.1 Five hundred micrograms per liter (500 µg/L);

2.8.1.2.2 One milligram per liter (1 mg/L) for antimony;

2.8.1.2.3 Ten times the maximum concentration value reported for that pollutant in the permit application in accordance with 18 AAC 83.310(c)-(g); or

2.8.1.2.4 The level established by the Department in accordance with 18 AAC 83.445.

# 3.0 Monitoring, Recording, and Reporting Requirements

## 3.1 Representative Sampling

A permittee must collect effluent samples from the effluent stream after the last treatment unit before discharge into the receiving waters. Samples and measurements must be representative of the volume and nature of the monitored activity or discharge.

## 3.2 Reporting of Monitoring Results

The permittee shall summarize monitoring results on the annual report form or approved equivalent. The permittee shall submit its annual report at the interval specified in the permit. The permittee shall sign and certify all annual reports and other reports in accordance with the requirements of Appendix A, Part 1.12, Signature Requirement and Penalties. The permittee shall submit the legible originals of these documents to the ADEC Compliance and Enforcement Program at the address in Appendix A, Part 1.1.2.

## 3.3 Additional Monitoring by Permittee

If the permittee monitors any pollutant more frequently than the permit requires using test procedures approved in 40 CFR Part 136, adopted by reference at 18 AAC 83.010, or as specified in this permit, the results of that additional monitoring must be included in the calculation and reporting of the data submitted in the DMR or annual report required by Appendix A, Part 3.2. All limitations that require averaging of measurements must be calculated using an arithmetic means unless the Department specifies another method in the permit. Upon request by the Department, the permittee must submit the results of any other sampling and monitoring regardless of the test method used.

## 3.4 Twenty-four Hour Reporting

A permittee shall report any noncompliance event that may endanger health or the environment as follows:

3.4.1 A report must be made:

3.4.1.1 Orally within 24 hours after the permittee becomes aware of the circumstances, and

3.4.1.2 In writing within five days after the permittee becomes aware of the circumstances.

3.4.2 A report must include the following information:

3.4.2.1 A description of the noncompliance and its causes, including the estimated volume or weight and specific details of the noncompliance;

3.4.2.2 The period of noncompliance, including exact dates and times;

3.4.2.3 If the noncompliance has not been corrected, a statement regarding the anticipated time the noncompliance is expected to continue; and

3.4.2.4 Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

3.4.3 An event that must be reported within 24 hours includes:

3.4.3.1 An unanticipated bypass that exceeds any effluent limitation in the permit (see Appendix A, Part 2.6, Bypass of Treatment Facilities).

3.4.3.2 An upset that exceeds any effluent limitation in the permit (see Appendix A, Part 2.7, Upset Conditions).

3.4.3.3 A violation of a maximum daily discharge limitation for any of the pollutants listed in the permit as requiring 24-hour reporting.

3.4.4 The Department may waive the written report on a case-by-case basis for reports under Appendix A, Part 3.4 if the oral report has been received within 24 hours of the permittee becoming aware of the noncompliance event.

3.4.5 The permittee may satisfy the written reporting submission requirements of Appendix A, Part 3.4 by submitting the written report via e-mail, if the following conditions are met:

3.4.5.1 The Noncompliance Notification Form or equivalent form is used to report the noncompliance;

3.4.5.2 The written report includes all the information required under Appendix A, Part 3.4.2;

3.4.5.3 The written report is properly certified and signed in accordance with Appendix A, Parts 1.12.3 and 1.12.5.;

3.4.5.4 The written report is scanned as a PDF (portable document format) document and transmitted to the Department as an attachment to the e-mail; and

3.4.5.5 The permittee retains in the facility file the original signed and certified written report and a printed copy of the conveying email.

3.4.6 The e-mail and PDF written report will satisfy the written report submission requirements of this permit provided the e-mail is received by the Department within five days after the time the permittee becomes aware of the noncompliance event and the e-mail and written report satisfy the criteria of Part 3.4.5. The e-mail address to report noncompliance is: dec-wqreporting@alaska.gov

### 3.5 Other Noncompliance Reporting

A permittee shall report all instances of noncompliance not required to be reported under Appendix A, Parts 2.4 (Compliance Schedules), 3.3 (Additional Monitoring by Permittee), and 3.4 (Twenty-four Hour Reporting) at the time the permittee submits monitoring reports under Appendix A, Part 3.2. (Reporting of Monitoring Results). A report of noncompliance under this part must contain the information listed in Appendix A, Part 3.4.2 and be sent to the Compliance and Enforcement Program address in Appendix A, Part 1.1.2.

## 4.0 Penalties for Violations of Permit Conditions

Alaska laws allow the State to pursue both civil and criminal actions concurrently. The following is a summary of Alaska law. Permittees should read the applicable statutes for further substantive and procedural details.

### 4.1 Civil Action

Under AS 46.03.760(e), a person who violates or causes or permits to be violated a regulation, a lawful order of the Department, or a permit, approval, or acceptance, or term or condition of a permit, approval or acceptance issued under the program authorized by AS 46.03.020 (12) is liable, in a civil action, to the State for a sum to be assessed by the court of not less than $500 nor more than $100,000 for the initial violation, nor more than $10,000 for each day after that on which the violation continues, and that shall reflect, when applicable:

4.1.1 Reasonable compensation in the nature of liquated damages for any adverse environmental effects caused by the violation, that shall be determined by the court according to the toxicity, degradability, and dispersal characteristics of the substance discharged, the sensitivity of the receiving environment, and the degree to which the discharge degrades existing environmental quality;

4.1.2 Reasonable costs incurred by the State in detection, investigation, and attempted correction of the violation;

4.1.3 The economic savings realized by the person in not complying with the requirements for which a violation is charged; and

4.1.4 The need for an enhanced civil penalty to deter future noncompliance.

## 4.2 Injunctive Relief

4.2.1 Under AS 46.03.820, the Department can order an activity presenting an imminent or present danger to public health or that would be likely to result in irreversible damage to the environment be discontinued. Upon receipt of such an order, the activity must be immediately discontinued.

4.2.2 Under AS 46.03.765, the Department can bring an action in Alaska Superior Court seeking to enjoin ongoing or threatened violations for Department-issued permits and Department statutes and regulations.

## 4.3 Criminal Action

Under AS 46.03.790(h), a person is guilty of a Class A misdemeanor if the person negligently:

4.3.1 Violates a regulation adopted by the Department under AS 46.03.020(12);

4.3.2 Violates a permit issued under the program authorized by AS 46.03.020(12);

4.3.3 Fails to provide information or provides false information required by a regulation adopted under AS 46.03.020(12);

4.3.4 Makes a false statement, representation, or certification in an application, notice, record, report, permit, or other document filed, maintained, or used for purposes of compliance with a permit issued under or a regulation adopted under AS 46.03.020(12); or

4.3.5 Renders inaccurate a monitoring device or method required to be maintained by a permit issued or under a regulation adopted under AS 46.03.020(12).

## 4.4 Other Fines

Upon conviction of a violation of a regulation adopted under AS 46.03.020(12), a defendant who is not an organization may be sentenced to pay a fine of not more than $10,000 for each separate violation (AS 46.03.790(g)). A defendant that is an organization may be sentenced to pay a fine not exceeding the greater of: (1) $200,00; (2) three times the pecuniary gain realized by the defendant as a result of the offense; or (3) three times the pecuniary damage or loss caused by the defendant to another, or the property of another, as a result of the offense (AS 12.55.035(c)(B), (c)(2), and (c)(3)).

**Appendix B** Acronyms (for the purposes of this permit)

| Abbreviations | |
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| ADEC | Alaska Department of Environmental Conservation |
| ADF&G | Alaska Department of Fish & Game |
| AK-CESCL | Alaska Certified Erosion and Sediment Control Lead |
| APDES | Alaska Pollutant Discharge Elimination System |
| BMP | Best Management Practice |
| CESSWI | Certified Erosion, Sediment and Storm Water Inspector |
| CFR | Code of Federal Regulations |
| CGP | Construction General Permit |
| CISEC | Certified Inspector of Sediment and Erosion Control |
| CPESC | Certified Professional in Erosion and Sediment Control |
| CPISM | Certified Professional in Industrial Stormwater Management |
| CPSWQ | Certified Professional in Storm Water Quality |
| CWA | Clean Water Act |
| DWPA | Drinking Water Protection Areas |
| ELG | Effluent Limit Guideline |
| EPA | United States Environmental Protection Agency |
| ESA | Endangered Species Act |
| FWS | United States Fish and Wildlife Service |
| MS4 | Municipal Separate Storm Sewer System |
| MSGP | Multi-Sector General Permit |
| NHPA | National Historic Preservation Act |
| NMFS | United States National Marine Fisheries Service |
| NOI | Notice of Intent |
| NOT | Notice of Termination |
| PAM | Polyacrylamides |
| POTW | Publicly Owned Treatment Works |
| PWS | Public Water Systems |
| SHPO | State Historic Preservation Office |
| SWPPP | Storm Water Pollution Prevention Plan |
| THPO | Tribal Historic Preservation Officer |
| TMDL | Total Maximum Daily Load |
| WQS | Water Quality Standard |

## Appendix C Definitions

Definitions

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| 2-year, 24-hour storm event | Means the maximum 24-hour precipitation event with a probable recurrence interval of once in two (2) years, respectively. |
| Active Treatment System (ATS) | For the purposes of this permit, means a treatment system comprised of automated chemical dispensing, mechanical aeration, pumps, and/or mechanical filtration that employs chemical coagulation, chemical flocculation, or electrocoagulation in order to reduce turbidity caused by fine suspended sediment. The system may also use gravity separation, inert media filtration and absorptive media. It does not include the passive application of treatment chemicals through the use of pre-manufactured products (e.g. floc logs, floc blocks, etc). |
| Actively Staffed | Projects that employ a sufficient number of essential personnel to maintain day-to-day operations at a construction site. Examples of essential personnel usually include a project engineer, foreman, or inspectors. |
| Activity | Any "point source" or any other facility or activity (including land or appurtenances thereto) that is subject to regulation under the APDES program. |
| Alaska Climatic Regions | For the purposes of this permit, means the climatic region (Coastal, South-central, Western, Interior, and Arctic) that the construction activity is located. |
| Anionic Polyacrylamide | Means a negatively charged chemical agent that binds soil particles together, which promotes coagulation and rapid settling. |
| Arid Areas | Areas with an average total precipitation of 0 to 10 inches. See xmacis.rcc-acis.org/ for precipitation data from the weather station closet to the construction project. |
| Best Management Practices (BMPs) | Schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants to waters of the United States (U.S.). BMPs also include treatment requirements, operating procedures, and practice to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. |
| Buffer | For the purposes of this permit, means a setback that establishes a no-disturbance vegetated zone along and around waters of the U.S.. The buffer consists of a dense turf or vegetation judiciously placed across the path of surface runoff in a way that promotes sheet flow that can reduce the velocity of flow, increase the likelihood of infiltration, and promote the trapping and settling of suspended matter. It may be used in combination with other control measures in a treatment train approach to promote erosion and sediment control. |
| Business Day (or work day) | A day on which work is performed on site. For State offices, typically, Monday thru Friday with the exception of state holidays. For state holidays, see http://doa.alaska.gov/calendar. |

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| Borrow Area | The areas where materials are dug for use as fill, either onsite or off-site. |
| Bypass | Defined in 40 CFR §122.41 and incorporated here by reference. Bypass means the intentional diversion of waste streams from any portion of a treatment facility. See Appendix A, Part 2.6. |
| Cationic Treatment Chemical | For the purposes of this permit, means polymers, flocculants, or other chemicals that contain an overall positive charge. Among other things, they are used to reduce turbidity in storm water discharges by chemically bonding to the overall negative charge of suspended silts and other soil materials and causing them to bind together and settle out. Common examples of cationic treatment chemicals are chitosan and cationic PAM. |
| Clean Water Act (CWA) | Means the Clean Water Act or the Federal Water Pollution Control Act, 33 U.S.C. section 1251 et seq. |
| Clearing | For the purposes of this permit, means the cutting down and removal of trees and brush without the disturbance of soils and the root mass. |
| Coagulants | Are substances that cause clumping of particles in a discharge to settle out impurities, often induced by chemicals such as lime, alum, and iron salts. |
| Commencement of Construction Activities or Construction Activity | For the purposes of this permit, means the initial disturbance of soils associated with clearing that disturbs the vegetative mat/grubbing, grading, or excavating activities or other construction-related activities (e.g., stockpiling of fill material, establishment of staging areas, or development of project-specific material sources). |
| Common Plan of Development or Sale | For the purposes of this permit, means a site where multiple separate and distinct construction activities may be taking place at different times on different schedules, but still under a single plan. Examples include:<br>1) phased projects and projects with multiple filings or lots, even if the separate phases or filings/lots will be constructed under separate contract or by separate owners (e.g., a development where lots are sold to separate builders);<br>2) a development plan for a rural infrastructure project that may be phased over multiple years and is under a consistent plan for long-term development (e.g., a project that is designed to be built over several years, however funding is available for those phases on a year-to-year basis). Projects that have multiple year development plans but have year-to-year funding shall file NOI and NOT at the beginning and end of each funded phase of the project; and<br>3) projects in a contiguous area that may be unrelated but still under the same contract, such as construction of a building extension and a new parking lot at the same facility.<br>If the project is part of a common plan of development or sale, the disturbed area of the entire plan shall be used in determining permit requirements. For land subdivided for residential lots, see the definition of 'Residential Subdivision' for further discussion of the requirements. |

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| | Where discrete construction projects within a larger common plan of development or sale are located one-quarter mile or more apart and the area between the projects is not being disturbed, each individual project can be treated as a separate plan of development or sale provided any interconnecting road, pipeline or utility project that is part of the same "common plan" is not being disturbed. If a utility company is constructing new trunk lines off an existing transmission line to serve separate residential subdivisions located more than one-quarter mile apart, the two trunk line projects could be considered to be separate projects. |
| Control Measure | For the purposes of this permit, refers to any BMP or other method used to prevent or reduce the discharge of pollutants to waters of the U.S.. |
| Construction and Development Rule (C&D Rule) | As published in 40 CFR §450 is the regulation requiring effluent limitations guidelines (ELG's) and new source performance standards (NSPS) for controlling the discharge of pollutants from construction sites. |
| Disaster | Has the meaning in AS 26.23.900. As defined in AS 26.23.900 the term includes, but is not limited to, the occurrence or imminent threat of widespread or severe damage, injury, loss of life or property, or shortage of food, water, or fuel resulting from an incident such as storm, high water, wind-driven water, tidal wave, tsunami, earthquake, volcanic eruption, landslide, mudslide, avalanche, snowstorm, prolonged extreme cold, drought, fire, flood, epidemic, explosion, or riot; the release of oil or a hazardous substance if the release requires prompt action to avert environmental danger or mitigate environmental damage; and equipment failure if the failure is not a predictably frequent or recurring event or preventable by adequate equipment maintenance or operation. |
| Disaster Emergency | For the purposes of this permit, means the condition declared by proclamation of the governor or declared by the principal executive officer of a political subdivision to designate the imminence or occurrence of a disaster. |
| Department or DEC | Refers to the Alaska Department of Environmental Conservation |
| Discharge | When used without qualification means the "discharge of a pollutant" |
| Discharge of Storm Water Associated with Construction Activity | For the purposes of this permit, refers to a discharge of pollutants in storm water from areas where soil disturbing activities (e.g., clearing, grading, or excavation), construction materials or equipment storage or maintenance (e.g., fill piles, borrow area, concrete truck chute washdown, fueling), or other industrial storm water directly related to the construction process (e.g., concrete or asphalt batch plants) are located. |
| Discharge Point | Means the location where collected and concentrated storm water flows are discharged from the construction site. |

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| Disturbed Area | Is a portion of any site that has been altered from pre-existing conditions, including but not limited to the following: providing access to a site, grubbing and clearing of vegetation (including the roots), grading, earth moving, altering land forms, and other construction-related activities (such as placement of project related stockpiles atop a soil surface). |
| Effluent | For the purposes of this permit, means any discharge of storm water and allowable non-storm water by a permittee either to the receiving water or beyond the property boundary controlled by the permittee. |
| Effluent Limit Guideline | Defined in 40 CFR §122.a as a regulation published by the Administrator under section 304(b) of the Clean Water Act to adopt or review effluent limitations. |
| Electronic Notice of Intent (eNOI) | For the purposes of this permit, means the ADEC online system for submitting electronic Construction General Permit forms. |
| Eligible | Qualified for authorization to discharge storm water under this general permit. |
| Equivalent Analysis Waiver | Means a waiver, available only to small construction activities which discharge to non-impaired waters only, based on the permittee performance of an equivalent analysis using existing instream concentrations, expected growth in pollutant concentrations from all sources, and a margin of safety |
| Erosion | Is the process of wearing away of the land surface by water, wind, ice, gravity, or other geologic agents. |
| Erosion Control Measures | Are control measures intended to minimize dislodging and mobilizing of sediment particles |
| Excavation Dewatering | The practice of dewatering excavation areas through the use of pumps placed within the excavation or well pumps in adjacent dewatering wells which lower the water table to provide a relative dry working condition. |
| Exceptional Recreational or Ecological Significance | For the purposes of this permit, means a waterbody that is important, unique, or sensitive ecologically and has been designated as an Outstanding Natural Resource Water or Tier 3 water. |
| Fall Freeze-up | For the purposes of this permit, means for planning purposes in the development of the SWPPP and initial planning of control measure maintenance the date in the fall that air temperatures will be predominately below freezing. It is the date in the fall that has an 80% probability that a minimum temperature below a threshold of 32.5 degrees Fahrenheit will occur on or after the given date. This date can be found by looking up the "Fall 'Freeze' Probabilities" for the weather station closest to the site on the website www.wrcc.dri.edu/summary/Climsmak.html. Alternatively, the Fall Freeze-up can be estimated by using the 5-year moving average from the First/Last dates where the minimum temperature below a threshold of 32.5 degrees Fahrenheit will occur on or after the given date for the weather station closest to the site on the website xmacis.rcc-acis.org. NOTE: this estimation of "Fall Freeze-up" is for planning purposes only. During construction the permittee will need to maintain control measures based on actual conditions. |

