LINN COUNTY ROAD DEPARTMENT

COUNTY CONSTRUCTION AND MAINTENANCE BEST MANAGEMNT PRACTICES (BMP's) MANUAL

FOR

NPDES 1200-CA PERMIT REQUIREMENTS

JULY 25, 2023

Linn County Road Department
3010 Ferry Street, S.W.
Albany, Oregon 97322

Table of Contents

1 INTRODUCTION 1

1.1 PURPOSE 1

1.2 ACRONYMS 1

1.3 DEFINITIONS 2

1.4 ACTIVITIES COVERED BY THE GENERAL PERMIT 2

1.5 LIMITATIONS OF COVERAGE 2

1.6 PERMITTED ACTIVITIES 3

2 CONTROLS AND EFFLUENT LIMITATIONS 3

2.1 MULTIPHASE DEVELOPMENT 3

2.2 CONSTRUCTION PROJECTS THAT DISTURB FIVE OR MORE ACRES 3

2.3 ENVIRONMENTAL MANAGEMENT PLAN 4

2.4 AUTHORIZED DISCHARGES 5
2.4.1 Stormwater Runoff, Snowmelt Runoff, and Surface Water 5
2.4.2. Construction Site Construction Support Activities 5
Stormwater discharge from construction support activities at the construction site are authorized when: 5

2.5 AUTHORIZED NON-STORMWATER DISCHARGES 5
2.5.1. Combined Discharges 6

2.6 PROHIBITED DISCHARGES 6

2.7 TECHNOLOGY-BASED EFFLUENT LIMITATIONS/CONTROL MEASURES 6
2.7.1. Stormwater Control Design, Installation, and Maintenance Requirements 6
2.7.1.1 Stormwater Control Design Consideration Factors 7
2.7.1.2 Stormwater Control Design and Installation 7
2.7.1.3 Stormwater Control Maintenance and Effectiveness 8
2.7.1.4 Maintaining Erosion and Sediment Controls 8
2.7.2. Erosion Prevention and Sediment Control and Treatment Requirements 8
2.7.2.1 Activities Prior to Commencement of Construction 9
2.7.2.2 Sequencing Land Disturbance Activities 10
2.7.2.3 Bypass and Ponding Prevention 10
2.7.2.4 Establishing and Maintaining Natural Buffer Zones or Equivalent ESC's 10
2.7.2.5 Preserve Natural Vegetation 11
2.7.2.6 Perimeter Controls 11
2.7.2.7 Prevent Sediment Track-Out 11
2.7.2.8 Stockpiles or Land Clearing Debris Piles 12
2.7.2.9 Dust Control 12
2.7.2.10 Steep Slope Disturbances 12
2.7.2.11 Prevention of Sediment Discharge to Waters of the State 12
2.7.2.12 Soil Compaction Prevention 13
2.7.2.13 Storm Drain Inlet Protection 13
2.7.2.14 Concrete Washout Facility 14
2.7.2.15 Material and Waste Storage Areas 14
2.7.2.16 Stormwater Discharge Control 14
2.7.2.17 Sediment Basin or Impoundment 14
2.7.2.18 Engineered Soils 15
2.7.2.19 Site Maintenance 15
2.7.2.20 Site Stabilization 16
2.7.2.21 Final Site Stabilization Criteria 16

2.7.3 Pollution Prevention Controls 17
2.7.3.1 General Conditions 17
2.7.3.2 Equipment and Vehicle Fueling and Maintenance 18
2.7.3.3. Equipment and Vehicle Washing 18
2.7.3.4. Building Materials and Building Products 18
2.7.3.5. Pesticides, Herbicides, Insecticides, and Fertilizer 18
2.7.3.6. Hazardous or Toxic Waste 18
2.7.3.7. Construction and Domestic Wastes 19
2.7.3.8. Sanitary Waste 19
2.7.3.9. Washing Applicators and Containers 19
2.7.3.10. Emergency Spill Notification Requirements 19
2.7.4 Construction Dewatering Requirements 19

2.8 WATER QUALITY BASED EFFLUENT LIMITATIONS AND ASSOCIATED REQUIREMENTS FOR STORMWATER DISCHARGE 20
2.8.1 Applicable Instream Water Quality Standards 20
2.8.2 Water Quality Limited Streams 20

2.9 EROSION AND SEDIMENT CONTROL PLANS (ESCP) 21
2.9.1 Qualifications to Develop ESCP 21
2.9.2 ESCP Design Objectives 21
2.9.3 Construction Phases ESCP 21
2.9.4 ESCP Contents 22
2.9.5 ESCP Certification 26
2.9.6 ESCP On-site Availability 26
2.9.7 Revision to the ESCP 26
2.9.8 ESCP Revision Submission Requirements 27
2.9.9 Prior to Commencement of Construction Activities 28
2.9.10 Responsibility of Permit Requirements 28

2.10 CORRECTIVE ACTIONS 28
2.10.1 Timeline for Corrective Action 29
2.10.2 Documenting Corrective Action 29
2.10.3 Corrective Action Report Submission 29

3 MONITORING, REPORTING AND RECORDKEEPING 30

3.1 VISUAL MONITORING AND REPORTING REQUIREMENTS (For Projects Covered by the General Permit) 30
3.1.1 Responsible Person for Monitoring 30
3.1.2 Frequency of Monitoring 31
3.1.3 Reductions in Monitoring Frequency 31
3.1.4 Requirements for Monitoring 32
3.1.5 Monitoring Inspection Report Requirements 33
3.1.6 On-Site Monitoring Requirements 34
3.1.6.1 pH Monitoring of Engineered Soils 34
3.1.7 Inspection and Entry by DEQ 34
3.1.7 Reporting Requirements 34
3.1.7.1 Planned Changes 35
3.1.7.2 Anticipated Noncompliance 35
3.1.7.3 24-Hour Reporting for Noncompliance 35

3.2 VISUAL MONITORING AND REPORTING REQUIREMENTS (For Projects Not Covered by the General Permit) 35
3.2.1 Frequency of Monitoring 36
3.2.2 Monitoring Inspection Report Requirements 36

APPENDIX

A –Environmental Management Plan Review Applications for Contaminated Media Management and active Chemical Treatment Systems
B – Natural Buffer Zone Requirements
C – Erosion and Sediment Control Plan 1200-CA Checklist
D – Erosion and Sediment Control Plan Template for 1200-CA Coverage
E – Erosion and Sediment Control Monitoring Form (For projects covered by NPDES 1200-CA Permit)
F – Erosion and Sediment Control Monitoring Form (For projects not covered by NPDES 1200-CA Permit)
G – ODOT Standard Drawings
H – Glossary of Terms

1 INTRODUCTION

This Best Management Practices (BMP) Manual provides guidance on requirements for the design, installation, inspection, and reporting of erosion prevention and sediment control measures for public agency construction activities with stormwater discharges for the activities listed under Section 1.4 below:

The manual is intended for use by County maintenance staff and engineering staff and inspectors during construction activities where there will be disturbed earth. These activities include construction activities, such as clearing, grading, excavation, grubbing, and staging and stockpiling that will disturb one or more acres, or will disturb less than one acre of land but be part of a common plan of development, or sale that will ultimately disturb one or more acres of land or has the potential to discharge to surface waters or conveyance system leading to waters of the state.

1.1 PURPOSE

This BMP Manual was developed for the sole purpose of providing erosion prevention and sediment control Best Management Practices (BMPs) to meet the requirements of the Department of Environmental Quality (DEQ) National Pollutant Discharge Elimination System (NPDES) 1200-CA General Permit to provide sufficient stormwater management for discharges of stormwater from construction sites. Throughout this document, the DEQ NPDES 1200-CA General Permit, hereafter will be called "General Permit". It is the intent of this manual to describe proactive practices designed to prevent erosion and the release of sediments and other pollutants generated at a site of ground disturbance. Site planning and good site control are the best practices that can be used to prevent discharges.

It is intended this manual and alternative methods acceptable for use in other jurisdictions will be reviewed on a regular basis, with the Manual updated as needed.

1.2 ACRONYMS

BMP	Best Management Practice
CMMP	Contaminated Media Management Plan
CFR	Code of Federal Regulations
CKD	Cement Kiln Dust
CO2	Carbon Dioxide
CTB	Cement Treated Base
DEQ	Department of Environmental Quality
DSL	Division of State Lands
EMP	Environmental Management Plan
EPA	Environmental Protection Agency
EPCM	Erosion and Pollution Control Manager
ESC	Erosion and Sediment Control
ESCP	Erosion and Sediment Control Plan
FWPCA	Federal Water Pollution Control Act
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System

NTU	Nephelometric Turbidity Units
NWS	National Weather Service
MS4	Municipal Separate Storm Sewer Systems
OAR	Oregon Administrative Rules
ODOT	Oregon Department of Transportation
ORS	Oregon Revised Statutes
PFDS	Precipitation Frequency Data Server
PCP	Pollution Control Plan
SPCC	Spill Prevention and Countermeasures
SU	Standard Units
TBEL	Technology-Based Effluent Limitations
TMDL	Total Maximum Daily Load
UIC	Underground Injection Control
YDO	Your DEQ Online
WPCF	Water Pollution Control Facility

1.3 DEFINITIONS

Definitions can be found in the Glossary of Terms in Appendix H.

1.4 ACTIVITIES COVERED BY THE GENERAL PERMIT

Permit coverage is required under the General Permit if the following activities under the authority or jurisdiction of a public entity have the potential to discharge to surface waters or to a conveyance system that leads to surface waters of the state in Oregon and do not have coverage under another NPDES permit:

A. Any construction activity, materials or equipment staging and stockpiling that will disturb one or more acres of land; or

B. Any construction activity, materials or equipment staging and stockpiling that 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; or

C. Any construction activity that results in the disturbance of less than one acre of land that is a necessary and required component (e.g., utilities, structure or infrastructure) of a final project that will ultimately disturb one or more acres of land; or

D. Any construction activity that may discharge stormwater to surface waters of the state that may be a significant contributor of pollutants to waters of the state or may cause an exceedance of a water quality standard.

1.5 LIMITATIONS OF COVERAGE

The General Permit does not authorize:

A. In-water work or projects that may result in the discharge of fill or dredged material into waters of the U.S. and the state.

B. If additional regulatory requirements, such as state (Department of State Lands) or federal (US Army Corps of Engineers) and DEQ 401 water quality certification requirements, are deemed necessary by other regulatory jurisdictions for the construction activity identified in the erosion and sediment control plan, the County may be required to significantly alter the project and erosion and sediment controls to accommodate other regulatory jurisdiction requirements.

C. Stormwater discharges associated with industrial activities [as defined in 40 CFR §122.26(b)(14)] or stormwater associated with municipal separate storm sewer systems [as defined in 40 CFR §122.26(b)(8) and (b)(16)]. Such discharges are regulated through DEQ's NPDES Industrial Stormwater General Permits (1200-A/Z) or DEQ's NPDES MS4 Stormwater Permits; or another appropriate NPDES permit.

D. Post-construction stormwater discharges that originate from the site after completion of construction activities and the site is stabilized.

E. Stormwater discharges to underground injection control (UIC) systems. Unless specifically authorized by the General Permit, by another NPDES or WPCF permit, or by Oregon Administrative Rule, any other direct or indirect discharge to waters of the state is prohibited.

1.6 PERMITTED ACTIVITIES

Until the General Permit expires or is modified or revoked, the County is authorized to construct, install, modify, and operate erosion and sediment control measures and storm water treatment and control facilities, and to discharge storm water to public waters in conformance with all the requirements, limitations and conditions set forth in the following Sections.

2 CONTROLS AND EFFLUENT LIMITATIONS

2.1 MULTIPHASE DEVELOPMENT

A map and description of each phase of the multiphase development for which land use approvals are approved with the intent of development or maintenance that requires the performing of construction activities must be included in the Erosion and Sediment Control Plan (ESCP). Construction activities, including stockpiling and staging, cannot commence within a phase unless that phase has a developed ESCP that has been submitted to DEQ.

2.2 CONSTRUCTION PROJECTS THAT DISTURB FIVE OR MORE ACRES

When the County conducts any project that includes construction activities that disturb or are likely to disturb five or more acres are subject to a 14-calendar day public review period of the Erosion and Sediment Control Plan (ESCP) that meets all General Permit requirements before any construction activities begin.

The County Engineer, or representative, will post all required and necessary project documents (i.e., site map and ESCP) for the mandatory 14-day public comment period or send to DEQ for posting. If construction activities expand beyond five acres after construction activities are initiated, a 14-calendar day public review period will be required. During the 14-calendar day public review period, the County

is not authorized to conduct construction activities in the area expanded beyond the boundaries of the originally submitted ESCP in accordance with 340-045-0033(6)(b). After the public comment period is over, the finalized ESCP must be submitted to DEQ.

2.3 ENVIRONMENTAL MANAGEMENT PLAN

An Environmental Management Plan (EMP) must be submitted to DEQ for the following:

A. Contaminated soils, contaminated groundwater or hazardous materials that will or have the potential to be encountered during construction activities. Provide detailed information with the Contaminated Media Management Plan (CMMP) on the nature and extent of the contamination (concentration, location, and depth) as well as pollution prevention and/or treatment BMPs proposed to control the discharge of impacted soil, groundwater or hazardous building materials debris in stormwater. In the event that undocumented contamination, underground storage tanks, or other potentially hazardous conditions are encountered that are not addressed in the Environmental Management Plan, discharges exposed to the contaminated media must cease and DEQ must be notified within 48 hours. The discharges exposed to the contaminated media may not occur until DEQ approves the CMMP.

B. Construction dewatering for the purpose of lowering non-contaminated groundwater will be or is performed, and an Active Chemical Treatment System is to be utilized before discharge. An EMP is not required for dewatering accumulated water due to shallow excavation activities, except for when an Active Chemical Treatment System is utilized before discharge from the permitted site (See Section 2.7.4 Construction Dewatering Requirements).

C. An Active Chemical Treatment System (e.g., cationic treatment chemicals, electro-coagulation, flocculants, filtration, anionic polyacrylamide, polymers, hydrochloric or sulfuric acid) for sediment, pH neutralization, or other pollutant removal is planned or implemented at the project site. When “treatment chemicals” are proposed, the County must demonstrate to DEQ that appropriate controls and implementation procedures are used to ensure that the use of treatment chemicals will not lead to discharges that cause an exceedance of water quality standards or harm aquatic life. DEQ will determine if the project can have coverage under this General Permit after the County has included appropriate controls and implementation procedures designed to ensure that the above activities will not lead to discharges that cause an exceedance of water quality standards. In the absence of authorization, the County must apply for and receive coverage under the 1200-C construction stormwater general permit or an individual permit prior to discharging from the site.

The County must complete an Environmental Management Plan (EMP, see Appendix A), pay the review fee, and submit the required DEQ documents for projects when the conditions listed above in Section 2.3 exist or are anticipated. The EMP must be submitted to and approved by DEQ before work may commence on the project site. If these conditions are discovered after registering for permit coverage, the EMP must be approved by DEQ before work is initiated in the area of contamination. The approved EMP becomes a component of the erosion and sediment control plan.

2.4 AUTHORIZED DISCHARGES

The following is a list of stormwater discharges that are authorized under the General Permit provided that all stormwater controls are designed, installed, and maintained as required by the General Permit:

2.4.1 Stormwater Runoff, Snowmelt Runoff, and Surface Water

Stormwater discharge including stormwater runoff, snowmelt runoff, and drainage associated with construction activity described in the Activities Covered Section 1.4 are authorized discharges.

2.4.2. Construction Site Construction Support Activities

Stormwater discharge from construction support activities at the construction site are authorized when:

A. The support activity is directly related to the construction site covered by the General Permit;

B. The support activity is not a commercial operation, nor does it serve multiple unrelated construction projects;

C. The support activity does not operate beyond the completion of the construction activity at the last construction project it supports; and

D. The appropriate control measures are implemented to ensure compliance with the discharge and water quality requirements of the General Permit.

2.5 AUTHORIZED NON-STORMWATER DISCHARGES

The following non-stormwater discharges from construction sites are authorized if the terms and conditions of this permit are met, all necessary controls are implemented to minimize sediment transport, the discharge is not a significant source of pollutants and not contaminated and the discharge is not prohibited by local ordinance:

A. Water and associated discharges from emergency firefighting activities;

B. Fire hydrant flushing;

C. Properly managed landscape irrigation;

D. Water used to wash equipment and vehicles (excluding the engine, undercarriage, and wheels/tires) provided there is no discharge of soaps, solvents or detergents used;

E. Water used to control dust;

F. Potable water including uncontaminated water line flushing as approved;

G. External building washdown, provided soaps, solvents, and detergents are not used, and external surfaces do not contain hazardous substances;

H. Pavement wash waters, provided spills or leaks of toxic or hazardous substances have not occurred (unless all spill material has been removed) and where soaps, solvents, and detergents are not used. Directing pavement wash waters into any surface water, storm drain inlet, or stormwater conveyance is prohibited, unless the conveyance is connected to a sediment basin, sediment trap, or similarly effective control for the pollutants present. The hosing of accumulated sediments on pavement into any stormwater conveyance is prohibited;

I. Uncontaminated air conditioning or compressor condensate;

J. Uncontaminated, non-turbid discharges of groundwater or spring water;

K. Foundation or footing drains where flows are not contaminated with process materials such as solvents or contaminated groundwater; and

L. Construction dewatering activities (including non-contaminated groundwater dewatering and well drilling discharge associated with the registered construction activity), provided that:
   i. The water is land applied in a way that results in complete infiltration with no potential to discharge to a surface water of the state, or the use of a sanitary or combined sewer discharge is authorized with local sewer district approval; or
   ii. Best Management Practices and a treatment system approved by DEQ (see Section 6) are used to ensure compliance with discharge and water quality requirements.

2.5.1. Combined Discharges

Discharges of stormwater listed in Sections 2.4.1 and 2.4.2 combined with authorized non-stormwater discharges in Section 2.5 into a common conveyance system are allowed.

2.6 PROHIBITED DISCHARGES

The following discharges are not authorized by the General Permit:

A. Visually turbid discharge or discharge of sediment (see Section 2.7.2.11) from the construction site to surface waters or a conveyance system that leads to waters of the state;

B. A discharge that causes or contributes to an exceedance of any applicable water quality standard;

C. Concrete wastewater from washing tools and vehicles after pouring, prepping or finishing concrete;

D. Wastewater from washing and cleanout of stucco, paint, form release oils, curing compounds and other construction materials,

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

F. Soaps, solvents, or detergents used in vehicle and equipment washing or external building washdown;

G. Wheel/tire wash wastewater, unless the discharge of wheel wash or tire bath wastewater is to a separate treatment system that prevents discharge to surface water, such as closed-loop recirculation or upland land application or to the sanitary sewer with approval from the local jurisdiction;

H. Hydro-demolition water and saw-cutting slurry; and

I. Toxics or hazardous substances from a spill or other release.

2.7 TECHNOLOGY-BASED EFFLUENT LIMITATIONS/CONTROL MEASURES

The control measures in this section are technology-based effluent limitations (TBELs).

2.7.1. Stormwater Control Design, Installation, and Maintenance Requirements

The County will implement erosion and sediment control measures at all times to prevent any visibly turbid discharges or sediment from leaving the project site from initial soil disturbance until project

completion. Failure to implement any of the required erosion and sediment control measures or practices, or the discharge of visibly turbid water and/or sediment from the project site is prohibited.

The County will ensure that the erosion and sediment control plan is revised as necessary to reflect site conditions in accordance with the requirements of this permit. Prior to and during the discharge of stormwater and authorized non-stormwater discharges to surface waters of the state, the County will design, install, and maintain effective stormwater control and treatment methods required in this section to prevent the discharge of pollutants in stormwater from construction activities that may cause or contribute to a violation of water quality standards. To meet this requirement, the County will perform the requirements in the following four subsections.

The County has developed a Stormwater Mangement Program Manual. This document provides specific design criteria to address the General Permit requirements identified in this BMP Manual. This document can be found at: https://www.co.linn.or.us/roads.

2.7.1.1 Stormwater Control Design Consideration Factors

Consider the following factors when designing stormwater controls:

A. The expected amount, frequency, intensity, and duration of precipitation;

B. The nature of stormwater runoff and run-on (See definitions in Appendix H) at the site, including factors such as expected flow from impervious surfaces, slopes and site drainage features; and

C. The soil type and range of soil particle sizes expected to be present on the site.

Additional design criteria can be found in the Linn County Stormwater Mangement Program.

2.7.1.2 Stormwater Control Design and Installation

The County will design and install all stormwater controls in accordance with appropriate, recognized and generally accepted engineering and professional practices, including applicable design specifications and manufacturer's instructions and the Linn County Stormwater Management Program. The County utilizes the most current edition of the Oregon Standard Specifications for Construction and ODOT Standard Drawings.

Installation of Stormwater Controls - The County will complete the installation of stormwater controls before each phase of construction activities begin as follows:

A. Install and implement any downgradient sediment controls (e.g., buffers, perimeter controls, discharge point controls, storm drain inlet protection) before construction activity in any portion of the site begins;

B. Install erosion prevention measures (e.g., matting, straw mulch, compost blankets) on areas with exposed soil that will not be worked for 14 days; and

C. Following the installation of stormwater controls for initial construction activities, the County will adjust stormwater controls and management strategies throughout the project site to meet and match the needs of each phase of construction as the project is implemented.

2.7.1.3 Stormwater Control Maintenance and Effectiveness

The County will ensure that all stormwater controls are maintained and remain effective during construction activities until project completion and are protected from activities that would reduce their effectiveness including:

A. Follow maintenance recommendations from the manufacturer and utilize appropriate recognized and generally accepted engineering and professional based on-site conditions. The County must document deviations from manufacturer recommendations in the inspection report;

B. Comply with any specific maintenance requirements for the stormwater controls implemented as required in this permit and in the ESCP. Regular maintenance is required and is not limited to response actions that result from inspections or identified problems;

C. Initiate repairs and replacements of stormwater controls when maintenance issues are discovered; and

D. Record any stormwater controls installed (where none had previously been), repaired, replaced or removed as required in Sections 2.10.2 and 3.1.5.

2.7.1.4 Maintaining Erosion and Sediment Controls

The County will maintain specific erosion and sediment controls. Maintenance criteria for specific controls are identified and addressed in the Linn County Erosion and Sediment Control Manual, and as follows:

A. Inspect and maintain erosion control measures (e.g., reseed, apply additional mulch, address blanket malformation and soil sloughing underneath);

B. Remove trapped sediment from sediment fence before it reaches one-third of the above ground fence height;

C. Remove sediment before it reaches one-third of the above ground height of sediment barriers such as straw wattles and biobags;

D. Clean catch basins and inserts before sediment retention capacity is reduced by 50 percent; and

E. Remove sediments from sediment basins before design capacity is reduced by 50 percent.

2.7.2. Erosion Prevention and Sediment Control and Treatment Requirements

The County will implement erosion prevention and sediment control and treatment methods in accordance with the following requirements to prevent the discharge of pollutants in stormwater from construction activities. The County will ensure that soils are stable during all rain events throughout the year.

The County will design, install and maintain effective erosion controls and sediment controls to minimize the discharge of pollutants. Specific erosion prevention and sediment controls can be found in the Linn County Erosion and Sediment Control Manual, and refer to the ODOT Standard Drawings of erosion control, sediment control and inlet protection measures, which can be found in Appendix G. At a minimum, such controls will be designed, installed and maintained to:

A. Control stormwater volume and velocity to minimize soil erosion in order to minimize pollutant discharges;

B. Control stormwater discharges, including both peak flowrates and total stormwater volume, to minimize channel and streambank erosion and scour in the immediate vicinity of discharge points;

C. Minimize the amount of soil exposed during construction activity;

D. Minimize the disturbance of steep slopes;

E. Minimize sediment discharges from the site. The design, installation and maintenance of erosion and sediment controls will address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting stormwater discharge, and soil characteristics, including the range of soil particle sizes expected to be present on the site;

F. Provide and maintain natural buffers around waters of the state, direct stormwater to vegetated areas and maximize stormwater infiltration to reduce pollutant discharges, unless infeasible;

G. Minimize soil compaction. Minimizing soil compaction is not required where the intended function of a specific area of the site dictates that it be compacted; and

H. 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.

The County has developed an Erosion and Sediment Control Manual. The manual provides specific measures to address the General Permit requirements identified in this BMP Manual. This document can be found at: https://www.co.linn.or.us/roads.

2.7.2.1 Activities Prior to Commencement of Construction

Before construction activities commence, the County will identify and protect any:

A. Riparian areas and vegetation including trees and associated root zones, and vegetation areas to be preserved;

B. Vegetated buffer zones between the site and sensitive areas (e.g., wetlands, springs, groundwater seeps, etc.) and other areas required to be preserved, especially in perimeter areas; and

C. Existing and post-construction stormwater facilities constructed during General Permit coverage that are designed and engineered to infiltrate or filter stormwater. In addition to physical protection, stormwater runoff discharge from areas where construction activities are performed may not be conveyed to existing or post-construction facilities during construction. The following exceptions are allowed:
    i. Existing post-construction stormwater facilities may receive stormwater runoff from construction activities performed on site if the ESCP states that upon project completion and final stabilization, the top 18” of soil is excavated from the entire surface of the facility and replaced with suitable growth media capable of infiltrating the runoff volume from the drainage area of a 2-year 24-hour storm event or satisfying the hydraulic conductivity criteria specified in the stormwater management requirements of the local regulatory agency.
    ii. Post-construction stormwater facilities constructed during General Permit coverage may receive stormwater runoff from construction activities on site if, upon project completion and final stabilization, accumulated sediment and temporary control measures, such as

rip rap, velocity dissipating pads or impermeable liners are removed before the facility is constructed to design specifications.

2.7.2.2 Sequencing Land Disturbance Activities

Sequence clearing, grading and other land disturbing actives to the maximum extent practicable to prevent exposed inactive areas from causing erosion as per Section 2.7.2.20.

2.7.2.3 Bypass and Ponding Prevention

Create smooth surfaces between the soil surface and erosion and sediment controls, when possible, to prevent stormwater from bypassing erosion and sediment controls or ponding.

2.7.2.4 Establishing and Maintaining Natural Buffer Zones or Equivalent ESC's

When a surface water of the state is located within 50 feet of the projected site's land disturbance:

A. The County will comply with local natural buffer zone requirements before proposing the following compliance alternatives. For any discharges to surface waters of the state located within 50 feet of the site's land disturbances, the County must comply with one of the following alternatives:
   i. Maintain a 50-foot undisturbed natural buffer zone (See Section 2.7.2.4.B to determine natural buffer zone encroachment authorization on 401 Water Quality Certification projects); or
   ii. Maintain an undisturbed natural buffer that is less than 50 feet and is supplemented by erosion and sediment controls that achieve, in combination, the sediment load reduction equivalent to a 50-foot undisturbed natural buffer (See Appendix B); or
   iii. If infeasible to provide and maintain an undisturbed natural buffer zone of any size, implement erosion and sediment controls to achieve the sediment load reduction equivalent to a 50-foot undisturbed natural buffer zone.