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| Facility | See "activity." |
| Federal Facility | Any buildings, installations, structures, land, public works, equipment, aircraft, vessels, and other vehicles and property, owned by, or constructed or manufactured for the purpose of leasing to, the Federal government. |
| Field Measurements | Are testing procedures performed in the field with portable field-testing kits or meters. |
| Fill-only projects | For the purposes of this permit, means projects where the road prism or gravel pad is constructed using low-erodible fill material placed over an undisturbed vegetative mat. Typically, there is not soil disturbance that may be subject to erosion. |
| Flocculants | Are substances that interact with suspended particles and bind them together to form flocs. These flocs more readily settle out compared to individual particles. |
| Frozen Ground | For the purposes of this permit, is characterized by soil temperature below freezing. Frozen ground by itself is not considered an acceptable stabilization control measure. It may be used in combination with control measures (e.g. track walking, downgradient control measures, etc.) |
| Good Housekeeping Measures | For the purposes of this permit, means storm water controls designed to reduce or eliminate the addition of pollutants to construction site discharges through analysis of pollutant sources, implementation of proper handling and/or disposal practices, employee education, and other actions. |
| Grubbing | For the purposes of this permit, means the stripping and removal of the root mass on or near the ground surface. This is considered soil disturbance activity and requires coverage under this permit. |
| Hazardous Materials or Hazardous Substances or Hazardous or Toxic Waste | For the purposes of this permit, any liquid, solid, or contained gas that contain properties that are dangerous or potentially harmful to human health or the environment. See also 40 CFR §261.2. |
| Immediately | No later than the end of the next work day, following the day when the earth-disturbing activities have temporarily or permanently ceased. |
| Impaired Water | (or "Water Quality Impaired Water" or "Water Quality Limited Segment") is defined as a water that is impaired for purposes of this permit if it has been identified by the State of Alaska or EPA pursuant to Section 303(d) of the Clean Water Act as not meeting applicable State WQSs (These waters are called "water quality limited segments" under 40 CFR §30.2(j)). Impaired waters include both waters with approved or established TMDLs, and those for which a TMDL has not yet been approved or established. For more information and current listing of impaired waters, see http://dec.alaska.gov/water/water-quality/impaired-waters. |

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| Indian Country | Defined at 40 CFR §122.2 to mean:<br>1. All land within the limits of any Indian reservation under the jurisdiction of the United States Government, notwithstanding the issuance of any patent, and including rights-of-way running through the reservation;<br>2. All dependent Indian communities with the borders of the United States whether within the originally or subsequently acquired territory thereof and whether within or without the limits of a state; and<br>3. All Indian allotments, the Indian titles to which have not been extinguished, including rights-of-ways running through the same. |
| Infeasible | Defined in 40 CFR §450.11 and incorporated here by reference. Infeasible means not technologically possible, or not economically practicable and achievable in light of best industry practices. |
| Large Construction Activity | Defined at 40 CFR §122.26(b)(14)(x) and incorporated here by reference. A large construction activity includes clearing, grading, and excavating resulting in a land disturbance that will disturb equal to or greater than five acres of land or will disturb less than five acres of total land area but is part of a larger common plan of development or sale that will ultimately disturb equal to or greater than five acres. Large construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity of conveyance channels, or original purpose of the site. |
| Linear Project | Is a land disturbing activity as conducted by an underground/overhead utility or highway department, including but not limited to any cable line or wire for the transmission of electrical energy; any conveyance pipeline for transportation of gaseous or liquid substance; any cable line for communications; or any other energy resource transmission right-of-way or utility infrastructure (e.g., roads and highways) along a long narrow area. |
| Maintenance | Activities performed to maintain the original line and grade, hydraulic capacity of conveyance channels, or original purpose of the site. For the purposes of this permit, means projects that repair, rehabilitate, or replace existing structures or facilities, provided that the maintenance activity does not change the original purpose of the structure or facility. Maintenance may include minor deviations in the configuration of the structure or facility due to changes in materials, construction methods, or current construction codes or safety standards. |
| Master Plan | For the purposes of this permit, means if the permittee has a long-range master plan of development (e.g. a rural infrastructure improvement project or military base construction) where some portions of the master plan are a conceptual rather than a specific plan of future development and the future construction activities would, if they occur at all, happen over an extended time period, the permittee may consider the “conceptual” phases of a master plan to be separate “common plans” provided the periods of construction for the physically interconnected phases do not overlap. |

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| Mean Annual Precipitation | This is the average total precipitation based on weather records. This data is available on the website for the Western Regional Climate Center https://xmacis.rcc-acis.org/. |
| Minimize | To reduce and/or eliminate to the extent achievable using control measures and good housekeeping measures that are technologically available and economically practicable and achievable in light of best industry practices. |
| Minimize Pollutant Discharge | See 'Minimize' |
| Municipality | A home rule municipality is a municipal corporation and political subdivision. It is a city or a borough that has adopted a home rule charter, or it is a unified municipality. A home rule municipality has all legislative powers not prohibited by law or charter. (§ 3 ch 74 SLA 1985) A general law municipality is a municipal corporation and political subdivision and is an unchartered borough or city. It has legislative powers conferred by law. (§ 3 ch 74 SLA 1985) |
| Municipal Separate Storm Sewer System (MS4) | Defined at 40 CFR §122.26(b)(8) to mean a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains):<br>1. Owned and operated by a state, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under Section 208 of the CWA that discharges to waters of the U.S.;<br>2. Designed or used for collecting or conveying storm water;<br>3. Which is not a combined sewer; and<br>4. Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR §122.2. |
| Nephelometric Turbidity Unit (NTU) | Is an expression of the optical property that causes light to be scattered and absorbed rather than transmitted in a straight line through the water. |
| New Project | The "commencement of construction" occurs after the effective date of this permit. |
| New Source | For the purpose of this permit, is any source whose discharges are defined in 40 CFR §122.26(b)(14)(x) and (b)(15), that commences construction activity after the effective date of the new Construction &Development rule. |
| New Source Performance Standards (NSPS) | Are technology-based standards for a construction site that qualifies as new source under 40 CFR §450.24. |

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| Non-Storm Water Discharges | Are discharges that do not originate from storm 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, concrete washout water, paint wash water, irrigation water, or pipe testing water. |
| Notice of Intent (NOI) | Is the form required to be submitted by an applicant to the Department to obtain authorization of coverage under the Alaska Construction General Permit. |
| Notice of Termination (NOT) | Is the form required for terminating coverage under the Alaska Construction General Permit. |
| Ongoing Project | The "commencement of construction" occurs before the effective date of this permit. |
| Operator | For the purpose of this permit, and in the context of storm water associated with construction activity, means any person associated with a construction project that meets either of the following two criteria:<br>1. The person has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or<br>2. The person has day-to-day operational control of those activities at a site which are necessary to ensure compliance with a SWPPP for the site or other permit conditions (e.g., the person is authorized to direct workers at a site to carry out activities required by the SWPPP or comply with other permit conditions). This definition is provided to inform permittees of the Department's interpretation of how the regulatory definitions of "owner or operator" and "facility or activity" are applied to discharges of storm water associated with construction activity.<br>Subcontractors generally are not considered operators for the purposes of this permit. |
| Owner | For the purposes of this permit, means the owner of any "facility or activity" subject to regulation under the APDES program. |
| Outfall | See 'Discharge Point.' |
| Permanent Storm Water Management Controls | For the purposes of this permit, refers to "Nondomestic wastewater treatment works" as described in 18 AAC 72.990. These controls include: dry extended detention ponds, constructed wetlands, wet ponds, sand filters, oil/grit separator, rotational flow separators, etc. |
| Permitted Ongoing Project | Is a construction project that commenced prior to the effective date of this permit, which has been covered by a prior general permit for storm water discharges. |
| Permittee | Is a person who is authorized to discharge pollutants to waters of the U.S. in accordance with the conditions and requirements of this permit. |

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| Person | For the purposes of this permit, means any public or private entity including but not limited to an individual, trust, firm, joint stock company, corporation (including government corporation), partnership, association, federal agency, state agency, city, borough, municipality, commission, political subdivision of the State, any interstate body or tribe. |
| 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 concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff. |
| Pollutant | Defined at 40 CFR §122.2. A partial listing from this definition includes: dredged spoil, solid waste, sewage, garbage, sewage sludge, chemical wastes, biological materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial or municipal waste. |
| Pollution Prevention Measures | See "Good Housekeeping Measures." |
| Polyacrylamide (PAM) | For the purposes of this permit, is a long-chain organic polymer developed to clarify drinking water that has many other beneficial uses including erosion control, enhanced infiltration, and nutrient removal. Some forms of PAM can be used to stabilize soils and remove fine suspended sediments from storm water runoff. In powder form PAM is easy to store, easy to transport, and is not a health concern when used as directed. PAM dissolved in nonaqueous emulsions are not recommended for use in this permit. |
| Polymers | For the purposes of this permit, means coagulants and flocculants used to enhance sediment removal capabilities of check dams, sediment traps, or basins. Common construction site polymers include polyacyrlamide (PAM), chitosan, alum, polyaluminum chloride, and gypsum. A permittee using polymers should carefully consider the appropriateness of usage of these materials where there are sensitive or protected aquatic organisms in the receiving waters, including threatened or endangered species and their critical habitat. |
| Post-Construction Discharges | For the purposes of this permit, means the storm water discharges occurring after construction has been completed and final stabilization has been attained. |
| Practicable | For the purposes of this permit, means capable of being done after taking into consideration costs, existing technology, standards of construction practice, impacts to water quality, site conditions, and logistics in light of the overall project purpose. |
| Project Area | For the purposes of this permit, meant that |

1. The areas on the construction site where storm water discharges originate and flow toward the point of discharge into the receiving waters (including areas where excavation, site development, or other ground disturbance activities occur) and the immediate vicinity. (Example: 1. Where bald eagles nest in a tree that is on or bordering a construction site and could be disturbed by the construction activity. 2. Where grading causes storm water to flow into a small wetland or other habitat that is on the site that contains listed species.)
2. The areas where storm water discharges flow from the construction site to the point of discharge into receiving waters. (Example: Where storm water flows into a ditch, swale, or gully that leads to receiving waters and where listed species (such as amphibians) are found in the ditch, swale, or gully.)
3. The areas where storm water from construction activities discharge into receiving waters and the areas in the immediate vicinity of the point of discharge. (Example: Where storm water from construction activities discharges into a stream segment that is known to harbor listed aquatic species.)
4. The areas where storm water BMPs will be constructed and operated, including any areas where storm water flows to and from BMPs. (Example: Where a storm water retention pond would be built.)
5. The areas upstream and /or downstream from construction activity that discharges into a stream segment that may be affected by the discharges. (Example: Where sediment discharged to a receiving stream settles downstream and impacts a breeding area of a listed aquatic species.)

Qualified Person

Given the range in size and types of projects in Alaska the following is a description of the experience and skills of a "qualified person" for the different roles typically required at a site to ensure compliance with this permit. The recommended experience or educational requirements for each of these "roles" is described below. The required training is described in Table 4. For projects that disturb 1 to less than 5 acres, all the roles described below will or may be carried out by one person. For the larger projects there will or maybe the need to have one person for each role (that is a project-specific choice by the permittee).

*Storm Water Lead/SWPPP Manager*

A. A person knowledgeable in the principles and practice of erosion and sediment controls who possesses the skills to assess conditions at the construction site that could impact storm water quality and to assess the effectiveness of any erosion and sediment control measures selected to control the quality of storm water discharges from the construction activity.

B. Such person shall have the authority to prepare the SWPPP, stop and/or modify construction activities as necessary to comply with the SWPPP and the terms and conditions of the permit, and modify the SWPPP.

C. Such a person shall be responsible for inspections and recordkeeping.

D. Such a person shall have the authority to supervise or initiate corrective actions identified by inspections, monitoring, or observation to fix control measures and minimize the discharge of pollutants.

Qualified Person (continued)

*SWPPP Preparer*

A person knowledgeable in the principles and practice of erosion and sediment controls who possesses the skills to assess conditions at the construction site that could impact storm water quality, the effectiveness of any erosion and sediment control measures selected to control the quality of storm water discharges from the construction activity, and is familiar with Part 5 as a means to implement this permit.

*Storm Water Inspector*

A person knowledgeable in the principles and practice of erosion and sediment controls who possesses the skills to assess conditions at the construction site that could impact storm water quality, the effectiveness of any erosion and sediment control measures selected to control the quality of storm water discharges from the construction activity, and is familiar with Part 6 as a means to ensure compliance with this permit. The person is familiar with the project specific inspection forms and how to fill them out, responsible for conducting inspections, and responsible for reporting the need for follow-up corrective action to the Storm Water Lead or site supervisor.

*Monitoring Person*

A person knowledgeable in the principles and practices of water quality monitoring who is familiar with Part 7 and the monitoring plan for the site and how to conduct water quality sampling, testing, and reporting.

*Active Treatment System Operator*

A person knowledgeable in the principles and practices of treatment systems that employs chemical coagulation, chemical flocculation, or electrocoagulation to aid in the treatment of storm water runoff who is familiar with Part 4.5 as a means to implement and comply with this permit.

*(*Table 4: Recommended Experience or Required Training for Specific Roles *is located on the following page.)*

Qualified Person (continued)

Table 4: Recommended Experience or Required Training for Specific Roles

| **Storm Water Role** | **Total Project Disturbed Acreage** | | |
|---|---|---|---|
| | **1 to < 5 acres** | **5 acres to <20 Acres** | **> 20 Acres** |
| *Storm Water Lead/SWPPP Manager* | Recommend AK-CESCL training, but not required | Be AK-CESCL certified | Be AK-CESCL certified |
| *SWPPP Preparer* | Be familiar with permit. | Recommend taking a course in SWPPP preparation. | Be AK-CESCL certified, visit the site prior to writing the SWPPP or soon after project start and revised the SWPPP based on site conditions. Recommend taking a course in SWPPP preparation. |
| *Storm Water Inspector* | Be familiar with permit and SWPPP. | Be AK-CESCL certified | Be AK-CESCL certified |
| *Monitoring Person* | Not Required | Not Required | Be AK-CESCL certified |
| *Active Treatment System Operator* | Be AK-CESCL certified and have general experience and knowledge of storm water control measures. Have operational experience with the specific equipment used on-site. | Be AK-CESCL certified and have general experience and knowledge of storm water control measures. Have operational experience with the specific equipment used on-site. | Be AK-CESCL certified and have general experience and knowledge of storm water control measures. Have operational experience with the specific equipment used on-site. |

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| | Note: The following training and certifications may substitute for AK-CESCL training and certification: CPESC, CESSWI, CPISM or CPSWQ by EnviroCert International, Inc (ECI, http://envirocertintl.org) or CISEC by CISEC, Inc. (http://cisecinc.org). |
| Rain Gauge | For the purposes of this permit, means a type of instrument to gather and measure the amount of liquid precipitation occurring during a storm event for a set period of time. |
| Rainfall Erosivity Factor or R Factor | Means a measure of the erosive force and intensity of rain in a normal year. Two components of the factor are total energy and the maximum 30-minute intensity of storms. The R-Factor is the sum of the product of these two components for all major storms in the area during an average year. |
| Rainfall Erosivity Waiver | Means a waiver, available only to small construction activities, that is based on the rainfall erosivity factor for the project. |
| Reasonable | For purposes of this permit, means the permittee has selected, designed, installed, implemented and maintained control measures in light of manufacture's specifications and good engineering practices at the project to meet the control measures and good housekeeping measures established in Part 4.0 of the permit. |
| Reasonable Time(s) | For inspections it is time when inspections may occur, typically during normal business hours of 8:00 am to 5:00 pm Monday through Friday, except for those construction sites that are operational outside of these times. For information requests it is thirty (30) calendar days from the date of the receipt of a written request for information from the department, unless specified otherwise in this permit. |
| Receiving Water | The "Water of the United States" as defined in 40 CFR §122.2 into which the regulated storm water discharges |
| Residential Subdivision | For the purposes of this permit, means any parcel of land that is divided into smaller parcels with the intent of selling the smaller parcels for the development of residential homes for individual ownership. |
| Rural Infrastructure Improvement Project | For the purposes of this permit, means a project that is a rural water, wastewater, solid waste, or energy project that is funded, designed, or built by a third party such as the Alaska Native Tribal Health Consortium, DEC Village Safe Water Program, or the Alaska Energy Authority for a 2nd class city, Tribe, Community Association, or statutory improvement district. |
| Rural Infrastructure Improvement Project Operators | For the purposes of this permit, means the agency or entity with "design control over plans and specifications" that acts as the operator rather than the ultimate owner of the rural infrastructure improvement project. |
| Sampling Point | For the purposes of this permit, means that point at which storm water samples are collected where the storm water or authorized non-storm water is discharged from the site. |
| Sediment | Is solid particulate matter, both mineral and organic, that is in suspension, is being transported, or has been moved from its site of origin by air, water, gravity, or ice and has come to rest on the earth's surface either above or below sea level. |

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| Sedimentation | Is the process of deposition of suspended matter carried by water, wastewater, or other liquids by gravity. It is usually accomplished by reducing the velocity of the liquid below the point at which it can transport the suspended material. |
| Sediment Control Measures | Are control measures that serve to capture sediment particles that have mobilized and are entrained in storm water with the objective of removing sediment and other pollutants from the storm water discharge. Examples of sediment control measures include but not limited to berms, dikes, fiber rolls, silt fences, sandbags, or gravel bags. |
| Semi-Arid Areas | Areas with an average total precipitation of 10 to 20 inches. See xmacis.rcc-acis.org/ for precipitation data from the weather station closest to the project. |
| Sensitive Area | For the purposes of this permit, means any lakes, ponds, perennial and intermittent streams, vernal pools, wetlands, floodplains, floodways and areas with highly erodible soils, which need special protection. |
| Sheet Flow | Is slow-velocity runoff that flows or is directed to flow across an overland area where there are no defined channels and the water spreads out over a large area at a uniform depth. Sometimes referred to as “sheetwash.” |
| Site | The land or water area where any “facility or activity” is physically located or conducted, including adjacent and off-site land used in connection with the facility or activity, including related areas for support activities. |
| Small Construction Activity | Defined at 40 CFR §122.26(b)(15) and incorporated here by reference. A small construction activity includes clearing, grading, and excavating resulting in a land disturbance that will disturb equal to or greater than one (1) acre and less than five (5) acres of land or will disturb less than one (1) acre of total land area but is part of a larger common plan of development or sale that will ultimately disturb equal to or greater than one (1) acre and less than five (5) acres. Small construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity of conveyance channels, or original purpose of the site. |
| Snowmelt | The conversion of snow into water runoff that may infiltrate into the ground with the onset of warmer temperatures. |