B. If DEQ determines that the project requires a 401 Water Quality Certification, construction activities, including stockpiling and staging of materials, are authorized to encroach into the existing 50-foot natural buffer zone of any water of the state as conditioned in the 401 Water Quality Certification. Projects with General Permit authorization and a 401 Water Quality Certification are not required to comply with the natural buffer zone requirements of Appendix B.

C. If a project has the potential to discharge to a waterbody that is listed as impaired and requiring a Total Daily Maximum Load (TMDL) for turbidity or sedimentation on the most recently approved Oregon 303(d) list (found on the "Water Quality Assessment" page of DEQ's website), or has an established TMDL for turbidity or sedimentation, the County must maintain established vegetated buffers sized at 50 feet (horizontally) plus an additional 25 feet (horizontally) per five degrees of slope or propose control measures of equal effectiveness to DEQ for approval.

D. Sediment and erosion control measures installed for any natural buffer zone requirement must be maintained and disposed of appropriately before project completion.

See Appendix B for natural buffer zone guidance, additional conditions applicable to each compliance alternative, and for exceptions to the compliance alternatives. For projects that began construction

activities prior to the effective date of this General Permit, the approved natural buffer zone width and approved erosion and sediment controls are deemed appropriate.

2.7.2.5 Preserve Natural Vegetation

Utilize existing vegetation as control and stabilization measures as follows:

A. When possible, preserve existing vegetation;

B. Direct stormwater to vegetated areas to maximize stormwater infiltration and filtering to reduce pollutant discharges where feasible;

C. Re-vegetate open areas as soon as the site is no longer active; and

D. Identify the composition of seed mix (percentage of annuals, perennials and clover) and other plantings used to establish temporary cover in the ESCP.

2.7.2.6 Perimeter Controls

Install sediment controls along all perimeter areas of the site that may potentially discharge stormwater runoff from disturbed areas identified in the ESCP.

For areas at "linear construction sites" (See definition in Appendix H) where perimeter controls are infeasible (e.g., due to a limited or restricted right-of-way), implement other practices to prevent pollutant discharges from perimeter areas of the site.

2.7.2.7 Prevent Sediment Track-Out

To prevent sediment track-out onto public or private roads do the following:

A. Establish graveled or paved exits and parking areas prior to any land disturbance;

B. Restrict vehicle use to properly designated entry and exit points. Use appropriate stabilization techniques at all points that exit onto paved roads (e.g., aggregate stone with an underlying geotextile or non-woven filter fabric and turf mats);
   i. Exception: Stabilization is not required for exit points at linear utility construction sites that are used only episodically and for very short durations over the life of the project, provided other exit point controls are implemented to prevent sediment track-out.

C. Implement additional track-out controls as necessary to ensure that sediment removal occurs prior to vehicle exit (e.g., wheel and tire washing, rumble strips and rattle plates);

D. Gravel all unpaved roads located onsite unless temporary or permanent stabilization measures are not required (see Section 2.7.2.20);

E. Cover all sediment loads leaving the site;

F. When trucking saturated soils from the site, use water-tight trucks or drain loads on site;

G. Where sediment has been tracked-out from the site onto paved roads, sidewalks, or other paved areas outside of the site, remove the sediment by the end of the same business day that the track-out occurs or by the end of the next business day if track-out occurs on a non-business day. Track-out must be removed by sweeping, shoveling, or vacuuming these surfaces or by using other similarly effective means of sediment removal; and

H. Hosing or sweeping tracked-out sediment into any stormwater conveyance, storm drain inlet or water of the state is prohibited.

2.7.2.8 Stockpiles or Land Clearing Debris Piles

Manage stockpiles or land clearing debris piles composed, in whole or in part, of sediment and/or soil as follows:

A. Locate the piles outside of any natural buffers established under Section 2.7.2.1 and away from any stormwater conveyances, drain inlets and areas where stormwater flow is concentrated;

B. Install a sediment barrier (e.g., berms, dikes, fiber rolls, silt fences, sandbags, gravel bags or straw bale) along all downgradient perimeter areas (Image 1);

Image 1. Sediment Barrier at Parameter of Stockpile

C. Soil stockpiles must be stabilized or covered at the end of each workday and before weekends, holidays or extended breaks of construction activities if a storm event is forecast that may result in any discharge from the project site or wind speeds (typically 10 mph or greater) capable of soil erosion that may result in fugitive dust;

D. Provide cover (e.g., tarps, blown straw or hydroseed) or appropriate temporary stabilization consistent with Section 2.7.2.20) for any piles not in use; and

E. Hosing down or sweeping soil or sediment accumulated on pavement or other impervious surfaces into any stormwater conveyance, storm drain inlet or water of the state is prohibited.

2.7.2.9 Dust Control

Prevent wind-blown soil and dust from areas with exposed soil through the appropriate application of water or other dust suppression techniques to control the generation of pollutants that could be discharged in stormwater from the site. Federal regulation 40 CFR Part 279 prohibits the use of used oil as a dust suppressant.

2.7.2.10 Steep Slope Disturbances

Steep slope disturbances in areas where construction activities are not occurring or projected to occur are prohibited (See definition in Appendix H).

2.7.2.11 Prevention of Sediment Discharge to Waters of the State

Prevent the discharge of sediment to surface waters or conveyance systems leading to surface waters of the state. The following conditions indicate that sediment has left or is likely to leave the site and are prohibited:

A. Required stabilization has not been initiated or completed.

B. Earth slides or mud flows.

C. Concentrated flows of stormwater such as rills, rivulets, gullies or channels that cause erosion when such flows are not filtered, settled or otherwise treated to remove sediment.

D. Sediment laden or turbid flows of stormwater that are not filtered or settled to remove sediment and turbidity.

E. Deposits of sediment at the construction site in areas that drain to unprotected stormwater inlets or to catch basins that discharge to surface waters. Inlets and catch basins with failing sediment controls due to a lack of maintenance or inadequate design are considered unprotected.

F. Sediment basins or traps without adequate wet or dry storage volume or sediment basins or traps that allow discharge of stormwater from below the surface of the wet storage portion of the basin or trap.

G. Deposits of sediment from the project site onto any property (including public and private streets) outside of the construction activity covered by this general permit.

H. Deposits of sediment from the project site at discharge locations or the banks of any waters flowing within or immediately adjacent to the site.

2.7.2.12 Soil Compaction Prevention

In areas of the site where final vegetative stabilization will occur or where post-construction infiltration practices will be installed (See Section 2.7.2.1.C) the County will:

A. Preserve suitable native topsoil by stockpiling for reuse or transferring to other locations, unless infeasible;

B. Restrict vehicle and equipment use in designated areas (e.g., haul roads, staging and stockpiling or laydown) to their stated purpose to avoid soil compaction; and

C. Before seeding or planting areas of exposed soil that have been compacted, use techniques that rehabilitate and condition the soils as necessary to support vegetative growth.

2.7.2.13 Storm Drain Inlet Protection

The following storm drain inlet protection measures are required:

A. Install inlet protection measures that remove sediment from discharges prior to entry into any storm drain inlet that conveys stormwater flow, provided the County has authority to access the storm drain inlet (Image 2); and

B. Clean, or remove and replace, the protection measures as sediment accumulates, the filter becomes clogged and/or performance is compromised. Where there is evidence of sediment accumulation adjacent to the inlet protection measure, remove the deposited sediment by the end of the same business day in which it is found or by the end of the following business day if removal by the same business day is not feasible.

Image 2. Compost Filter Sock Inlet Projection

2.7.2.14 Concrete Washout Facility

For projects involving concrete, establish concrete truck and other concrete equipment washout area before beginning concrete work. When performing construction activities involving concrete, the following control measures are required:

A. Wash concrete trucks and equipment in an appropriately protected area or in designated concrete washout areas only;

B. Direct all concrete wash water into an impermeable-lined pit or leak-proof container designed so that overflows will not occur due to inadequate sizing or precipitation (Image 3);

C. Locate activities away from waters of the state and stormwater inlets or conveyances so that stormwater coming into contact with areas where these activities are performed cannot reach waters of the state;

D. Concrete wash may not adversely affect groundwater;

E. Concrete washout and waste concrete management areas must be maintained and functional;

Image 3. Plastic Sheeting Lined Concrete Washout Basin

F. Handle (e.g., through disposal, reuse or recycle) wash water as waste. Do not dispose of concrete wash water or wash out concrete trucks onto the ground, or into storm drains, open ditches, streets or streams;

G. Do not dump excess concrete on site, except in designated concrete washout areas;

H. Handle (e.g., through disposal, reuse or recycle) hardened concrete waste consistent with handling of other construction wastes; and

I. Concrete spillage or concrete discharge to surface waters of the state is prohibited.

2.7.2.15 Material and Waste Storage Areas

Establish material and waste storage areas, and other non-stormwater controls before construction activities commence.

2.7.2.16 Stormwater Discharge Control

Control all stormwater discharges, including both peak flowrates and total stormwater volume, to prevent channel and streambank erosion and scour in the immediate vicinity of discharge points as follows:

A. Use erosion controls and velocity dissipation devices within and along the length of any stormwater conveyance channel and at any outlet to slow down runoff to prevent erosion; and

B. Protect stream banks from concentrated flows by constructing runoff control measures (e.g., check dams, outlet protection (riprap), pipe slope drains, swales/dikes, surface roughening).

2.7.2.17 Sediment Basin or Impoundment

If an engineered sediment basin or similar impoundment is installed, the following must take place:

A. The design must be prepared and stamped by an Oregon Registered Professional Engineer or an Oregon Registered Landscape Architect per Section 2.9.1.B;

B. The basin or impoundment must be situated outside of any water of the state, any natural water quality buffers, and any post-construction stormwater facility designed and engineered to infiltrate established under Section 2.7.2.1;

C. The basin or impoundment must be designed to avoid collecting water from wetlands;

D. The basin or impoundment must be designed to provide storage for either of the following:
   i. Find the site's estimated 2-year, 24-hour precipitation. The 2-year, 24-hour precipitation can be found using the Precipitation Frequency Data Server (PFDS) developed by the National Oceanic and Atmospheric Administration's (NOAA) National Weather Service (NWS) or the Oregon Department of Transportation (ODOT) Precipitation Data Viewer;
   ii. 3,600 cubic feet per acre drained; or
   iii. A site-specific alternative capable of ensuring that water quality violations do not occur through a combination of storage (e.g., Baker tanks), retention, infiltration or other means of stormwater runoff control;

E. The design must utilize outlet structures that withdraw water from the surface of the sediment basin or similar impoundment, unless infeasible;

F. The design must use erosion controls and velocity dissipation devices to prevent erosion at inlets and outlets; and

G. Follow maintenance requirements per Sections 2.7.1.3 and 2.7.1.4.

2.7.2.18 Engineered Soils

An engineered sediment basin or similar impoundment must be installed on sites with engineered soils as follows:

A. For construction activity involving the use of engineered soils (soil amendments including, but not limited to Portland cement-treated base [CTB], cement kiln dust [CKD], or fly ash), the County must install an engineered sediment basin or similar impoundment in accordance with Section 2.7.2.17 (e.g., trap, pond) to treat high pH runoff (i.e., above 8.5 standard units) before discharge. The County is required to determine the acceptable pH water quality criteria range of site discharge based on criteria of the receiving waterbody according to OAR 340-041-0021. If necessary, the County must adjust or neutralize the high pH water until it is in the range of pH Standard Units (SU) using an appropriate treatment BMP such as carbon dioxide (CO2) sparging or dry ice.

B. The County will obtain written approval from DEQ or Agent before using any form of chemical treatment other than CO2 sparging or dry ice (see Section 2.3). See Section 3.1.6.1 for pH monitoring requirements.

2.7.2.19 Site Maintenance

Maintain the site as follows:

A. Clean up sediment that leaves the site and place sediment back on the site and stabilize or dispose of sediment properly within 24 hours. In addition, the source(s) of the sediment must be controlled to prevent continued or additional discharge within 24 hours of being identified, and

a corrective action report submitted to DEQ per Section 2.10.3. Until the sediment or turbidity are no longer visually detectable, immediate corrective actions or the implementation of additional and appropriate BMPs is required to ensure the County is not causing or contributing to a violation of water quality standards. Any instream cleanup of sediment may require authorization from the Oregon Department of State Lands; and

B. Do not intentionally wash sediment into storm sewers or drainage ways. Methods such as vacuuming, dry mechanical sweeping, or manual sweeping must be used to cleanup released sediments.

2.7.2.20 Site Stabilization

Stabilize exposed portions of the site as follows:

A. Implement and maintain the stabilization measures (e.g., seeding protected by erosion controls until vegetation is established, sodding, mulching, erosion control blankets, hydromulch, gravel) that prevent erosion from exposed portions of the site;

B. Document the day that construction activities cease in an area and the location on site in the visual monitoring report (see Section 3.1.5.E);

C. Initiate the installation of temporary stabilization measures (e.g., blown straw and a tackifier, loose straw, compost mulch, temporary vegetative cover, crushed rock or gravel base), final vegetation cover or permanent stabilization measures immediately whenever any land disturbing activities have permanently ceased or will be temporarily inactive on any portion of the site for 14 or more calendar days; and

D. Complete the installation of stabilization measures as soon as practicable, but no later than seven calendar days after stabilization has been initiated.

2.7.2.21 Final Site Stabilization Criteria

The County will do the following in order to achieve project completion:

A. Establish uniform (i.e., evenly distributed, without large bare areas) perennial vegetation that provides 70 percent or more cover on all exposed areas. Limited allowable exceptions include:
   i. For sites where it is difficult to establish 70 percent coverage (e.g., arid, semiarid or drought-stricken areas), the County must cover exposed soil between planted or seeded areas with bio or photo degradable controls designed to prevent erosion without active maintenance or propose a site-specific plan to DEQ for approval.
   ii. Disturbed areas on farm use land as defined in ORS 308A.056 (e.g., pipelines across crop or range land, or staging areas for highway construction) that are restored to their preconstruction farm use are not subject to final vegetative stabilization criteria.
   iii. Stabilization may not be required if the intended function of a specific area of the site necessitates that it remains disturbed, and only the minimum area needed remains disturbed (e.g., dirt access roads, utility pole pads, areas being used for storage of vehicles, equipment, materials);

B. Implement temporary bio or photo-degradable non-vegetative stabilization measures (e.g., mulch or rolled erosion control products) to provide effective cover while vegetation is being established to prevent erosion of the seeded or planted area;

C. Ensure that final vegetative cover or permanent stabilization is established before temporary sediment controls are removed unless doing so conflicts with local requirements;

D. Ensure there is no discharge from the site of construction-related sediment or turbidity to surface waters;

E. Remove and properly dispose of all construction materials, waste and waste handling devices, and remove all equipment and vehicles that were used during construction, unless intended for long-term use;

F. Remove all temporary stormwater controls that were installed and maintained during construction, except those that are intended for long-term use;

G. Remove sediment from permanent (post-construction) structural stormwater facilities by over excavating and replacing with growth media before vegetating; and

H. Remove all potential pollutants, including any sediment being retained by temporary erosion and sediment controls, and discontinued pollutant-generating activities associated with construction, unless needed for long-term use.

2.7.3 Pollution Prevention Controls

The County will implement pollution prevention controls in accordance with the following requirements to prevent the discharge of pollutants to stormwater and to prevent the discharge of pollutants from spilled or leaked materials from construction activities, such as building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, fuels, lubricants and other material present.

The County will ensure that written spill prevention and response procedures are prepared, employee training on spill prevention and proper disposal procedures are conducted, spill kits are available on site, vehicles and machinery are regularly maintained, material delivery and storage controls are in place, signage is installed, and provide covered storage areas for waste and supplies, as necessary.

2.7.3.1 General Conditions

Provide an effective means of eliminating the discharge of any waste from any activities performed on-site by implementing the following:

A. Locate activities away from waters of the state and stormwater inlets or conveyances so that stormwater coming into contact with areas where waste generating activities are performed cannot reach waters of the state;

B. Ensure adequate supplies are available at all times to handle spills, leaks and disposal of liquids, and provide secondary containment (e.g., spill berms, decks, spill containment pallets);

C. Have a spill kit available on site and ensure personnel are available to respond expeditiously in the event of a leak or spill;

D. Clean up spills or contaminated surfaces immediately using dry clean up measures (do not clean contaminated surfaces by hosing the area down) and eliminate the source of the spill to prevent a discharge or a continuation of an ongoing discharge; and

E. Store materials in a covered area (e.g., plastic sheeting, temporary roofs), or in secondary containment to prevent the exposure of these containers to precipitation or stormwater runoff, or a similarly effective means designed to prevent the discharge of pollutants from these areas.

2.7.3.2 Equipment and Vehicle Fueling and Maintenance

A. Use drip pans and absorbents under or around vehicles;

B. Dispose of or recycle oil and oily wastes in accordance with other federal, state, tribal, or local requirements;

C. To the extent possible perform equipment fueling and maintenance off-site at authorized facilities; and

D. If allowed by the local fire department, fit fuel dispensing nozzles with "hold-open latches" with an automatic shutoff.

2.7.3.3. Equipment and Vehicle Washing

A. Ensure there is no discharge of soaps, solvents, or detergents in equipment and vehicle wash water; and

B. Prevent the discharge of turbid vehicle wash water to waters of the state or conveyances that lead to waters of the state.

2.7.3.4. Building Materials and Building Products

Minimize material exposure in cases where the exposure to precipitation or to stormwater will result in a discharge of pollutants (e.g., elevate materials from soil to prevent leaching of pollutants).

2.7.3.5. Pesticides, Herbicides, Insecticides, and Fertilizer

Comply with all application and disposal requirements included on the registered pesticide, herbicide, insecticide, and fertilizer label (see also Section 2.7.3.6). When applying fertilizers, the County will:

A. Apply at a rate and in amounts consistent with manufacturer's specifications;

B. Apply at the appropriate time of year for the location, and preferably timed to coincide as closely as possible to the period of maximum vegetation uptake and growth;

C. Avoid applying before heavy rains that could cause excess nutrients to be discharged;

D. Never apply to frozen ground;

E. Never apply to stormwater conveyance channels;

F. Follow all other federal, state and local requirements regarding fertilizer application.

2.7.3.6. Hazardous or Toxic Waste

A. Separate hazardous or toxic waste from construction and domestic waste;

B. Store waste in sealed containers, which are constructed of suitable materials to prevent leakage and corrosion, and which are clearly labeled with their contents in accordance with all applicable federal, state, tribal or local requirements;

C. Store all outside containers within appropriately sized secondary containment (e.g., spill berms, decks, spill containment pallets) to prevent spills from being discharged or provide a similarly

effective means designed to prevent the discharge of pollutants from these areas (e.g., storing chemicals in a covered area, having a spill kit available on site); and

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

2.7.3.7. Construction and Domestic Wastes

A. Provide waste containers (e.g., dumpster, trash receptacle) that provide ground separation and are of sufficient size and number to contain construction and domestic wastes;

B. Keep waste container lids closed when not in use and close lids at the end of the business day for those containers that are actively used throughout the day. For waste containers that do not have lids, provide either (1) cover (e.g., a tarp, plastic sheeting, temporary roof) to prevent exposure of wastes to precipitation, or (2) a similarly effective means designed to prevent the discharge of pollutants (e.g., secondary containment);

C. Clean up and dispose of waste in designated waste containers; and

D. Clean up immediately if containers overflow.

2.7.3.8. Sanitary Waste

Position portable toilets so that they are secure and will not be tipped or knocked over and located away from waters of the state and stormwater inlets or conveyances.

2.7.3.9. Washing Applicators and Containers

When construction activities involve washing applicators and containers used for stucco, paint, concrete, form release oils, curing compounds, or other materials, the following measures are required:

A. No discharge of these liquid wastes is allowed in storm sewers or waters of the state;

B. Dispose of liquid wastes in accordance with applicable requirements;

C. Remove and dispose of hardened concrete waste consistent with the handling of other construction wastes in Section 2.7.3.7; and

D. Locate any washout or cleanout activities as far away as possible from waters of the state and stormwater inlets or conveyances, and, to the extent feasible, designate areas to be used for these activities with signs and in the ESCP and conduct such activities only in these areas.

2.7.3.10. Emergency Spill Notification Requirements

Discharges of toxic or hazardous substances from a spill or other release are prohibited, consistent with Section 2.6. Where a leak, spill, or other release containing a hazardous substance or oil occurs during a 24-hour period, the County must notify the Oregon Emergency Response System at (800) 452-0311 as soon as the County has knowledge of the release. Contact information must be in locations that are readily accessible and available to all employees.

2.7.4 Construction Dewatering Requirements

This section pertains to accumulated water from precipitation and uncontaminated groundwater seepage due to shallow excavation activities, not for the lowering of contaminated groundwater (see Section 2.3). The County will comply with the following requirements to prevent the discharge of pollutants in groundwater or accumulated stormwater that is removed from excavations, trenches,

foundations, vaults, or other similar points of accumulation, in accordance with Section 2.6 -Prohibited Discharges:

A. To the extent feasible, use vegetated, upland areas of the site to infiltrate dewatering water before discharge. The County is prohibited from using waters of the state as part of the treatment area;

B. Implement the appropriate control measures for dewatering discharges to prevent the discharge of pollutants;

C. Do not discharge visible floating solids or foam;

D. Use an oil-water separator or suitable filtration device (such as a cartridge filter) that is designed to remove oil, grease or other products if dewatering water is found to contain these materials;

E. At all points where dewatering water is discharged, comply with the velocity dissipation requirements of Section 2.7.2.16;

F. With backwash water, either haul it away for disposal or return it to the beginning of the treatment process;

G. Replace and clean the filter media used in dewatering devices when the pressure differential equals or exceeds the manufacturer's specifications;

H. If there is no alternative option, the use of a sanitary or combined sewer discharge is authorized with local sewer district approval; and

I. Active chemical treatment systems for turbidity or any other pollutants must be designed and stamped by an Oregon Registered Professional Engineer and be approved by DEQ.

2.8 WATER QUALITY BASED EFFLUENT LIMITATIONS AND ASSOCIATED REQUIREMENTS FOR STORMWATER DISCHARGE

Discharges must be controlled to meet all applicable water quality standards. In addition, DEQ expects compliance with the General Permit conditions is compliance with applicable water quality standards. As soon as the County becomes aware or DEQ determines that discharges do not meet applicable water quality standards, corrective actions must be undertaken as required in Section 2.10.1.

2.8.1 Applicable Instream Water Quality Standards

Discharges must be controlled and may not cause or contribute to an exceedance of the applicable water quality standards as established in OAR 340-041; specifically, OAR 340-041-0036: Turbidity (Nephelometric Turbidity Units, NTU); No more than a 10% (ten percent) cumulative increase in natural stream turbidities may be allowed, as measured relative to a control point immediately upstream of the turbidity causing activity.

2.8.2 Water Quality Limited Streams

DEQ may establish additional controls on construction activities that discharge stormwater runoff to water quality limited streams if Total Maximum Daily Loads are established and construction activities are determined to be a significant contributor to these loads. DEQ may also require application for individual permit or develop a watershed-based general permit for the activity.

2.9 EROSION AND SEDIMENT CONTROL PLANS (ESCP)

Before any project under the General Permit begins, the ESCP must be submitted to DEQ. The County will implement the ESCP at all times, from initial soil disturbance until project completion. Failure to implement any of the control measures or practices described in the ESCP is a permit violation. The ESCP must be kept up to date throughout the term of coverage under the General Permit requirements. The County will ensure that an ESCP is revised as necessary to reflect site conditions and submit revisions to DEQ in accordance with the requirements of the General Permit.

County projects covered under the General Permit prior to the effective date of this permit must revise and update the ESCP content and site map to ensure that the ESCP is compliant with the requirements of this permit and must submit the revised ESCP to DEQ in YDO by April 1, 2023.

2.9.1 Qualifications to Develop ESCP

A. For construction activities disturbing twenty or more acres, the ESCP must be developed and stamped by a professional with one of the following credentials, and their name and credentials must be included in the ESCP as a preparer:
   i. Certified Professional in Erosion and Sediment Control.
   ii. Certified Professional in Stormwater Quality.
   iii. Oregon Registered Professional Engineer.
   iv. Oregon Registered Landscape Architect.
   v. Oregon Certified Engineering Geologist.

B. For engineered facilities such as sedimentation basins or diversion structures for erosion and sediment control are required, these portions of the ESCP must be designed and stamped by an Oregon Registered Professional Engineer or an Oregon Registered Landscape Architect (see Section 2.7.2.17).

2.9.2 ESCP Design Objectives

The ESCP must be designed to meet the following objectives:

A. To implement best management practices (BMPs) in accordance with appropriate, recognized and generally accepted engineering practices to prevent erosion and sedimentation, and to identify, reduce, eliminate or prevent contamination of stormwater and water pollution from construction activities;

B. To prevent violations of water quality standards, erosion and sediment transport from the project site and meet General Permit technology-based effluent limitations and treatment requirements; and

C. To control peak volumetric flow rates and velocities of stormwater discharges to prevent scouring by means such as diverting, collecting, conveying and/or controlling flows.

2.9.3 Construction Phases ESCP

Sediment and erosion controls must be clearly depicted for each of the following four distinct phases of construction activities within the ESCP. In addition, a site description and site map must be developed for the following construction phases:

A. Demolition, clearing, grading, excavating and land development;

B. Street and utilities;

C. Vertical construction; and

D. Final landscaping and site stabilization.

Linear construction projects must have an ESCP that clearly defines and addresses each distinct phase of construction. An ESCP including the site description and site map for each construction phase must be submitted to DEQ before construction activities may be initiated on the subsequent construction phase.

2.9.4 ESCP Contents

An ESCP 1200-CA General Permit Designer Checklist has been developed to aid in the design of the ESCP to ensure all requirements are captured. This checklist can be found in Appendix C. An ESCP template has also been developed and is included in Appendix D.