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| Spring Thaw | For the purposes of this permit, means for planning purposes in the development of the SWPPP and initial planning of control measure maintenance the date in the spring that air temperatures will be predominately above freezing. It is the date in the spring that has a 20% probability that a minimum temperature below a threshold of 32.5 degrees Fahrenheit will occur on or after the given date. This date can be found by looking up the "Spring 'Freeze' Probabilities" for the weather station closest to the project on the website www.wrcc.dri.edu/summary/Climsmak.html. Alternatively, the Spring Thaw can be estimated by using the 5-year moving average from the First/Last dates where the minimum temperature below a threshold of 32.5 degrees Fahrenheit will occur on or after the given date for the weather station closest to the project site on the website xmacis.rcc-acis.org. NOTE: this estimation of "Spring Thaw" is for planning purposes only. During construction the permittee will need to maintain control measures based on actual conditions. |
| Stabilization | The use of vegetative and/or non-vegetative cover to prevent erosion and sediment loss in areas exposed by Construction Activities. |
| Temporary Stabilization | For the purposes of this permit, means protecting soils from erosion and sediment loss by rainfall, snow melt, runoff, or wind, with a temporary vegetative and/or non-vegetative protection cover. Temporary stabilization may include a combination of surface roughening (track walking), temporary seeding, geotextiles, mulches, surface tackifers, rolled erosion control products, gravel or paving, 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 this area. |
| Final Stabilization | For the purposes of this permit, means that:<br>1. All soil disturbing activities at the site have been completed and either of the two following criteria shall be met:<br>a. a uniform (e.g., evenly distributed, without large bare areas) perennial vegetative cover with a density of 70 percent of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures, or<br>b. equivalent non vegetative permanent stabilization measures have been employed (such as the use of riprap, gabions, porous backfill (ADOT&PF Specification 703-2.10), railroad ballast or subballast, ditch lining (ADOT&PF Specification 610-2.01), geotextiles, or fill material with low erodibility as determined by an engineer familiar with the site and documented in the SWPPP).<br>2. When background native vegetation will cover less than 100 percent of the ground (e.g., arid areas, beaches), the 70 percent coverage criteria is adjusted as follows: if the native vegetation covers 50 percent of the ground, then 70 percent of 50 percent (0.70 X 0.50 = 0.35) would require 35 percent total cover for final stabilization. On a beach with no natural vegetation, no stabilization is required. |

3. In arid and semi-arid areas only, all soil disturbing activities at the site have been completed and both of the following criteria have been met:
    a. Temporary erosion control measures (e.g., degradable rolled erosion control product) are selected, designed, and installed along with an appropriate seed base to provide erosion control for at least three years without active maintenance by the permittee;
    b. The temporary erosion control measures are selected, designed, and installed to achieve 70 percent vegetative coverage within three years.
4. For individual lots in residential construction, final stabilization means that either:
    a. The homebuilder has completed final stabilization as specified above, or
    b. The homebuilder has established temporary stabilization including perimeter controls for an individual lot prior to occupation of the home by the homeowner and informing the homeowner of the need for, and benefits of, final stabilization.
5. For construction projects on land used for agricultural purposes (e.g., pipelines across crop or range land, staging areas for highway construction, etc.), final stabilization may be accomplished by returning the disturbed land to its preconstruction agricultural use. Areas disturbed that were not previously used for agricultural activities, such as buffer strips immediately adjacent to ‘‘water of the United States,’’ and areas which are not being returned to their preconstruction agricultural use must meet the final stabilization criteria (1) or (2) or (3) above.

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| Steep Slope | For the purposes of this permit, mean any slope occurring on the construction site that is 20 percent or greater in grade for a length of the slope that exceeds 25 feet. |
| Storm Event | For the purposes of this permit, means a rainfall event that produces more than 0.5 inch of precipitation in 24 hours and that is separated from the previous storm event by at least 3 days of less than 0.1 inch of rain per day. |
| Storm Water | Storm water runoff, snow melt runoff, and surface runoff and drainage. |
| Storm Water Controls | See ‘Control Measure’ |
| Storm Water Discharge-Related Activities | Activities that cause, contribute to, or result in storm water point source pollutant discharges, including but not limited to: excavation, site development; grading and other surface disturbance activities; and measures to control storm water including the sitting, construction and operation of BMPs to control, reduce or prevent storm water pollution. |
| Storm Water Inlet | A structure placed below grade to conduct water used to collect storm water runoff for conveyance purposes. |

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| Storm Water Pollution Prevention Plan (SWPPP) | Means a site-specific, written document that: (1) identifies potential sources of storm water pollution at the construction site; (2) describes practices to reduce or eliminate pollutants in storm water discharges from the construction site; and (3) identifies procedures the permittee will implement to comply with the terms and conditions of this general permit. |
| Support Activities | For the purposes of this permit, means any concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, and borrow areas provided:<br>1. The support activity is directly related to the construction project that is covered under this general permit,<br>2. The support activity is not a commercial operation serving multiple unrelated construction projects by different permittees,<br>3. The support activity does not operate beyond the completion of the construction activity at the project it supports, and<br>4. Appropriate control measures are identified in the SWPPP covering the discharges from the support activity areas.<br>Material borrow areas that are developed specific for the projects and are non-contiguous to the project site (e.g. the material is barged in from another area not nearby the project area) are considered "support activities" however, they would not need to be routinely inspected as part of the project. These areas would need to comply with other conditions of the permit to control storm water discharge as described in the SWPPP. The permit provides an exception for concrete or asphalt plants used for highway paving projects that may also, incidental to the main project contract, pave residential driveways. This additional paving is allowed under this permit provided those activities are covered under the SWPPP.<br>For communities where equipment or materials are barged in, flown in, or shipped by Alaska Marine Highway, the support activities may serve more than one project if: (1) each project that qualifies for coverage under this permit files a project-specific NOI and includes an acknowledgement of the shared support activities; (2) identifies the operator responsible for maintaining those support activities in compliance with permit requirements; and (3) identifies the operator responsible for the support activities until an NOT is filed at the conclusion of use of the support activity. |
| Tackifier and Soil Stabilizer (binder) | For the purposes of this permit, means hydraulically applied chemicals derived from natural and synthetic sources used for erosion control to promote adhesion among soil particles or mulch materials. In general soil stabilizers (also known as soil binders) are used to increase soil adhesion, which improves soil stabilization by reducing water and wind driven erosion. Tackifiers are used as "glue" to bind and immobilize straw, cellulose products, pine needles, or other mulch that has been applied to a seeded area. Common examples include polyacrylamide, guar, chloride compounds, psyllium, resins, enzymes, surfactants, and various polymers, starches, and other compounds. |

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| Total Maximum Daily Load (TMDL) | The sum of the individual wasteload allocations (WLAs) for point sources and load allocations (LAs) for nonpoint sources and natural background. If receiving water has only one point source discharger, the TMDL is the sum of that point source WLA plus the LAs for any nonpoint sources of pollution and natural background sources, tributaries, or adjacent segments. TMDLs can be expressed in terms of either mass per time, toxicity, or other appropriate measure. |
| TMDL Waiver | Means a waiver, available only to small construction activities, based on an EPA established or approved TMDL. |
| Treatment Chemicals | For the purposes of this permit, means polymers, flocculants, or other chemicals used to reduce turbidity in storm water. Tackifiers and soil stabilizers (binders) are not considered treatment chemicals. |
| Turbidmeter | For the purposes of this permit, means an instrument that measures the amount of light scattered at right angles to an incident light beam by particles present in a storm water sample. |
| Turbidity | Means a condition of water quality characterized by the presence of suspended solids and/or organic material. |
| Upset | Defined in 40 CFR §122.41 and incorporated here by reference. Upset means an exceptional incident in which there is unintentional and temporary non-compliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. See Appendix A, Part 2.7. |
| Water Quality Impaired | See 'Impaired Water.' |
| Water Quality Standard (WQS) | For the purposes of this permit, means the Alaska Water Quality Standards (18 AAC 70) as approved by U.S. EPA. As defined in 40 CFR § 131.3 water quality standards are provisions of State or Federal law which consist of a designated use or uses for the waters of the U.S. and water quality criteria for such waters based upon such uses. Water quality standards are to protect the public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act. |
| waters of the U.S. (WOUS) | Defined in 40 CFR §122.2 and incorporated here by reference. |
| Wetland | Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. |
| Winter Construction | For the purposes of this permit, means the commencement of construction specifically during frozen conditions to aid in construction. Typically, this period is from December to March and is approximately from after fall freeze-up to before spring thaw. |

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| Winter Shutdown | For the purposes of this permit, means the cessation of soil disturbing or soil stabilizing construction activity for the winter. Typically this period is from October/November to April/May and is approximately from fall freeze-up to spring thaw. |

# Appendix D Small Construction Waivers and Instructions

These waivers are only available to storm water discharges associated with small construction activities (i.e., 1-5 acres). As the operator of a small construction activity, the operator may be able to qualify for a waiver in lieu of needing to obtain coverage under this general permit based on: (A) a low rainfall erosivity factor, (B) a TMDL analysis, or (C) an equivalent analysis that determines allocations for small construction sites are not needed. Each applicant, otherwise needing permit coverage, must notify DEC of its intention for a waiver. It is the responsibility of that person wishing to obtain a waiver from coverage under this general permit to submit a complete and accurate waiver certification as described below. Where the operator changes or another is added during the construction project, the new operator must also submit a waiver certification to be waived.

## D.1 Rainfall Erosivity Waiver

Under this scenario the small construction project's rainfall erosivity factor calculation ("R" in the Revised Universal Soil Loss Equation) is less than 5 during the period of construction activity. The operator must certify to the Department that construction activity will occur only when the rainfall erosivity factor is less than 5. The period of construction activity begins at initial earth disturbance and ends with final stabilization. Where vegetation will be used for final stabilization, the date of installation of a stabilization practice that will provide temporary non-vegetative stabilization can be used for the end of the construction period, provided the operator commits (as a condition of waiver eligibility) to periodically inspect and properly maintain the area until the criteria for final stabilization as defined in the construction general permit have been met. If use of this temporary stabilization eligibility condition was relied on to qualify for the waiver, signature on the waiver with its certification statement constitutes acceptance of and commitment to complete the final stabilization process. The applicant must submit a waiver certification to the Department prior to commencing construction activities.

Note: The basis of the rainfall erosivity factor "R" was determined in accordance with Chapter 2 of Agriculture Handbook Number 703, Predicting Soil Erosion by Water: A Guide to Conservation Planning With the Revised Universal Soil Loss Equation (RUSLE), pages 21–64, dated January 1997; United States Department of Agriculture (USDA), Agricultural Research Service. R factor information for Alaska can be found in the Fact Sheet and were obtained from RUSLE2 Version 1.26.6.4 http://fargo.nserl.purdue.edu/rusle2_dataweb/RUSLE2_Index.htm. (Database last modified on Feb, 28, 2008).

If the operator is eligible for a waiver based on low erosivity potential, the operator may submit a rainfall erosivity waiver to the address listed in Appendix A, Part 1.1.1 and provide the following information on the waiver certification form in order to be waived from permitting requirements:

1. Name, address and telephone number of the operator;
2. Name (or other identifier), address, county or similar governmental subdivision, and latitude/longitude of the construction project or site;
3. Estimated construction start and completion (i.e., final stabilization) dates, and total acreage (to the nearest quarter acre) to be disturbed;
4. The rainfall erosivity factor calculation that applies to the active construction phase at your project site; and
5. A statement, signed and dated by an authorized representative as provided in Appendix A, Part 1.12, which certifies that the construction activity will take place during a period when the value of the rainfall erosivity factor is less than five.

An applicant can access the waiver certification form from ADEC's website at: (http://dec.alaska.gov/water/wastewater/stormwater/). The form must be sent to the address listed in Appendix A, Part 1.1.1, Permitting Program of this permit.

Note: If the R factor is five or greater, you cannot apply for the rainfall erosivity waiver, and must apply for permit coverage as per Part 2.2 of the construction general permit, unless you qualify for the Water Quality Waiver as described below.

If the small construction project continues beyond the projected completion date given on the waiver certification, the applicant must recalculate the rainfall erosivity factor for the new project duration. If the R factor is below five, the owner or operator must update all applicable information on the waiver certification and retain a copy of the revised waiver as part of the site SWPPP. The new waiver certification must be submitted prior to the projected completion date listed on the original waiver form to assure exemption from permitting requirements is uninterrupted. If the new R factor is five or above, the applicant must submit an NOI, in accordance with Part 2.0 of the permit.

### D.2 TMDL Waiver

This waiver is available if DEC or EPA has established or approved a TMDL that addresses the pollutant(s) of concern and has determined that controls on storm water discharges from small construction activity are not needed to protect water quality. The pollutant(s) of concern include sediment (such as total suspended solids, turbidity, or siltation) and any other pollutant that has been identified as a cause of impairment of any water body that will receive a discharge from the construction activity. Information on TMDLs that have been established or approved by EPA is available from EPA online at https://www.epa.gov/tmdl/impaired-waters-and-tmdls-region-10 and from DEC online at http://dec.alaska.gov/water/water-quality/impaired-waters.

If an applicant of the construction activity is eligible for a waiver based on compliance with a DEC or EPA established or approved TMDL, the operator must provide the following information on the Waiver Certification form in order to be waived from permitting requirements:

1. Name, address and telephone number of the operator;
2. Name (or other identifier), address, county or similar governmental subdivision, and latitude/longitude of the construction project or site;
3. Estimated construction start and completion (i.e., final stabilization) dates, and total acreage (to the nearest quarter acre) to be disturbed;
4. The name of the water body(s) that would be receiving storm water discharges from your construction project;
5. The name and approval date of the TMDL;
6. A statement, signed and dated by an authorized representative as provided in Appendix A, Part 1.12 that certifies that the construction activity will take place and that the storm water discharges will occur, within the drainage area addressed by the TMDL.

### D.3 Equivalent Analysis Waiver

This waiver is available for non-impaired waters only (see *2018 Approved Integrated Report*, or most current EPA-approved version: http://dec.alaska.gov/water/water-quality/integrated-report/ and http://dec.alaska.gov/water/water-quality/impaired-waters/ for list of impaired waters). The operator can develop an equivalent analysis that determines allocations for the small construction site for the pollutant(s) of concern or determines that such allocations are not needed to protect water quality. This waiver requires a small construction site to develop an equivalent analysis based on existing in-stream concentrations, expected growth in pollutant concentrations from all sources, and a margin of safety.

If an operator wants to use this waiver, the operator must develop an equivalent analysis and provide the following information to be waived from permitting requirements:

1. Name, address and telephone number of the operator;
2. Name (or other identifier), address, county or similar governmental subdivision, and latitude/longitude of the construction project or site;
3. Estimated construction start and completion (i.e., final stabilization) dates, and total acreage (to the nearest quarter acre) to be disturbed;
4. The name of the water bodies that would be receiving storm water discharges from your construction project;
5. The equivalent analysis;
6. A statement, signed and dated by an authorized representative as provided in Appendix A, Part 1.12, that certifies that the construction activity will take place and that the storm water discharges will occur, within the drainage area addressed by the equivalent analysis.

### D.4 Waiver Deadlines and Submissions

1. Waiver certifications must be submitted prior to commencement of construction activities.
2. If an operator submits a TMDL or equivalent analysis waiver request, the operators request is not waived until the Department approves the request. As such, the operator may not commence construction activities until receipt of approval from the Department.
3. Late Notifications: operators are not prohibited from submitting waiver certifications after initiating clearing, grading, excavation activities, or other construction activities. The Department reserves the right to take enforcement for any unpermitted discharges that occur between the time construction commenced and waiver authorization is granted.

Submittal of a waiver certification is an optional alternative to obtaining permit coverage for discharges of storm water associated with small construction activity, provided the operator qualifies for the waiver. Any discharge of storm water associated with small construction activity not covered by either a permit or a waiver may be considered an unpermitted discharge under the CWA. As mentioned above, the Department reserves the right to take enforcement for any unpermitted discharges that occur between the time construction commenced and either discharge authorization is granted or a complete and accurate waiver certification is submitted. The Department may notify any operator covered by a waiver that they must apply for a permit. The Department may notify any construction project that has been in non-compliance with a waiver that they may no longer use the waiver for future projects. Any member of the public may petition the Department to take action under this provision by submitting written notice along with supporting justification.

## Appendix E Forms

- Notice of Intent (NOI)
- Notice of Termination (NOT)
- Notice of Intent Modification
- Low Erosivity Waiver
- Annual Report

(For Agency Use) Permit Authorization #: _____

# Notice of Intent (NOI)
# for Storm Water Discharges Associated with Construction Activity under an APDES Construction General Permit

Submission of this Notice of Intent (NOI) constitutes notice that the party identified in Section II of this form requests authorization to discharge pursuant to the APDES Construction General Permit (CGP, AKR100000). Submission of this NOI also constitutes notice that the party identified in Section II of this form meets the eligibility requirements of the CGP for the project identified in Section III of this form. Permit authorization is required prior to commencement of construction activity until you are eligible to terminate coverage as detailed in the CGP. To obtain authorization, you must submit a complete and accurate NOI form. Refer to the instructions at the end of this form.

## I. Single/Multiple NOI Project

Is this NOI for a project with a single NOI? ☐ Yes ☐ No

If "No," then your project has multiple NOIs, will the fee be paid with this NOI? ☐ Yes ☐ No

If "No," then enter the name of the operator paying the fee:

## II. Operator Information

Type of Operator/Responsibility per Permit Part 1.2.1:

☐ Day-to-day operational control of on-site activities ☐ Construction Plans and Specifications

| Organization: | Name: | Title: |
|---|---|---|
| | | |

| Phone: | Fax (optional): | Email: |
|---|---|---|
| | | |

| Mailing Address: Street or PO Box: | City | State: | Zip: |
|---|---|---|---|
| | | | |

Primary SIC or NAICS Code: SIC: NAICS:

## III. Project / Site Information

| Project Name: | Estimated Start Date: | Estimated End Date: |
|---|---|---|
| | | |

Brief Description of Project:

Estimated Area to be Disturbed *(nearest tenth acre)*:

**Location Address:**

Borough or similar government subdivision:

| Street: | City: | State: | Zip: |
|---|---|---|---|
| | | Alaska | |

| Latitude (decimal degree, 5 places): | Longitude (decimal degree, 5 places): | Determined By: ☐ GPS ☐ Web, Source: ☐ USGS Topographic Map, scale: ☐ Other: |
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| | | |

## IV. SWPPP (Storm Water Pollution Prevention Plan)

Location of SWPPP for Viewing: ☐ Address in Section II, ☐ Address in Section III, ☐ Other

| If other: Street: | City: | State: | Zip: |
|---|---|---|---|
| | | | |

Additional Info:

SWPPP Contact Information (if different than that in Section II):

| Organization: | Name: | Title: |
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| | | |

| Phone: | Fax (optional): | Email: |
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| | | |

Mailing Address: ☐ Check if same as Operator Information

Street (PO Box):

| City: | State: | Zip: |
|---|---|---|
| | | |

| | |
|---|---|
| Has the SWPPP been prepared in advance of filing this NOI? | ☐ Yes ☐ No |
| For projects with 5 or more acres of disturbance, has a SWPPP been submitted to DEC? | ☐ Yes ☐ No, ≤ 5 acres |

Is your project / site less than one-acre, but part of a common plan of development? ☐ Yes ☐ No

If "Yes", provide the Permit Authorization Number and name of the common plan of development: Number: Name:

Have storm water discharges from your project / site been authorized previously by a DEC permit? ☐ Yes ☐ No

If "Yes," provide the Permit Authorization Number for the previous DEC permit?

If "Yes," have you updated your SWPPP according to the most recently issued CGP? ☐ Yes ☐ No

## V. Permanent Storm Water Controls

Will you construct a permanent storm water management control measure at the project site (Part 4.11)? ☐ Yes ☐ No

If "Yes", indicate the type of measure to be installed:

☐ Pond ☐ Oil/Water/Grit Separator ☐ Proprietary Storm Water Sedimentation Device

☐ Other:

## VI. Discharge Information

Does your project discharge into a Municipal Separate Storm Sewer System (MS4)? ☐ Yes ☐ No

If yes, name of the MS4 Operator:

**Receiving Water and Wetlands Information:** (if additional space is needed for this question, attach separate sheet or annotate in Section XI.)

| **a.** Identify the name(s) of waterbodies or wetlands to which you discharge. | **Impaired waters/303d Listed waters**: (see http://dec.alaska.gov/water/water-quality/impaired-waters or GIS map of Impaired Waters, and Integrated Water Quality and Monitoring and Assessment Reports Webpage. | | | | | | |
|---|---|---|---|---|---|---|---|
| | **b.** Are any of your discharges directly into any segment of a 303d Listed Water, i.e. "Impaired" Water? | | **c.** If you answered **YES** to question **b**, then answer the following three questions: | | | | |
| | | | **i.** What pollutant(s) are causing the impairment? | **ii.** Are the pollutant(s) causing the impairment present in your discharge? | | **iii.** Is the discharge consistent with the assumptions and requirements of applicable EPA approved or established Total Maximum Daily Load (TMDL(s))? | |
| | **Yes** | **No** | | **Yes** | **No** | **Yes** | **No** |
| | ☐ | ☐ | | ☐ | ☐ | ☐ | ☐ |
| | ☐ | ☐ | | ☐ | ☐ | ☐ | ☐ |
| | ☐ | ☐ | | ☐ | ☐ | ☐ | ☐ |

## VII. Billing Contact Information

| Organization: | Name: | Title: |
|---|---|---|
| Phone: | Fax (optional): | Email: |

Mailing Address: Street (PO Box):

☐ Check if same as Operator Information

City: State: Zip:

## VIII. NOI Preparer (Complete if NOI was prepared by someone other than the certifier.)

| Organization: | Name: | Title: |
|---|---|---|
| Phone: | Fax (optional): | Email: |

Mailing Address: Street (PO Box):

☐ Check if same as Operator Information

City: State: Zip:

## IX. Certification Information

An Alaska Pollutant Discharge Elimination System (APDES) permit application or report must be signed by an individual with the appropriate authority per 18 AAC 83.385. For additional information, please refer to 18 AAC 83.385 at the following link: http://www.legis.state.ak.us/basis/aac.asp#18.83.385.

| | |
|---|---|
| Corporate Executive Officer<br>18 AAC 83.385 (a)(1)(A) | For a corporation, 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. |
| Corporate Operations Manager<br>18 AAC 83.385 (a)(1)(B) | For a corporation, the manager of one or more manufacturing, production, or operating facilities, if<br>(i) the manager is authorized to make management decisions that 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 statutes and regulations;<br>(ii) the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and<br>(iii) authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. |
| Sole Proprietor or General Partner<br>18 AAC 83.385 (a)(2) | For a partnership or sole proprietorship, the general partner or the proprietor respectively. |
| Public Agency, Chief Executive Officer<br>18 AAC 83.385 (a)(3)(A) | For a municipality, state, or other public agency, the chief executive officer of the agency. |
| Public Agency, Senior Executive Officer<br>18 AAC 83.385 (a)(3)(B) | For a municipality, state, or other public agency, a senior executive officer having responsibility for the overall operations of a principal geographic unit or division of the agency. |
| **For Delegated Authority: the delegation must be made in writing and submitted to the DEC.*<br>*An Example of written authorization delegating authority can be found at http://dec.alaska.gov/media/13316/delegation-of-signatory-authority.pdf* | |
| Operations Manager<br>*(Delegated Authority)**<br>18 AAC 83.385 (b)(2)(A) | For a duly authorized representative, an individual or a position having responsibility for the overall operation of the regulated facility or activity, including the position of plant manager, operator of a well or a well field, superintendent or position of equivalent responsibility. |
| Environmental Manager<br>*(Delegated Authority)**<br>18 AAC 83.385 (b)(2)(B) | For a duly authorized representative, an individual or position having overall responsibility for environmental matters for the company. |

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

| Organization: | Name: | Title: |
|---|---|---|
| Phone: | Fax (optional): | Email: |

Mailing Address:
☐ Check if same as Operator Information

Street (PO Box):

| City: | State: | Zip: |
|---|---|---|

Signature

Date

## X. Document Attachments and Supplemental Information

Documents attached with this application:

☐ Copy of SWPPP if ≥ 5 acres of disturbance.

☐ Delegation of Signatory Authority.

☐ Other:

# Instructions for Completing a Notice of Intent (NOI) Form for Storm Water Discharges Associated with Construction Activity under an APDES Construction General Permit

**Who Must File an NOI Form:**

Operators of construction sites where one or more acres are disturbed, smaller sites that are part of a larger common plan of development or sale where there is a cumulative disturbance of at least one acre, or any other site specifically designated by the Director, must submit an NOI to obtain coverage under an APDES construction general permit. Each person, firm, public organization, or any other entity that meets either of the following criteria must file this form: (1) they have operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or (2) they have day-to-day operational control of those activities at the project necessary to ensure compliance with SWPPP requirements or other permit conditions.

**Completing the Form:**

Obtain and read a copy of the APDES Construction General Permit. Type or print, in the appropriate areas only. "NA" can be entered in areas that are not applicable. If you have any questions about how or when to use this form, contact the DEC Storm Water Program at (907) 269-6285 or online at http://dec.alaska.gov/water/wastewater/stormwater/.

**Section I. Single/Multiple NOI Project:**

Indicate whether or not this is a single NOI project. If not, indicate if the fee will be paid with this NOI or another associated with this project. Provide the name of the operator that will be paying the fee.

**Section II. Operator Information:**

Provide the name of the contact person, title, and the legal name of the firm, public organization, or any other entity that operates the project described in this application. (An operator of a project is a legal entity that controls at least a portion of site operations and is not necessarily the site manager.) Also provide the operator's mailing address, telephone number, fax number (optional) and e-mail address (to be notified via e-mail of NOI approval when available). Correspondence for the NOI will be sent to this address.

**Section III. Project/Site Information:**

Enter the official or legal name, a brief description of the project or site, and complete street address, including city, state, zip code, and county or similar government subdivision of the project or site. If the project or site lacks a street address, indicate the general location of the site (e.g., Intersection of State Highways 61 and 34). Complete site information must be provided for permit authorization to be granted.

Provide the latitude and longitude of the facility in decimal degrees format with up to 5 digit accuracy. The latitude and longitude of your facility can be determined in several different ways, including through the use of global positioning system (GPS) receivers, U.S. Geological Survey (U.S.G.S.) topographic or quadrangle maps, Google Earth, Bing Maps, and EPA's web-based siting tools, among others. For consistency, DEC requests that measurements be taken from the approximate center of the construction site. Applicants must specify which method they used to determine latitude and longitude. If a U.S.G.S. topographic map is used, applicants are required to specify the scale of the map used. Enter the estimated construction start and completion dates using four digits for the year (i.e., 05/27/2021).

Enter the estimated area (acres) to be disturbed including but not limited to grubbing, excavation, grading, and utilities and infrastructure installation. Indicate to the nearest tenth of an acre. Note: 1 acre = 43,560 sq. ft.

Indicate whether or not the project/site has been previously covered by an EPA or DEC permit. If "Yes" provide the permit authorization number that the project/site was covered under.

If this is a project that was covered under a previous DEC construction general permit indicate whether or not the SWPPP has been updated in accordance with the most recently issued Alaska Construction General Permit.

If the project or site is less than one-acre, but part of a common plan of development, provide the permit authorization number and name of the common plan of development.

**Section IV. SWPPP (Storm Water Pollution Prevention Plan) Information:**

Note the SWPPP should be prepared in advance of filing the NOI form. For projects with 5 acres or more of disturbance, the initial SWPPP will need to be submitted to DEC with the NOI. Check the appropriate box for the location where the SWPPP may be viewed. Provide the name, fax number (optional), and e-mail address of the contact person if different than that listed in Section II of the NOI form.

**Section V. Permanent Storm Water Controls**

A permittee must comply with applicable APDES MS4 permit requirements, local requirements, and the applicable requirements under 18 AAC 72.600 (i.e., Nondomestic Wastewater System Plan Review) regarding the design and installation of permanent storm water management controls. Annotate the type of measure to be installed and see Permit Part 4.11 for additional requirements regarding plan submittal deadlines.

**Section VI. Discharge Information:**

Identify the receiving water bodies or wetlands to which the project's storm water will discharge. These should be the first bodies of water that the discharge will reach. (Note: If you discharge to more than one water body, please indicate all such waters in the space provided and attach a separate sheet if necessary.) For example, if the discharge leaves your site and travels through a roadside swale or a storm sewer and then enters a stream that flows to a river, the stream would be the receiving water body. Waters of the U.S. include lakes, streams, creeks, rivers, wetlands, impoundments, estuaries, bays, oceans, and other surface bodies of water within the confines of the U.S. and U.S. coastal waters. (Waters of the U.S. do not

include man-made structures created solely for the purpose of wastewater treatment.) U.S.G.S. topographical maps may be used to make this determination. If the map does not provide a name, use a format such as "unnamed tributary to Cross Creek". If you discharge into a municipal separate storm sewer system (MS4), you must identify the water body into which that portion of the storm sewer discharges. That information should be readily available from the operator of the MS4.

Indicate if any of your storm water discharges from construction activities will be reach a 303d listed water (i.e., impaired water body)?
For a listing of impaired waters and an interactive map, see http://dec.alaska.gov/water/water-quality/impaired-waters.

Indicate whether your storm water discharges from construction activities will be consistent with the assumptions and requirements of applicable EPA approved or established total maximum daily load(s)(TMDL(s)). To answer this question, refer to http://dec.alaska.gov/water/water-quality/impaired-waters/. You may also have to contact DEC. If there are no applicable TMDLs or no related requirements, please check the "yes" box in the NOI form.

**Section VII. Billing Contact Information**

Provide the name of the contact person, title, and the legal name of the firm, public organization, or any other entity that is responsible for accounts payable for this project. Also provide the billing contact's mailing address, telephone number, fax number (optional), and email address. Correspondence for billing purposes will be sent to this address. If the billing contact is that same as the operator, check the box.

**Section VIII. NOI Preparer Information.**

If the NOI was prepared by someone other than the certifier (for example, if the NOI was prepared by the project SWPPP contact or a consultant for the certifier's signature), include the name, title, organization, address, telephone number, and email address of the NOI preparer.

**Section IX. Certification Information:**

The NOI must be signed as follows:

(1) For a corporation, a responsible corporate officer shall sign the NOI, a responsible corporate officer means:
   (A) 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
   (B) the manager of one or more manufacturing, production, or operating facilities, if
      (i) the manager is authorized to make management decisions that 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 statutes and regulations;
      (ii) the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and
      (iii) authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

(2) For a partnership or sole proprietorship, the general partner or the proprietor, respectively; or

(3) for a municipality, state, or other public agency, either a principal executive officer or ranking elected official shall sign the application; in this subsection, a principal executive officer of an agency means
   (A) the chief executive officer of the agency; or
   (B) a senior executive officer having responsibility for the overall operations of a principal geographic unit or division of the agency.

(4) Include the name, title, organization, address, telephone number, and email address of the person signing the form and the date of signing. An unsigned or undated NOI form will not be considered valid application for permit coverage.

**Section X. Document Attachments and Supplemental Information**

Include a copy of the SWPPP if ≥ 5 acres of disturbance. Indicate documents attached and supplemental information.

**Where to File NOI form**

Select one of three options:

1) **Preferred Option**: DEC encourages you to complete the NOI form electronically via DEC's Online Application System (OASys): https://myalaska.state.ak.us/dec/water/OASys/Login.aspx. Filing electronically is the fastest way to obtain permit coverage and help ensure that your NOI is complete.

2) If you file by mail please submit the original form with a signature in ink. Remember to retain a copy for your records.

   NOIs sent by mail:
   Alaska Dept. of Environmental Conservation
   Division of Water
   Wastewater Discharge Authorization Program
   555 Cordova Street
   Anchorage, AK 99501
   Phone: (907) 269-6285

3) Submit all pages of scanned original form via Email: DEC.Water.WQPermit@alaska.gov. *(Note, 20MB limit).*

For Agency Use

Permit #: _____

# Notice of Termination (NOT) for Storm Water Discharges Associated with Construction Activity filed under an APDES General Permit

Submission of this Notice of Termination (NOT) constitutes notice that the operator identified in Section II of this form is no longer authorized discharge pursuant to the APDES Construction General Permit (CGP) from the site identified in Section III of this form. All necessary information must be included on this form.

Coverage under the APDES CGP is terminated at midnight of the day the NOT is signed. The NOT must be submitted within 30 calendar days of one of the conditions in Section 10.2 of the CGP being met. Refer to the instructions at the end of this form for information on submitting a NOT.

Note: As per 18 AAC 83.130(k), a permittee subject to pending state or federal enforcement actions, including citizen suits brought under state or federal law, may not submit a NOT.

## I. Permit Information

Permit Tracking Number:

**Reason for Termination** (Check only one):

| | |
|---|---|
| ☐ | Final stabilization has been achieved on all portions of the site for which you are responsible, all ground disturbing construction activity or use of support activities has been completed and all temporary BMP's have been removed. |
| ☐ | Another operator has assumed control, according to Appendix A, Part 2.3, over all areas of the site that have not been finally stabilized. Provide the other operator's permit authorization number: |
| ☐ | Coverage under an individual permit or alternative APDES general permit has been obtained. |
| ☐ | For residential construction only, temporary stabilization has been completed and the residence has been transferred to the homeowner. |
| ☐ | The planned construction activity identified on the original NOI was never initiated (e.g., no grading or earthwork was ever started) and plans for the construction have been permanently abandoned or indefinitely postponed. |

## II. Operator Information (as it appears on your NOI):

| Organization: | Name: | Title: |
|---|---|---|
| | | |

| Phone: | Fax (optional): | Email: |
|---|---|---|
| | | |

| Mailing Address: Street or PO Box: | City | State: | Zip: |
|---|---|---|---|
| | | | |

## III. Project / Site Information (as it appears on your NOI):

Project / Site Name:

Location Address: Street:

| City: | State: | Zip: | Borough or similar government subdivision: |
|---|---|---|---|
| | Alaska | | |

## IV. Certification Information

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I certify that I am not subject to any pending state or federal enforcement actions, including citizen suits brought under state or federal law.

| Organization | Name | Title |
|---|---|---|
| | | |

| Phone | Fax (Optional) | Email |
|---|---|---|
| | | |

| Mailing Address: ☐ check if same as Operator Information | Street (PO Box) | City | State | Zip |
|---|---|---|---|---|
| | | | | |

Signature _____ Date _____

# Instructions for Completing a Notice of Termination (NOT) Form for APDES Construction General Permit

**Who May File an NOT Form**

Permittees presently covered under the Alaska Pollutant Discharge Elimination System (APDES) General Permit for Storm Water Discharges Associated with Construction Activity may submit an NOT form when:

- *final stabilization has been achieved on all portions of the site for which you are responsible;*
- *another operator has assumed control, in accordance with Appendix A, Part 2.3 of the General Permit, over all areas of the site that have not been finally stabilized;*
- *coverage under individual permit or an alternative APDES permit has been obtained;*
- *for residential construction only, temporary stabilization has been completed and the residence has been transferred to the homeowner; or*
- *the planned construction activity identified on the original NOI was never initiated (e.g., no grading or earthwork was ever started) and plans for the construction have been permanently abandoned or indefinitely postponed.*

"Final stabilization" means that all soil disturbing activities at the site have been completed and that a uniform perennial vegetative cover with a density of at least 70% of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures, or equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed. See "final stabilization" definition in Appendix A of the Construction General Permit for further guidance where background native vegetation covers less than 100 percent of the ground, in arid or semi-arid areas, for individual lots in residential construction, and for construction projects on land used for agricultural purposes.