At a minimum, the ESCP must include the applicable information specified below:

A. Clearly identify the ESCP preparer and their credentials or stamp within the ESCP per Section 2.9.1;

B. Name and location of the site;

C. All contractors to perform work on site as follows:
   i. Once known, include a list of all contractors that will engage in construction activities on site, and the areas of the site where the contractor(s) will engage in construction activities. Revise the list as appropriate until project completion.
   ii. Include a list of all personnel (by name and position) that are responsible for the design, installation and maintenance of stormwater control measures (e.g., ESCP developer, BMP installer (see Section 2.9.10), as well as their individual responsibilities.
   iii. Personnel conducting visual monitoring must be identified in the ESCP. Provide the following for all personnel conducting visual monitoring of the project site:
      a. Name and title
      b. Contact information
      c. A description of certification per Section 3.1.1, along with any certification numbers and expiration dates;

D. Environmental Management Plan per Section 2.3 if applicable;

E. Site description must include the following:
   i. A description of the construction activities, including structures that are planned for demolition.
   ii. The size of the property (in acres and length in miles if a linear construction site).
   iii. A statement that clearly identifies the 303 (d) category 4 and 5 impairments status of each receiving water body (when the discharge enters an impaired watershed unit the listing will only be applied if there is a hydrologic connection between the receiving water and assessment water body causing the impairment);
   iv. Any waterbody to be impacted by the construction activities and reference in 401 water quality certifications, USACE permit, DSL permit, and/or any other applicable agency authorization;

v. The total area expected to be disturbed by the construction activities (to the nearest quarter acre or quarter mile if a linear construction site);
vi. A description of any on-site and off-site construction support activity areas covered by this permit (see Section 2.4.2) such as staging areas;
vii. The maximum area expected to be disturbed at any one time, including on-site and offsite construction support activity areas;
viii. A description and projected schedule for the following:
    a. Start dates of construction activities in each portion of the site, site preparation (i.e., excavating, cutting and filling), final grading, and creation of soil vegetation stockpiles requiring stabilization.
    b. Temporary or permanent stop dates of construction activities in each portion of the site.
    c. Dates of temporary or final stabilization of exposed area for each portion of site.
    d. Dates of removal of temporary stormwater controls and construction equipment or vehicles, and the final end date of construction related pollutant generating activities;
ix. Type of fill material to be used, and of soils prior to disturbance;
x. Composition of seed mix and other planting used to establish temporary cover;
xi. A statement indicating engineered soil will be used per Section 3.1.6, and pH monitoring is required of sedimentation basins;
xii. Identify all authorized non-stormwater discharges in Section 2.5 that will or may occur;
xiii. A list and description of all pollutant-generating activities on the site. For each pollutant generating activity include an inventory of pollutants or pollutant constituents (e.g., sediment, fertilizers pesticides, paints, caulks, sealants, fluorescent light ballasts, contaminated substrates, solvents, fuels, associated with that activity, which could be discharged in stormwater from the construction site. The County must consider where potential spills and leaks could occur that contribute pollutants to stormwater discharges, and any known hazardous or toxic substances, such as PCBs and asbestos, that will be disturbed, removed, or used on site during construction;
xiv. Description of stormwater controls. For each of the Section 2.7.2 Erosion Prevention and Sediment Control and Treatment Requirements, Section 2.7.3 Pollution Prevention Controls, and Section 2.7.4 Construction Dewatering Requirements, as applicable to the site, County must include the following in detail design sheet of the ESCP:
    a. A description of the specific controls(s) to be implemented to comply with the requirements of this permit.
    b. Any applicable stormwater control design specifications (including references to any manufacturer specifications and/or erosion and sediment control manuals/ordinances relied upon).
    c. Routine stormwater control maintenance specifications.
    d. Proposed timetable indicating when each sediment and control BMP is to be installed/implemented and duration that it is to remain in place;
xv. Natural buffer zone and/or equivalent sediment controls (see Section 2.7.2.4, and Appendix B). The following must be included in the narrative site description:
    a. The compliance alternative to be implemented.
    b. If complying with alternative 1, the width of natural buffer retained.

c. If complying with alternative 2 or 3, the erosion and sediment control(s) the County will use to achieve an equivalent sediment reduction, and any information the County relied upon to demonstrate the equivalency.
d. If complying with alternative 3, a description of why it is infeasible for the County to provide and maintain an undisturbed natural buffer of any size.
e. For "linear construction sites" where it is infeasible to implement compliance alternative 1, 2, or 3, a rationale for this determination, and a description of any buffer width retained and/or supplemental erosion and sediment controls installed.
f. A description of any disturbances that are exempt under Section 2.7.2.1 that occur within 50 feet of a water of the state.
g. A description of the vegetated buffers, sized at 50 feet (horizontally) plus an additional 25 feet (horizontally) per five degrees of slope or DEQ approved control measures of equal effectiveness for any waterbody that is listed as impaired and requiring a TMDL for turbidity or sedimentation on the most recently approved Oregon 303(d) list, or has an established TMDL for turbidity or sedimentation;

xvi. Perimeter controls for a "linear construction site" (see Section 2.7.2.6). For areas where perimeter controls are not feasible, include documentation to support this determination and a description of the other practices that will be implemented to prevent discharges of pollutants in stormwater associated with construction activities;
   a. Note: Routine maintenance specifications for perimeter controls documented in the ESCP must include Sections 2.7.1.4.A, and 2.7.2.6 requirement that sediment be removed before it has accumulated to one-third of the above-ground height of any perimeter control.

xvii. Sediment track-out controls (see Section 2.7.2.7). Document the specific stabilization techniques and/or controls that will be implemented to remove sediment prior to vehicle exit;

xviii. Sediment basins (see Section 2.7.2.17). The County must include the design storm method and calculations, and other design details in the ESCP. In circumstances where it is infeasible to utilize outlet structures that withdraw water from the surface of the sediment basin, include documentation to support this determination, including the specific conditions or time periods when this exception will apply;

xix. Treatment chemicals (see Section 2.3). The County must include the specific controls and implementation procedures designed to ensure that the use of cationic treatment chemicals will not lead to an exceedance of water quality standards;

xx. Stabilization measures (see Sections 2.7.2.20 and 2.7.2.21). The County must include the specific vegetative and/or non-vegetative practices that will be used;

xxi. Spill Prevention Procedures (see Section 2.7.3.10). The following must be included:
   a. Procedures for expeditiously stopping, containing, and cleaning up spills, leaks, and other releases.
   b. The ESCP may also reference the existence of oil Spill Prevention Control and Countermeasure (SPCC) plans developed for the construction activity (see Section 2.7.3.2.A), provided that the County keeps a copy of the SPCC on site or electronically available.
   c. Waste management procedures (see Sections 2.7.3.1 and 2.7.3.4).
   d. The location of fertilizers applied on site (see Section 2.7.3.5);

xxii. Staff Training. Include documentation that the required personnel are trained in accordance with Section 3.1.1; and
xxiii. Planned business days and hours for the project known at the time

F. Site Map. Include a legible map, or series of maps, showing the following features of the site if applicable:
   i. Roads and features for DEQ to locate and access the site;
   ii. Boundaries of the property;
   iii. Depict the drainage patterns of stormwater and authorized non-stormwater before and after major grading activities;
   iv. Locations where land disturbing activities will occur including:
      a. Locations where land disturbing activities will occur (note any phasing), including any demolition activities.
      b. Approximate slopes before and after major grading activities (pre- and post-elevation contours).
      c. For steep slopes (see definition in Appendix H), clearly label with the words "Steep Slope" and include the percentage grade.
      d. Locations where sediment, soil, or other construction materials will be stockpiled.
      e. Clearly label any water of the state crossings with words "water crossing".
      f. Designated points where vehicles will exit onto paved roads.
      g. Locations of structures and other impervious surfaces upon completion of construction.
      h. Locations of on-site and off-site construction support activity areas covered by this permit (see Section 2.4.2);
   v. Locations of springs, wetlands, surface waters, and all waters of Oregon and within one mile downstream of the site's discharge point. Also identify if any surface waters are 303(d) Category 4 and 5 listed as impaired (when the discharge enters an impaired watershed unit, the listing will only be applied if there is a hydrologic connection between the receiving water and assessment water body causing the impairment);
   vi. Riparian areas and vegetation including trees and associated rooting zones, and vegetation areas to be preserved;
   vii. Vegetated buffer zones and/or equivalent sediment controls (see Section 2.7.2.4 and Appendix B) between the site and sensitive areas (e.g., wetlands), and other areas to be preserved, clearly label with the words "Natural Buffer Zone";
   viii. Clearly label the type and extent of pre-construction cover on the site (e.g., vegetative cover, forest, pasture, pavement, structures);
   ix. Temporary and permanent stormwater conveyance systems;
   x. Location of concrete wash out;
   xi. Location of sanitary facilities;
   xii. Location of nearest official rain gauge, or if used, location of the County’s onsite rain gauge;
   xiii. Onsite water disposal locations (e.g., for dewatering);
   xiv. Onsite drain catch basin depicting inlet protections, and a description of the type of catch basins used (e.g., field inlet, curb inlet, grated drain, and combination);
   xv. Septic drain field;
   xvi. Existing or proposed drywells or other UICs;
   xvii. Drinking water wells on site or adjacent to the site;

xviii. Stormwater planters;
xix. Detention ponds, storm drain piping, and inflow and outflow details (e.g., bottom elevations and inverts);
xx. Post-construction stormwater facilities designed and engineered to infiltrate or filter stormwater and associated access restriction control measures (Section 2.7.2.12);
xxi. Locations of all potential pollutant-generating activities identified in Section 2.9.4.E.
xxii. Locations of stormwater controls, including any shared controls utilized to comply with this permit;
xxiii. Any other applicable features or controls that are associated with pollution prevention in stormwater discharges;
xxiv. Locations where polymers, flocculants, or other treatment chemicals will be used and stored; Locations of engineered soils (see Section 2.7.2.18);
xxv. Locations of engineered sediment basins (see Section 2.7.2.17);
xxvi. Receiving water(s). Stormwater and authorized non-stormwater discharge point locations, including:
    a. Locations where stormwater and/or authorized non-stormwater will be discharged to storm drain inlets; and
    b. Locations where stormwater or authorized non-stormwater will be discharged directly to surface waters of the state;
xxvii. Perimeter controls for a "linear construction site" (see Section 2.7.2.6);
xxviii. Sediment track-out controls (see Section 2.7.2.7); and
xxix. Stabilization measures (see Sections 2.7.2.20 and 2.7.2.21). The County must include the specific vegetative and/or non-vegetative practices that will be used.

2.9.5 ESCP Certification

The ESCP must be signed and dated by the preparer and in accordance with Section 2.9.1 if applicable.

2.9.6 ESCP On-site Availability

The County will keep a current copy of the ESCP at the site and be available for inspections or upon request by DEQ. The ESCP can be stored electronically as long as the personnel on-site can access it and make it available for inspector review.

2.9.7 Revision to the ESCP

The ESCP and the site maps must be revised, within seven days of any of the following to accurately reflect site conditions and BMPs used onsite, if any of the following occurs:

A. Changes to the construction plans that impact erosion and sediment control measures.
B. Changes to the stormwater control BMPs, their location, maintenance required, and any other revisions necessary to prevent and control erosion and sediment runoff.
C. An increase in construction activities to adjacent lots.
D. Other activities at the site that are no longer accurately reflected in the ESCP. This includes changes made in response to corrective actions triggered under Section 2.10. The ESCP does not need to be modified if the estimated dates in Section 2.9.4.E.viii change during the course of construction.

E. To reflect areas on the site map where operational control has been transferred (and the date of transfer) since initiating permit coverage.

F. If inspections by DEQ determine that ESCP revisions are necessary for compliance with this permit.

G. Where DEQ determines it is necessary to install and/or implement additional controls at the site in order to meet the requirements of this permit, the following must be included in the ESCP:
   i. A copy of any correspondence describing such measures and requirements; and
   ii. A description of the controls that will be used to meet such requirements.

H. Change of contractors that will engage in construction activities on site, and the areas of the site where the contractor(s) will engage in construction activities.

I. Change of any personnel (by name and position) that are responsible for the design, installation and maintenance of stormwater control measures (see Section 2.9.10).

J. Change of the Certified Erosion and Sediment Control Inspector, or of their contact information and any applicable certification and training experience.

K. To reflect any revisions to applicable federal, state, tribal or local requirements that affect the stormwater controls implemented at the site.

L. If a change in chemical treatment systems or chemically enhanced stormwater control is made, including use of a different treatment chemical, different dosage rate or different area of application as applicable.

2.9.8 ESCP Revision Submission Requirements

Revisions to the ESCP that require submission are a reporting requirement. The County will submit a revised version of the complete ESCP to DEQ within 30 calendar days of the revision. If the County does not receive a response to the revisions from DEQ within ten calendar days of receipt, the proposed revisions are deemed accepted.

A. ESCP revisions must be submitted if they are made for the following reasons:
   i. Part of a corrective action requirement in Section 2.10.
   ii. An increase or decrease of the project size.
   iii. An increase or decrease of the size or location of disturbed areas.
   iv. Change to BMPs (e.g., type, design, or location).
   v. Change of the certified visual monitoring inspector.

B. The County will maintain records showing the dates of all ESCP revisions. The records must include the name of the person authorizing each change (see Section 2.9.8 above) and a brief summary of all changes.

C. All revisions made to the ESCP consistent with Section 2.9.8 must be authorized by a person identified in Section 2.9.1 if applicable.

D. Approval of the revisions by DEQ prior to implementation is not required, however the addition of an Active Chemical Treatment System must be approved by DEQ before operating and requires submission of an Environmental Management Plan (see Section 2.3.C).

2.9.9 Prior to Commencement of Construction Activities

The County will document the names and contact information of personnel that have responsibilities for implementing stormwater control measures and complying with the permit and ESCP requirements at the project site. The list of personnel should be kept with the ESCP.

If new or additional contractors are hired to implement control measures identified in the ESCP after construction has commenced, the contact information must be updated. The County will ensure that the following personnel are informed of the permit and ESCP requirements and their specific responsibilities:

A. Personnel who are responsible for the installation, maintenance, and/or repair of stormwater controls (including pollution prevention controls);

B. Personnel responsible for the application and storage of treatment chemicals (if applicable);

C. Personnel who are responsible for conducting inspections as required in Section 3.1.1; and

D. Personnel who are responsible for taking corrective actions as required in Section 2.10.

2.9.10 Responsibility of Permit Requirements

The County will ensure subcontractors and outside service providers are aware of any permit requirements that apply to the work they are subcontracted to perform. The County will provide subcontractors and outside service providers easy access to an electronic or paper copy of applicable portions of the General Permit, the most updated copy of the ESCP and other relevant documents or information that must be kept with the ESCP.

2.10 CORRECTIVE ACTIONS

The County issued General Permit coverage prior to August 11, 2022, the issuance date of this permit, must comply with all conditions of Section 2.10 - Corrective Actions as of September 15, 2022, the General Permit effective date.

The County will take corrective action(s) to comply with permit conditions, and will take immediate corrective action if any of the following conditions exist:

A. The discharges are causing an exceedance of applicable water quality standards.

B. Sediment or turbidity (as described in Section 2.7.2.11) are visible in discharge from the permitted site within:
   a. A conveyance system leading to surface waters.
   b. Surface waters from the discharge point.

C. If DEQ requires the County to take corrective actions to prevent or control the discharge of significant amounts of sediment or turbidity to surface waters or to conveyance systems that discharge to surface waters, or as the result of a permit violations found during an inspection.

D. A stormwater control needs repair or replacement (beyond routine maintenance required under Section 2.7.1.4).

E. A stormwater control necessary to comply with the requirements of this permit was never installed or was installed incorrectly.

F. A prohibited discharge has occurred (see Section 2.6), including visibly turbid discharge.

2.10.1 Timeline for Corrective Action

If any corrective action is required per Section 2.10 above, the County will immediately implement that action according to the following:

A. Take all necessary steps to address the condition, including cleaning up any contaminated surfaces so the material will not discharge in subsequent storm events;

B. Complete the corrective action by the close of the next business day when the problem does not require a new or replacement control or significant repair; and

C. When the problem requires a new or replacement control or significant repair, install the new or modified control and make it operational, or complete the repair, by no later than 24 hours from the time of discovery to ensure that the requirements of Section 2.8.1 are met. If it is infeasible to complete the installation or repair within 24 hours, the County must document in the records why it is infeasible to complete the installation or repair within the 24-hour timeframe and document the schedule for installing the stormwater control(s) and making it operational as soon as feasible after the 24-hour timeframe. Where these actions result in changes to any of the stormwater controls or procedures documented in the ESCP, the County must revise the ESCP in accordance with Section 2.9.8.

2.10.2 Documenting Corrective Action

Within 24 hours of each corrective action implemented, the County will document the corrective actions in a report that includes:

A. The site common name;

B. Identification of discharge locations that were out of compliance;

C. The period of noncompliance;

D. Names, titles and contact information of personnel conducting inspections;

E. The specific condition and the date and time it was identified;

F. Describe the noncompliance and evaluate the stormwater control measures and practices to determine the cause of noncompliance;

G. Within 24 hours of completing the corrective action (in accordance with the timelines of Section 2.10.1), document the actions taken to address the condition, and steps taken to prevent the reoccurrence of the noncompliance including whether any ESCP revisions are required. Where these actions result in changes to any of the stormwater controls or procedures documented in the ESCP, the County must revise the ESCP in accordance with Section 2.9.8;

H. Each corrective action report must be signed by the County;

I. The corrective action reports must be kept at the site or at an easily accessible location and made available to DEQ upon request; and

J. The corrective action reports must be retained for three years after project completion.

2.10.3 Corrective Action Report Submission

Within 48 hours of taking Corrective Action(s) that prevent an exceedance of water quality standards, sediment from leaving the site or visibly turbid discharge as required in Sections 2.10.A, 2.10.B or 2.10.C above the County will submit a corrective action report to DEQ. This report will include:

A. The site common name and permit identification number;

B. A description of the noncompliance and its cause;

C. Identification of outfalls that were out of compliance;

D. The NTU of the turbid discharge before and after corrective actions or photo of discharge before and after corrective action(s) implementation;

E. The period of noncompliance;

F. Names of personnel conducting visual monitoring;

G. Steps taken or planned to reduce, eliminate and prevent recurrence of the noncompliance (such as specific BMPs that will be implemented or increased inspection frequency);

H. A timeline of corrective action events:
   a. From identifying the need to take corrective action to submission of a corrective action report showing that the required steps were taken in the time allotted per Sections 2.10.1, 2.10.2 and 2.10.3.
   b. If allotted time is exceeded, state the cause for the delay;

I. Weather conditions that varied from predicted storm events and may have contributed to prohibited discharge occurrence; and

J. ESCP revisions if revisions were required to prevent and control erosion and sediment discharges. If the County performs appropriate corrective actions and reporting in accordance with Sections 2.10, 2.10.1, 2.10.2 and 2.10.3, DEQ will consider these efforts to correct and/or mitigate the violation in deciding whether to initiate an enforcement action.

3 MONITORING, REPORTING AND RECORDKEEPING

This Section includes well defined visual monitoring requirements that improve ESCP and implemented BMP oversight. This robust visual monitoring approach creates a professional stormwater presence on all project sites and focuses monitoring efforts during times when construction activities have an increased potential for turbid discharge.

DEQ determined that pH sampling of detained stormwater runoff must be performed before discharge from the site on projects with engineered soils.

3.1 VISUAL MONITORING AND REPORTING REQUIREMENTS (For Projects Covered by the General Permit)

3.1.1 Responsible Person for Monitoring

All sites one or more acres in size must be visually monitored by a Certified Erosion and Sediment Control or Storm Water Quality Visual Monitoring Inspector (Inspector). The Visual Monitoring Inspector must be certified in one of the following sediment and erosion control programs, or any other course approved at a future date by DEQ. DEQ has approved the following programs:

A. Certified Professional in Erosion and Sediment Control;

B. Certified Professional in Storm Water Quality; or

C. Certified Inspector of Sediment and Erosion Control.

3.1.2 Frequency of Monitoring

At a minimum, the Inspector must document the initial date of any construction staging, construction activities or land clearing, and conduct and document a visual monitoring inspection of the project site per the following frequency:

A. On the initial date (commencement of staging or land disturbance activities);

B. Once every 14 calendar days; and

C. Daily within 24 hours of any storm event, including snowmelt that results in discharge from the site. Storm event information can be derived from weather stations that are representative of the site location, rain gauges and other appropriate documentation can be used in the inspection reports. Note, a storm event of 0.10 inches will result in a discharge from construction sites and will require inspection.

3.1.3 Reductions in Monitoring Frequency

The Inspector must inspect stabilized areas no more than 14 days prior to a site becoming inactive to ensure that erosion and sediment control measures are in working order. For the following scenarios, the Inspector must clearly document the following conditions have begun in the written visual monitoring reports:

A. The Inspector may reduce the frequency of inspections in any area of the site where the temporary stabilization steps, in accordance with Section 2.7.2.20, have been completed to twice per month for the first month, no less than 14 calendar days apart, then once per month. If construction activity resumes on a stabilized area of the site at a later date, the inspection frequency must immediately increase to that required in Section 3.1.2, as applicable. The Inspector must document the beginning and ending dates of site inactivity in the visual monitoring reports.

B. For “linear construction sites” where disturbed portions have achieved final stabilization criteria at the same time active construction continues on others, the inspection frequency may be reduced to twice per month for the first month, no less than 14 calendar days apart, in any area of the site where the temporary stabilization steps have been completed. After the first month, inspect once more within 24 hours of any storm event leading to discharge from the site. If there are no issues or evidence of stabilization problems (e.g., failure to establish 70% vegetative cover), inspections may be discontinued. If “wash-out” of stabilization materials and/or sediment is observed, following restabilization, inspections must resume at the inspection frequency required in Section 3.1.2. Inspections must continue until final stabilization is visually confirmed following a storm event leading to discharge from the site.

Frozen conditions monitoring:

A. If construction activities are suspended due to frozen conditions, visual monitoring inspections may be temporarily suspended on the site until thawing conditions (See definitions, Appendix H) exist if:

   i. Runoff is unlikely due to continuous frozen conditions. If unexpected weather conditions (such as above freezing temperatures or rain events) make discharges likely, the Inspector

must immediately resume the regular inspection frequency as described in Section 3.1.2, as applicable;

ii. Land disturbances have been suspended; and

iii. All disturbed areas of the site have been temporarily stabilized in accordance with Section 2.7.2.20.

B. If construction activities are conducted during frozen conditions, the visual monitoring inspection frequency may be reduced to once per month if:

i. Runoff is unlikely due to continuous frozen conditions. If unexpected weather conditions (such as above freezing temperatures or rain events) results in likely discharges, the Inspector must immediately resume the regular inspection frequency as described in Section 3.1.2, as applicable; and

ii. Disturbed areas of the site have been temporarily stabilized in accordance with Section 2.7.2.20.

3.1.4 Requirements for Monitoring

Visual Monitoring should be conducted during safe conditions and evaluate all elements of the ESC including:

A. Confirmation that all stormwater controls are properly installed and are working as intended to prevent pollutant discharges;

B. Confirmation that the presence of conditions that could lead to spills, leaks, or other accumulations of pollutants on the site are addressed;

C. Identify any locations where new or modified stormwater controls are necessary to meet the erosion and sediment control requirements of Sections 2.7, 2.8 and 2.9;

D. Check for the presence of visible erosion and sedimentation as outlined in Section 2.7.2.11 and document any indication of sediment that has left or is likely to leave the project site;

E. If a discharge is occurring during the inspection:

i. Identify all stormwater discharge locations at the site; and

ii. Document the visual quality of the discharge and take note of the characteristics of the stormwater discharge, including color, odor, suspended solids, foam, oil sheen and any other indicators of stormwater pollutants;

F. If no discharge occurred from site within 24 hours of a storm event, the inspector must document (e.g., date stamped photos of all points of discharge from the site) that no discharge from the site occurred;

G. Identify any portion of the project site where land disturbing activities have permanently ceased or will be temporarily inactive for 14 or more calendar days and note the initial date of cessation; and

H. Complete any necessary maintenance, corrective actions or stabilization measures.

The Inspector is not required to visually monitor areas that, at the time of the inspection, are considered unsafe. Nearby downstream locations of any receiving waterbodies must be inspected to the extent that such inspections are safe, accessible and practical.

3.1.5 Monitoring Inspection Report Requirements

The inspection report must be completed within 48 hours of all site inspections. The Linn County Erosion and Sediment Control Monitoring Form can be found in Appendix E. Inspection reports must include the following as applicable to the site:

A. The inspection date;

B. The name of the site and the identification number provided by the County;

C. Names, titles and contact information of the inspector;

D. A summary of the inspection, including the observations of the elements made in Section 3.1.4, the location of BMPs in need of any necessary maintenance or corrective actions, the location of any BMPs that failed to operate as designed or proved inadequate for a particular application, the location of where additional BMPs are needed that did not exist at the time of inspection, visual observations of the stormwater discharges from the site, or if a discharge from the site did not occur within 24 hours of a storm event (attach date stamped photos to report);

E. Any unauthorized discharges from the site;

F. Any portion(s) of the site where land disturbing activities have permanently ceased or will be temporarily inactive for 14 or more calendar days;

G. If complying with stabilization schedules for sites affected by unforeseen circumstances that delay the initiation and/or completion of vegetative stabilization, document the circumstances and the schedule for initiating and completing stabilization;

H. All pH sampling results conducted per Section 3.1.6.1;

I. The alternative erosion and sediment control measures and the inspection frequency (see Section 3.1.3.B) for linear construction projects;

J. Reasons for changes or modifications to the ESCP;

K. Start and end dates subject to alternative inspection frequencies listed in Section 3.1.3;

L. If the Inspector is inspecting the site at the frequency specified in Section 3.1.2 or Section 3.1.3, the applicable rain gauge, weather station readings or other source of information that triggered the inspection (e.g., weather conditions during the inspection, the approximate amount of precipitation since the last inspection, and approximate amount of precipitation during the last 24 hours);

M. If the Inspector determines that it is unsafe to inspect a portion of the site or the inclement weather makes the site, or portions of the site inaccessible, the reasoning and the locations to which this condition applies must be documented;

N. Each inspection report must be signed by the Inspector with the following statement: “I certify that this report is true, accurate, and complete to the best of my knowledge, abilities, and belief”;

O. All inspection reports should be kept in chronological order at the site or at an easily accessible location (electronically is acceptable), and made available at the time of inspection or within three days upon request by DEQ; and

P. All visual monitoring notes, sampling records and inspection reports must be kept for three years from project completion.

3.1.6 On-Site Monitoring Requirements

3.1.6.1 pH Monitoring of Engineered Soils

If construction activity involves the use of engineered soils (soil amendments including, but not limited to Portland cement-treated base, cement kiln dust, or fly ash), the County must conduct, and document pH monitoring of stormwater captured in the sediment impoundment as described below:

A. The County will begin the pH monitoring period when the engineered soils are first exposed to precipitation and must continue every 7 calendar days and within 24 hours of the occurrence of discharge from the site, or the occurrence of a storm event of 0.10 inches or greater until final stabilization of the area of engineered soils is established;

B. Document date soil amendments are added, and final stabilization achieved in the Inspection Report per Section 3.1.5;

C. The County must monitor the pH of stormwater in the sediment basins/impoundments immediately before the stormwater discharge to surface waters and at discharge point locations that receive stormwater runoff from the area of engineered soils;

D. The benchmark value for pH is defined in Standard Units (SU) and determined by the river basin containing the receiving waterbody according to OAR 340-041-0021. Anytime monitoring indicates that the pH is the maximum allowed SU or greater, the County must either:
   i. Prevent the high pH water from entering storm sewer systems or surface waters; or
   ii. If necessary, adjust or neutralize the high pH water until it is in the range of pH SU acceptable for discharge to the river basin containing the receiving waterbody by using an appropriate treatment BMP such as carbon dioxide (CO2) sparging or dry ice. The County must obtain written permission from DEQ before using any form of chemical treatment other than CO2 sparging or dry ice per Section 2.3; and

E. The County must perform pH monitoring on site within 15 minutes of sample collection with an accurately calibrated pH meter and record the pH monitoring results and any pH adjustment treatments in the inspection report.