**Completing the Form:**

Type or print, in the appropriate areas only. "NA" can be entered in areas that are not applicable. If you have any questions about how or when to use this form, contact the DEC Storm Water Program at (907) 269-6285 or online at http://dec.alaska.gov/water/wastewater/stormwater/.

**Section I. Permit Number:**

Enter the existing APDES Construction General Permit authorization number assigned to the project by ADEC's Storm Water Program. If you do not know the tracking number, you can find the tracking number assigned to your project/facility on DEC's Water Permit Search: http://dec.alaska.gov/Applications/Water/WaterPermitSearch/Search.aspx?number=akr10.

Indicate your reason for submitting this Notice of Termination by checking the appropriate box. Check only one.

**Section II. Operator Information:**

Provide the name of the contact person, and the legal name of the firm, public organization, or any other entity that operates the project described in this application. (An operator of a project is a legal entity that controls at least a portion of site operations and is not necessarily the site manager.)

Also provide the operator's mailing address, telephone number, fax number (optional) and e-mail address.

**Section III. Project/Site Information:**

Enter the official or legal name, and complete street address, including city, state, zip code, and county or similar government subdivision of the project or site. If the project or site lacks a street address, indicate the general location of the site (e.g., Intersection of State Highways 61 and 34). Complete site information must be provided for termination of permit authorization to be valid.

**Section IV. Certification Information:**

The NOT must be signed as follows:

(1) For a corporation, a responsible corporate officer shall sign the NOT, a responsible corporate officer means:

  (A) 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

  (B) the manager of one or more manufacturing, production, or operating facilities, if

    (i) the manager is authorized to make management decisions that 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 statutes and regulations;

    (ii) the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and

    (iii) authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

(2) For a partnership or sole proprietorship, the general partner or the proprietor, respectively; or

(3) for a municipality, state, or other public agency, either a principal executive officer or ranking elected official shall sign the application; in this subsection, a principal executive officer of an agency means

  (A) the chief executive officer of the agency; or

  (B) a senior executive officer having responsibility for the overall operations of a principal geographic unit or division of the agency.

(4) Include the name, title, and email address of the person signing the form and the date of signing. An unsigned or undated NOT form will not be considered valid termination for permit coverage.

As per 18 AAC 83.130(k) A permittee subject to pending state or federal enforcement actions, including citizen suits brought under state or federal law, may not proceed under expedited termination procedures. A permittee requesting expedited permit termination procedures must certify that it is not subject to any pending state or federal enforcement actions, including citizen suits brought under state or federal law.

**Where to File NOT form**

DEC encourages you to complete the NOT form electronically via DEC's Online Application System (OASys) can be found at https://myalaska.state.ak.us/dec/water/OASys/Login.aspx.Filing electronically is the fastest way to terminate permit coverage and help ensure that your NOT is complete. If you choose not to file electronically, you must send the NOT to the address listed below.

If you file by mail, please submit the original form with a signature in ink. Remember to retain a copy for your records.

NOTs sent by mail:

Alaska Dept. of Environmental Conservation
Division of Water, Wastewater Discharge Authorization Program
555 Cordova Street
Anchorage, AK 99501
Phone: (907) 269-6285
Email: DEC.Water.WQPermit@alaska.gov

# Notice of Intent (NOI) Modification for Storm Water Discharges Associated with Construction Activity filed under an APDES General Permit

(***Please copy content exactly from your NOI. Indicate changes*** *on the* ***next page***.)

## I. Current NOI Information

I. Permit Authorization Number:

## II. Operator Information *(as it appears on your NOI)*

| Organization: | Name: | Title: |
|---|---|---|
| Phone: | Fax (optional): | Email: |
| Mailing Address: Street or PO Box: | City | State: Zip: |

## III. Project / Site Information

Project Name:

Brief Description of Project:

**Location Address:**

Borough or similar government subdivision:

| Street: | City: | State: | Zip: |
|---|---|---|---|
| | | Alaska | |

## Instructions for Completing a Modification to an APDES Notice of Intent (NOI)

Use the form on the subsequent pages to indicate the items for which you are submitting this modification. Only enter the information you wish to change. You may use this form to modify an NOI that you submitted to ADEC for coverage under the Construction General Permit (CGP). If you have any questions about modifying your NOI, call the DEC Storm Water Program at (907) 269-6285.

**When Should You Modify Your Notice of Intent (NOI)?**

- You can use this form to update or correct information on your NOI, including:
- Owner/Operator address and contact information
- Site Information
- Start or End dates *(if estimated start or end dates differ greater than 30 days)*
- Number of acres to be disturbed
  *(Note, if the original project disturbance was between 1 and < 5 acres, and now will disturb five acres or more, a SWPPP must also be submitted with the NOI modification. Please note the CGP has different provisions for small and large construction projects.)*
- Storm Water Pollution Prevention Plan (SWPPP) location and contact information
- Continuation of expired permit in accordance with Part 2.6.

**When must you Submit a Notice of Termination (NOT) Instead of a Modification Form?**

- The owner/operator has changed: You must submit a NOT when you transfer control of a site to a new owner/operator. The new owner/operator must then file a new NOI to obtain coverage under DEC's CGP. Coverage is not transferable.

(For Agency Use) Permit Authorization #: _____

# Notice of Intent (NOI)
# for Storm Water Discharges Associated with Construction Activity under an APDES Construction General Permit

Submission of this Notice of Intent (NOI) constitutes notice that the party identified in Section II of this form requests authorization to discharge pursuant to the APDES Construction General Permit (CGP, AKR100000). Submission of this NOI also constitutes notice that the party identified in Section II of this form meets the eligibility requirements of the CGP for the project identified in Section III of this form. Permit authorization is required prior to commencement of construction activity until you are eligible to terminate coverage as detailed in the CGP. To obtain authorization, you must submit a complete and accurate NOI form. Refer to the instructions at the end of this form.

## I. Single/Multiple NOI Project

Is this NOI for a project with a single NOI? ☐ Yes ☐ No

If "No," then your project has multiple NOIs, will the fee be paid with this NOI? ☐ Yes ☐ No

If "No," then enter the name of the operator paying the fee:

## II. Operator Information

Type of Operator/Responsibility per Permit Part 1.2.1:

☐ Day-to-day operational control of on-site activities ☐ Construction Plans and Specifications

| Organization: | Name: | Title: |
|---|---|---|
| | | |

| Phone: | Fax (optional): | Email: |
|---|---|---|
| | | |

| Mailing Address: Street or PO Box: | City | State: | Zip: |
|---|---|---|---|
| | | | |

Primary SIC or NAICS Code: SIC: NAICS:

## III. Project / Site Information

| Project Name: | Estimated Start Date: | Estimated End Date: |
|---|---|---|
| | | |

Brief Description of Project:

Estimated Area to be Disturbed *(nearest tenth acre)*:

**Location Address:**

Borough or similar government subdivision:

| Street: | City: | State: | Zip: |
|---|---|---|---|
| | | Alaska | |

| Latitude (decimal degree, 5 places): | Longitude (decimal degree, 5 places): | Determined By: ☐ GPS ☐ Web, Source: ☐ USGS Topographic Map, scale: ☐ Other: |
|---|---|---|
| | | |

## IV. SWPPP (Storm Water Pollution Prevention Plan)

Location of SWPPP for Viewing: ☐ Address in Section II, ☐ Address in Section III, ☐ Other

| If other: Street: | City: | State: | Zip: |
|---|---|---|---|
| | | | |

Additional Info:

SWPPP Contact Information (if different than that in Section II):

| Organization: | Name: | Title: |
|---|---|---|
| | | |

| Phone: | Fax (optional): | Email: |
|---|---|---|
| | | |

Mailing Address: ☐ Check if same as Operator Information

Street (PO Box):

| City: | State: | Zip: |
|---|---|---|
| | | |

| | |
|---|---|
| Has the SWPPP been prepared in advance of filing this NOI? | ☐ Yes ☐ No |
| For projects with 5 or more acres of disturbance, has a SWPPP been submitted to DEC? | ☐ Yes ☐ No, ≤ 5 acres |

Is your project / site less than one-acre, but part of a common plan of development? ☐ Yes ☐ No

If "Yes", provide the Permit Authorization Number and name of the common plan of development: Number: Name:

Have storm water discharges from your project / site been authorized previously by a DEC permit? ☐ Yes ☐ No

If "Yes," provide the Permit Authorization Number for the previous DEC permit?

If "Yes," have you updated your SWPPP according to the most recently issued CGP? ☐ Yes ☐ No

## V. Permanent Storm Water Controls

Will you construct a permanent storm water management control measure at the project site (Part 4.11)? ☐ Yes ☐ No

If "Yes", indicate the type of measure to be installed:

☐ Pond ☐ Oil/Water/Grit Separator ☐ Proprietary Storm Water Sedimentation Device

☐ Other:

## VI. Discharge Information

Does your project discharge into a Municipal Separate Storm Sewer System (MS4)? ☐ Yes ☐ No

If yes, name of the MS4 Operator:

**Receiving Water and Wetlands Information:** (if additional space is needed for this question, attach separate sheet or annotate in Section XI.)

| **a.** Identify the name(s) of waterbodies or wetlands to which you discharge. | **Impaired waters/303d Listed waters**: (see http://dec.alaska.gov/water/water-quality/impaired-waters or GIS map of Impaired Waters, and Integrated Water Quality and Monitoring and Assessment Reports Webpage. | | | | | | |
|---|---|---|---|---|---|---|---|
| | **b.** Are any of your discharges directly into any segment of a 303d Listed Water, i.e. "Impaired" Water? | | **c.** If you answered **YES** to question **b**, then answer the following three questions: | | | | |
| | | | **i.** What pollutant(s) are causing the impairment? | **ii.** Are the pollutant(s) causing the impairment present in your discharge? | | **iii.** Is the discharge consistent with the assumptions and requirements of applicable EPA approved or established Total Maximum Daily Load (TMDL(s))? | |
| | **Yes** | **No** | | **Yes** | **No** | **Yes** | **No** |
| | ☐ | ☐ | | ☐ | ☐ | ☐ | ☐ |
| | ☐ | ☐ | | ☐ | ☐ | ☐ | ☐ |
| | ☐ | ☐ | | ☐ | ☐ | ☐ | ☐ |

## VII. Billing Contact Information

| Organization: | Name: | Title: |
|---|---|---|
| Phone: | Fax (optional): | Email: |

Mailing Address: Street (PO Box):

☐ Check if same as Operator Information

City: State: Zip:

## VIII. NOI Preparer (Complete if NOI was prepared by someone other than the certifier.)

| Organization: | Name: | Title: |
|---|---|---|
| Phone: | Fax (optional): | Email: |

Mailing Address: Street (PO Box):

☐ Check if same as Operator Information

City: State: Zip:

## IX. Certification Information

An Alaska Pollutant Discharge Elimination System (APDES) permit application or report must be signed by an individual with the appropriate authority per 18 AAC 83.385. For additional information, please refer to 18 AAC 83.385 at the following link: http://www.legis.state.ak.us/basis/aac.asp#18.83.385.

| | |
|---|---|
| Corporate Executive Officer<br>18 AAC 83.385 (a)(1)(A) | For a corporation, 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. |
| Corporate Operations Manager<br>18 AAC 83.385 (a)(1)(B) | For a corporation, the manager of one or more manufacturing, production, or operating facilities, if<br>(i) the manager is authorized to make management decisions that 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 statutes and regulations;<br>(ii) the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and<br>(iii) authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. |
| Sole Proprietor or General Partner<br>18 AAC 83.385 (a)(2) | For a partnership or sole proprietorship, the general partner or the proprietor respectively. |
| Public Agency, Chief Executive Officer<br>18 AAC 83.385 (a)(3)(A) | For a municipality, state, or other public agency, the chief executive officer of the agency. |
| Public Agency, Senior Executive Officer<br>18 AAC 83.385 (a)(3)(B) | For a municipality, state, or other public agency, a senior executive officer having responsibility for the overall operations of a principal geographic unit or division of the agency. |
| **For Delegated Authority: the delegation must be made in writing and submitted to the DEC.*<br>*An Example of written authorization delegating authority can be found at http://dec.alaska.gov/media/13316/delegation-of-signatory-authority.pdf* | |
| Operations Manager<br>*(Delegated Authority)**<br>18 AAC 83.385 (b)(2)(A) | For a duly authorized representative, an individual or a position having responsibility for the overall operation of the regulated facility or activity, including the position of plant manager, operator of a well or a well field, superintendent or position of equivalent responsibility. |
| Environmental Manager<br>*(Delegated Authority)**<br>18 AAC 83.385 (b)(2)(B) | For a duly authorized representative, an individual or position having overall responsibility for environmental matters for the company. |

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

| Organization: | Name: | Title: |
|---|---|---|
| Phone: | Fax (optional): | Email: |

Mailing Address:
☐ Check if same as Operator Information

Street (PO Box):

| City: | State: | Zip: |
|---|---|---|

Signature

Date

## X. Document Attachments and Supplemental Information

Documents attached with this application:

☐ Copy of SWPPP if ≥ 5 acres of disturbance.

☐ Delegation of Signatory Authority.

☐ Other:

# Instructions for Completing a Notice of Intent (NOI) Form for Storm Water Discharges Associated with Construction Activity under an APDES Construction General Permit

**Who Must File an NOI Form:**

Operators of construction sites where one or more acres are disturbed, smaller sites that are part of a larger common plan of development or sale where there is a cumulative disturbance of at least one acre, or any other site specifically designated by the Director, must submit an NOI to obtain coverage under an APDES construction general permit. Each person, firm, public organization, or any other entity that meets either of the following criteria must file this form: (1) they have operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or (2) they have day-to-day operational control of those activities at the project necessary to ensure compliance with SWPPP requirements or other permit conditions.

**Completing the Form:**

Obtain and read a copy of the APDES Construction General Permit. Type or print, in the appropriate areas only. "NA" can be entered in areas that are not applicable. If you have any questions about how or when to use this form, contact the DEC Storm Water Program at (907) 269-6285 or online at http://dec.alaska.gov/water/wastewater/stormwater/.

**Section I. Single/Multiple NOI Project:**

Indicate whether or not this is a single NOI project. If not, indicate if the fee will be paid with this NOI or another associated with this project. Provide the name of the operator that will be paying the fee.

**Section II. Operator Information:**

Provide the name of the contact person, title, and the legal name of the firm, public organization, or any other entity that operates the project described in this application. (An operator of a project is a legal entity that controls at least a portion of site operations and is not necessarily the site manager.) Also provide the operator's mailing address, telephone number, fax number (optional) and e-mail address (to be notified via e-mail of NOI approval when available). Correspondence for the NOI will be sent to this address.

**Section III. Project/Site Information:**

Enter the official or legal name, a brief description of the project or site, and complete street address, including city, state, zip code, and county or similar government subdivision of the project or site. If the project or site lacks a street address, indicate the general location of the site (e.g., Intersection of State Highways 61 and 34). Complete site information must be provided for permit authorization to be granted.

Provide the latitude and longitude of the facility in decimal degrees format with up to 5 digit accuracy. The latitude and longitude of your facility can be determined in several different ways, including through the use of global positioning system (GPS) receivers, U.S. Geological Survey (U.S.G.S.) topographic or quadrangle maps, Google Earth, Bing Maps, and EPA's web-based siting tools, among others. For consistency, DEC requests that measurements be taken from the approximate center of the construction site. Applicants must specify which method they used to determine latitude and longitude. If a U.S.G.S. topographic map is used, applicants are required to specify the scale of the map used. Enter the estimated construction start and completion dates using four digits for the year (i.e., 05/27/2021).

Enter the estimated area (acres) to be disturbed including but not limited to grubbing, excavation, grading, and utilities and infrastructure installation. Indicate to the nearest tenth of an acre. Note: 1 acre = 43,560 sq. ft.

Indicate whether or not the project/site has been previously covered by an EPA or DEC permit. If "Yes" provide the permit authorization number that the project/site was covered under.

If this is a project that was covered under a previous DEC construction general permit indicate whether or not the SWPPP has been updated in accordance with the most recently issued Alaska Construction General Permit.

If the project or site is less than one-acre, but part of a common plan of development, provide the permit authorization number and name of the common plan of development.

**Section IV. SWPPP (Storm Water Pollution Prevention Plan) Information:**

Note the SWPPP should be prepared in advance of filing the NOI form. For projects with 5 acres or more of disturbance, the initial SWPPP will need to be submitted to DEC with the NOI. Check the appropriate box for the location where the SWPPP may be viewed. Provide the name, fax number (optional), and e-mail address of the contact person if different than that listed in Section II of the NOI form.

**Section V. Permanent Storm Water Controls**

A permittee must comply with applicable APDES MS4 permit requirements, local requirements, and the applicable requirements under 18 AAC 72.600 (i.e., Nondomestic Wastewater System Plan Review) regarding the design and installation of permanent storm water management controls. Annotate the type of measure to be installed and see Permit Part 4.11 for additional requirements regarding plan submittal deadlines.

**Section VI. Discharge Information:**

Identify the receiving water bodies or wetlands to which the project's storm water will discharge. These should be the first bodies of water that the discharge will reach. (Note: If you discharge to more than one water body, please indicate all such waters in the space provided and attach a separate sheet if necessary.) For example, if the discharge leaves your site and travels through a roadside swale or a storm sewer and then enters a stream that flows to a river, the stream would be the receiving water body. Waters of the U.S. include lakes, streams, creeks, rivers, wetlands, impoundments, estuaries, bays, oceans, and other surface bodies of water within the confines of the U.S. and U.S. coastal waters. (Waters of the U.S. do not

include man-made structures created solely for the purpose of wastewater treatment.) U.S.G.S. topographical maps may be used to make this determination. If the map does not provide a name, use a format such as "unnamed tributary to Cross Creek". If you discharge into a municipal separate storm sewer system (MS4), you must identify the water body into which that portion of the storm sewer discharges. That information should be readily available from the operator of the MS4.