3.1.7 Inspection and Entry by DEQ

The County will allow and make arrangements for DEQ to have access to the site at all reasonable times and will allow the Director, or an authorized representative upon the presentation of credentials to:

A. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

B. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

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

D. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by state law, any substances or parameters at any location.

3.1.7 Reporting Requirements

3.1.7.1 Planned Changes

The County will comply with Oregon Administrative Rules (OAR) 340, Division 52, "Review of Plans and Specifications". Except where exempted under OAR 340-52, no construction, installation, or modification involving disposal systems, treatment works, sewerage systems, or common sewers will commence until the plans and specifications are submitted to and approved by the Department. The County will give notice to the Department as soon as possible of any planned physical alternations or additions to the permitted facility.

3.1.7.2 Anticipated Noncompliance

The County will give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

3.1.7.3 24-Hour Reporting for Noncompliance

The County will report any noncompliance which may endanger health or the environment. Any information shall be provided orally (by telephone) within 24 hours, unless otherwise specified in this permit, from the time the County becomes aware of the circumstances. During normal business hours, DEQ's Regional office shall be called. Outside of normal business hours, the Department shall be contacted at 1-800-452-0311 (Oregon Emergency Response System).

A written submission shall also be provided within 5 days of the time the County becomes aware of the circumstances. If the County is establishing an affirmative defense of upset or bypass to any offense under ORS 468.922 to 468.946, and in which case if the original reporting notice was oral, delivered written notice must be made to DEQ or other agency with regulatory jurisdiction within 4 (four) calendar days. The written submission shall contain:

A. A description of the noncompliance and its cause;

B. The period of noncompliance, including exact dates and times;

C. The estimated time noncompliance is expected to continue if it has not been corrected;

D. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance; and

The following shall be included as information which must be reported within 24 hours under this paragraph:

A. Any unanticipated bypass which exceeds any effluent limitation in this permit.

B. Any upset which exceeds any effluent limitation in this permit.

C. Violation of maximum daily discharge limitation for any of the pollutants listed in this document.

DEQ may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

3.2 VISUAL MONITORING AND REPORTING REQUIREMENTS (For Projects Not Covered by the General Permit)

At a minimum, the Inspector must document the initial date of any construction staging, construction activities or land clearing, and conduct and document a visual monitoring inspection of the project site.

Visual Monitoring should be conducted during safe conditions and evaluate all elements of the ESC measures installed. The Inspector is not required to visually monitor areas that, at the time of the inspection, are considered unsafe.

3.2.1 Frequency of Monitoring

An Erosion control inspection report shall be completed weekly for active sites, every 2 weeks for inactive sites, or within 24 hours after 0.5 inch or more rainfall occurs. A blank Erosion and Sediment Control Monitoring form, and a sample, filled out form, can be found in Appendix E.

3.2.2 Monitoring Inspection Report Requirements

During a site inspection, document the following:

- The date when the control measure was installed;
- Determine if the control measures installed are implemented and maintained properly;
- What corrective actions were taken and when the corrective actions were completed;
- Determine if visible sediment is present or has left the site
- The date the control measure was removed.

APPENDIX A

ENVIRONMENTAL MANAGEMENT PLAN REVIEW APPLICATIONS FOR CONTAMINATED MEDIA MANAGEMENT AND ACTIVE CHEMICAL TREATMENT SYSTEMS

Appendix A - Environmental Management Plan Review Applications for Contaminated Media Management & Active Chemical Treatment Systems

August 2022

WQ Permitting
700 NE Multnomah St.
Suite 600
Portland, OR 97232
Phone: 503-229-5185
800-452-4011
Fax: 503-229-6124
Contact: Blair Edwards

www.oregon.gov/DEQ

DEQ is a leader in restoring, maintaining and enhancing the quality of Oregon's air, land and water.

State of Oregon
Department of Environmental Quality

This report prepared by:

Oregon Department of Environmental Quality

700 NE Multnomah Street, Suite 600

Portland, OR 97232

1-800-452-4011

www.oregon.gov/deq

Contact:

Blair Edwards

503-229-5185

Table of Contents

Executive Summary 1

Contaminated Media Management 2

Contaminated Media Environmental Management Plan Review Application 4

Active Chemical Treatment Systems 8

Active Chemical Treatment System Environmental Management Plan Review Application 9

Executive Summary

The purpose of this Appendix is to assist 1200-CA permit registrants in complying with the requirements of Section 6 regarding DEQ review and approval of a contaminated media management plan (CMMP) or an active chemical treatment system. The permit registrant must complete an Environmental Management Plan (EMP) application, pay the review fee (See Table 70F), and submit to DEQ the required documents found on DEQ's website and electronic reporting system when contaminated soil, contaminated groundwater or hazardous materials exist or are anticipated to be encountered during construction activities. If contaminated soil, contaminated groundwater or hazardous materials are discovered on a construction project site after construction activities are initiated, the EMP application must be submitted and approved before discharges from areas exposed to contaminated media will be authorized. The approved EMP becomes a component of the Erosion and Sediment Control Plan.

Contaminated Media Management

This Section of Appendix A provides the Environmental Management Plan review application form for construction projects that will or have the potential of encountering contaminated soils, contaminated groundwater, or hazardous materials during construction activities. Section 6 of the 1200-CA permit requires the permit registrant to provide detailed information with the Contaminated Media Management Plan (CMMP) on the nature and extent of the contamination (concentration, location, and depth) as well as pollution prevention and/or treatment Best Management Practices proposed to control the discharge of impacted soil, groundwater, or hazardous building materials debris in stormwater. In the event that undocumented contamination, underground storage tanks or other potentially hazardous conditions are encountered that are not addressed in the Environmental Management Plan, discharges exposed to the contaminated media must cease and DEQ must be notified within 48 hours. The discharges exposed to the contaminated media may not occur until DEQ approves the CMMP.

The DEQ ECSI Database can be found at: https://www.oregon.gov/deq/hazards-and-cleanup/env-cleanup/pages/ecsi.aspx

On sites without a DEQ Environmental Cleanup Site Information (ECSI) number where potential contamination is encountered. DEQ provides the following guidance:

Unanticipated and unknown contaminated soil is soil that exhibits any of the following: Any soil distinctly different in its physical characteristics, such as observation of unusual soil staining, color variations, unusual odors, building debris (bricks, stained timber, or charcoal), or oily liquids. Odors, such as a petroleum hydrocarbons odor may coincide with elevated constituent concentrations indicated of gasoline or diesel fuel. Anticipated and unknown contaminated soil is present if it exhibits a volatile organic compound (VOC) vapor concentration in excess of 50 parts per million (ppm), as measured with a photoionization detector (PID) using soil sample head space. Upon discovery of suspected unanticipated and unknown contaminated soil, immediately suspend all activities in the vicinity, notify DEQ. Additional work at the property should be performed in accordance with an approved CMMP.

For groundwater, additional management protocols for unknown or unanticipated contamination should be followed if any unusual odors or sheen (or free product) is present on the water surface. In the event of discovery of unknown groundwater contamination, suspend work activities and notify DEQ. Following notification, proceed with site activities following the management requirements identified in a DEQ-approved CMMP. In the event of sheen or free product, the construction contractor should remove the sheen and/or free product and containerize the water in a temporary aboveground storage tank for testing to determine the appropriate management requirements.

If free-phase product petroleum is encountered in groundwater, the free product should be removed for disposal in a manner consistent with local, state, and federal regulations. To remove free product from the surface of the groundwater, the construction contractor may choose to use a vacuum truck to skim the product from the surface of the groundwater (if sufficient product is present). The removed product should be vacuumed directly into the vacuum truck or into drums. Alternatively, the construction contractor may choose to use adsorbent booms/pads to remove the product/sheen. However, adsorbent booms/pads are not encouraged, because of the elevated health and safety risks of handling the used booms and the higher costs associated with disposal of used booms/pads. Alternatively, the groundwater can be treated through a DEQ-approved treatment system prior to discharge through an approved permit to stormwater or sanitary sewer.

DEQ may assign coverage under this permit after the permit registrant has included appropriate controls

and implementation procedures designed to ensure that the above activities will not lead to discharges that cause an exceedance of water quality standards. In the absence of authorization, the permit registrant must apply for and receive coverage under an individual permit prior to discharging from the site.

Contaminated Media Environmental Management Plan Review Application

Under Section 6 of the 1200-CA NPDES Construction Stormwater General Discharge Permit, if "treatment chemicals" are to be added to stormwater and/or authorized non-stormwater prior to discharge, the following EMP application must be submitted to DEQ prior to the initiation of construction activities. Submit this form to describe the proposed use of treatment chemicals.

I. Permit Registrant Information

Permit Registrant Name:			
Mailing Address:			
City:	State:	Zip:	County:
Phone:	Email:		

II. Project/Site Information

Project/Site Name:			
Project/Site Address:			
City:	State:	Zip:	County:
Site contact name (if different from permit registrant):			
Name:	Phone:	Email:	
Name:	Phone:	Email:	
Names of receiving waterbodies:			

III. Map

Attach a map that illustrates the entire site including all of the below items. Include this map in your Erosion and Sediment Control Plan (ESCP):

- DEQ Environmental Cleanup Site Information (ECSI) site number (if applicable)
- A list or table of all known contaminants with lab tests results showing concentration and depth
- A list of all disposal locations
- Notice of approval from local jurisdiction if discharge is to public storm system
- A map with sample locations
- Temporary Erosion and Sediment Control Plans specific to contaminated soils
- Plans for offsite disposal of contaminated soils
- Any relevant (related) portions of ESCP that address the management of contaminated and potentially contaminated construction stormwater and dewatering program (if applicable)
- The dewatering plan (if applicable)
- All proposed point(s) of discharge to receiving waterbodies
- All soil types within areas to be disturbed
- All area of earth disturbance
- Sufficient indication of topography to indicate where stormwater flows

Attach a schematic drawing of the proposed treatment system(s). Include all components of the treatment train, sample points, and pipe configurations. In addition to sufficient holding capacity upstream of treatment, the system must have the capacity to hold water for testing and to re-treat water that does not meet water quality standards.

IV. Responsible Personnel

Treatment System Operator	Subcontractor (if applicable)

Street/Location:	City:	State	Zip	County

Responsible personnel. List personnel who will be responsible for operating the chemical treatment systems and application of the chemicals. Cite the training that the personnel have received in operation and maintenance of the treatment system(s) and use of the specific chemical(s) proposed.

V. Proposed Treatment

- Check proposed treatment system.
- Chitosan enhanced sand filtration with discharge to infiltration (ground water)
- Chitosan enhanced sand filtration with discharge to temporary holding ponds (batch).
- Chitosan enhanced sand filtration with discharge to surface waters (flow-through).
- Other (describe below and submit documentation that the proposed system and chemical(s) demonstrate the ability to remove turbidity and produce non-toxic effluent/ discharge)

Check proposed cationic chemical(s) to be used:			
FlocClear™ (2% chitosan acetate solution)		LiquiFloc™ (1% chitosan acetate solution).	
ChitoVan™ (1% chitosan acetate solution)		StormKlear™	
LiquiFloc™ (3% Chitosan acetate solution)		StormKlearTM LiquiFlocTM (1% chitosan acetate solution)	
Other"			
Estimated Treatment Period Start Date:		Estimated Treatment Period End Date:	
Describe sampling and recordkeeping schedule. Attach additional sheets as needed:			

VI. Certification Information

I have documented and hereby certify that the following information is correct and has been documented in the ESCP for this project:

- The ESCP includes a complete site-specific description of the chemical treatment system herein proposed for use, including specifications, design, and Material Safety Data Sheets for all chemicals to be used.
- The controls to be used on the site are compatible with the safe and effective use of cationic chemical treatment.
- I verified through jar tests that the site soil is conducive to chemical treatment.
- I verified that the chemical treatment system operators for this project received training.
- I read, understand, and will follow all conditions and design criteria in the applicable use designation(s).
- If the discharge is to tribal waters, I notified the appropriate tribal government of the intent to use chemical treatment on a site located within that jurisdiction.
- I will keep the use level designation, operation and maintenance manual, and training certificate on site prior to and during use of chemical treatment.
- A licensed engineer designed the system for this project including system sizing, pond sizing, and flow requirements.
- I verify that the discharge will not adversely affect downstream conveyance systems or stream channels (e.g., cause erosion).

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.

Authorized Official First Name, Middle Initial, Last Name:

Title:

Signature: Date:

Email:

Active Chemical Treatment Systems

This Section of Appendix A provides the Environmental Management Plan review application for projects with an active chemical treatment system (e.g., electro-coagulation, flocculants, filtration, polymers, hydrochloric or sulfuric acid) for sediment, pH neutralization, or other pollutant removal is planned or implemented. When "treatment chemicals" are proposed to treat stormwater and/or authorized non-stormwater prior to discharge, Section 6 of the 1200-CA permit requires the permit registrant to submit the following EMP review application to DEQ prior to the commencement of construction activities. DEQ may assign coverage under this permit after the permit registrant has included appropriate controls and implementation procedures designed to ensure that the above activities will not lead to discharges that cause an exceedance of water quality standards. In the absence of authorization, the permit registrant must apply for and receive coverage under an individual permit prior to discharging from the site.

Active Chemical Treatment System Environmental Management Plan Review Application

Under Section 6 of the 1200-CA NPDES Construction Stormwater General Discharge Permit, if "treatment chemicals" are to be added to stormwater and/or authorized non-stormwater prior to discharge, the following EMP application must be submitted to DEQ before the initiation of construction activities. Submit this form to describe the proposed use of treatment chemicals.

I. Permit Registrant Information

Permit Registrant Name:			
Mailing Address:			
City:	State:	Zip:	County:
Phone:	Email:		

II. Project/Site Information

Project/Site Name:			
Project/Site Address:			
City:	State:	Zip:	County:
Site contact name (if different from permit registrant):			
Name:	Phone:	Email:	
Name:	Phone:	Email:	
Names of receiving waterbodies:			

III. Map

Attach a map that illustrates the entire site including all of the below items. Include this map in your Erosion and Sediment Control Plan (ESCP):

- DEQ Environmental Cleanup Site Information (ECSI) site number (if applicable)
- A list or table of all known contaminants with lab tests results showing concentration and depth
- A list of all disposal locations
- Notice of approval from local jurisdiction if discharge is to public storm system
- A map with sample locations
- Temporary Erosion and Sediment Control Plans specific to contaminated soils
- Plans for offsite disposal of contaminated soils
- Any relevant (related) portions of ESCP that address the management of contaminated and potentially contaminated construction stormwater and dewatering program (if applicable)
- The dewatering plan (if applicable)
- All proposed point(s) of discharge to receiving waterbodies
- All soil types within areas to be disturbed
- All area of earth disturbance
- Sufficient indication of topography to indicate where stormwater flows

Attach a schematic drawing of the proposed treatment system(s). Include all components of the treatment train, sample points, and pipe configurations. In addition to sufficient holding capacity upstream of treatment, the system must have the capacity to hold water for testing and to re-treat water that does not meet water quality standards.

IV. Responsible Personnel

Treatment System Operator	Subcontractor (if applicable)

Street/Location:	City:	State	Zip	County

Responsible personnel. List personnel who will be responsible for operating the chemical treatment systems and application of the chemicals. Cite the training that the personnel have received in operation and maintenance of the treatment system(s) and use of the specific chemical(s) proposed.

V. Proposed Treatment

- Check proposed treatment system.
- Chitosan enhanced sand filtration with discharge to infiltration (ground water)
- Chitosan enhanced sand filtration with discharge to temporary holding ponds (batch).
- Chitosan enhanced sand filtration with discharge to surface waters (flow-through).
- Other (describe below and submit documentation that the proposed system and chemical(s) demonstrate the ability to remove turbidity and produce non-toxic effluent/ discharge)

Check proposed cationic chemical(s) to be used:			
FlocClear™ (2% chitosan acetate solution)		LiquiFloc™ (1% chitosan acetate solution).	
ChitoVan™ (1% chitosan acetate solution)		StormKlear™	
LiquiFloc™ (3% Chitosan acetate solution)		StormKlearTM LiquiFlocTM (1% chitosan acetate solution)	
Other"			
Estimated Treatment Period Start Date:		Estimated Treatment Period End Date:	

Describe sampling and recordkeeping schedule. Attach additional sheets as needed:

VI. Certification Information

I have documented and hereby certify that the following information is correct and has been documented in the ESCP for this project:

- The ESCP includes a complete site-specific description of the chemical treatment system herein proposed for use, including specifications, design, and Material Safety Data Sheets for all chemicals to be used.
- The controls to be used on the site are compatible with the safe and effective use of cationic chemical treatment.
- I verified through jar tests that the site soil is conducive to chemical treatment.
- I verified that the chemical treatment system operators for this project received training.
- I read, understand, and will follow all conditions and design criteria in the applicable use designation(s).
- If the discharge is to tribal waters, I notified the appropriate tribal government of the intent to use chemical treatment on a site located within that jurisdiction.
- I will keep the use level designation, operation and maintenance manual, and training certificate on site prior to and during use of chemical treatment.
- A licensed engineer designed the system for this project including system sizing, pond sizing, and flow requirements.
- I verify that the discharge will not adversely affect downstream conveyance systems or stream channels (e.g., cause erosion).

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.

Authorized Official First Name, Middle Initial, Last Name:

Title:

Signature: Date:

Email:

APPENDIX B

NATURAL BUFFER ZONE REQUIREMENTS

Appendix B – Natural Buffer Zone Requirements

August 2022

WQ Permitting
700 NE Multnomah St.
Suite 600
Portland, OR 97232
Phone: 503-229-5185
800-452-4011
Fax: 503-229-6124
Contact: Blair Edwards

www.oregon.gov/DEQ

DEQ is a leader in restoring, maintaining and enhancing the quality of Oregon's air, land and water.

State of Oregon
Department of
Environmental
Quality

This report prepared by:

Oregon Department of Environmental Quality
700 NE Multnomah Street, Suite 600
Portland, OR 97232
1-800-452-4011
www.oregon.gov/deq

Contact:
Blair Edwards
503-229-5185

The purpose of this appendix is to assist the 1200-CA permit registrant in complying with the requirements in Section 13.2.4 of the 1200-CA permit regarding the establishment of natural buffer zones and/or equivalent sediment controls. This Appendix is organized as follows:

Table of Contents

Sites that are required to provide and maintain natural buffer zones and/or equivalent erosion and sediment controls 1

B.1 Compliance alternatives and exceptions 1

B.1.1 Compliance alternatives 1

B.1.2 Exceptions to the compliance alternatives 2

B.1.3 Requirements for providing and maintaining natural buffer zones 3

Limits to disturbance within the buffer 5

B.1.4 Guidance for providing the equivalent sediment reduction as a 50-foot buffer 6

Steps to help meet compliance alternative 2 and 3 requirements are provided below. 7

Step 1 - Estimate the sediment reduction from the 50-foot buffer 7

Step 2 - Design controls that match the sediment removal efficiency of the 50-foot buffer 8

Step 3 - Document how site-specific controls will achieve the sediment removal efficiency of the 50-foot buffer 9

B.2 Small residential lot compliance alternatives 9

B.2.1 Small residential lot compliance alternative eligibility 10

B.2.2 Small residential lot compliance alternatives 10

Attachment 1: Sediment removal efficiency tables 14

Sediment removal efficiency tables – questions and answers 15

Attachment 2 - Examples of how to use the sediment removal efficiency tables 16

Example 1. Comparatively wet location (7.5-acre site located in Western Oregon) 16

Example 2. Arid location with pre-existing disturbances in the natural buffer zone (6.5-acre site located in Eastern Oregon) 17

Notes 18

Sites that are required to provide and maintain natural buffer zones and/or equivalent erosion and sediment controls

The requirement in Section 13.2.4 to provide and maintain natural buffer zones and/or equivalent erosion and sediment controls applies for any discharges to surface waters of the state located within 50 feet of the site's earth disturbances. If the surface water of the state is not located within 50 feet of earth disturbing activities, Section 13.2.4 does not apply. See Figure B-1.

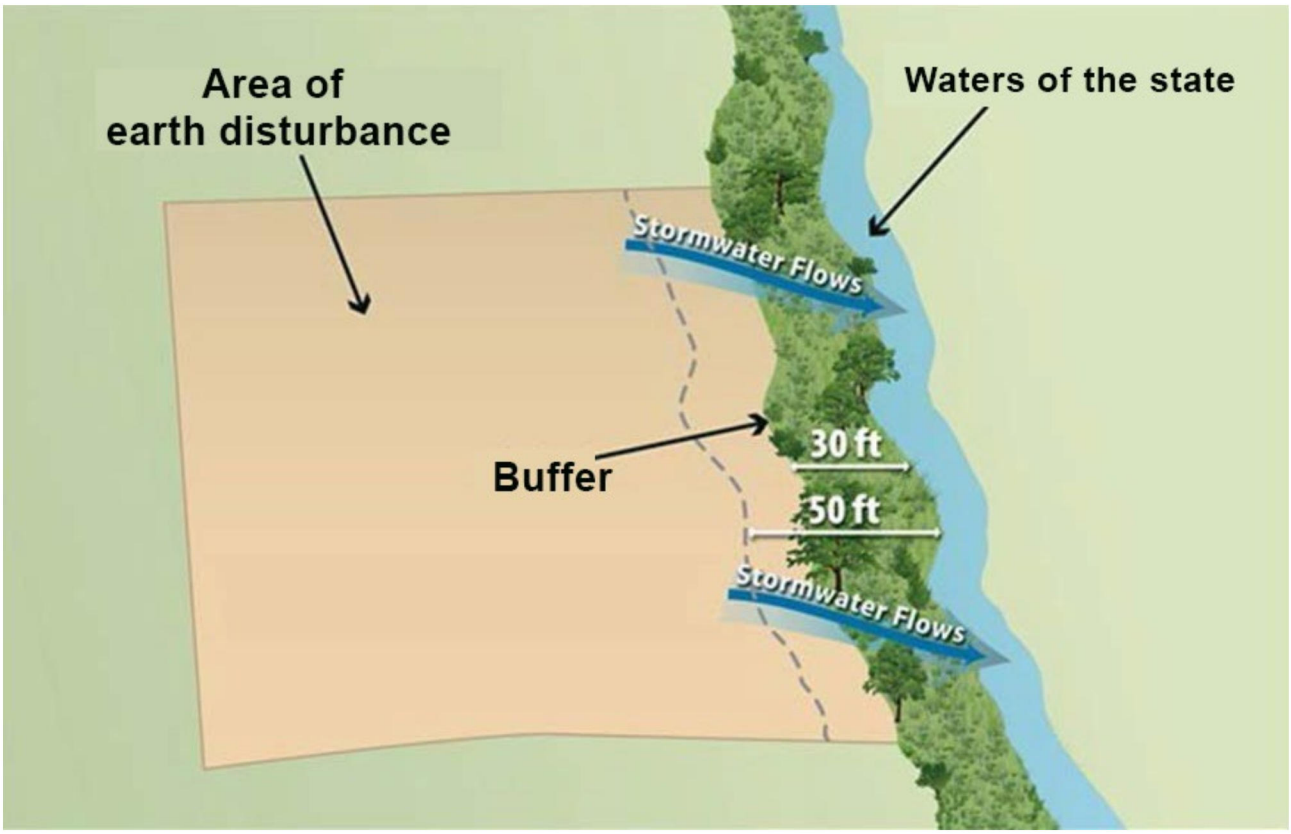


Figure B-1. Example of earth disturbing activities within 50 feet of a surface water of the state.

B.1 Compliance alternatives and exceptions

B.1.1 Compliance alternatives

If Section 13.2.4 of the 1200-CA permit applies to the project site, there are three compliance alternatives from which the permit registrant can choose, unless the project qualifies for any of the exceptions of Section B.1.2 (below) and permit Section 13.2.4.a:

1. Provide and maintain a 50-foot undisturbed natural buffer zone (See 13.2.b to determine natural buffer zone encroachment authorization on 401 Water Quality Certification (WQC) projects); or

2. Provide and maintain an undisturbed natural buffer zone that is less than 50 feet and is supplemented by erosion and sediment controls that achieve the sediment load reduction equivalent to a 50-foot undisturbed natural buffer zone; or

3. If infeasible to provide and maintain an undisturbed natural buffer zone of any size, implement erosion and sediment controls to achieve the sediment load reduction equivalent to a 50-foot undisturbed natural buffer zone.

The compliance alternative selected must be maintained throughout the duration of permit coverage.

See Section B.1.2 below for exceptions to the compliance alternatives.

See Section B.1.3 for requirements applicable to providing and maintaining natural buffer zones under compliance alternatives 1 and 2 above.

See Section B.1.4 for requirements applicable to providing erosion and sediment controls that achieve the sediment load reduction equivalent to a 50-foot undisturbed natural buffer zone under compliance alternatives 2 and 3 above.

B.1.2 Exceptions to the compliance alternatives

The following exceptions apply to the requirement to implement one of the alternatives of section 13.2.4.a of the 1200-CA permit:

- The following disturbances within 50 feet of a surface water of the state may not claim the natural buffer zone alternatives of 13.2.4.a:
  - Construction approved under a CWA Section 404 permit or 401 WQC; or
  - Construction of a water-dependent structure or water access areas *(e.g., pier, boat ramp, trail)*.
- If there is no discharge of stormwater to waters of the state through the area between the disturbed portions of the site and any waters of the state located within 50 feet of the project site, permit registrants are not required to comply with the requirements in Section 13.2.4 and this Appendix.
- Where no natural buffer zone exists due to preexisting development disturbances *(e.g., structures, impervious surfaces)* that occurred prior to the initiation of planning for the current development of the site, permit registrants are not required to comply with the requirements in Section 13.2.4 and this Appendix.

  Where some natural buffer zone exists but portions of the area within 50 feet of the surface water of the state are occupied by preexisting development disturbances, the permit registrant is required to comply with the requirements in Section 13.2.4 and this Appendix. For the purposes of calculating the sediment load reduction for either compliance alternative 2 or 3, permit registrants are not expected to compensate for the reduction in buffer function that would have resulted from the area covered by these preexisting disturbances. Clarity about how to implement the compliance alternatives for these situations is provided in B.1.3 and B.1.4 below.