Indicate if any of your storm water discharges from construction activities will be reach a 303d listed water (i.e., impaired water body)?
For a listing of impaired waters and an interactive map, see http://dec.alaska.gov/water/water-quality/impaired-waters.

Indicate whether your storm water discharges from construction activities will be consistent with the assumptions and requirements of applicable EPA approved or established total maximum daily load(s)(TMDL(s)). To answer this question, refer to http://dec.alaska.gov/water/water-quality/impaired-waters/. You may also have to contact DEC. If there are no applicable TMDLs or no related requirements, please check the "yes" box in the NOI form.

**Section VII. Billing Contact Information**

Provide the name of the contact person, title, and the legal name of the firm, public organization, or any other entity that is responsible for accounts payable for this project. Also provide the billing contact's mailing address, telephone number, fax number (optional), and email address. Correspondence for billing purposes will be sent to this address. If the billing contact is that same as the operator, check the box.

**Section VIII. NOI Preparer Information.**

If the NOI was prepared by someone other than the certifier (for example, if the NOI was prepared by the project SWPPP contact or a consultant for the certifier's signature), include the name, title, organization, address, telephone number, and email address of the NOI preparer.

**Section IX. Certification Information:**

The NOI must be signed as follows:

(1) For a corporation, a responsible corporate officer shall sign the NOI, a responsible corporate officer means:
   (A) 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
   (B) the manager of one or more manufacturing, production, or operating facilities, if
      (i) the manager is authorized to make management decisions that 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 statutes and regulations;
      (ii) the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and
      (iii) authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

(2) For a partnership or sole proprietorship, the general partner or the proprietor, respectively; or

(3) for a municipality, state, or other public agency, either a principal executive officer or ranking elected official shall sign the application; in this subsection, a principal executive officer of an agency means
   (A) the chief executive officer of the agency; or
   (B) a senior executive officer having responsibility for the overall operations of a principal geographic unit or division of the agency.

(4) Include the name, title, organization, address, telephone number, and email address of the person signing the form and the date of signing. An unsigned or undated NOI form will not be considered valid application for permit coverage.

**Section X. Document Attachments and Supplemental Information**

Include a copy of the SWPPP if ≥ 5 acres of disturbance. Indicate documents attached and supplemental information.

**Where to File NOI form**

Select one of three options:

1) **Preferred Option**: DEC encourages you to complete the NOI form electronically via DEC's Online Application System (OASys): https://myalaska.state.ak.us/dec/water/OASys/Login.aspx. Filing electronically is the fastest way to obtain permit coverage and help ensure that your NOI is complete.

2) If you file by mail please submit the original form with a signature in ink. Remember to retain a copy for your records.

   NOIs sent by mail:
   Alaska Dept. of Environmental Conservation
   Division of Water
   Wastewater Discharge Authorization Program
   555 Cordova Street
   Anchorage, AK 99501
   Phone: (907) 269-6285

3) Submit all pages of scanned original form via Email: DEC.Water.WQPermit@alaska.gov. *(Note, 20MB limit).*

For Agency Use

Permit #: _____

# Low Erosivity Waiver Certification
# Storm Water Discharges Associated with Construction Activity under an APDES Construction General Permit

This form provides notice to DEC that the project operator identified in Section I of this form are certifying that construction activity at the project site identified in Section II, will take place during a period when the rainfall erosivity factor is less than five [40 CFR 122.26(b)(15)(i)(A) adopted by reference at 18 AAC 83.010(b)(3)]. By submitting a complete and accurate form, the otherwise applicable APDES permitting requirements for stormwater discharges associated with construction activity, are waived. Based on your certification, a waiver is granted for the period beginning on the date this Low Erosivity Waiver Form is mailed to DEC (i.e., postmark date), or the project start date specified in Part III of this form, whichever shall occur last, and ending on the project completion date specified in Part III. Refer to the instructions at the end of this form for more details.

Note this waiver is only available to storm water discharges associated with small construction activities (i.e., 1-5 acres). See 2021 CGP, Appendix D.

## I. Operator Information

| Organization: | Name: | Title: |
|---|---|---|
| | | |

| Phone: | Fax (optional): | Email: |
|---|---|---|
| | | |

| Mailing Address: Street or PO Box: | City | State: | Zip: |
|---|---|---|---|
| | | | |

Primary SIC or NAICS Code: SIC: NAICS:

## II. Project / Site Information

| Project / Site Name: | Estimated Start Date: | Estimated End Date: |
|---|---|---|
| | | |

| Brief Description of the Project / Site: | Estimated Area to be Disturbed *(nearest tenth acre)*: |
|---|---|
| | |

| location Address: | Street: | City: | State | Zip: | Borough or similar government subdivision: |
|---|---|---|---|---|---|
| | | | Alaska | | |

| Latitude (decimal degree, 5 places): | Longitude (decimal degree, 5 places): | Determined By: ☐ GPS ☐ USGS Topographic Map ☐ Other |
|---|---|---|
| | | |

If you used a USGS Topographic map, what was the scale?

## III. Rainfall Erosivity Factor Calculation Data

Are interim non-vegetative site stabilization measures used to establish the project completion date for purposes of obtaining this waiver? ☐ Yes ☐ No

Rainfall erosivity factor (R factor):

***Note**: To qualify for this waiver, the construction activity must take place during a period when the R factor is less than five.*

Rainfall erosivity factor was calculated by using: ☐ Online calculator, ☐Table 4-3 of 2016 CGP Fact Sheet, ☐USDA Handbook 703

## IV. Certification Information

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

| Organization | Name | Title |
|---|---|---|
| | | |

| Phone | Fax (Optional) | Email |
|---|---|---|
| | | |

| Mailing Address: ☐ check if same as Operator Information | Street (PO Box) | City | State | Zip |
|---|---|---|---|---|
| | | | | |

Signature _____ Date _____

# Instructions for Completing a Notice of Intent (NOI) Form for Storm Water Discharges Associated with Construction Activity under an APDES Construction General Permit

**Who May Qualify for a Low Erosivity Waiver**

Under the Alaska Pollutant Discharge Elimination System (APDES) Program, operators of construction projects that result in land disturbances equal to or greater than one acre, including sites that are less than one acre but are part of a larger common plan of development or sale where there is a cumulative disturbance of at least one acre, are required to obtain coverage under an APDES permit for stormwater discharges associated with construction activity.

DEC may waive the otherwise applicable permit requirements for stormwater discharges from construction activities that disturb less than five acres if the construction activity will take place during a period when the rainfall erosivity factor (R factor) is less than five. More information on the low erosivity waiver is available in the 2021 CGP Fact Sheet Appendix D. For questions related to completion of this form, you may contact DEC's Stormwater Program at (907) 269-6285.

**Completing the Form:**

You must type or print in appropriate areas only. One form must be completed for each facility or site for which you are seeking to obtain a Low Erosivity Waiver. Additional guidance on completing this form can be accessed at DEC's Storm Water Program website: http://dec.alaska.gov/water/wastewater/stormwater.

Please make sure you have addressed all applicable questions and have made a photocopy for your records before sending the completed form to DEC.

**Section I. Operator Information:**

Each legal entity that meets DEC's definition of "operator" (see definitions in Appendix C of DEC's APDES Construction General Permit) and that meets the eligibility conditions for the low erosivity waiver must file this form to have the permit requirements waived. The operator is the legal entity that either (1) has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications, or (2) has day-to-day operational control of some or all of those activities.

It is possible that there will be more than one operator at a site and, in such cases, each entity that meets the operator definition must complete a Low Erosivity Waiver Certification.

Provide the legal name of your firm, public organization, or other entity that operates the project described in this waiver certification. Usually this will be a company or organization's name but for construction activities undertaken by you as an individual, this should be your name. Enter the operator's complete mailing address and name of contact person, telephone number, fax number (optional) and email who can answer questions about the site (e.g., a project or site manager).

**Section II. Project/Site Information:**

Enter the official or legal name, a brief description of the project or site, and complete street address, including city, state, zip code, and county or similar government subdivision of the project or site. If the project or site lacks a street address, indicate the general location of the site (e.g., Intersection of State Highways 61 and 34). Complete site information must be provided for permit authorization to be granted.

Provide the latitude and longitude of the facility in , decimal degrees format with up to 5 digit accuracy. The latitude and longitude of your facility can be determined in several different ways, including through the use of global positioning system (GPS) receivers, U.S. Geological Survey (U.S.G.S.) topographic or quadrangle maps, Google Earth, Bing Maps, and EPA's web-based siting tools, among others. Refer to https://www.epa.gov/npdes/construction-general-permit-resources-tools-and-templates for further guidance on the use of these methodologies. For consistency, DEC requests that measurements be taken from the approximate center of the construction site. Applicants must specify which method they used to determine latitude and longitude. If a U.S.G.S. topographic map is used, applicants are required to specify the scale of the map used. Enter the estimated construction start and completion dates using four digits for the year (i.e., 05/27/2015).

Enter the estimated area (acres) to be disturbed including but not limited to: grubbing, excavation, grading, and utilities and infrastructure installation. Indicate to the nearest tenth of an acre. Note: 1 acre = 43,560 sq. ft.

**Section III. Rainfall Erosivity Factor Calculation Data**

The construction period begins with the initial earth disturbance and ends with final site stabilization. To qualify for this waiver, the rainfall erosivity factor for the project must be less than five during the entire construction period. Specify the construction period by entering the project start date (date of initial earth disturbance) and project completion date (date of final site stabilization). For example, a grading contractor that is operating on-site for only one week during a nine month construction project, must enter the start date and completion date of the entire nine month construction period.

DEC believes, where the environmental threat is low (i.e., in arid and semi-arid climates), that "final stabilization" can include techniques that employ re-vegetation combined with other stabilization measures, consisting of temporary degradable rolled erosion control products, also known as "erosion control blankets (ECBs). With proper selection, design, and installation of the combination re-vegetation/ECB technique in arid or semi-arid areas, an operator can be considered to have achieved final stabilization upon completion of the installation process. Note that if more than three years is required to establish 70 percent of the natural

vegetative cover, this technique cannot be used or cited for fulfillment of the final stabilization requirement. If your waiver is based on use of interim non-vegetative stabilization measures, such as erosion control blankets, to establish the end of the construction period, you must indicate so on this form. In doing so, you must commit and certify (as a condition of waiver eligibility) to periodically inspect and properly maintain the area until the criteria for final stabilization, as defined in the Construction General Permit, have been met.

The rainfall erosivity factor "R" is determined in accordance with the U.S. Department of Agriculture *Agriculture Handbook Number 703, Predicting Soil Erosion by Water: A Guide to Conservation Planning with the Revised Universal Soil Loss Equation (RUSLE)*, Chapter 2 pages 21-64, dated January 1997.

If the R factor is five or greater during the project's construction period, you must have or obtain coverage under an APDES stormwater permit. If the project was eligible for the waiver during the original construction period, but the construction activity will extend past the project completion date specified in the Low Erosivity Waiver Certification, the operator must recalculate the R factor using the original start date and a new project completion date. If the recalculated R factor is still less than five, a new waiver certification form must be submitted before the end of the original construction period. If the new R factor is five or greater, the operator must submit a Notice of Intent to be covered by the Construction General Permit before the original project completion date. The Notice of Intent (NOI) form may be submitted electronically using DEC's Online Application System (OASys). OASys can be accessed at http://dec.alaska.gov/water/oasys.aspx. If you choose to fill out an NOI and mail it to DEC you can obtain a copy at http://dec.alaska.gov/water/wastewater/stormwater/forms/#tab-CGP.

**Section IV. Certification Information:**

The Low Erosivity Waiver must be signed as follows:

(1) For a corporation, a responsible corporate officer shall sign the Low Erosivity Waiver, a responsible corporate officer means:
   (A) 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
   (B) the manager of one or more manufacturing, production, or operating facilities, if
      (i) the manager is authorized to make management decisions that 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 statutes and regulations;
      (ii) the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and
      (iii) authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

(2) For a partnership or sole proprietorship, the general partner or the proprietor, respectively; or

(3) for a municipality, state, or other public agency, either a principal executive officer or ranking elected official shall sign the application; in this subsection, a principal executive officer of an agency means
   (A) the chief executive officer of the agency; or
   (B) a senior executive officer having responsibility for the overall operations of a principal geographic unit or division of the agency.

(4) Include the name, title, and email address of the person signing the form and the date of signing. An unsigned or undated waiver form will not be considered valid application for exclusion from permit coverage.

**Where to File Low Erosivity Certification Form**

Please submit the original form with a signature in ink. Remember to retain a copy for your records.

NOIs sent by mail:

Alaska Dept. of Environmental Conservation
Division of Water
Wastewater Discharge Authorization Program
555 Cordova Street
Anchorage, AK 99501
Phone: (907) 269-6285
Email: DEC.Water.WQPermit@alaska.gov

# Alaska Department of Environmental Conservation
# CGP Annual Reporting Form

Complete one set of tables for each storm event (rainfall or snowmelt) that resulted in a discharge from the site. At a minimum per part 7.3.2.2 of the CGP two samples per discharge point shall be collected and averaged. Attach additional tables as necessary. See instructions on the next page for more information.

## I. Project Information

| Permit Tracking Number: | Project Name: | Project Location: |
|---|---|---|
| | | |

| Project Operator Name | Nature of Discharge | | |
|---|---|---|---|
| | Rainfall Amount (inches) | Rainfall | Snowmelt |
| | | ☐ | ☐ |
| Do you have substantially identical discharge points on a linear project as described in Part 7.3.4 of the ACGP? ☐ Yes ☐ No | Measurement Method | | |
| List identical discharge point names or ID numbers which are identified in your SWPPP that are not sampled but visually monitored. | On Site Gauge: | At Nearest National Weather Service Precipitation Gauge | |
| | ☐ | ☐ | |
| | Date Samples Collected (mm/dd/yyyy): | | |

## II. Monitoring Results

*All discharge points on your site subject to monitoring shall have two turbidity samples collected, averaged, and reported as average downstream turbidity. Compliance is determined based upon the difference between the individual upstream sample for that specific discharge point and the average downstream turbidity result.*

| **Upstream location ID** *(used in the SWPPP)* | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Latitude/Longitude *(Decimal Degrees)* | | | | | | | | |
| Time Sample collected: | | | | | | | | |
| Turbidity (NTUs): | | | | | | | | |
| **Downstream location ID** | | | | | | | | |
| Latitude/Longitude *(Decimal Degrees)* | | | | | | | | |
| Time Samples collected: | | | | | | | | |
| Turbidity (NTUs): | | | | | | | | |
| Average Downstream Turbidity (NTUs): | | | | | | | | |
| **Difference** | | | | | | | | |
| Difference in Turbidity (NTUs): | | | | | | | | |

## III. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

| | | | |
|---|---|---|---|
| | | | |
| **Title** | **Printed Name** | **Signature** | **Date** |

# Instructions for Completing the CGP Annual Report

**Who Must Submit an Annual Report to DEC?**

The operator of a construction site must submit an Annual Report if their site meets the requirements of Section 3.2 (Discharge to Impaired Water Body) of the 2021 APDES Construction General Permit (CGP).

**Completing the Form**

Obtain and read a copy of the CGP. Type or print in the appropriate areas only. "NA" can be entered in areas that are not applicable. If you have questions about how or when to use this form contact the DEC Storm Water Program at 907-269-6285 or online at http://dec.alaska.gov/water/wastewater/stormwater/construction.

For each storm event sampled, collect a minimum of two representative samples of each discharge point. To meet the requirements of Part 9.1 of the CGP, all completed forms must be submitted to DEC by December 31st of each year during construction and with the NOT upon submittal. The form must be submitted to the appropriate address in Appendix A, Part 1.1.2 of the CGP.

**Section I. Project Information**

Provide the APDES permit tracking number assigned by DEC to the project. If you do not know the tracking number, you can find the tracking number assigned to your project on DEC's Water Permit Search http://dec.alaska.gov/Applications/Water/WaterPermitSearch/search.aspx?number=akr10

Provide the project name, location and project operator. Use the same name provided on your NOI. Enter the outfall name or number identified in the SWPPP for all discharge points subject to monitoring. If no discharge occurs at some outfalls simply state "No Discharge". Also indicate any discharge points that are considered substantially identical and list on the form pursuant to Section 7.3.4 of the CGP.

Indicate if the discharge was a result of a rain event or snowmelt. If the discharge was the result of rainfall provide the total amount of rain for the storm event in inches. Indicate if the measurement of rainfall was taken using an onsite gauge or a National Weather Service precipitation gauge.

**Section II. Monitoring Results**

Provide the date and time the samples were collected. Enter the measured turbidity for each sample in Nephelometric Turbidity Units (NTUs). Provide the average of the two samples collected from each discharge point.

Provide the difference between the upstream and average downstream sampling results from each discharge point sampled to determine compliance with Part 3.2 of the CGP.

Per Part 3.2.1 upstream monitoring must take place at a representative location (upgradient) from the point of discharge or outside the area of influence.

Downstream monitoring must take place at a representative location inside the area of influence or at the point the storm water discharge leaves the construction site.

**Section III. Certification Information:**

The Annual Report must be signed as follows:

(1) For a corporation, a responsible corporate officer shall sign the Annual Report, a responsible corporate officer means:

  (A) 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

  (B) the manager of one or more manufacturing, production, or operating facilities, if

    (i) the manager is authorized to make management decisions that 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 statutes and regulations;

    (ii) the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and

    (iii) authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

(2) For a partnership or sole proprietorship, the general partner or the proprietor, respectively; or

(3) for a municipality, state, or other public agency, either a principal executive officer or ranking elected official shall sign the application; in this subsection, a principal executive officer of an agency means

  (A) the chief executive officer of the agency; or

  (B) a senior executive officer having responsibility for the overall operations of a principal geographic unit or division of the agency.

(4) Include the name, title, and email address of the person signing the form and the date of signing. An unsigned or undated form will not be considered valid submittal.

**Where to File Annual Report form**

Please submit the original form with a signature in ink. Remember to retain a copy for your records.

Annual Reports sent by mail:

State of Alaska
Department of Environmental Conservation
Division of Water
Compliance and Enforcement Program
555 Cordova Street
Anchorage, Alaska 99501
Telephone Nationwide (877) 569-4114
Anchorage Area / International (907) 269-4114
Fax (907) 269-4604
Email: dec-wqreporting@alaska.gov

THE STATE of ALASKA
GOVERNOR MIKE DUNLEAVY

Department of Fish and Game

HABITAT SECTION
Southcentral Regional Office

333 Raspberry Road
Anchorage, Alaska
Main: 907.267.2342
Fax: 907.267.2499

# FISH HABITAT PERMIT FH22-II-0056-GP

**ISSUED:** January 3, 2022
**EXPIRES:** December 31, 2025

General Public:

**RE:** Vehicle Movement on Frozen Water Surfaces within the Alaska Department of Fish and Game (ADF&G), Habitat Section Region II Permitting Boundaries

Pursuant to the Anadromous Fish Act at AS 16.05.871(b), the Alaska Department of Fish and Game (ADF&G) Habitat Section has determined that both the public interest and the proper protection of fish and game would be served through the issuance of a general permit (GP) authorizing the use of motorized vehicles on frozen rivers, lakes, and streams within the ADF&G, Habitat Section Region II permitting boundaries (see attached map). This GP does not apply to motorized vehicle use within state refuges, critical habitat areas, and sanctuaries. Winter motorized vehicle use in Trading Bay State Game Refuge and Redoubt Bay Critical Habitat Area are covered under separate general permits.

Categories of motorized vehicles covered by the GP are limited to wheeled and tracked motorized vehicles less than 1,000 pounds dry vehicle weight, except for vehicles operated on the Yukon and Kuskokwim rivers and their first order tributaries, which are limited to less than 10,000 pounds dry vehicle weight. The dry weight of a vehicle is the weight of the vehicle without passengers and cargo, as specified by the manufacturer. This GP does not authorize cross-country movement of equipment on state lands or other activities not allowed under 11 AAC 96.020 (Generally Allowed Uses on State Lands).

Various rivers, lakes, and streams within the ADF&G, Habitat Section Region II permitting boundaries have been specified as being important for spawning, rearing, or migration of anadromous fish pursuant to AS 16.05.871(a). These rivers, lakes, and streams may also support a variety of resident fish species.

Pursuant to AS 16.05.871(d), access to, crossings of, or egress from any frozen specified anadromous river, lake, or stream within the ADF&G, Habitat Section Region II permitting boundaries is authorized subject to the activity description above, the following stipulations, and the permit terms.

1. This permit must be in your possession while conducting authorized activities.
2. The ice cover shall be of sufficient thickness to support the weight-bearing load of the authorized vehicle(s).
3. There shall be no vehicles or equipment operated in the open waters of any specified river, lake, or stream.
4. The use of snow or ice bridges, access ramps, or cribbing to cross any specified river, lake, or stream is prohibited unless approved, in writing, by the ADF&G, Habitat Section.
5. Access to or egress from frozen waters shall occur only at locations with gently or gradually sloping banks. There shall be no access to or egress from frozen waters at locations with sheer or cut banks.
6. The bed or banks of any specified river, lake, or stream shall not be altered or disturbed in any way to facilitate access to, use of, or egress from their frozen surfaces.
7. No fuel shall be stored, nor vehicles fueled or serviced while located on the frozen surface or below the ordinary high-water line of any specified river, lake, or stream.

**Permit Terms**

This letter constitutes a permit issued under the authority of AS 16.05.871 and must be retained on site during project activities. Please be advised that this determination applies only to activities regulated by the Habitat Section; other agencies also may have jurisdiction under their respective authorities. This determination does not relieve you of your responsibility to secure other permits; state, federal, or local. You are still required to comply with all other applicable laws.

The vehicle owner and the operator, or the legal guardian of minor dependents, are responsible for the actions of contractors, agents, or other persons who participate in the approved activity. For any activity that significantly deviates from the approved plan, you shall notify the Habitat Section and obtain written approval in the form of a permit amendment before beginning the activity. Any action that increases the project's overall scope or that negates, alters, or minimizes the intent or effectiveness of any provision contained in this permit will be deemed a significant deviation from the approved plan. The final determination as to the significance of any deviation and the need for a permit amendment is the responsibility of the Habitat Section. Therefore, we recommend you consult the Habitat Section immediately before considering any deviation from the approved plan.

You shall give an authorized representative of the state free and unobstructed access to the permit site, at safe and reasonable times, for the purpose of inspecting or monitoring compliance with any provision of this permit. You shall furnish whatever assistance and information the authorized representative reasonably requires for monitoring and inspection purposes.

In addition to the penalties provided by law, this permit may be terminated or revoked for failure to comply with its provisions or failure to comply with applicable statutes and regulations. You shall mitigate any adverse effect upon fish or wildlife, their habitats, or any restriction or interference with public use that the commissioner determines was a direct result of your failure to comply with this permit or any applicable law.

You shall indemnify, save harmless, and defend the department, its agents, and its employees from any and all claims, actions, or liabilities for injuries or damages sustained by any person or property arising directly or indirectly from permitted activities or your performance under this

permit. However, this provision has no effect if, and only if, the sole proximate cause of the injury is the department's negligence.

You may appeal this permit decision relating to AS 16.05.871 in accordance with the provisions of AS 44.62.330-630.

Any questions or concerns about this permit may be directed to the ADF&G Habitat Section Region II office in Anchorage by calling (907) 267-2342 or by email at dfg.hab.infoanc@alaska.gov.

Sincerely,
Doug Vincent-Lang
Commissioner



By Ron Benkert
Southcentral Regional Supervisor

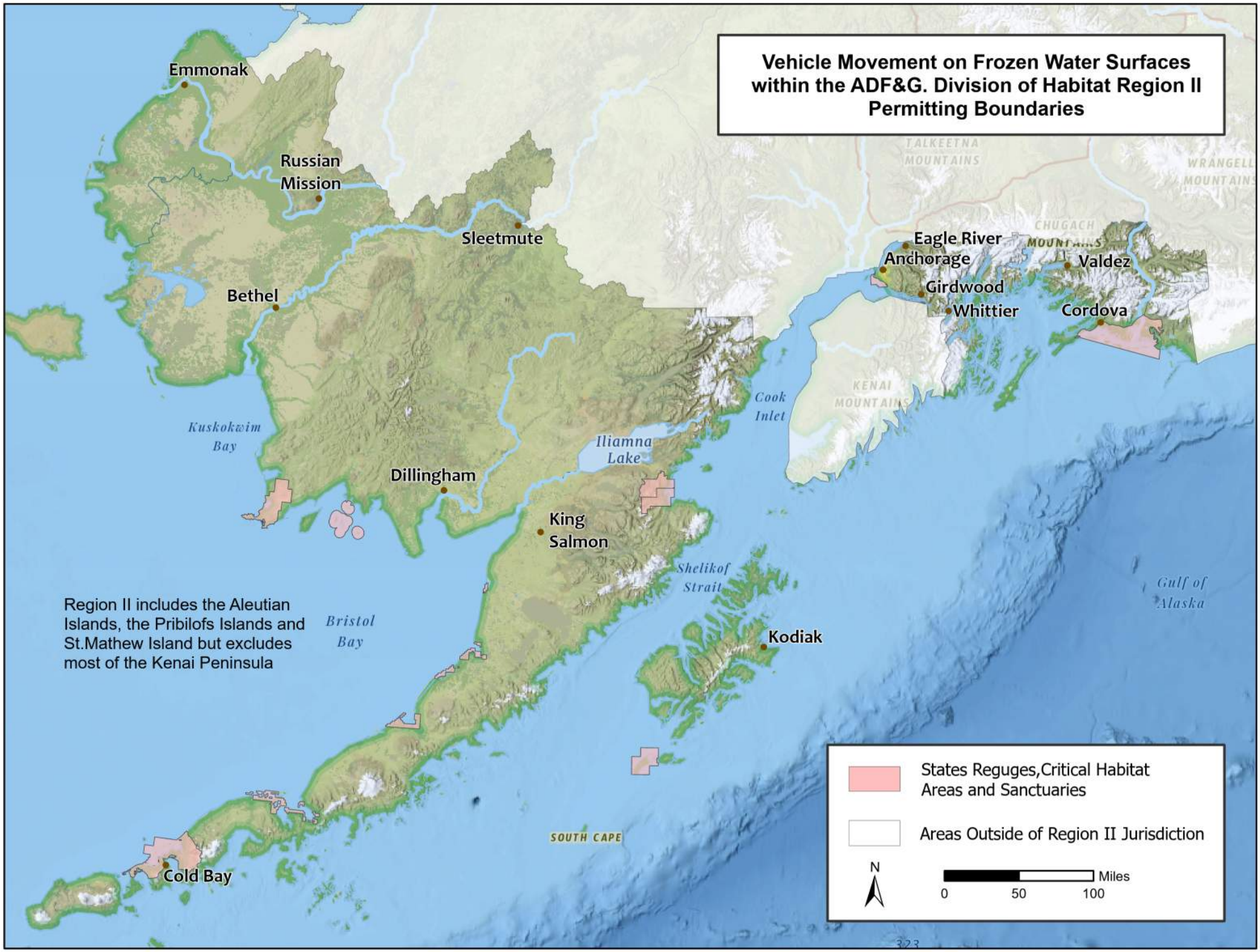
Enclosure: Map

Email cc:

A. Ott, ADF&G
J. Baumer, ADF&G
N. Smith, ADF&G
J. Chythlook, ADF&G
L. Borden, ADF&G
B. Marston, ADF&G
S. Ivey, ADF&G
E. Fox, ADF&G
T. Elison, ADF&G
T. Sands, ADF&G
K. Gatt, ADF&G
R. Johnson, ADF&G
J. Jackson, ADF&G
G. Hollowell, ADF&G
M. Booz, ADF&G
C. Gleason, ADF&G
D. Jallen, ADF&G
D. Crowley, ADF&G
A. Tiernan, ADF&G
J. Meehan, ADF&G
D. Hill, ADF&G
A. Dubour, ADF&G
M. Carter, ADF&G

N. Svoboda, ADF&G
C. Westing, ADF&G
D. Battle, ADF&G
T. Polum, ADF&G
P. Jones, ADF&G
J. Botz, ADF&G
J. Rypkema, ADEC
C. Larson, ADNR
B. Corwin, ADNR
B. Shryock, ADNR
A. Achee, City of Whittier
M. Detter, City of Valdez
N. Hill, LPB
H. Howarth, City of Cordova
T. Tobish, MOA
P. Williams, City of Bethel
E. Weiss, AEB
P. Zavadil, City of St. Paul
J. Wilson, BBB
L. Lockett, City of Adak
E. Reinders, City of Unalaska
S. Lopez, KPB
Borough Manager, KIB

AWT, Valdez
AWT, Bethel
AWT, King Salmon
AWT, Kodiak
AWT, Soldotna
AWT, Cordova
AWT, Dutch Harbor
AWT, Dillingham
AWT, Anchorage


Vehicle Movement on Frozen Water Surfaces within the ADF&G. Division of Habitat Region II Permitting Boundaries
Emmonak
Russian Mission
Sleetmute
Bethel
Dillingham
King Salmon
Kodiak
Cold Bay
Eagle River
Anchorage
Girdwood
Whittier
Valdez
Cordova
Kuskokwim Bay
Iliamna Lake
Cook Inlet
Shelikof Strait
Bristol Bay
Gulf of Alaska
SOUTH CAPE
TALKEETNA MOUNTAINS
WRANGELL MOUNTAINS
CHUGACH MOUNTAINS
KENAI MOUNTAINS
Region II includes the Aleutian Islands, the Pribilofs Islands and St.Mathew Island but excludes most of the Kenai Peninsula
States Reguges,Critical Habitat Areas and Sanctuaries
Areas Outside of Region II Jurisdiction
N
Miles
0
50
100

# APPENDIX G

## GRADING AND STABILIZATION LOG

# SWPPP GRADING & STABILIZATION ACTIVITIES LOG PAGE _____

**Project Number:** **Project Name:** E2214092 - Portage OH Primary System Improvements

**Project Area (if applicable:**

*Detailed instructions for completing this form can be found on the Alaska Construction Forms website: http://dot.alaska.gov/stwddes/dcsconst/pop_constforms.shtml*

| Date Grading Activity Initiated/ Initials | Description of Grading Activity and Location | Date Grading Activity Ceased (Temporary or Permanent) and Initials | Date Stabilization Measures Initiated (Temporary or Permanent) and Initials | Date Stabilization Measure Complete | Description of Stabilization Measure |
|---|---|---|---|---|---|
| | | T ☐ P ☐ | T ☐ P ☐ | | |
| | | T ☐ P ☐ | T ☐ P ☐ | | |
| | | T ☐ P ☐ | T ☐ P ☐ | | |
| | | T ☐ P ☐ | T ☐ P ☐ | | |
| | | T ☐ P ☐ | T ☐ P ☐ | | |
| | | T ☐ P ☐ | T ☐ P ☐ | | |
| | | T ☐ P ☐ | T ☐ P ☐ | | |
| | | T ☐ P ☐ | T ☐ P ☐ | | |
| | | T ☐ P ☐ | T ☐ P ☐ | | |

# APPENDIX H

## SPILL PLAN AND REPORTING REQUIREMENTS

## ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION

# MONTHLY OIL SPILL REPORTING LOG

Only for spills less than 10 gallons, solely to land, not to creeks, sewers or storm drains.
(see Discharge Reporting requirements, 18 AAC 75.300)

**SPILLS GREATER THAN 55 GALLONS SOLELY TO LAND OUTSIDE SECONDARY CONTAINMENT, HAZARDOUS SUBSTANCE SPILLS OR SPILLS TO WATER MUST BE REPORTED IMMEDIATELY.**

Call the nearest ADEC office for more information: **Anchorage:** 269-3063 **Fairbanks**: 451-2121 **Juneau**: 465-5340

Please submit the completed monthly spill reporting log to the nearest ADEC office:

**Anchorage:** dec.carspillreport@alaska.gov
**Fairbanks:** dec.narspillreport@alaska.gov
**Juneau:** dec.spar.seregion.spills@alaska.gov

| FACILITY NAME AND ADDRESS: | |
|---|---|
| | |
| **REPORT MONTH/YEAR:** | |
| | |
| **REPORTED BY:** | **PHONE #:** |
| | |
| **EMAIL:** | |
| | |

| DATE / TIME OF SPILL | LOCATION | PRODUCT SPILLED | QTY SPILLED (GALLONS) | CAUSE OF SPILL & AREA AFFECTED | WHO RESPONDED | CLEANUP & METHOD / PLACE OF DISPOSAL |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION

# OIL & HAZARDOUS SUBSTANCES SPILL NOTIFICATION FORM

ADEC USE ONLY

| ADEC SPILL #: | ADEC FILE #: | ADEC LC: |
|---|---|---|
| | | |

| PERSON REPORTING: | PHONE NUMBER: | REPORTED HOW? (ADEC USE ONLY)<br>☐ Phone ☐ Fax ☐ PERS ☐ E-mail |
|---|---|---|
| DATE/TIME OF SPILL: | DATE/TIME DISCOVERED: | DATE/TIME REPORTED TO ADEC: |

| INCIDENT LOCATION/ADDRESS: | DATUM: ☐ NAD27 ☐ NAD83 ☐ WGS84 ☐ Other _____<br>LAT.<br>LONG. | PRODUCT SPILLED: |
|---|---|---|

| QUANTITY SPILLED: ☐ gallons ☐ pounds | QUANTITY CONTAINED: ☐ gallons ☐ pounds | QUANTITY RECOVERED: ☐ gallons ☐ pounds | QUANTITY DISPOSED: ☐ gallons ☐ pounds |
|---|---|---|---|

| | POTENTIAL RESPONSIBLE PARTY: | OTHER PRP, IF ANY: | VESSEL NAME: |
|---|---|---|---|
| ***Name/Business:*** | | | |
| ***Mailing Address:*** | | | VESSEL NUMBER: |
| | | | |
| ***Contact Name:*** | | | > 400 GROSS TON VESSEL: ☐ Yes ☐ No |
| ***Contact Number:*** | | | |

| SOURCE OF SPILL: | CAUSE CLASSIFICATION: |
|---|---|
| CAUSE OF SPILL: ☐ Under Investigation | ☐ Accident<br>☐ Human Factors<br>☐ Structural/Mechanical<br>☐ Other |

CLEANUP ACTIONS:

DISPOSAL METHODS AND LOCATION:

| AFFECTED AREA SIZE: | SURFACE TYPE: *(gravel, asphalt, name of river etc.)* | RESOURCES AFFECTED/THREATENED: *(Water sources, wildlife, wells, etc.)* |
|---|---|---|
| | | |

COMMENTS:

## ADEC USE ONLY

| SPILL NAME: | NAME OF DEC STAFF RESPONDING: | C-PLAN MGR NOTIFIED? ☐ Yes ☐ No |
|---|---|---|
| | | |

| DEC RESPONSE: ☐ Phone follow-up ☐ Field visit ☐ Took Report | CASELOAD CODE: ☐ First and Final ☐ Open/No LC ☐ LC Assigned | CLEANUP CLOSURE ACTION: ☐ NFA ☐ Monitoring ☐ Transferred to CS or STP |
|---|---|---|

COMMENTS:

Status of Case: ☐ Open ☐ Closed DATE CASE CLOSED:

| REPORT PREPARED BY: | DATE: |
|---|---|
| | |

State of Alaska
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Clear Form Print Form

# OIL & HAZARDOUS MATERIALS INCIDENT FINAL REPORT

*The following written report is required by State regulations 18 AAC 75.300(e), following departmental notification of a discharge of oil and hazardous materials. The report is due within 15 days after the cleanup is completed, or if no cleanup occurs, within 15 days after the discharge. Forward the report to the nearest DEC office of the department. The report must contain, as applicable:*

**1. Date and time of the discharge:**

**2. Location of the discharge:**

**3. Name of the site, facility or operation:**

**4. Name, mailing address, and telephone number of:**

A. Person or persons causing or responsible for the discharge:

B. Owner and operator of the site, facility or operation:

**5. Type and amount of each oil or hazardous substance discharged:**

**6. Cause of the discharge:**

**7. Description of any environmental damage caused by the discharge or containment, to the extent the damage can be identified:**