  If during the duration of the project, a permit registrant will disturb any portion of these preexisting disturbances, the area removed will be deducted from the area treated as a "natural buffer zone."
- For "linear construction sites", the permit registrant is not required to comply with this requirement if site constraints *(e.g., limited right-of-way)* make it infeasible to implement one of the Section 13.2.4.a compliance alternatives, provided that, to the extent feasible, disturbances

are limited within 50 feet of any waters of the state and/or supplemental erosion and sediment controls are provided to treat stormwater discharges from earth disturbances within 50 feet of the surface water ofthe state. The permit registrant must also document in the ESCP the rationale for why it is infeasible to implement one of the Section 13.2.4.a compliance alternatives and describe any buffer width retained and supplemental erosion and sediment controls installed.

- For "small residential lot" construction *(i.e., a lot being developed for residential purposes that will disturb less than 1 acre of land but is part of a larger residential project that will ultimately disturb greater than or equal to 1 acre),* the permit registrant has the option of complying with one of the "small residential lot" compliance alternatives in Section B.2 of this Appendix.

Note that permit registrants must document in the ESCP if any disturbances related to any of the above exceptions occurs within the buffer area on the project site.

B.1.3 Requirements for providing and maintaining natural buffer zones

This Section of the appendix applies if the permit registrant chooses compliance alternative 1 (50-foot buffer), compliance alternative 2 (a buffer of < 50 feet supplemented by additional erosion and sediment controls that achieve the equivalent sediment load reduction as the 50-foot buffer), or if a buffer is provided in compliance with one of the "small residential lot" compliance alternatives in Section B.2.

Buffer width measurement

Where a buffer of any size is maintained, the buffer should be measured perpendicularly from any of the following points, whichever is further landward from the waterbody:

1. The ordinary high-water mark of the waterbody, defined as the line on the shore established by fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, and/or the presence of litter and debris; or
2. The edge of the stream or riverbank, bluff, or cliff, whichever is applicable.

Refer to Figure B-2 and Figure B-3. The permit registrant may find that specifically measuring these points is challenging if the flow path of the surface water of the state changes frequently, thereby causing the measurement line for the buffer to fluctuate continuously along the path of the waterbody. Where this is the case, DEQ suggests that rather than measuring each change or deviation along the water's edge, it may be easier to select regular intervals from which to conduct the measurement. For instance, the permit registrant may elect to conduct buffer measurements every 5 to 10 feet along the length of the water.

Additionally, note that if earth disturbing activities will take place on both sides of a surface water of the state that flows through the project site, to the extent that a buffer is established around this water, it must be established on both sides. For example, if the permit registrant chooses compliance alternative 1, and the project calls for disturbances on both sides of a small stream, the permit registrant will need to retain the full 50 feet of buffer on both sides of the water.

However, if construction activities will only occur on one side of the stream, the permit registrant will only need to retain the 50-foot buffer on the side of the stream where the earth disturbance will occur.

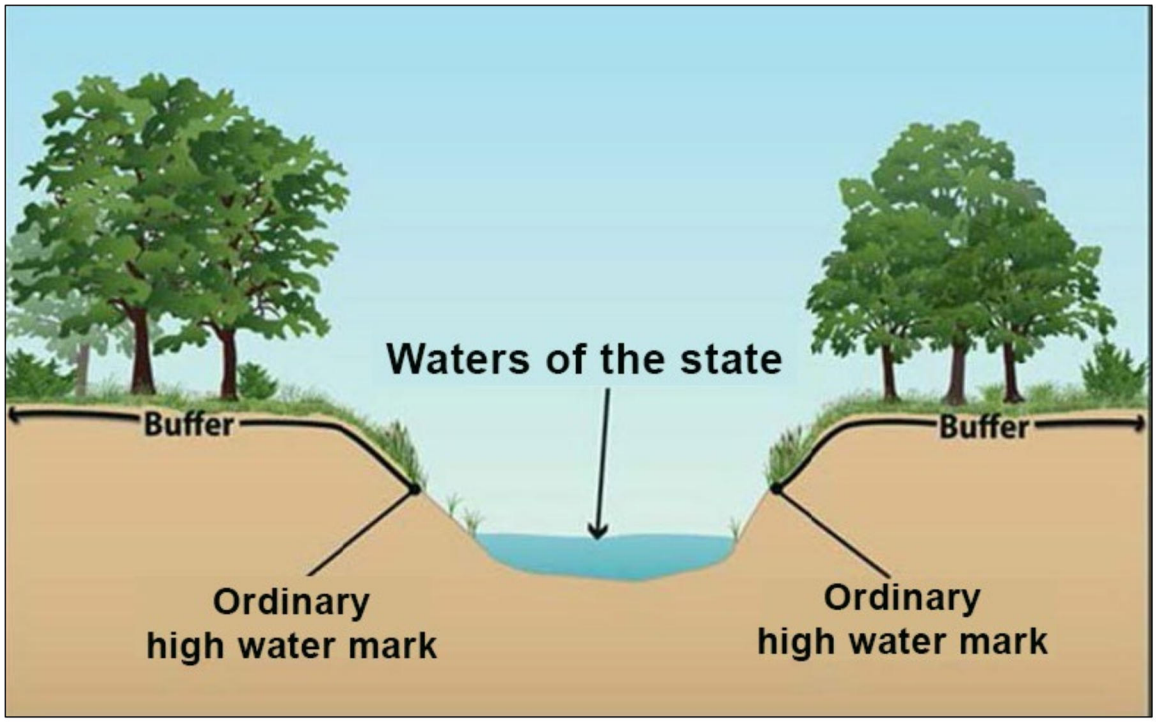


Figure B-2. Buffer measurement from the ordinary high-water mark of the water body, as indicated by a clear natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, and/or the presence of litter/debris.

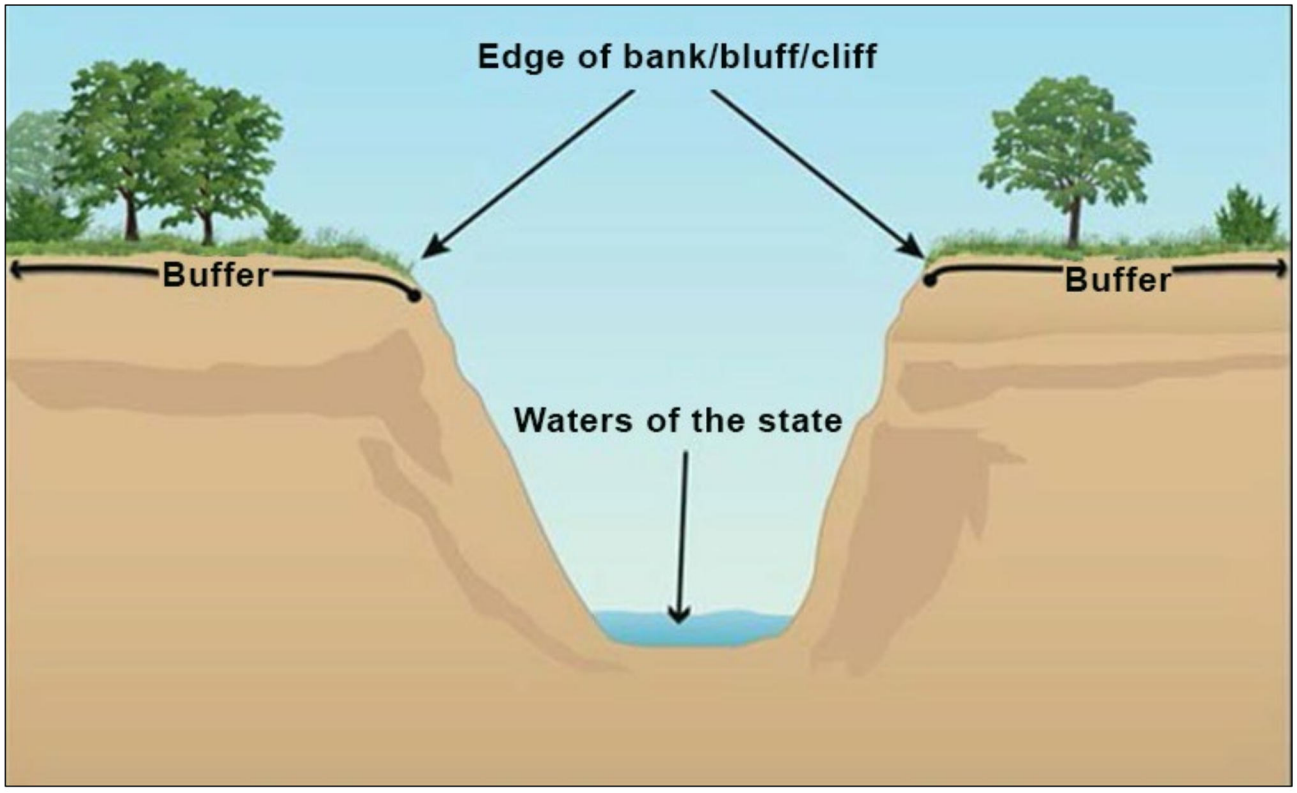


Figure B-3. Buffer measurement from the edge of the bank, bluff, or cliff, whichever is applicable.

Limits to disturbance within the buffer

A permit registrant is in compliance with the requirement to provide and maintain a natural buffer zone if the natural buffer zone that existed prior to the commencement of construction is retained and protected from construction activities. If the buffer area contains no vegetation prior to the commencement of construction (e.g., sand or rocky surface), the permit registrant is not required to plant vegetation. As noted above, any preexisting structures or impervious surfaces may occur in the natural buffer zone provided the permit registrant retain and protect from disturbance the buffer areas outside of the preexisting disturbance.

To ensure that the water quality protection benefits of the buffer are retained during construction, permit registrants are prohibited from conducting any earth disturbing activities within the buffer during permit coverage. In furtherance of this requirement, **prior to commencing earth disturbing activities on the project site, permit registrants must delineate, and clearly mark off, with flags, tape, or a similar marking device, the buffer area on the project site.** The purpose of this requirement is to make the buffer area clearly visible to the people working on site so that unintended disturbances are avoided.

While permit registrants are not required to enhance the quality of the vegetation that already exists within the buffer, permit registrants are encouraged to do so where such improvements will enhance the water quality protection benefits of the buffer. (Note that any disturbances within the buffer related to buffer enhancement are permitted and do not constitute construction disturbances.) For instance, the permit registrant may want to target plantings where limited vegetation exists or replace existing vegetation where invasive or noxious plant species (see http://plants.usda.gov/java/noxiousDriver) have taken over. In the case of invasive or noxious species, the permit registrant may want to remove and replace them with a diversity of native trees, shrubs, and herbaceous plants that are well-adapted to the climatic, soil, and hydrologic conditions on the site. Permit registrants are also encouraged to limit the removal of naturally deposited leaf litter, woody debris, and other biomass, as this material contributes to the ability of the buffer to retain water and filter pollutants.

If a portion of the buffer area adjacent to the surface water of the state is owned by another party and is not under the permit registrant's control, the permit registrant is only required to retain and protect from construction activities the portion of the buffer area that is under their control. For example, if the permit registrant complies with compliance alternative 1 (provide and maintain a 50-foot buffer), but 10 feet of land immediately adjacent to the surface water of the state is owned by a different party than the land on which the construction activities are taking place and the permit registrant does not have control over that land, only the 40-foot buffer area that occurs adjacent to the property on which construction activities are taking place must be retained and protected from construction activities. DEQ would consider the permit registrant to be in compliance with this requirement regardless of the activities that are taking place in the 10-foot area that is owned by a different party than the land on which construction activities are taking place that the permit registrant has no control over.

Discharges to the buffer

The permit registrant must ensure that all discharges from the area of earth disturbance to the natural buffer zone are first treated by the site's erosion and sediment controls (*for example, the permit registrant must comply with the requirement of the 1200-CA permit to install sediment controls along any perimeter areas of the site that will receive pollutant discharges*), **and if necessary, to prevent erosion caused by stormwater flows within the buffer, velocity dissipation devices must be used**. The purpose of this requirement is to decrease the rate of stormwater flow and encourage infiltration so that the pollutant filtering functions of the buffer will be achieved. To comply with this requirement, a permit registrant typically will use devices that physically dissipate stormwater flows so that the discharge entering the buffer is spread out and slowed down.

ESCP documentation

Permit registrants are required to document in their ESCP the natural buffer zone width that is retained. For example, if complying with alternative 1, the permit registrant must specify in their ESCP that a 50-foot buffer is provided. Or, if complying with alternative 2, the permit registrant must document the reduced width of the buffer that will be retained (and must also describe the erosion and sediment controls that will be used to achieve an equivalent sediment reduction, as required in Section B.1.4 below). Note that the permit registrant must also show any buffers on the site map in their ESCP. Additionally, if any disturbances related to the exceptions in Section B.2.2 occur within the buffer area, it must be documented in the ESCP.

B.1.4 Guidance for providing the equivalent sediment reduction as a 50-foot buffer

This Section of the appendix applies if compliance alternative 2 is selected (provide and maintain a buffer that is less than 50 feet that is supplemented by erosion and sediment controls that achieve the sediment load reduction equivalent to a 50-foot buffer) or compliance alternative 3 (implement erosion and sediment controls to achieve the sediment load reduction equivalent to a 50-foot buffer).

Determine whether it is feasible to provide a reduced buffer

DEQ recognizes that there will be a few situations in which it will be infeasible to provide and maintain a buffer of any width. While some of these situations may exempt the permit registrant from the buffer requirement entirely (see B.2.2), if the project site does not qualify for one of these exemptions, there still may be conditions or circumstances at the site that make it infeasible to provide a natural buffer zone. For example, there may be sites where a significant portion of the property on which the earth disturbing activities will occur is located within the buffer area, thereby precluding the retention of natural buffer zone areas.

Therefore, the permit registrant should choose compliance alternative 2 if it is feasible to retain some natural buffer zone on the project site. (Note: For any buffer width retained, the permit registrant is required to comply with the requirements in Section B.1.3, above, concerning the retention of vegetation and restricting earth disturbances). Similarly, if it is determined that it is infeasible to provide a natural buffer zone of any size during construction, the permit registrant should choose alternative 3.

Design controls that provide equivalent sediment reduction as 50-foot buffer

The permit registrant must next determine what additional controls must be implemented on the project site that, alone or in combination with any retained natural buffer zone, achieve a reduction in sediment equivalent to that achieved by a 50-foot buffer.

Note that if only a portion of the natural buffer zone is less than 50 feet, the permit registrant is only required to implement erosion and sediment controls that achieve the sediment load reduction equivalent to the 50-foot buffer for discharges through that area. The permit registrant would not be required to provide additional treatment of stormwater discharges that flow through 50 feet or more of natural buffer zone. See Figure B-4.

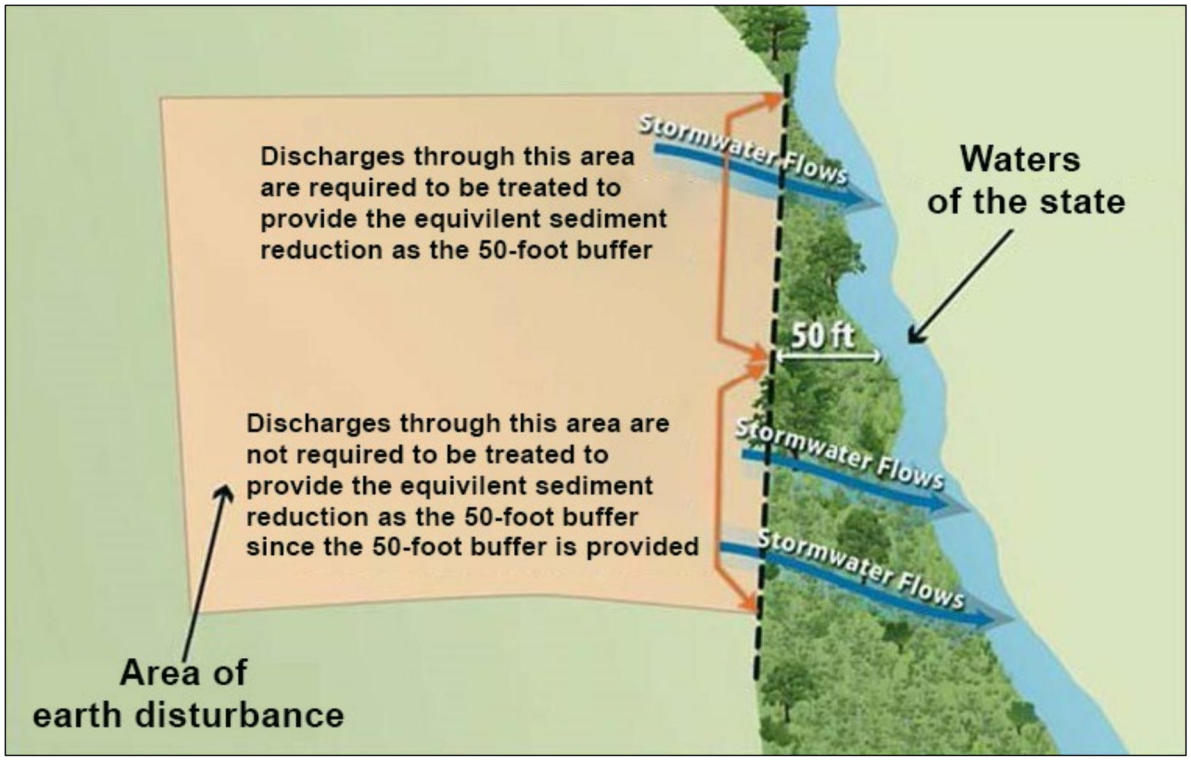


Figure B-4. Example of how to comply with the requirement to provide the equivalent sediment reduction when only a portion of the earth disturbances discharge to a buffer of less than 50- feet.

Steps to help meet compliance alternative 2 and 3 requirements are provided below.

Step 1 - Estimate the sediment reduction from the 50-foot buffer

In order to design controls that match the sediment removal efficiency of a 50-foot buffer, the permit registrant first needs to know what this efficiency is for the project site. The sediment removal efficiencies of natural buffer zones vary according to a few site-specific factors, including precipitation, soil type, land cover, slope length, width, steepness, and the types of erosion and sediment controls used to reduce the discharge of sediment prior to the buffer. DEQ has simplified this calculation by developing buffer performance tables covering a range of vegetation and soil types for the areas covered by the 1200-CA General Permit. See Attachment 1 of this Appendix, Tables B-8 and B-9. Note: buffer performance values in Tables B-8 and B-9 represent the percent of sediment captured through the use of perimeter controls (e.g., silt fences) and 50-foot buffers at disturbed sites of fixed proportions and slope[1].

Using Tables B-8 and B-9 (see Attachment 1 of this Appendix), a permit registrant can determine the sediment removal efficiency of a 50-foot buffer for the site's geographic area by matching the vegetative cover type that best describes the natural buffer area and the type of soils that predominate at the site. For example, if the site is located in Western Oregon (Table B-9), and the buffer vegetation corresponds most closely with that of tall fescue grass, and the soil type at the site is best typified as sand, the site's sediment removal efficiency would be 81 percent.

In this step, the permit registrant should choose the vegetation type in the tables that most closely matches the vegetation that would exist naturally in the buffer area on their project site regardless of the condition

of the buffer. However, because the permit registrant is not required to plant any additional vegetation in the buffer area, in determining what controls are necessary to meet this sediment removal equivalency in Step 2 below, the permit registrant will be able to take credit for this area as a fully vegetated "natural buffer zone."

Similarly, if a portion of the buffer area adjacent to the surface water of the state is owned by another party and is not under the permit registrant's control, the permit registrant can treat the area of land not under their control as having the equivalent vegetative cover and soil type that predominates on the portion of the property on which the construction activities are occurring.

- For example, if the earth disturbances occur within 50 feet of a surface water of the state, but the 10 feet of land immediately adjacent to the surface water of the state is owned by a different party than the land on which the construction activities are taking place and the permit registrant does not have control over that land, the 10 foot area adjacent to the stream can be treated as having the equivalent soil and vegetation type that predominates in the 40 foot area under permit registrant control. The permit registrant would then make the same assumption in Step 2 for purposes of determining the equivalent sediment removal.

Alternatively, the permit registrant may do their own calculation of the effectiveness of the 50-foot buffer based upon site-specific conditions and may use this number as the sediment removal equivalency standard to meet instead of using Tables B-8 and B-9. This calculation must be documented in the ESCP.

Step 2 - Design controls that match the sediment removal efficiency of the 50-foot buffer

Once the permit registrant determines the estimated sediment removal efficiency of a 50-foot buffer for the site in Step 1, the permit registrant must next select stormwater controls that will provide an equivalent sediment load reduction. These controls can include the installation of a single control, such as a sediment pond or additional perimeter controls, or a combination of stormwater controls. Whichever control(s) the permit registrant selects, the permit registrant must demonstrate in the ESCP that the controls will provide at a minimum the same sediment removal capability as a 50-foot natural buffer zone (Step 1). The permit registrant may take credit for the removal efficiencies of the required perimeter controls in the calculation of equivalency, because these were included in calculating the buffer removal efficiencies in Tables B-8 and B-9. (Note: The permit registrant is reminded that the controls must be kept in effective operating condition until complete final stabilization on the disturbed portions of the site discharging to the surface water of the state).

To make the determination that the controls and/or buffer area achieve an equivalent sediment load reduction as a 50-foot buffer, the permit registrant should use a model or other type of calculation. As mentioned above, there are a variety of models available that can be used to support the calculation, including USDA's RUSLE-series programs and the WEPP erosion model, SEDCAD, SEDIMOT, or other models. A couple of examples are provided in Attachment 2 to help illustrate how this determination could be made.

If the permit registrant retains a buffer of less than 50 feet, credit may be taken for the removal that will occur from the reduced buffer and only need to provide additional controls to make up the difference between the removal efficiency of a 50-foot buffer and the removal efficiency of the narrower buffer. For example, if a permit registrant retains a 30-foot buffer and can account for the sediment removal provided by the 30-foot buffer retained, the permit registrant will only need to design controls to make up for the additional removal provided by the 20 feet of buffer that is not being provided. To do this, the permit registrant would plug the width of the buffer that is retained into RUSLE or another model, along with other stormwater controls that will together achieve a sediment reduction equivalent to a natural 50-foot buffer

As described in Step 1 above, the permit registrant can take credit for the area retained as a "natural buffer zone" as being fully vegetated, regardless of the condition of the buffer area.

- For example, if the earth disturbances occur 30 feet from a surface water of the state, but the 10 feet of land immediately adjacent to the surface water of the state is owned by a different party than the land on which the construction activities are taking place and the permit registrant does not have control over that land, the permit registrant can treat the 10-foot area as a natural buffer zone, regardless of the activities that are taking place in the area. Therefore, the permit registrant can assume (for purposes of the equivalency calculation) that the site is providing the sediment removal equivalent of a 30-foot buffer, and the permit registrant will only need to design controls to make up for the additional removal provided by the 20-foot of buffer that is not being provided.

Step 3 - Document how site-specific controls will achieve the sediment removal efficiency of the 50-foot buffer

In Steps 1 and 2, the permit registrant determined both the expected sediment removal efficiency of a 50-foot buffer at the site and used this number as a performance standard to design controls to be installed at the site, which alone or in combination with any retained natural buffer zone, achieves the expected sediment removal efficiency of a 50-foot buffer at the site. The final step is to document in the ESCP the information the permit registrant relied on to calculate the equivalent sediment reduction as an undisturbed natural buffer zone.

DEQ will consider the documentation to be sufficient if it generally meets the following:

- For Step 1, refer to the table in Attachment 1 used to derive the estimated 50-foot buffer sediment removal efficiency performance. Include information about the buffer vegetation and soil type that predominate at the site, which were used to select the sediment load reduction value in Tables B-8 and B-9. Or, if a site-specific calculation for sediment removal efficiency was conducted, provide the specific removal efficiency, and the information relied on to make the site-specific calculation.
- For Step 2, (1) Specify the model used to estimate sediment load reductions from the site; and (2) the results of calculations showing how the controls will meet or exceed the sediment removal efficiency from Step 1.

If the permit registrant chose compliance alternative 3, a description must also be included in the ESCP of why it is infeasible to provide and maintain an undisturbed natural buffer zone of any size.

B.2 Small residential lot compliance alternatives

DEQ has developed two additional compliance alternatives applicable only to "small residential lots" that are unable to provide and maintain a 50-foot buffer.

A **small residential lot** is a lot or grouping of lots being developed for residential purposes that will disturb less than 1 acre of land, but that is part of a larger residential project that will ultimately disturb greater than or equal to 1 acre.

The following steps describe how a small residential lot permit registrant would achieve compliance with one these 2 alternatives.

B.2.1 Small residential lot compliance alternative eligibility

In order to be eligible for the small residential lot compliance alternatives, the following conditions must be met:

a. The lot or grouping of lots meets the definition of "small residential lot"; and

b. The permit registrant must follow the guidance for providing and maintaining a natural buffer zone in Section B.1.3 of this Appendix, including:

   i. Ensure that all discharges from the area of earth disturbance to the natural buffer zone are first treated by the site's erosion and sediment controls, and use velocity dissipation devices, if necessary, to prevent erosion caused by stormwater within the buffer;

   ii. Document in the ESCP the natural buffer zone width retained on the property, and show the buffer boundary on the site plan; and

   iii. Delineate, and clearly mark off, with flags, tape, or other similar marking device, all-natural buffer zone areas.

B.2.2 Small residential lot compliance alternatives

The permit registrant must next choose from one of two small residential lot compliance alternatives and implement the stormwater control practices associated with that alternative.

> *Note: The compliance alternatives provided below are not mandatory. Permit registrants of small residential lots can alternatively choose to comply with the any of the options that are available to other sites in Sections 13.2.4.a and B.2.1 of this Appendix.*

Small residential lot compliance alternative 1

Alternative 1 is a straightforward tiered-technology approach that specifies the controls that a small residential lot must implement based on the buffer width retained. To meet the requirements of small residential lot compliance alternative 1, the permit registrant must implement the controls specified in Table B-1 based on the buffer width to be retained. See footnote 3, below, for a description of the controls that must be implemented.

- For example, if a permit registrant of a small residential lot will be retaining a 35-foot buffer and chose Small Residential Lot Compliance Alternative 1, the permit registrant must implement double perimeter controls between earth disturbances and the surface water of the state.

In addition to implementing the applicable control, the permit registrant must also document in the ESCP how compliance with small residential lot compliance alternative 1 will be achieved.

Table B-1. Alternative 1 Requirements[2]

Retain 50-foot Buffer	Retain <50 and >30-foot Buffer	Retain ≤ 30-foot Buffer
No Additional Requirements	Double Perimeter Controls	Double Perimeter Controls and 7-Day Site Stabilization

Small residential lot compliance alternative 2

Alternative 2 specifies the controls that a builder of a small residential lot must implement based on both the buffer width retained and the site's sediment discharge risk. By incorporating the sediment risk, this approach may result in the implementation of controls that are more appropriate for the site's specific conditions.

Step 1 – Determine the site's sediment risk level

To meet the requirements of Alternative 2, the permit registrant must first determine the site's sediment discharge "risk level" based on the site's slope, location, and soil type. To help determine the site's sediment risk level, DEQ developed five different tables for different slope conditions. The permit registrant should select the table that most closely corresponds to the site's average slope. One source for determining the site's predominant soil type is the USDA's Web Soil Survey located at http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx.

- For example, if the site's average slope is 7 percent, the permit registrant should use Table B-4 to determine the site's sediment risk.

After determining which table applies to the site, the permit registrant must then use the table to determine the "risk level" (e.g., "low", "moderate", or "high") that corresponds to the site's location and predominant soil type.[3]

- For example, based on TableB-3, a site located in Western Oregon with a 4 percent average slope and with predominately sandy clay loam soils would fall into the "moderate" risk level.

Table B-2. Risk Levels for Sites with Average Slopes of ≤ 3 Percent

Location	Soil Type Clay	Silty Clay Loam or Clay-Loam	Sand	Sandy Clay Loam, Loamy Sand or Silty Clay	Loam, Silt, Sandy Loam or Silt Loam
Eastern Oregon	Low	Low	Low	Low	Low
Western Oregon	Low	Moderate	Low	Low	Moderate

Table B-3. Risk Levels for Sites with Average Slopes of > 3 Percent and ≤ 6 Percent

Location	Soil Type Clay	Silty Clay Loam or Clay-Loam	Sand	Sandy Clay Loam, Loamy Sand or Silty Clay	Loam, Silt, Sandy Loam or Silt Loam
Eastern Oregon	Low	Low	Low	Low	Low
Western Oregon	Moderate	Moderate	Low	Moderate	High

Table B-4. Risk Levels for Sites with Average Slopes of > 6 Percent and ≤ 9 Percent

Location	Soil Type Clay	Silty Clay Loam or Clay-Loam	Sand	Sandy Clay Loam, Loamy Sand or Silty Clay	Loam, Silt, Sandy Loam or Silt Loam
Eastern Oregon	Low	Low	Low	Low	Low
Western Oregon	Moderate	Moderate	Moderate	Moderate	High

[2] Description of Additional Controls Applicable to Small Residential Lot Compliance Alternatives 1 and 2:

- **No Additional Requirements:** If a buffer of 50 feet or greater is maintained, then the buffer is not subject to any additional requirements. Note that it is required to install perimeter controls between the disturbed portions of the site and the buffer in accordance with Part 2.2.3.
- **Double Perimeter Control:** In addition to the reduced buffer width retained on the site, the registrant must provide a double row of perimeter controls between the disturbed portion of the site and the water of the U.S. spaced a minimum of 5 feet apart.
- **Double Perimeter Control and 7-Day Site Stabilization:** In addition to the reduced buffer width retained on the site and the perimeter control implemented in accordance, the permit registrant must provide a double row of perimeter controls between the disturbed portion of the site and the water of the U.S. spaced a minimum of 5 feet apart, and it is required to complete the stabilization activities specified in the 1200-CA permit within 7 calendar days of the temporary or permanent cessation of earth disturbing activities.

[3] One source for determining your site's predominant soil type is the USDA's Web Soil Survey located at: http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx.

Table B-5. Risk Levels for Sites with Average Slopes of > 9 Percent and ≤ 15 Percent

Location	Soil Type Clay	Silty Clay Loam or Clay-Loam	Sand	Sandy Clay Loam, Loamy Sand or Silty Clay	Loam, Silt, Sandy Loam or Silt Loam
Eastern Oregon	Low	Low	Low	Low	Low
Western Oregon	Moderate	Moderate	Moderate	Moderate	High

Table B-6. Risk Levels for Sites with Average Slopes of > 15 Percent

Location	Soil Type Clay	Silty Clay Loam or Clay-Loam	Sand	Sandy Clay Loam, Loamy Sand or Silty Clay	Loam, Silt, Sandy Loam or Silt Loam
Eastern Oregon	Low	Low	Low	Low	Moderate
Western Oregon	High	High	Moderate	High	High

Step 2 – Determine which additional controls apply

Once the permit registrant determines the site's "risk level", the additional controls that need to be implemented on the site must be determined next, based on the width of buffer that is to be retained. Table B-7 specifies the requirements that apply based on the "risk level" and buffer width retained.

- For example, if the permit registrant of a small residential lot that falls into the "moderate" risk level and decides to retain a 20-foot buffer, it will be determined using Table B-7 that double perimeter controls need to be implemented to achieve compliance with small residential lot compliance alternative 2.

The permit registrant must also document in the ESCP compliance with small residential lot compliance alternative 2.

Table B-7. Alternative 2 Requirements

Risk Level Based on Estimated Soil Erosion	Retain ≥ 50' Buffer	Retain <50' and >30' Buffer	Retain ≤30' and >10' Buffer	Retain ≤ 10' Buffer
Low Risk	No Additional Requirements	No Additional Requirements	Double Perimeter Control	Double Perimeter Control
Moderate Risk	No Additional Requirements	Double Perimeter Control	Double Perimeter Control	Double Perimeter Control and 7-Day Site Stabilization
High Risk	No Additional Requirements	Double Perimeter Control	Double Perimeter Control and 7-Day Site Stabilization	Double Perimeter Control and 7-Day Site Stabilization

Description of additional controls applicable to small residential lot compliance alternatives 1 and 2:

- **No Additional Requirements:** If a buffer of 50 feet or greater is implemented, then the permit registrant is not subject to any additional requirements. Note that the permit registrant is required to install perimeter controls between the disturbed portions of the site and the buffer.
- **Double Perimeter Control:** In addition to the reduced buffer width retained on the site, the permit registrant must provide a double row of perimeter controls between the disturbed portion of the site and the surface water of the state spaced a minimum of 5 feet apart.
- **Double Perimeter Control and 7-Day Site Stabilization:** In addition to the reduced buffer width retained on the site and the perimeter control implemented, the permit registrant must provide a double row of perimeter controls between the disturbed portion of the site and the surface water of the state spaced a minimum of 5 feet apart, and is required to complete the stabilization activities specified in the 1200-CA permit within 7 calendar days of the temporary or permanent cessation of earth disturbing activities.

Attachment 1: Sediment removal efficiency tables

DEQ recognizes that very high removal efficiencies, even where theoretically achievable by a 50-foot buffer, may be very difficult to achieve in practice using alternative controls. Therefore, in the tables below, DEQ has limited the removal efficiencies to a maximum of 90%. Efficiencies that were calculated at greater than 90% are shown as 90%, and this is the minimum percent removal that must be achieved by alternative controls. The buffer performances were calculated based on a denuded slope upgradient of a 50-foot buffer and perimeter controls, as perimeter controls are a standard requirement.

Table B-8. Estimated 50-foot Buffer Performance in Eastern Oregon*

	Estimated % Sediment Removal				
Type of Buffer Vegetation**	**Clay**	**Silty Clay Loam or Clay-Loam**	**Sand**	**Sandy Clay Loam, Loamy Sand or Silty Clay**	**Loam, Silt, Sandy Loam or Silt Loam**
Tall Fescue Grass	42	52	44	48	85
Medium-density Weeds	28	30	28	26	60
Low-density Warm-season Native Bunchgrass (i.e., Grama Grass)	25	26	24	24	55
Northern Mixed Prairie Grass	28	30	28	26	50
Northern Range Cold Desert Shrubs	28	28	24	26	50

* Applicable for sites with less than nine percent slope
** Characterization focuses on the under-story vegetation

Table B-9. Estimated 50-foot Buffer Performance in Western Oregon*

	Estimated % Sediment Removal				
Type of Buffer Vegetation**	**Clay**	**Silty Clay Loam or Clay-Loam**	**Sand**	**Sandy Clay Loam, Loamy Sand or Silty Clay**	**Loam, Silt, Sandy Loam or Silt Loam**
Warm-season Grass (i.e., Switchgrass, Lemongrass)	79	90	90	90	90
Cool-season Dense Grass (Kentucky Bluegrass, Smooth Bromegrass, Timothy)	78	90	90	90	90
Tall Fescue Grass	76	90	81	89	90
Medium-density Weeds	66	76	60	72	66

* Applicable for sites with less than nine percent slope
** Characterization focuses on the under-story vegetation

Sediment removal efficiency tables – questions and answers

- **What if my specific buffer vegetation is not represented in Tables B-8 and B-9?**
  Tables B-8 and B-9 provide a wide range of factors affecting buffer performance; however, there are likely instances where the specific buffer vegetation type on the site is not listed. If the permit registrant does not see a description of the type of vegetation present at the site, the permit registrant should choose the vegetation type that most closely matches the vegetation type on the site. Permit registrants can contact the local Cooperative Extension Service Office (-and-extension-map) for assistance in determining the vegetation type in Tables B-8 and B-9 that most closely matches the site-specific vegetation.

- **What if there is high variability in local soils?**
  DEQ recognizes that there may be a few different soil type(s) on any given construction site. General soil information can be obtained from USDA soil survey reports (http://websoilsurvey.nrcs.usda.gov) or from individual site assessments performed by a certified soil expert. Tables B-8 and B-9 present generic soil texture classes, grouping individual textures where DEQ has determined that performance is similar. If the site contains different soil texture classes, the permit registrant should use the soil type that best approximates the predominant soil type at the site.

- **What if my site slope is greater than 9 percent after final grade is reached?**
  As indicated in the buffer performance tables, the estimated sediment removal efficiencies are associated with disturbed slopes of up to 9 percent grade. Where the graded site has an average slope of greater than 9 percent, the permit registrant should calculate a site-specific buffer performance.

- **How do I calculate my own estimates for sediment reduction at my specific site?**
  If the permit registrant determines that it is necessary to calculate the sediment removal efficiency of the natural buffer zone on the project site using site-specific conditions (e.g., slopes at the site are greater than 9 percent), a range of available models that are available to facilitate this calculation can be utilized, including USDA's RUSLE- series programs and the WEPP erosion model, SEDCAD, SEDIMOT, or other equivalent models.

- **What is my estimated buffer performance if my site location is not represented by Tables B-8 and B-9?**
  If the site is located in an area not represented by Tables B-8 and B-9, the permit registrant should use the table that most closely approximates conditions at the site (Table B-8 represents conditions typical to Eastern Oregon, Table B-9 represents conditions typical to Western Oregon). The permit registrant may instead choose to conduct a site-specific calculation of the buffer performance.

- **What if only a portion of my site drains to the buffer area?**
  If only a portion of the site drains to a surface water of the state, where that water is within 50 feet of earth disturbances, the permit registrant is only required to meet the equivalency requirement for the stormwater flows corresponding to those portions of the site. See Example 2 below for an example of how this is expected to work.

Attachment 2 - Examples of how to use the sediment removal efficiency tables

Example 1. Comparatively wet location (7.5-acre site located in Western Oregon)

The permit registrant of a 7.5-acre construction site in Western Oregon has determined that it is infeasible to establish a buffer of any size on the site and is now required to select and install controls that will achieve an equivalent sediment load reduction as that estimated in B-9 for their site conditions. The first step is to identify what percentage of eroded sediment is estimated to be retained from a 50-foot buffer. For this example, it is assumed that the site has a relatively uniform gentle slope (3 percent), so Table B-9 can be used to estimate the 50-foot buffer sediment load reduction. If the site's buffer vegetation is best typified by cool-season dense grass and the underlying soil is of a type best described as loamy sand, the 50-foot buffer is projected to capture 90 percent of eroded sediment from the construction site.

The second step is to determine what sediment controls can be selected and installed in combination with the perimeter controls already required to be implemented at the site, which will achieve the 90 percent sediment removal efficiency from Table B-9. For this example, using the RUSLE2 profile model, it was determined that installing a pair of shallow- sloped diversion ditches to convey runoff to a well-designed and maintained sediment basin provides 99 percent sediment removal. Because the estimated sediment reduction is greater than the required 90 percent that a 50-foot buffer provides, the permit registrant will have met the buffer requirements. See Figure B-5. The permit registrant could also choose a different set of controls, if at least a 90 percent sediment removal efficiency is achieved.

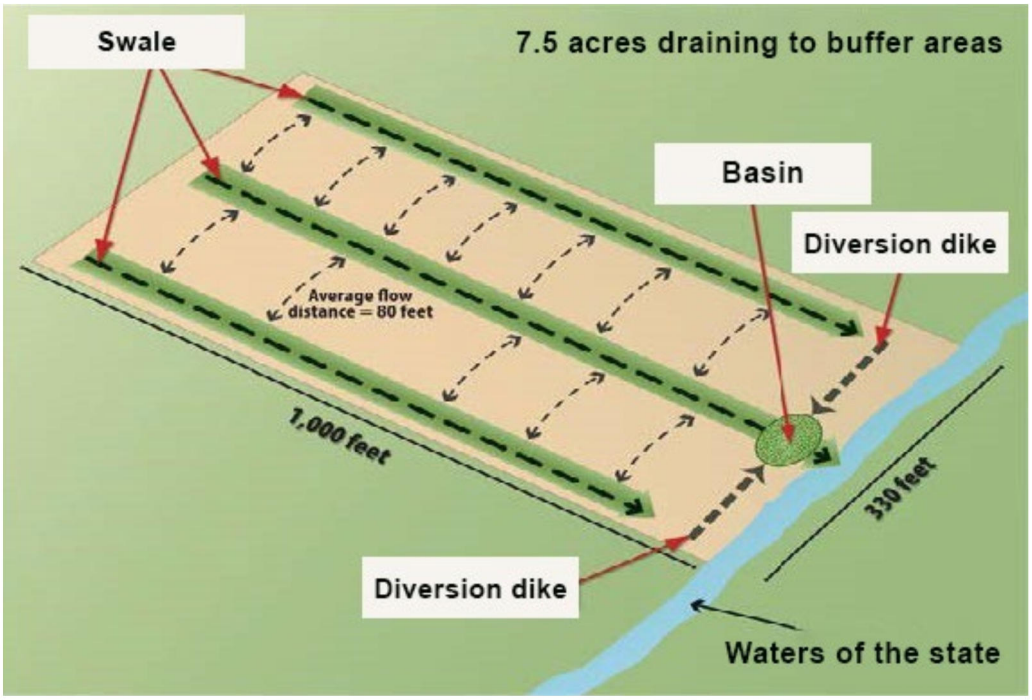


Figure B-5. Example 1 – Equivalent Sediment Load Reductions at a 7.5-acre Site in Western Oregon.

Example 2. Arid location with pre-existing disturbances in the natural buffer zone (6.5-acre site located in Eastern Oregon)

A permit registrant of a site in Eastern Oregon determines that it is not feasible to provide a 50-foot buffer, but a 28-foot buffer can be provided. Because the permit registrant will provide a buffer that is less than 50 feet, the permit registrant must determine which controls, in combination with the 28-foot buffer, achieve a sediment load reduction equivalent to the 50-foot buffer.

In this example, the project will disturb 6.5 acres of land, but only 1.5 acres of the total disturbed area drains to the buffer area. Within the 28-foot buffer area is a preexisting concrete walkway. Like Example 1, the equivalence analysis starts with Step 1in Section B.1.4 of this Appendix with a review of the Eastern Oregon buffer performance (Table B-8).

The permit registrant determines that the predominate vegetation type in the buffer area is prairie grass, the soil type is like silt, and the site is of a uniform, shallow slope (e.g., 3 percent grade). Although the permit registrant will take credit for the disturbance caused by the concrete walkway as a natural buffer zone in Step 2, here the permit registrant can treat the entire buffer area as being naturally vegetated with prairie grass. Based on this information, the permit registrant refers to Table B-8 to estimate that the 50-foot buffer would retain 50 percent of eroded soil.

The second step is to determine, based on the 50 percent sediment removal efficiency found in Table B-8, what sediment controls, in combination with the 28-foot buffer area, can be implemented to reduce sediment loads by 50 percent or more. The permit registrant does not have to account the reduction in buffer function caused by the preexisting walkway and can take credit for the entire 28-foot buffer being fully vegetated in the analysis. For this example, using the RUSLE2 profile model, the permit registrant determined that installing a fiber roll barrier between the silt fence (already required) and the 28-foot buffer will achieve an estimated 84 percent sediment removal efficiency. (See Figure B-6).

Note that this permit registrant is subject to the requirement in Section B.1.3 of this Appendix to ensure that discharges through the silt fence, fiber roll barrier, and 28-foot buffer do not cause erosion within the buffer. The estimated sediment reduction is greater than the required 50 percent; therefore, the permit registrant will have met the buffer alternative requirement.

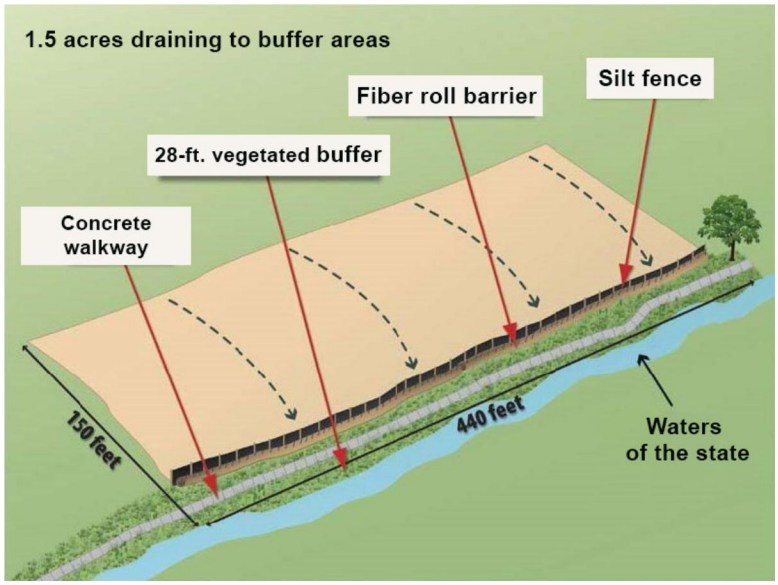


Figure B-6. Example 2 – Equivalent Sediment Load Reductions at a 6.5-acre Site in Eastern Oregon.

Notes

[1] DEQ used the following when developing the buffer performance tables:

- The sediment removal efficiencies are based on the U.S. Department of Agriculture's RUSLE2 ("Revised Universal Soil Loss Equation 2") model for slope profiles using a 100-foot-long denuded slopes.
- Sediment removal was defined as the annual sediment delivered at the downstream end of the 50-foot natural buffer zone (tons/yd/acre) divided by the annual yield from denuded area (tons/yr./acre).
- As perimeter controls are also required by the 1200-CA General Permit, sediment removal is in part a function of the reduction due to a perimeter control (i.e., silt fence) located between the disturbed portion of the site and the upstream edge of the natural buffer zone and flow traveling through a 50-foot buffer of undisturbed natural vegetation. A perimeter control required under Section 13.2.6 may not also be categorized as a sediment load reduction control when calculating sediment removal efficient to justify proposed natural buffer zone encroachment; therefore, a perimeter control and an additional BMP(s) must be implemented to achieve the necessary sediment load reduction when a natural buffer zone is encroached upon.
- It was assumed that construction sites have a relatively uniform slope without topographic features that accelerate the concentration for erosive flows.
- It was assumed that vegetation has been removed from the disturbed portion of the site and a combination of cuts and fills have resulted in a smooth soil surface with limited retention of near-surface root mass.

To represent the influence of soil, DEQ presents general soil texture classifications in its evaluation of buffer performance. To represent different types of buffer vegetation, DEQ presents four or more common vegetative types for the State of Oregon covered under the permit. For each vegetation type evaluated, DEQ considered only permanent, non-grazed, and non-harvested vegetation, on the assumption that a natural buffer zone adjacent to the surface water of the state will typically be undisturbed. DEQ also considered slope steepness and found that risk levels present in Tables B-2 through B-6 are achievable for slopes that are less than nine percent.

APPENDIX C

EROSION AND SEDIMENT CONTROL PLAN CHECKLIST

Oregon Department of Transportation

Erosion and Sediment Control Plan 1200-CA Checklist

Project Name:		Key Number:
ESC Designer Name:	**ESC Manager Name:**	**Date Prepared:**

The ESC Plan designer begins the process of filling out a copy of this checklist, providing all information available during design Phase. The designer shall coordinate with a Haz-Mat specialist in providing the Environmental Management Plan (EMP).

This Checklist will remain with, and be included as part of ESCP as the project moves into construction. The Erosion and Sediment Control Manager (ESCM) will then provide updates to this ESCP checklist during construction and submits these updates to DEQ according to specified timelines.

There are essentially 2 ESCPs that will be prepared, there is the contract plans ESCP, and there is a formal ESCP submitted to DEQ. The ESCP that is included in the Contract plans are succinct and provide only information needed to direct the contractor. The Formal ESCP that is submitted to DEQ provides additional information to provide a snapshot of the Project for the regulatory agency.

Yes	No/NA	DEQ Erosion and Sediment Control Plan (ESCP) Submittal
☐	☐	DEQ Cover Sheet Including DEQ's 42 notes
☐	☐	Include in symbols legend all features including drainage features • Label paved areas, both existing and new • Slope arrows for both existing (shaded) and new (solid) conditions
☐	☐	Roadside Development Plans as final stabilization
☐	☐	01030 Special Provision with seed mix.
☐	☐	Standard Drawings for BMPs used on Plans
☐	☐	relevant drainage and hydraulic feature details
☐	☐	Items not relevant to the Project are noted in the narrative.
☐	☐	Preparer's stamp and signature
☐	☐	Sheets for each phase of work • Demolition, clearing, grading & earthwork - Include Standard Drawings • Streets & utilities • Final landscaping and stabilization - Subtitle Roadside development Plans “Final Stabilization” - include 01030 special provision
☐	☐	Name and location of site
☐	☐	All contractors • Personnel working on construction • Personnel (name & position) installing, maintaining & repairing ESC features • Personnel (name & position, contact information and certification w/certification numbers) monitoring & reporting on ESC function.
☐	☐	EMP (written document outlining procedures for contaminated material, toxic pollutants etc.)
☐	☐	Site Description including: • Nature of construction including structure demo. • Impairment status of receiving waterbody (if hydrologic connection exists between construction and waterbody)
☐	☐	Waterbodies & wetlands impacted by construction
☐	☐	Waterbodies & wetlands within one mile of Project (identify with text note if water is beyond plan sheet image)

Oregon Department of Transportation

Erosion and Sediment Control Plan 1200-CA Checklist

Yes	No/NA	DEQ Erosion and Sediment Control Plan (ESCP) Submittal
☐	☐	Total project area
☐	☐	Total area of lands disturbance
☐	☐	Description of construction support areas (staging, stockpile, construction trailer) both on-site and off-site.
☐	☐	The maximum area to be disturbed at any given time (both on-site and off-site)
☐	☐	Description and Schedule including: • Start dates for each construction activity type, including vegetative stabilization • Stop dates - permanent or temporary • Estimated dates of temporary or permanent vegetative stabilization for each portion of site • Removal of stormwater control, removal of equipment and end of construction related pollution creating activities
☐	☐	Type of fill material and type/nature of existing soils
☐	☐	Seed mix(s)
☐	☐	Notice when cementaceous material is used to amend subsoils & that pH monitoring will occur
☐	☐	List non-stormwater discharges
☐	☐	List and description and inventory of all potential pollution generating activities which could be discharged by stormwater& account of potential leaks
☐	☐	Stormwater controls for preventing erosion, controlling sedimentation & treatment including: • Description of specific controls (plans and standard drawings satisfy) • Specifications • Maintenance specifications (in Standard Specs) • Timetable for each BMP implementation & duration of use
☐	☐	Natural buffer zone and/or equivalent sediment controls • The compliance alternative to be implemented; • If complying with alternative 1, the width of natural buffer retained; • If complying with alternative 2 or 3, the erosion and sediment control(s) the registrant will use to achieve an equivalent sediment reduction, and any information the registrant relied upon to demonstrate the equivalency; • If complying with alternative 3, a description of why it is infeasible for the registrant to provide and maintain an undisturbed natural buffer of any size; • For "linear construction sites" where it is infeasible to implement compliance alternative 1, 2, or 3, a rationale for this determination, and a description of any buffer width retained and/or supplemental erosion and sediment controls installed; and • A description of any disturbances that are exempt under Section 13.2.1 that occur within 50 feet of a water of the state. • A description of the vegetated buffers, sized at 50 feet (horizontally) plus an additional 25 feet (horizontally) per five degrees of slope or DEQ approved control measures of equal effectiveness for any waterbody that is listed as impaired and requiring a TMDL for turbidity or sedimentation on the most recently approved Oregon 303(d) list, or has an established TMDL for turbidity or sedimentation.
☐	☐	Perimeter Controls - include documentation that risk is addressed • Provide maintenance requirements associated with perimeter controls
☐	☐	Sediment track out controls (construction entrance, wheel wash etc.)
☐	☐	Sediment basins (sediment traps) with design storm and calculations and details.
☐	☐	Sediment basin design shall be stamped by licensed engineer.
☐	☐	Treatment chemicals - Specific controls & implementation to ensure treatment chemicals do not result in water quality exceedances
☐	☐	Stabilization measures - vegetative or non-vegetative soil cover

Oregon Department of Transportation

Erosion and Sediment Control Plan 1200-CA Checklist

Yes	No/NA	DEQ Erosion and Sediment Control Plan (ESCP) Submittal
☐	☐	Spill prevention procedures • Procedure for stopping, containing & cleaning up spills, leaks & other releases • ESCP may reference Spill Prevention Control & Countermeasure plan • Waste management procedures • Locations where fertilizer is applied
☐	☐	Staff Training - Furnish verification that ESCM has completed approved training
☐	☐	Planned business days of project operation.