**8. Description of cleanup actions taken:**

**9. Estimated amount of:**
(A) oil or hazardous substance cleaned up:
(B) oily or hazardous waste generated:

**10. Date, location, and method of ultimate disposal of the oil, hazardous substance and any contaminated materials, including cleanup materials:**

**11. Description of actions being taken to prevent recurrence of the discharge:**

**12. Other information the department requires to fully assess the cause and impact of the discharge (receipts for disposal if available):**

| **Signature** | **Printed name** |
|---|---|
| **Date** | **Title** |

**MAIL OR FAX TO the Closest A.D.E.C. Office below**

**Anchorage**
Phone: 269-3063
Fax: 269-7648
555 Cordova Street
Anchorage, AK 99501

**Fairbanks**
Phone: 451-2121
Fax: 451-2362
610 University Ave.
Fairbanks, AK 99709-3643

**Juneau**
Phone: 465-5340
Fax: 465-2237
410 Willoughby Ave., Suite 309
Juneau, AK 99801-1795

| **DEC USE ONLY** | |
|---|---|
| ADEC Project Manager: | ADEC Spill #: |

# IT'S THE LAW!

*AS 46.03.755, 18 AAC 75.300, 75.325 and 18 AAC 78.200*

# REPORT
# OIL AND HAZARDOUS SUBSTANCE SPILLS

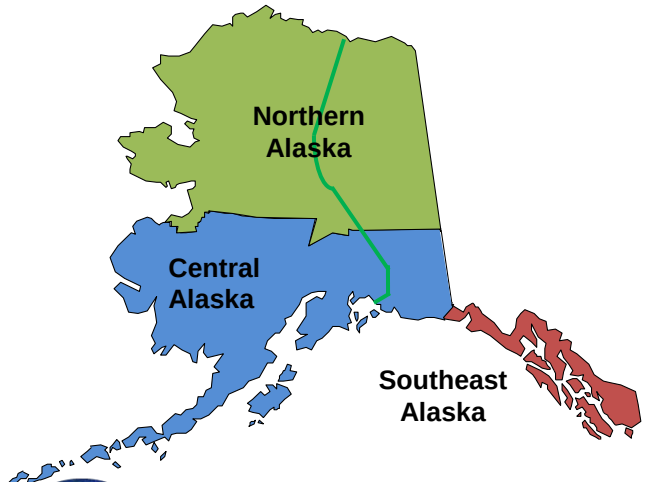
## During Normal Business Hours

call the nearest response team office:

| | |
|---|---|
| **Central Alaska: Anchorage** | **(907) 269-3063** Fax: (907) 269-7648 |
| **Northern Alaska: Fairbanks** | **(907) 451-2121** Fax: (907) 451-2362 |
| **Southeast Alaska: Juneau** | **(907) 465-5340** Fax: (907) 465-5245 |
| **Alaska Pipeline: Fairbanks** | **(907) 451-2121** Fax: (907) 451-2362 |

## Outside Normal Business Hours

| | |
|---|---|
| **Toll Free** | **1-800-478-9300** |
| **International** | **1-907-269-0667** |




**Alaska Department of Environmental Conservation**
Division of Spill Prevention and Response
www.dec.alaska.gov/spar/ppr/spill-information/reporting

## Hazardous Substance

Any hazardous substance spill, other than oil, must be reported immediately.

## Oil – Petroleum Products

### To Water

- Any amount spilled to water must be reported immediately.

### To Land

- Spills in ***excess of 55 gallons*** must be reported immediately.
- Spills in ***excess of 10 gallons, but 55 gallons or less***, must be reported within 48 hours after the person has knowledge of the spill.
- Spills of ***1 to 10 gallons*** must be recorded in a spill reporting log submitted to ADEC each month.

### To Impermeable Secondary Containment Areas

- Any spills in ***excess of 55 gallons*** must be reported within 48 hours.

### Additional Requirements for Underground Storage Tank Spill Reporting

*Regulated Underground Storage Tank (UST) systems are defined at 18 AAC 78.005. Releases at heating oil tanks must be reported.*

- You must report a *suspected* belowground release from a UST system, in any amount, within 24 hours *(18 AAC 78.220(c))*.
- You must report if your release detection system indicates two consecutive months of invalid or inconclusive results.
- If you observe unusual operating conditions, sudden loss, erratic dispensing (slow flow/no flow) or discharge to soil or water, **report it to the UST Unit:**

**907-269-3055 or 269-7679**

rev. July/2018

# APPENDIX I

## TRAINING RECORDS

# SWPPP TRAINING LOG

**Project Name:** E2214092 - Portage OH Primary System Improvement
**Location:**
Whittier, Alaska

Instructor's Name(s): _____

Instructor's Title(s):_____

Course Location:_____Date:_____

Course Length (hours):_____

**Stormwater Training Topic:** *(check as appropriate)*

| | |
|---|---|
| Erosion Control BMPs | Good Housekeeping BMPs |
| Sediment Control BMPs | SWPPP Provisions or Conditions |
| Non-Storm Water BMPs | "Conducting Inspections" or "Inspection Reports" |
| Emergency Procedures | |

**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 | | |

# APPENDIX J

## CORRECTIVE ACTION LOG

# SWPPP CORRECTIVE ACTION LOG PAGE ____

**Project Number:** **Project Name:** E2214092 - Portage OH Primary System Improvement

*Use this form to track completion of all corrective actions. Note that corrective actions can be identified during and outside of inspections. Detailed instructions for completing this form can be found on the Alaska Construction Forms website: http://dot.alaska.gov/stwddes/dcsconst/pop_constforms.shtml*

| Corrective Action Number | Date Identified (check box if outside inspection) | Description of corrective action, including the following as applicable:<br>• Related SWPPP Amendment #<br>• Note if a >2-yr., 24-hr. storm event occurred (see instructions)<br>• All corrective actions require a complete by date and description | Complete-by Date | Date Complete | Name of Person Documenting Completion |
|---|---|---|---|---|---|
| | ☐ | | | | |
| | ☐ | | | | |
| | ☐ | | | | |
| | ☐ | | | | |
| | ☐ | | | | |
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| | ☐ | | | | |
| | ☐ | | | | |
| | ☐ | | | | |

# APPENDIX K

## INSPECTION REPORT

# SWPPP CONSTRUCTION SITE INSPECTION REPORT

*Detailed instructions for completing this form can be found on the Alaska Construction Forms website:*
http://dot.alaska.gov/stwddes/dcsconst/index.shtml

## 1.0 General Information

| | | | |
|---|---|---|---|
| **1.1 Project Name** | Portage OH Primary System Improvement | | |
| **1.2 Project Number** | | **1.3 Location** | Portage Valley, AK |
| **1.4 NOI Tracking No.** | **Contractor's:** | | |
| **1.5a Date of Inspection** | | **1.5b Start/End Times:** | |
| **1.6 Inspectors' Names** | **Contractor:** | | |
| **1.7 Inspectors' Titles** | **Contractor:** | | |
| **1.8 Inspectors' Contact Information** | **Contractor:** | | |
| **1.9a AK-CESCL Cert. No.** | **Contractor:** | | |
| **1.9b AK-CESCL Exp. Date** | **Contractor:** | | |

**1.10 Describe construction activities**

**1.11 Type of Inspection:** ☐ Regular ☐ Post-storm Event ☐ Reduced Inspection Frequency Period

## 2.0 Weather Information

**2.1 Describe the weather since the last inspection, or start of construction activities if first Inspection.**

**Check all appropriate boxes.**

☐ Clear ☐ Cloudy ☐ Rain ☐ Sleet ☐ Fog ☐ Snow ☐ High Winds ☐ Other:

**2.2 Storm events. Complete storm event information if there were any storm events since the last inspection.**

***Storm event:*** a rainfall event that produces more than 0.5 inch of precipitation in 24 hours and that is separated from the previous storm event by at least 3 days of less than 0.1 inch of rain per day, CGP C16.

| | | | | | |
|---|---|---|---|---|---|
| **Estimated Start Date:** | | | | | |
| **Estimated Duration (#days):** | | | | | |
| **Approximate Amount of Precipitation (in):** | | | | | |

**2.3 Weather at time of this inspection?** ☐ Clear ☐ Cloudy ☐ Rain ☐ Sleet ☐ Fog ☐ Snow ☐ High Winds ☐ Other:

Temperature:

**3.0 Overall Site Issues**

***For complete instructions, please see instructions on Constructions Forms web page, by separate form***

- ***Overall Site Issue*** *-- These are general site issues that must be assessed during inspections.*
- ***Implemented?*** *– If a BMP should be installed at the time of the inspection and you marked "No" in the "BMP Installed" column, then you must check "Yes" in the "BMP Action Required?" column. If there is good reason to mark "no" in the "BMP Installed" column (such as the BMP is no longer needed and was removed) then you can mark "no" in the "BMP Action Required?" column and explain in the "Comments" column.*
- ***Corrective Action Required? -*** *When maintenance or some other corrective action is required, check "Yes" in this column.*
- ***Corrective Action Required, Complete by Date -*** *When a corrective action is required, before certifying the report, fill in the date when the corrective action can reasonably be expected to be completed. When a corrective action is NOT required, leave the "Complete by Date" blank.*
- ***If Corrective Action is required, describe Action and Location*** *– Anytime you check "Yes" in the "Corrective Action Required?" column, you must fill in the "Describe Corrective Action and Location" column as well.*
- ***Corrective Action Log -*** *When a Corrective Action is required as noted in this report, you must also enter all the information for this action in the Corrective Action Log and document on the Log the actual date of completed correction.*

| | Overall Site Issue | Response | Corrective Action Required? | If Corrective Action is required, describe Action and Location | Comments |
|---|---|---|---|---|---|
| 3.1 | Have stabilization measures been initiated on slopes and disturbed areas not actively being worked? | ☐Yes ☐No | ☐Yes ☐No<br>Complete by Date: | | |
| 3.2 | Are natural resource areas (e.g., streams, wetlands, mature trees, etc.) required by the SWPPP to be delineated in the field, identified with barriers or markings? | ☐Yes ☐No | ☐Yes ☐No<br>Complete by Date: | | |
| 3.3 | Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained? | ☐Yes ☐No | ☐Yes ☐No<br>Complete by Date: | | |
| 3.4 | Are storm drain inlets properly protected? | ☐Yes ☐No | ☐Yes ☐No<br>Complete by Date: | | |
| 3.5 | Are the construction exits preventing sediment from being tracked into the street? | ☐Yes ☐No | ☐Yes ☐No<br>Complete by Date: | | |
| 3.6 | Is trash/litter from work areas collected and disposed of properly? | ☐Yes ☐No | ☐Yes ☐No<br>Complete by Date: | | |

| | Overall Site Issue | Response | Corrective Action Required? | If Corrective Action is required, describe Action and Location | Comments |
|---|---|---|---|---|---|
| 3.7 | Are washout facilities (e.g., paint, concrete) available, clearly marked, and maintained? | ☐Yes ☐No | ☐Yes ☐No<br>Complete by Date: | | |
| 3.8 | Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or any other potential pollutants? | ☐Yes ☐No | ☐Yes ☐No<br>Complete by Date: | | |
| 3.9 | Are materials that are potential stormwater contaminants stored inside or under cover? | ☐Yes ☐No | ☐Yes ☐No<br>Complete by Date: | | |
| 3.10 | Are non-stormwater discharges (e.g., wash water, dewatering) properly controlled? | ☐Yes ☐No | ☐Yes ☐No<br>Complete by Date: | | |
| 3.11 | Has Spill Response kit been used since the last inspection? | ☐Yes ☐No | ☐Yes ☐No<br>Complete by Date: | | |
| 3.12 | Is the SWPPP Main Entrance Signage legible and does it contain the correct information? | ☐Yes ☐No | ☐Yes ☐No<br>Complete by Date: | | |
| 3.13 | Are erodible stockpiles properly covered and have a perimeter control? | ☐Yes ☐No | ☐Yes ☐No<br>Complete by Date: | | |
| 3.14 | Are any additional BMPs needed? | ☐Yes ☐No | ☐Yes ☐No<br>Complete by Date: | | |
| 3.15 | (Other) | ☐ Yes ☐ No | ☐ Yes ☐ No<br>Complete by Date: | | |

| 4.0 Discharge Points | | | | | |
|---|---|---|---|---|---|
| | **Overall Site Issue** | **Response** | **Corrective Action Required?** | **If Response is No, describe Location. If Corrective Action is required, describe Action and Location** | **Comments** |
| 4.1 | At the time of inspection, are the discharge points and receiving waters free of pollutant discharges (sediment deposits, sediment plume or oil sheen)? (See Section 4.3 for list of discharge points) | ☐ Yes<br>☐ No | ☐ Yes<br>☐ No<br>Complete by Date: | | |
| 4.2 | Since the last inspection, are the discharge points and receiving waters free of evidence that pollutants had left the project site (for example, sediment deposits, oily residue)? (See Section 4.3 for list of discharge points) | ☐ Yes<br>☐ No | ☐ Yes<br>☐ No<br>Complete by Date: | | |

| 4.3 Location of Discharge Points | |
|---|---|
| **List the project discharge point locations** | **Inspected? Circle** |
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| | |

| List the project discharge point locations | Inspected? Circle |
|---|---|
| | |
| | |

**5.0 Site-specific BMPs**

- ***BMP Identifier*** *-- This column is a mandatory entry used to help correspond BMPs with the site map. Number the structural and non-structural BMPs identified in your SWPPP on your site map and list them below (add as many BMPs as necessary on the continuation sheets).*
- ***BMP and Location*** *- Describe and give the location of the structural and non-structural BMPs identified in your SWPPP in the BMP column below (Include areas that are required to be inspected by the CGP, such as material storage areas that are exposed to precipitation.)*
- ***BMP Installed?*** *– If a BMP should be installed at the time of the inspection and you marked "No" in the "BMP Installed" column, then you must check "Yes" in the "BMP Action Required?" column. If there is good reason to mark "no" in the "BMP Installed" column (such as the BMP is no longer needed and was removed) then you can mark "no" in the "BMP Action Required?" column and explain in the "Comments" column.*
- ***BMP Action Required?*** *- If a BMP needs repair, modification, replacement, maintenance or a new BMP is needed or a SWPPP amendment is needed, then a BMP Action is required.*
- ***BMP Action Required, Complete by Date*** *- Before certifying the report, fill in the date when the BMP Action can reasonably be expected to be completed. When a BMP Action is NOT required, leave the "Complete by Date" blank.*
- ***If BMP Action is required, describe Action and Location*** *– Anytime you check "Yes" for "BMP Action Required," then you must also fill in the "Describe BMP Action and Location" column.*
- ***Corrective Action Log*** *- When a BMP Action is required as noted in this report, you must also enter all the information for this action in the Corrective Action Log, and document on the Log the actual date of completing correction.*

| BMP Identifier | BMP & Location | BMP Installed? | BMP Action Required? | If BMP Action is required, describe Action and Location | Comments |
|---|---|---|---|---|---|
| | | __Yes<br>__No | __Yes __No<br>Complete by Date: | | |
| | | __Yes<br>__No | __Yes __No<br>Complete by Date: | | |
| | | __Yes<br>__No | __Yes __No<br>Complete by Date: | | |
| | | __Yes<br>__No | __Yes __No<br>Complete by Date: | | |
| | | __Yes<br>__No | __Yes __No<br>Complete by Date: | | |

| BMP Identifier | BMP & Location | BMP Installed? | BMP Action Required? | If BMP Action is required, describe Action and Location | Comments |
|---|---|---|---|---|---|
| | | __Yes<br>__No | __Yes __No<br>Complete by Date: | | |
| | | __Yes<br>__No | __Yes __No<br>Complete by Date: | | |
| | | __Yes<br>__No | __Yes __No<br>Complete by Date: | | |
| | | __Yes<br>__No | __Yes __ No<br>Complete by Date: | | |
| | | __ Yes<br>__ No | __Yes __No<br>Complete by Date: | | |
| | | __ Yes<br>__ No | __ Yes __No<br>Complete by Date: | | |
| | | __ Yes<br>__ No | __ Yes __No<br>Complete by Date: | | |
| | | __ Yes<br>__ No | __Yes __ No<br>Complete by Date: | | |
| | | __ Yes<br>__ No | __ Yes __ No<br>Complete by Date: | | |
| | | __Yes<br>__No | __ Yes __ No<br>Complete by Date: | | |
| | | __ Yes<br>__ No | __ Yes __No<br>Complete by Date: | | |
| | | __ Yes<br>__No | __Yes __No<br>Complete by Date: | | |

| 6.1 Areas of Inspection | | |
|---|---|---|
| Did you inspect all areas of the project that are required to be inspected by the CGP including areas disturbed by construction activity, areas used for storage of materials that are exposed to precipitation, areas where control measures are installed, areas where sediment or other pollutants have accumulated or been deposited and may have the potential for or are entering a stormwater conveyance system, locations where vehicles enter or exit the site, areas where storm water typically flows, points of discharge from the site, and portions of the site where temporary or permanent stabilization has been initiated? | ☐ Yes<br>☐ No | If you did not inspect any required areas, list those locations here and explain why they weren't inspected. |

**6.2 Project Compliance**

- *If there are incidences of non-compliance identified in this inspection report then you must summarize below the incidence(s) of non-compliance.*
- *If there is an Action Item described in the non-compliance box below that does not already have a "Complete by Date" assigned elsewhere in this report, then add a Complete by Date within the box.*

Non-Compliance

**Incidence(s) of Non-compliance:**

**Action Item(s) and Complete by Date(s):**

- *Check the box below if there are no incidences of non-compliance with the CGP:*

☐ **I certify that on the date of this inspection, this project was found to be in compliance with the terms of the applicable Construction General Permit.**

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**CERTIFICATION STATEMENT**

"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."

**Contractor's Duly Authorized Representative**

**Print name:** _____

**Title**: Superintendent

**Signature**_____

**Date** _____

**Duly Authorized Representative**

**Print Name:** _____

**Title**: Project Engineer

**Signature** _____

**Date** _____