Yes	No/NA	DEQ ESCP Site Map Submittal
☐	☐	Roads and features for DEQ to locate and access the site; Boundaries of the property
☐	☐	Depict the drainage patterns of stormwater and authorized non-stormwater before and after major grading activities
☐	☐	Locations where construction activities will occur, including: • Locations where land disturbing activities will occur (note any phasing), including any demolition activities; • Approximate slopes before and after major grading activities (pre and post- elevation contours); • For steep slopes (see definitions), clearly label with the words "Steep Slope" and include the percentage grade; • Locations where sediment, soil, or other construction materials will be stockpile • Clearly label any water of the state crossings with words "water crossing"; • Designated points where vehicles will exit onto paved roads; • Locations of structures and other impervious surfaces upon completion of construction; • Locations of on-site and off-site construction support activity areas covered by this permit
☐	☐	Locations of springs, wetlands, surface waters, and all waters of Oregon within and one mile downstream of the site's discharge point
☐	☐	Identify if any surface waters are 303(d) Category 4 and 5 listed as impaired (when the discharge enters an impaired watershed unit, the listing will only be applied if there is a hydrologic connection between the receiving water and assessment water body causing the impairment);
☐	☐	Riparian areas and vegetation including trees and associated rooting zones, and vegetation areas to be preserved;
☐	☐	Vegetated buffer zones and or equivalent sediment controls between the site and sensitive areas (e.g. wetlands), and other areas to be preserved, clearly label with the words "Natural Buffer Zone"
☐	☐	Clearly label the type and extent of pre-construction cover on the site (e.g., vegetative cover, forest, pasture, pavement, structures)
☐	☐	Temporary and permanent stormwater conveyance systems
☐	☐	Location of concrete wash out
☐	☐	Location of sanitary facilities
☐	☐	Location of the nearest official rain gauge, or, if used, location of the registrant's onsite rain gauge
☐	☐	Onsite water disposal locations (e.g. for dewatering)
☐	☐	Storm drain catch basins depicting inlet protection, and a description of the type of catch basins used (e.g. field inlet, curb inlet, grated drain, and combination)
☐	☐	Septic drain field
☐	☐	Existing or proposed drywells or other UIC
☐	☐	Detention ponds, storm drain piping, and inflow and outflow details (e.g. bottom elevations and inverts)
☐	☐	Post-construction stormwater facilities designed and engineered to infiltrate or filter stormwater and associated access restriction control measures

Oregon Department of Transportation

Erosion and Sediment Control Plan 1200-CA Checklist

☐	☐	Locations of all potential pollutant-generating activities
☐	☐	Locations of stormwater controls, including any shared controls utilized to comply with this permit
Yes	**No/NA**	**DEQ ESCP Site Map Submittal**
☐	☐	Any other applicable features or controls that are associated with pollution prevention in stormwater discharges
☐	☐	Locations where polymers, flocculants, or other treatment chemicals will be used and stored
☐	☐	Locations of engineered soils (with cementaceous amendments)
☐	☐	Locations of engineered sediment basins
☐	☐	Receiving water(s). Stormwater and authorized non-stormwater discharge point locations, including: • Locations where stormwater and/or authorized non-stormwater will be discharged to storm drain inlets; and • Locations where stormwater or authorized non-stormwater will be discharged directly to surface waters of the state.
☐	☐	Perimeter controls for a "linear construction site"
☐	☐	Sediment track-out controls
☐	☐	Stabilization measures. The registrant must include the specific vegetative and/or non-vegetative practices that will be used.
☐	☐	Signed and dated by preparer (designer & ESCM)
☐	☐	Attachments - Environmental Management Plan

Oregon Department of Transportation

Erosion and Sediment Control Plan 1200-CA Checklist

Preparer Signature	Date	Reviewer Signature	Date

APPENDIX D

EROSION AND SEDIMENT CONTROL PLAN TEMPLATE FOR 1200-CA COVERAGE

EROSION AND SEDIMENT CONTROL PLAN (ESCP)

PROJECT NAME

CITY, LINN COUNTY, OREGON

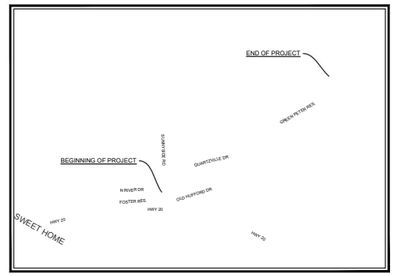
DEQ 1200-CA PERMIT REQUIREMENTS:

1. ONCE KNOWN, INCLUDE A LIST OF ALL CONTRACTORS THAT WILL ENGAGE IN CONSTRUCTION ACTIVITIES ON SITE, AND THE AREAS OF THE SITE WHERE THE CONTRACTOR(S) WILL ENGAGE IN CONSTRUCTION ACTIVITIES.REVIEW THE LIST AS APPROPRIATE UNTIL PERMIT COVERAGE IS TERMINATED (SECTION 15.4.c.i). IN ADDITION INCLUDE A LIST OF ALL PERSONNEL (BY NAME AND POSITION) THAT ARE RESPONSIBLE FOR THE DESIGN, INSTALLATION AND MAINTENANCE OF STORMWATER CONTROL MEASURES (e.g. ESCP DEVELOPER, BMP INSTALLER (SEE SECTION 15.10), AS WELL AS THEIR INDIVIDUAL RESPONSIBILITIES. (SECTION 15.4.c.ii)
2. VISUAL MONITORING INSPECTION REPORTS MUST BE MADE IN ACCORDANCE WITH DEQ 1200-CA PERMIT REQUIREMENTS. (SECTION 17.5)
3. INSPECTION LOGS MUST BE KEPT IN ACCORDANCE WITH DEQ's 1200-CA PERMIT REQUIREMENTS. (SECTION 17.5.q)
4. RETAIN A COPY OF THE ESCP AND ALL REVISIONS ON SITE AND MAKE IT AVAILABLE ON REQUEST DEQ, AGENT, OR LOCAL MUNICIPALITY.(SECTION 15.7)
5. THE PERMIT REGISTRANT MUST IMPLEMENT THE ESCP. FAILURE TO IMPLEMENT ANY OF THE CONTROL MEASURES OR PRACTICES DESCRIBED IN THE ESCP IS A VIOLATION OF THE PERMIT. (SECTIONS 15 AND 15.11)
6. THE ESCP MUST BE ACCURATE AND REFLECT SITE CONDITIONS. (SECTION 15.8)
7. SUBMISSION OF ALL ESCP REVISIONS IS NOT REQUIRED. SUBMITTAL OF THE ESCP REVISIONS IS ONLY UNDER SPECIFIC CONDITIONS. SUBMIT ALL NECESSARY REVISIONS TO DEQ OR AGENT WITHIN 10 DAYS. (SECTION 15.9)
8. SEQUENCE CLEARING AND GRADING TO THE MAXIMUM EXTENT PRACTICAL TO PREVENT EXPOSED INACTIVE AREAS FROM BECOMING A SOURCE OF EROSION. (SECTION 13.2.2)
9. CREATE SMOOTH SURFACES BETWEEN SOIL SURFACE AND EROSION AND SEDIMENT CONTROLS TO PREVENT STORMWATER FROM BYPASSING CONTROLS AND PONDING. (SECTION 13.2.3)
10. IDENTIFY, MARK, AND PROTECT (BY CONSTRUCTION FENCING OR OTHER MEANS) CRITICAL RIPARIAN AREAS AND VEGETATION INCLUDING IMPORTANT TREES AND ASSOCIATED ROOTING ZONES, AND VEGETATION ARES TO BE PRESERVED. IDENTIFY VEGETATIVE BUFFER ZONES BETWEEN THE SITE AND SENSITIVE AREAS (e.g., WETLANDS), AND OTHER AREAS TO BE PRESERVED, ESPECIALLY IN PERIMETER AREAS. (SECTION 13.2.1)
11. PRESERVE EXISTING VEGETATION WHEN PRACTICAL AND RE-VEGETATE OPEN AREAS. RE-VEGETATE OPEN AREAS WHEN PRACTICABLE BEFORE AND AFTER GRADING OR CONSTRUCTION. IDENTIFY THE TYPE OF VEGETATIVE SEED MIX USED. (SECTION 13.2.5)
12. MAINTAIN AND DELINEATE ANY EXISTING NATURAL BUFFER WITHIN THE 50-FEET OF WATERS OF THE STATE. (SECTION 13.2.4)
13. INSTALL PERIMETER SEDIMENT CONTROL, INCLUDING STORM DRAIN INLET PROTECTION AS WELL AS ALL SEDIMENT BASINS, TRAPS, AND BARRIERS PRIOR TO LAND DISTURBANCE. (SECTION 13.1.3)
14. CONTROL BOTH PEAK FLOWS RATES AND TOTAL STORMWATER VOLUME, TO MINIMIZE EROSION AT OUTLETS AND DOWNSTREAM CHANNELS AND STREAMBANKS. (SECTIONS 13.1.1 AND 13.2.16)
15. CONTROL SEDIMENT AS NEEDED ALONG THE SITE PERIMETER AND AT ALL OPERATIONAL INTERNAL STORM DRAIN INLETS AT ALL TIMES DURING CONSTRUCTION, BOTH INTERNALLY AND AT THE SITE BOUNDARY. (SECTIONS 13.2.6 AND 13.2.13)
16. ESTABLISH CONCRETE TRUCK AND OTHER CONCRETE EQUIPMENT WASHOUT AREAS BEFORE BEGINNING CONCRETE WORK. (SECTION 13.2.14)
17. APPLY TEMPORARY AND/OR PERMANENT SOIL STABILIZATION MEASURES IMMEDIATELY ON ALL DISTURBED AREAS AS GRADING PROGRESSES. TEMPORARY OR PERMANENT STABILIZATIONS MEASURES ARE NOT REQUIRED FOR AREAS THAT ARE INTENDED TO BE LEFT UNVEGETATED, SUCH AS DIRT ACCESS ROADS OR UTILITY POLE PADS. (SECTIONS 13.2.20 AND 13.2.21)
18. ESTABLISH MATERIAL AND WASTE STORAGE AREAS, AND OTHER NON-STORMWATER CONTROLS. (SECTION 13.3.7)
19. KEEP WASTE CONTAINER LIDS CLOSED WHEN NOT IN USE AND CLOSE LIDS AT THE END OF THE BUSINESS DAY FOR THOSE CONTAINERS THAT ARE ACTIVELY USED THROUGHOUT THE DAY. FOR WASTE CONTAINERS THAT DO NOT HAVE LIDS, PROVIDE EITHER (1) COVER (e.g., A TARP, PLASTIC SHEETING, TEMPORARY ROOF) TO PREVENT EXPOSURE OF WASTES TO PRECIPITATION, OR (2) A SIMILARLY EFFECTIVE MEANS DESIGNED TO PREVENT THE DISCHARGE OF POLLUTANTS (e.g., SECONDARY CONTAINMENT). (SECTION 13.3.7)
20. PREVENT TRACKING OF SEDIMENT ONTO PUBLIC OR PRIVATE ROADS USING BMPs SUCH AS: CONSTRUCTION ENTRANCE, GRAVELED (OR PAVED) EXITS AND PARKING AREAS, GRAVEL ALL UNPAVED ROADS LOCATED ONSITE, OR USE AND EXIT TIRE WASH. THESE BMPs MUST BE IN PLACE PRIOR TO LAND - DISTURBING ACTIVITIES. (SECTION 13.2.7)
21. WHEN TRUCKING SATURATED SOILS FROM SITE, EITHER USE WATER-TIGHT TRUCKS OR DRAIN LOADS ON SITE. (SECTION 13.2.7.f)
22. CONTROL PROHIBITED DISCHARGES FROM LEAVING THE CONSTRUCTION SITE. i.e., CONCRETE WASH-OUT, WASTEWATER FROM CLEANOUT OF STUCCO, PAINT AND CURING COMPOUNDS. (SECTIONS 12.5 AND 13.3.9)
23. ENSURE THAT STEEP SLOPE AREAS WHERE CONSTRUCTION ACTIVITIES ARE NOT OCCURRING ARE ARE NOT DISTURBED. (SECTION 13.2.10)
24. PREVENT SOIL COMPACTION IN AREAS WHERE POST-CONSTRUCTION INFILTRATION FACILITIES ARE TO BE INSTALLED. (SECTION 13.2.10)
25. USE BMPs TO PREVENT OR MINIMIZE STORMWATER EXPOSURE TO POLLUTANTS FROM SPILLS; VEHICLE AND EQUIPMENT FUELING, MAINTENANCE, AND STORAGE; OTHER CLEANING AND MAINTENANCE ACTIVITIES; AND WASTE HANDLING ACTIVITIES. THESE POLLUTANTS INCLUDE FUEL, HYDRAULIC FLUID, AND OTHER OILS FROM VEHICLES AND MACHINERY, AS WELL AS DEBRIS, FERTILIZER, PESTICIDES AND HERBICIDES, PAINT, SOLVENTS, CURING COMPOUNDS AND ADHESIVES FROM CONSTRUCTION OPERATIONS. (SECTIONS 13.2.15 AND 13.3)
26. PROVIDE PLANS FOR SEDIMENTATION BASINS THAT HAVE BEEN DESIGNED PER SECTION 13.2.17 AND STAMPED BY AN OREGON PROFESSIONAL ENGINEER. (SEE SECTION 13.2.17.a)
27. IF ENGINEERED SOILS ARE USED ON SITE, A SEDIMENTATION BASIN/IMPOUNDMENT MUST BE INSTALLED. (SEE SECTIONS 13.2.17 AND 13.2.18)
28. PROVIDE A DEWATERING PLAN FOR ACCUMULATED WATER FROM PRECIPITATION AND UNCONTAMINATED GROUNDWATER SEEPAGE DUE TO SHALLOW EXCAVATION ACTIVITIES. (SECTION 13.4)
29. IMPLEMENT THE FOLLOWING BMPs WHEN APPLICABLE: WRITTEN SPILL PREVENTION AND RESPONSE PROCEDURES, EMPLOYEE TRAINING ON SPILL PREVENTION AND PROPER DISPOSAL PROCEDURES, SPILL KITS IN ALL VEHICLES, REGULAR MAINTENANCE SCHEDULE FOR VEHICLES AND MACHINERY, MATERIAL DELIVERY AND STORAGE CONTROLS, TRAINING AND SIGNAGE, AND COVERED STORAGE AREAS FOR WASTE AND SUPPLIES. (SECTION 13.3)
30. USE WATER, SOIL-BINDING AGENT OR OTHER DUST CONTROL TECHNIQUE AS NEEDED TO AVOID WIND-BLOWN SOIL. (SECTION 13.2.9)
31. THE APPLICATION RATE OF FERTILIZERS USED TO REESTABLISH VEGETATION MUST FOLLOW MANUFACTURER'S RECOMMENDATIONS TO MINIMIZE NUTRIENT RELEASES TO SURFACE WATERS. EXERCISE CAUTION WHEN USING TIME-RELEASE FERTILIZERS WITHIN ANY WATERWAY RIPARIAN ZONE. (SECTION 13.3)
32. IF AN ACTIVE TREATMENT SYSTEM (FOR EXAMPLE, ELECTRO-COAGULATION, FLOCCULATION, FILTRATION, etc.) FOR SEDIMENT OR OTHER POLLUTANT REMOVAL IS EMPLOYED, SUBMIT AN OPERATION AND MAINTENANCE PLAN (INCLUDING SYSTEM SCHEMATIC, LOCATION OF SYSTEM, LOCATION OF INLET, LOCATION OF DISCHARGE, DISCHARGE DISPERSION DEVICE DESIGN, AND A SAMPLING PLAN AND FREQUENCY) BEFORE OPERATING THE TREATMENT SYSTEM. OBTAIN ENVIRONMENTAL MANAGEMENT PLAN APPROVAL FROM DEQ BEFORE OPERATING THE TREATMENT SYSTEM. OPERATE AND MAINTAIN THE TREATMENT SYSTEM ACCORDING TO MANUFACTURER'S SPECIFICATIONS. (SECTION 6)
33. TEMPORARILY STABILIZE SOILS AT THE END OF THE SHIFT BEFORE HOLIDAYS AND WEEKENDS, IF NEEDED. THE REGISTRANT IS RESPONSIBLE FOR ENSURING THAT SOILS ARE STABLE DURING RAIN EVENTS AT ALL TIMES OF THE YEAR. (SECTION 13.2)
34. AS NEEDED BASED ON WEATHER CONDITIONS, AT THE END OF EACH WORKDAY SOIL STOCKPILES MUST BE STABILIZED OR COVERED, OR OTHER BMPs MUST BE IMPLEMENTED TO PREVENT DISCHARGES TO SURFACE WATERS OR CONVEYANCE SYSTEMS LEADING TO SURFACE WATERS. (SECTION 13.2.8)
35. SEDIMENT FENCE: REMOVE TRAPPED SEDIMENT BEFORE IT REACHES ONE THIRD OF THE ABOVE GROUND FENCE HEIGHT AND BEFORE FENCE REMOVAL. (SECTION 13.1.5.b)
36. OTHER SEDIMENT BARRIERS (SUCH AS BIOBAGS): REMOVE SEDIMENT BEFORE IT REACHES TWO INCHES DEPTH ABOVE GROUND HEIGHT AND BEFORE BMP REMOVAL. (SECTION 13.1.5.c)
37. CATCH BASINS: CLEAN BEFORE RETENTION CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT. SEDIMENT BASINS AND SEDIMENT TRAPS: REMOVE TRAPPED SEDIMENTS BEFORE DESIGN CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT AND AT COMPLETION OF PROJECT. (SECTION 13.1.5.d)
38. WITHIN 24 HOURS, SIGNIFICANT SEDIMENT THAT HAS LEFT THE CONSTRUCTION SITE, MUST BE REMEDIATED. INVESTIGATE THE CAUSE OF THE SEDIMENT RELEASE AND IMPLEMENT STEPS TO PREVENT A RECURRANCE OF THE DISCHARGE WITHIN THE SAME 24 HOURS. ANY IN-STREAM CLEAN-UP OF SEDIMENT SHALL BE PREFORMED ACCORDING TO THE OREGON DEPARTMENT OF STATE LANDS REQUIRED TIMEFRAME. (SECTION 13.2.19.a)
39. THE INTENTIONAL WASHING OF SEDIMENT INTO STORM SEWERS OR DRAINAGE WAYS MUST NOT OCCUR. VACUUMING OR DRY SWEEPING AND MATERIAL PICKUP MUST BE USED TO CLEANUP RELEASED SEDIMENTS. (SECTION 13.2.19)
40. DOCUMENT ANY PORTION(S) OF THE SITE WHERE LAND DISTURBING ACTIVITIES HAVE PERMANENTLY CEASED OR WILL BE TEMPORARILY INACTIVE FOR 14 OR MORE CALENDAR DAYS. (SECTION 17.5.f)
41. PROVIDE TEMPORARY STABILIZATION FOR THAT PORTION OF THE SITE WHERE CONSTRUCTION ACTIVITIES CEASE FOR 14 DAYS OR MORE WITH A COVERING OF BLOWN STRAW AND TACKIFIER, LOOSE STRAW, OR ADEQUATE COVERING OF COMPOST MULCH UNTIL WORK RESUMES ON THAT PORTION OF THE SITE. (SECTION 13.2.20)
42. DO NOT REMOVE TEMPORARY SEDIMENT CONTROL PRACTICES UNTIL PERMANENT VEGETATION OR OTHER COVER OF EXPOSED AREAS IS ESTABLISHED. ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED, ALL TEMPORARY EROSION CONTROLS AND RETAINED SOILS MUST BE REMOVED AND DISPOSED OF PROPERLY, UNLESS NEEDED FOR LONG TERM USE FOLLOWING TERMINATION OF PERMIT COVERAGE. (SECTION 13.2.21)

Site Condition	Minimum Frequency
1. Active period	On initial date that land disturbance activities commence. Within 24 hours of any storm event, including runoff from snow melt, that results in discharge from the site. At least once every 14 days, regardless of whether stormwater runoff is occurring
2. Inactive periods greater than fourteen (14) consecutive calendar days	The Inspector may reduce the frequency of inspections in any area of the site where the stabilization steps in Section 13.2.20 have been completed to twice per month for the first month, no less than 14 calendar days apart, then once per month.
3. Periods during which the site is inaccessible due to inclement weather	If safe, accessible and practical, inspections must occur daily at a relevant discharge point or downstream location of the receiving waterbody.
4. Periods during which construction activities are suspended and runoff is unlikely due to frozen conditions	Visual monitoring inspections may be temporarily suspended. Immediately resume monitoring upon thawing, or when weather conditions make discharges likely.
5. Periods during which construction activities are conducted and runoff is unlikely during frozen conditions	Visual monitoring inspections may be reduced to once a month. Immediately resume monitoring upon thawing, or when weather conditions make discharges likely.

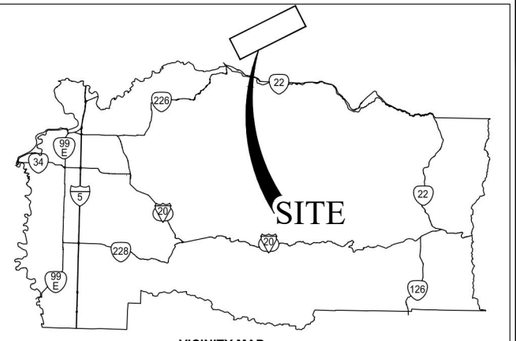
BMP MATRIX FOR CONSTRUCTION PHASE

YEAR	*Insert year*				
PHASE/BMP	*CLEARING*	*MASS GRADING*	*UTILITY CONSTRUCTION*	*VERTICAL CONSTRUCTION*	*FINAL STABILIZATION*
EROSION CONTROL					
GROUND COVER					
PLASTIC SHEETING					
DUST CONTROL					
TEMPORARY STABILIZATION (STRAW MULCH/HYDROSEED)					
PERMANENT STABILIZATION					
BUFFER ZONE					
SEDIMENT CONTROL					
SEDIMENT FENCE (PERIMETER)					
SEDIMENT FENCE (INTERIOR)					
STRAW WATTLES					
INLET PROTECTION					
DEWATERING					
RUN OFF CONTROL					
CONSTRUCTION ENTRANCE					
EXISTING OUTLET PROTECTION					
NEW OUTLET PROTECTION					
EXISTING CURB INLET PROTECTION					
POLLUTION PROTECTION					
HAZARD WASTE MANAGEMENT					
SPILL KIT ONSITE					
CONCRETE WASHOUT AREA					



SITE MAP

N.T.S.



VICINITY MAP

N.T.S.

DESIGN ENGINEER: Name

GEOTECHNICAL ENGINEER: Name

SITE CONTRACTOR*: Name

*SITE SUBCONTRACTORS TO BE DETERMINED AT A LATER DATE

INSPECTOR: Name, Cert#, Expiration Date

BMP INSTALLER/MAINTAINER: Name

ESCP PREPARER: Name

RAIN GAUGE:
ADD SITE

BUSINESS DAYS/HOURS

MONDAY	7:00-8:00
TUESDAY	7:00-8:00
WEDNESDAY	7:00-8:00
THURSDAY	7:00-8:00
FRIDAY	7:00-8:00
SATURDAY	8:00-8:00
SUNDAY	-NO WORK-
LEGAL HOLIDAYS	-NO WORK-

SITE INFORMATION:

1. TYPE OF DEVELOPMENT:
2. CONSTRUCTION ACTIVITY WILL CONSIST OF:
   - A) CURB, ASPHALT PAVING, AND SIDEWALK CONSTRUCTION
   - B) WASTEWATER SYSTEM CONSTRUCTION
   - C) STORMWATER DRAINAGE SYSTEM:
     - -STORMWATER PIPING
     - -STORMWATER TREATMENT DETENTION POND
   - D) DOMESTIC WATER SYSTEM CONSTRUCTION
   - E) FRANCHISE UTILITY CONSTRUCTION
   - F) OFFSITE PUBLIC ROADWAY IMPROVEMENTS
3. PROJECT TIMELINE:
   - BEGINNING DATE:
   - COMPLETION DATE:
4. PROJECT SITE AREAS:
   - -TOTAL AREA: ACRES AND SQUARE FEET
   - -DISTRUBED AREA: ACRES AND SQUARE FEET
   - -PERCENT OF SITE DISTURBED:
5. OFFSITE PUBLIC IMPROVEMENT AREA:
   - -IMPROVEMENT LENGTH:
6. ONSITE SOIL TYPES:
   - A)
7. CUT AND FILL DATA:
   - -CUT: CUBIC YARDS
   - -FILL:CUBIC YARDS
   - -NET ADJUSTED: CUBIC YARDS

LEGEND

ROW	RIGHT OF WAY
	TAXLOT
	EXISTING EDGE OF PAVEMENT
	EXISTING CURB
	EXISTING SIDEWALK
	EXISTING GUTTER
	EXISTING SHOULDER
SD	EXISTING STORM DRAIN
WAT	EXISTING WATER LINE
SS	EXISTING SANITARY SEWER LINE
GAS	EXISTING GAS LINE
TEL	EXISTING PHONE LINE
FO	EXISTING FIBER OPTIC LINE
OH	EXISTING OVERHEAD UTILITY LINE
SS	EXISTING SEWER LINE
	EXISTING FENCE
	EXISTING GUARDRAIL
	EXISTING DITCH
	BOTTOM OF SWALE
	EDGE OF PAVEMENT
	SHOULDER/GRAVEL
	CURB AND GUTTER
	SIDEWALK
	SAW CUT LINE
	CONSTRUCTION LIMITS
	ELECTRICAL CONDUIT
	STORM DRAIN PIPE
	EXISTING VEGETATION
	EXISTING SURVEY MONUMENT
V	EXISTING UTILITY VALVE
FH	EXISTING FIRE HYDRANT
M	EXISTING UTILITY METER BOX
	EXISTING UTILITY PEDESTAL/VAULT
	EXISTING UTILITY POLE AND GUY WIRE
	EXISTING SIGN AND SUPPORT
	EXISTING STRUCTURE
	EXISTING STORM INLET
SS	EXISTING SANITARY SEWER MANHOLE
SD	EXISTING STORM DRAIN MANHOLE
	SIGN AND SUPPORT
	STORM DRAIN MANHOLE
	STORM DRAIN INLETS
	STORM DRAIN OVERFLOW
C	STORM DRAIN CLEANOUT

SHEET INDEX

SHEET EC.1	COVER SHEET
SHEET EC.2	ESCP EXISTING CONDITIONS
SHEET EC.3	ESCP DEMO, CLEARING, GRUBBING, EXCAVATION LAND DEVELOPMENT
SHEET EC.4	ESCP ROADWAY & UTILITY
SHEET EC.5	ESCP FINAL LANDSCAPING AND STABILIZATION
SHEET EC.6	ESCP DETAILS

PRELIMINARY

LINN COUNTY ROAD DEPARTMENT
3010 FERRY STREET SW
ALBANY, OREGON 97322
PHONE: (541) 967-3919
FAX: (541) 924-0202
E-MAIL: Roads@co.linn.or.us

COUNTY COMMISSION
ROGER NYQUIST CHAIRMAN
WILLIAM TUCKER
SHERRIE SPRENGER

ROADMASTER
WAYNE MINK, P.E.

COUNTY ENGINEER
DAINEAL L. MALONE, P.E.

DATE:	REVISION:	BY:

ROAD NO: CXXXXX	DATE: XX/XX/XXXX	PROJECT TITLE	ESCP COVER SHEET
PROJECT NO: CXXXXX		ROAD NAME	
TRS: TXXX RXX SEC XX, W.M.			
DESIGNED BY: X.X	CHECKED BY: X.X	LINN COUNTY MONTH YEAR	SCALE: no scale / SHEET EC.1
DRAFTED BY: X.X	REVIEWED BY: X.X		

SHOW SLOPE ARROWS
AND IDENTIFY ALL EXISTING STORM WATER FACILITIES AND INCLUDE
THEIR ELEVATIONS AND INVERTS ON PLAN

Removing a lot of trees? Draft a sheet specifically for that. Cutting trees and removing root balls, especially on multiple acres, generates a large amount of disturbance and loose soil. Make sure to have a plan for proper management of that activity.

This sheet should communicate the existing conditions - How is stormwater flowing at the beginning of the project? What structures will be demolished? The beginning stages of the project may not involve grading, but have a level of ground disturbance and staging that have specific erosion and sediment control needs.

When drafting your ESCP, consider the different stages of your project and the specific erosion and sediment control needs of each stage. Also consider your audience: make sure the construction crews can read and understand the plans.

LINN COUNTY
ROAD DEPARTMENT
3010 FERRY STREET SW
ALBANY, OREGON 97322
PHONE: (541) 967-3919
FAX: (541) 924-0202
E-MAIL: Roads@co.linn.or.us

DATE:	REVISION:	BY:

ROAD NO: CXXXXX	DATE: XX/XX/XXXX	PROJECT TITLE	ESCP EXISTING CONDITIONS
PROJECT NO: CXXXXX		ROAD NAME	
TRS: TXXX RXX SEC XX, W.M.			
DESIGNED BY: X.X	CHECKED BY: X.X	LINN COUNTY MONTH YEAR	SCALE: no scale / SHEET EC.2
DRAFTED BY: X.X	REVIEWED BY: X.X		

PRELIMINARY

SHOW SLOPE ARROWS ON PLAN

CONSTRUCTION NOTES:

1. XXXXXXXXX
2. XXXXXXXXX
3. SANITARY FACILITY

LEGEND FOR EC MEASURES

- AREA CUT
- AREA FILL
- SEEDING
- NATURAL BUFFER

GRADING PHASE INFORMATION:

1. ONSITE SOIL TYPES:
   A)
2. EXISTING VEGETATION CONSISTS OF A MIX OF HERBACEOUS-WOODY UNDERSTORY SHRUBS AND GROUNDCOVERS AND IS DOMINATED BY SCOTCH BROOM
3. CUT AND FILL DATA:
   -CUT: CUBIC YARDS
   -FILL:CUBIC YARDS
   -NET ADJUSTED: CUBIC YARDS
4. ONSITE FILL MATERIALS:
   -NATIVE SOIL
   -CRUSHED ROCK
5. PHASE SCHEDULE:
   START:
   FINISH:

GRADING PHASE NOTES:

1. DRAINAGE DITCH ALONG THE SOUTH AND EAST BOUNDARY SHALL BE PERMANENTLY SEEDED AS SOON AS POSSIBLE AFTER EXCAVATION.
2. ANY STORM RUNOFF CONVEYED BY THE DRAINAGE DITCH MENTIONED ABOVE IS TO BE TRAPPED AT THE END OF THE DITCH ON THE WEST AND PUMPED TO THE DETENTION POND WITHIN THE TEMPORARY FOREBAY AREA AS SHOWN.
3. IN CASE OF SPILLS FROM PORTABLE RESTROOM, REFER TO THE SPILL PLAN.
4. STRAW MULCH AND/OR HYDROSEED SHALL BE USED FOR TEMPORARY STABILIZATION OF EXPOSED SOILS AFTER EXCAVATION.
5. HYDROSEED FOR TEMPORARY STABILIZATION TO BE SUNMARK SEEDS TURF WORK MIX PER DETAIL ON THIS SHEET.

Add Seed Mix Information Here (i.e. composition, percentages, supplier, total amount)

Add stockpile area and staging area that includes sanitary facility and waste receptacle with lid.

Include pond (basin) folume to meet required sizing requirement. Add restoration plan if utilized during construction activities.

Detention Pond Cross Section Detail
nts

PRELIMINARY

LINN COUNTY ROAD DEPARTMENT
3010 FERRY STREET SW
ALBANY, OREGON 97322
PHONE: (541) 967-3919
FAX: (541) 924-0202
E-MAIL: Roads@co.linn.or.us

DATE:	REVISION:	BY:

ROAD NO: CXXXXX DATE: XX/XX/XXXX
PROJECT NO: CXXXXX
TRS: TXXX RXX SEC XX, W.M.
DESIGNED BY: X.X CHECKED BY: X.X
DRAFTED BY: X.X REVIEWED BY: X.X

PROJECT TITLE
ROAD NAME
LINN COUNTY
MONTH YEAR

ESCP
DEMO, CLEARING, GRUBBING, EXCAVATION, AND LAND DEVELOPMENT

SCALE: no scale

SHEET EC.3

Add stockpile area and staging area that includes sanitary facility and waste receptacle with lid.

All dewatering must be addressed and managed appropriately, even authorized (non-polluted) dewatering.

Utility installation presents unique erosion an sediment control challenges. Developing a separate sheet for this stage of the project helps ensure permit compliance.

UTILITIES PHASE INFORMATION:

1. PHASE SCHEDULE:
   START:
   FINISH:

UTILITIES PHASE NOTES:

1. PROPOSED DETENTION POND TO BE DISCHARGE POINT FOR ALL STORMWATER RUNOFF CONVEYANCE.
2. ANY TRENCH DEWATERING SHALL BE DISCHARGED THROUGH A FILTER BAG INTO DETENTION POND WITHIN THE FOREBAY AREAS AS SHOWN.
3. STRAW MULCH AND/OR HYDROSEED SHALL BE USED FOR TEMPORARY STABILIZATION OF EXPOSED TRENCH SPOILS (INCLUDING STOCKPILE IF PLASTIC SHEETING DOESN'T WORK).

CONSTRUCTION NOTES:

1. XXXXXXXXX
2. XXXXXXXXX
3. SANITARY FACILITY
4. CONCRETE WASHOUT

LEGEND FOR EC MEASURES

- AREA CUT
- AREA FILL
- SEEDING
- NATURAL BUFFER

Features that will be present through multiple stages or throughout the uratin of ht eproject need to be reflected on each sheet. Examples include construction entrances, natural buffer areas, and dewatering.

PRELIMINARY

LINN COUNTY ROAD DEPARTMENT
3010 FERRY STREET SW
ALBANY, OREGON 97322
PHONE: (541) 967-3919
FAX: (541) 924-0202
E-MAIL: Roads@co.linn.or.us

COUNTY COMMISSION
ROGER NYQUIST
CHAIRMAN
WILLIAM TUCKER
SHERRIE SPRENGER

ROADMASTER
WAYNE MINK, P.E.

COUNTY ENGINEER
DAINEAL L. MALONE, P.E.

DATE:	REVISION:	BY:

ROAD NO: CXXXXX		DATE: XX/XX/XXXX	
PROJECT NO: CXXXXX			
TRS: TXXX RXX SEC XX, W.M.			
DESIGNED BY: X.X		CHECKED BY: X.X	
DRAFTED BY: X.X		REVIEWED BY: X.X	

PROJECT TITLE

ROAD NAME

LINN COUNTY
MONTH YEAR

ESCP
ROADWAY AND UTILITIES

SCALE: no scale

SHEET EC.4

FINAL STABILIZATION PHASE INFORMATION:

1. PHASE SCHEDULE:
   START:
   FINISH:

FINAL STABILIZATION PHASE NOTES:

1. ALL PERIMETER SEDIMENT FENCING AND CATCH BASIN FILTER INSERTS TO BE REMOVED UPON COMPLETION OF THIS PHASE.

PLANTINGS LISTS

NAME OF AREA

PLANTING ZONE	*HATCH/CODE*	*HYDROSEED MIX*	*BOTANICAL NAME COMMON NAME*	*O.C.*	*QUANITY*	*SIZE*	*COMMENTS*	*OTHER MEASURES*
ADD PERCENT OF COVERAGE								ADD HATCH

Add basin restoration plan. Typically excavate top 18" after construction activities cease and final stabilization is achieved. Add 18" of approved growth media before permanent vegetation is installed.

Include the dimensions of any constructed outfalls and any associated BMP's.

Detention Pond Cross Section Detail
nts

PONDS NOTES:

1. DETENTION POND TO HAVE 12" OF PLANTING MEDIA.
2. SEE LANDSCAPE PLAN FOR PLANTING INFORMATION.
3. ROCK SPLASH PADS SHALL BE XXXXXXXXXXX

DETENTION POND STABILIZATION

1. INSTALL JUTE MATTING PER OREGON STD. DWG RD1055 SLOPE AND CHANNEL MATTING AS PRESCRIBED FOR TEMPORARY SOIL STABILIZATION DURING ESTABLISHMENT IF CONSTRUCTION TAKES PLACE DURING WET WEATHER SEASON.

Note: There are no defined wet/dry seasons or dates in the permit, or allowance for the assumption of dry conditions. The site is expected to manage stormwater any time of year.

PRELIMINARY

LINN COUNTY ROAD DEPARTMENT
3010 FERRY STREET SW
ALBANY, OREGON 97322
PHONE: (541) 967-3919
FAX: (541) 924-0202
E-MAIL: Roads@co.linn.or.us

COUNTY COMMISSION
ROGER NYQUIST
CHAIRMAN
WILLIAM TUCKER
SHERRIE SPRENGER

ROADMASTER
WAYNE MINK, P.E.

COUNTY ENGINEER
DAINEAL L. MALONE, P.E.

DATE:	*REVISION:*	*BY:*

ROAD NO: CXXXXX	*DATE:* XX/XX/XXXX		
PROJECT NO: CXXXXX			
TRS: TXXX RXX SEC XX, W.M.			
DESIGNED BY: X.X	*CHECKED BY:* X.X		
DRAFTED BY: X.X	*REVIEWED BY:* X.X		

PROJECT TITLE

ROAD NAME

LINN COUNTY
MONTH YEAR

ESCP
FINAL LANDSCAPING AND STABILIZATION

SCALE: no scale

SHEET EC.5

INCLUDE APPROPRIATE ODOT STANDARD DETAILS AND/OR
PROJECT SPECIFIC DETAILS

LINN COUNTY
ROAD DEPARTMENT
3010 FERRY STREET SW
ALBANY, OREGON 97322
PHONE: (541) 967-3919
FAX: (541) 924-0202
E-MAIL: Roads@co.linn.or.us

DATE:	REVISION:	BY:

ROAD NO: CXXXXX	DATE: XX/XX/XXXX	
PROJECT NO: CXXXXX		
TRS: TXXX RXX SEC XX, W.M.		
DESIGNED BY: X.X	CHECKED BY: X.X	
DRAFTED BY: X.X	REVIEWED BY: X.X	

PROJECT
TITLE

ROAD NAME

LINN COUNTY
MONTH YEAR

ESCP
DETAILS

SCALE: no scale

SHEET EC.6

PRELIMINARY

APPENDIX E

EROSION AND SEDIMENT CONTROL MONITORING FORM

For projects covered by NPDES 1200-CA Permit

EROSION AND SEDIMENT CONTROL MONITORING

DATE OF INSPECTION _____

Fill out form Completely. Use blue or blank ink if filling out by hand.

PROJECT NAME		PROJECT No.	KEY No.
PROJECT LOCATION (Site Address)		FACILITY No.	FA No.
INSPECTOR NAME	TITLE	PHONE No.	

INSPECTION FREQUENCY

☐ Initial (staging or land disturbance) ☐ 14 Calendar Day ☐ *Daily During Storm Event (0.10 inches) ☐ Final (Site has been stabilized)

INSPECTION SUMMARY

1) All stormwater controls are properly installed and are working as intended to prevent pollutant discharges?	☐Yes ☐No	6) The presence of conditions that could lead to spills, leaks, or other accumulations of pollutants on the site are addressed?	☐Yes ☐No
2) Are there any locations where new or modified stormwater controls are necessary to meet ESC requirements? (If yes, identify below in 2a)	☐Yes ☐No	7) Has any discharge from the site occurred? (If yes, identify below and attach date stamped photos to report) *If no, attach date stamped photos to report.	☐Yes ☐No*
2a) Location(s) of Where Additional BMP's are Needed: ☐N/A		7a) Location(s) of Any Discharge: ☐N/A	
1 ☐corrected		A	
2 ☐corrected		B	
3) Location(s) of BMP's that Failed to Operate or are Inadequate: ☐N/A		7b) Identify Quality and Characteristics of Discharge (color, odor, suspended solids, foam, oil sheen, other indication of pollutants) ☐N/A	
1 ☐corrected		A	
2 ☐corrected		B	
4) Presence of visible erosion and sedimentation? (If yes, document any indication of sediment that has left or is likely to leave the site below)	☐Yes ☐No	8) Any unauthorized discharges from the site?	☐Yes ☐No
4a) Location(s) of BMP in Need of Maintenance or Corrective Action: ☐N/A		Location(s) of Unauthorized Discharge: ☐N/A	
1 ☐corrected		1 ☐corrected	
2 ☐corrected		2 ☐corrected	
5) Location(s) Where Land Disturbance Activities Have Permanently Ceased or Will be Inactive for More Than 14 Calendar Days. ☐N/A		9) All pH sampling results conducted? (Sampling is required if project has engineered soils) ☐Yes ☐No ☐N/A	
1		ESCP MODIFICATIONS AND REASONS FOR CHANGES ☐N/A	
2			

WEATHER CONDITIONS

CURRENT WEATHER CONDITIONS	RAIN GAUGE/WEBSITE SOURCE

24-Hour Rainfall															
Ending Dates															

☐ Inaccessible Site - Inspector has determined that it is unsafe to inspect a portion of the site or the inclement weather makes the site, or portions of the site inaccessible. Attach documentation supporting the reasoning and the locations to which this condition applies.

CERTIFICATION AND SIGNATURES

I certify that this report is true, accurate, and complete to the best of my knowledge, abilities, and belief.

INSPECTOR SIGNATURE	DATE	CERTIFICATION No.

INSTRUCTIONS FOR COMPLETING THE EROSION AND SEDIMENT CONTROL MONITORING
LINN COUNTY FORM ESCM-01

SAVE a copy of **each** report on site at **ALL** times. Can be in electronic form. Must be accessible to DEQ in the event of an unannounced inspection.

HEADINGS –
[DATE OF INSPECTION] – Enter the date the inspection was completed.
[PROJECT NAME] – Enter the Project Name as shown on Contract Coversheet or County Force project name.
[PROJECT No.] – This is the County Project Number, located on the Contract Coversheet or as provided by Sandy.
[KEY No.] – Found on the cover of the Contract Coversheet in the lower left corner. Enter N/A if County Force project.
[PROJECT LOCATION] – This is the physical address of the project.
[FACILITY No.] – This will be the Bridge Number or Road Number as found on the Contract Coversheet.
[FA No.] – This Number will only be present if this is a Federally Funded Project, located on the Contract Coversheet.
[INSPECTOR NAME] – Enter the name of the individual who is performing the inspection.
[TITLE] – There are three selections of approved individuals qualified to do this inspection, choose one.
[PHONE NUMBER] – Enter the Inspector's phone number.

INSPECTION FREQUENCY – Choose the box that corresponds to the Inspection Type being completed. Only one type of inspection can be performed per sheet.
[Initial (staging or land disturbance)] – Check this box for first inspection of activity on construction site.
[14 Calendar Day] – Check this box for a 14-day cycle inspection, usually during dry stretches of weather.
[*Daily During Storm Event (0.10 inches)] – Check this box for a storm event with more than 0.10 inches of rain on site.
[Final (Site has been stabilized)] – Check this box when all soils have been stabilized at the end of the project period.

INSPECTION SUMMARY –
1) Check the correct box.
2) Check the correct box and if Yes, list the locations in 2a 1, 2. If additional BMP's were installed, then check the box "corrected" next to the Location. If not applicable check N/A.
3) Location of failed BMP's, enter locations in line 1, 2 if failed, check the "corrected" box if fixed, check N/A for none.
4) Check the correct box and if Yes, list the locations in 2a 1, 2. If additional BMP's were installed, then check the box "corrected" next to the Location. If not applicable check N/A.
5) List locations on lines 1, 2, check N/A if they have not.
6) Check the correct box.
7) Check the correct box. Yes, identify the locations on 7a lines A, B attach date stamped photos. If No, attach date stamped photos.
   7a) Identify locations. If none, check N/A.
   7b) List the nature and looks of the spill, leaks or other accumulation from locations in 7a A and B. If none check N/A.
8) Check the correct box, if Yes fill in lines 1, 2 with locations and check "corrected" if the issue was resolved, or check N/A for no locations.
9) Check the correct box. This question is for engineered soils. If you have Engineered Soils on this site, it will be spelled out in the contract documents and drawing for this site. If no Engineered Soils, check N/A.

ESCP MODIFICATIONS AND REASONS FOR CHANGES –
Use this space to write out a description of any changes and reasons changes needed to be made. If nothing was changed check N/A.

WEATHER CONDITIONS –
[CURRENT WEATHER CONDITIONS] – Report current weather conditions
[RAIN GAUGE OR WEBSITE SOURCE] – Website Source for local weather in the project area for rainfall or location of the rain gauge.
[24-HOUR RAINFALL] - List amount per day, for example 0.04, 0.5, 0.1
[ENDING DATES] - Date for recorded rainfall amounts. Should be a 14-day cycle, for example 03/06, 03/07….03/18, 0319.
[INACCESSIBLE SITE] – Check if portions of the site are deemed unsafe to inspect at this time. Attach reasons, locations, photos.

CERTIFICATION AND SIGNATURE –
[INSPECTORS SIGNATURE] - This certifies that the one doing the inspection is the one filling out the form.
[DATE] – This indicates the date in which this form was completed and signed. (Must be completed within 48 hours of the inspection time.
[CERTIFICATION No.] – This is the number given the certified individual by those who gave them the TITLE listed in the headings section.

APPENDIX F

EROSION AND SEDIMENT CONTROL MONITORING FORM

For Projects not Covered by NPDES 1200-CA Permit

SAMPLE

EROSION AND SEDIMENT CONTROL MONITORING FOR ROAD DEPARTMENT

☐ Maintenance Project ☒ Construction Project < 1 Acre ☐ Construction > 1 Acre (use form ESCM-01) Also Requires ESC Plan

PROJECT LOCATION (Site Address)	MILEPOST (MP X to MP X)	
Dirt Road	MP 0.11 to MP 0.21	

SUPERVISOR NAME	DISTRICT	PHONE
Supervisor Smith	Halsey, Scio, Albany, Sweet Home	(555) 867-5309

1. Identify Erosion Control Measures implemented:

EROSION CONTROL MEASURES	DATE INSTALLED	FUNCTIONING AS DESIGNED?	DESCRIBE WHAT IS NOT FUNCTIONING	LOCATION OF DEFICIENCY	CORRECTIVE ACTION	DATE CORRECTIVE ACTION COMPLETE	IS THERE VISIBLE OR MEASURABLE SEDIMENT?	HAS SEDIMENT ENTERED A BODY OF WATER?	DATE MEASURE REMOVED
Wattle Check dam	3/9/23	Y	N/A	N/A	N/A	N/A	Y	N	
Plastic Sheeting	3/9/23	N	Tear in plastic	Top NE Corner	Replaced plastic	4/6/23	N	N	

DESCRIBE ANY EROSION CONTROL MEASURES NOT LISTED ABOVE

2. Add or Attach Any Additional Information as Needed:

ADDITIONAL INFORMATION MAY BE INCLUDED IN THIS FIELD or ATTACHED TO THIS REPORT

3. Weekly Rainfall Amounts:

RAINFALL REPORTING STATION	MONITORING PERIOD			24-HOUR RAINFALL AMOUNT:	0.01	0.00	0.14	0.06	0.02	0.11	0.40
www.rain	4/2 to 4/9/23	☒	ACTIVE								
		☐	INACTIVE	ENDING DATES:	4/2	4/3	4/4	4/5	4/6	4/7	4/8

4. Inspector Signature:

PRINTED NAME	SIGNATURE	DATE	PHONE
Inspector John	~	4/6/23	(222) 867-5309

Minimum Monitoring Requirements: Inspect all erosion control facilities at least every 7 calendar days on active sites and two weeks on inactive sites. Inspect daily during stormwater or snowmelt runoff and within 24 hours after more than 0.5 inch of rain per 24-hour period. See *Linn County Road Department BMP Manual for Stormwater Requirements* for additional information.

EROSION AND SEDIMENT CONTROL MONITORING FOR ROAD DEPARTMENT

☐ Maintenance Project ☐ Construction Project < 1 Acre ☐ *Construction > 1 Acre (use form ESCM-01) Also Requires ESC Plan

PROJECT LOCATION (Site Address)	MILEPOST (MP X to MP X)	
SUPERVISOR NAME	DISTRICT	PHONE

1. Identify Erosion Control Measures implemented:

EROSION CONTROL MEASURES	DATE INSTALLED	FUNCTIONING AS DESIGNED?	DESCRIBE WHAT IS NOT FUNCTIONING	LOCATION OF DEFICIENCY	CORRECTIVE ACTION	DATE CORRECTIVE ACTION COMPLETE	IS THERE VISIBLE OR MEASURABLE SEDIMENT?	HAS SEDIMENT ENTERED A BODY OF WATER?	DATE MEASURE REMOVED
DESCRIBE ANY EROSION CONTROL MEASURES NOT LISTED ABOVE									

2. Add or Attach Any Additional Information as Needed:

ADDITIONAL INFORMATION MAY BE INCLUDED IN THIS FIELD or ATTACHED TO THIS REPORT

3. Weekly Rainfall Amounts:

RAINFALL REPORTING STATION	MONITORING PERIOD									
		☐ ACTIVE	24-HOUR RAINFALL AMOUNT:							
		☐ INACTIVE	ENDING DATES:							

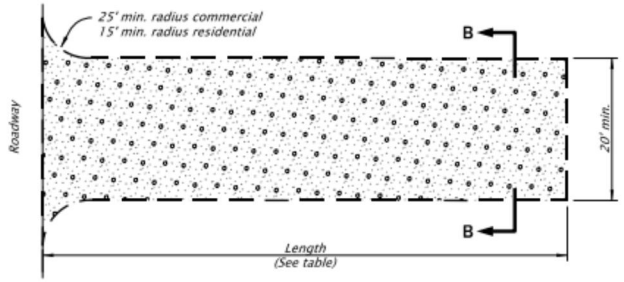
4. Inspector Signature:

PRINTED NAME	SIGNATURE	DATE	PHONE

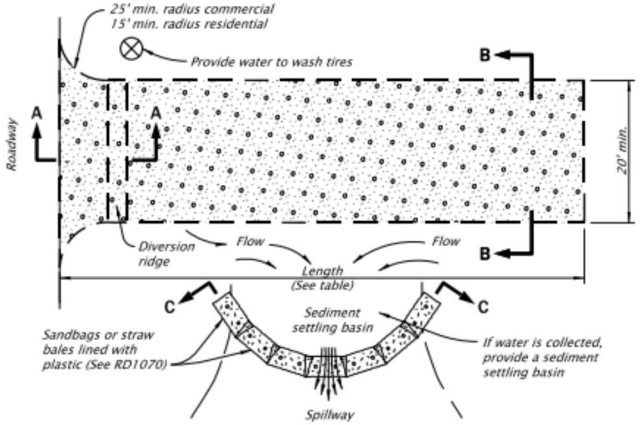
Minimum Monitoring Requirements: Inspect all erosion control facilities at least every 7 calendar days on active sites and two weeks on inactive sites. Inspect daily during stormwater or snowmelt runoff and within 24 hours after more than 0.5 inch of rain per 24-hour period. See *Linn County Road Department BMP Manual for Stormwater Requirements* for additional information.

APPENDIX G

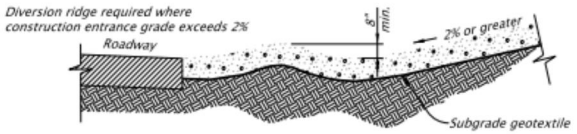
ODOT STANDARD DRAWINGS



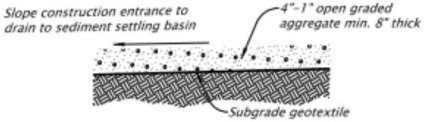
CONSTRUCTION ENTRANCE - TYPE 1
NOT TO SCALE



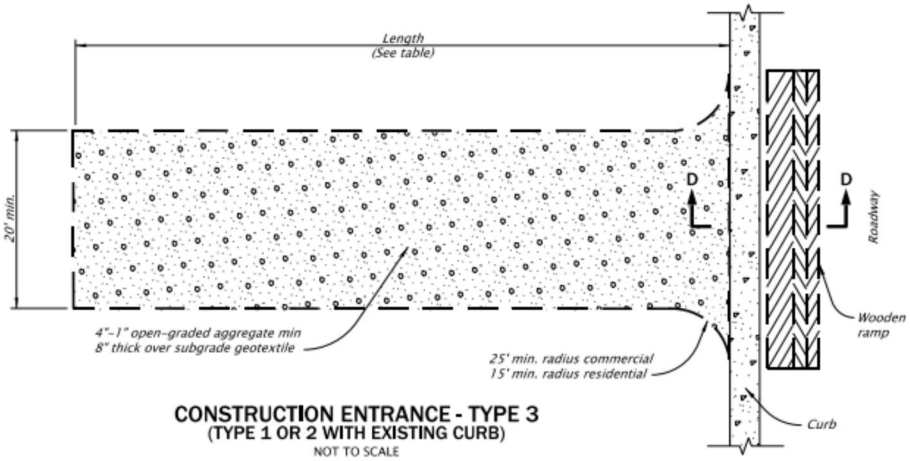
CONSTRUCTION ENTRANCE - TYPE 2
NOT TO SCALE



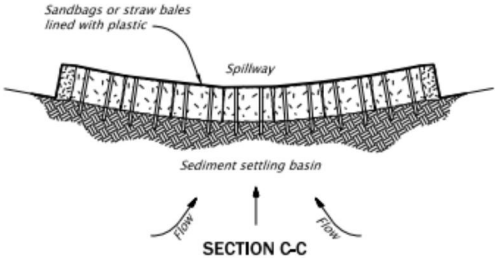
SECTION A-A
NOT TO SCALE



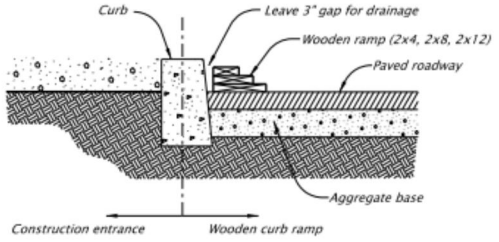
SECTION B-B
NOT TO SCALE



CONSTRUCTION ENTRANCE - TYPE 3
(TYPE 1 OR 2 WITH EXISTING CURB)
NOT TO SCALE



SECTION C-C
NOT TO SCALE



WOODEN CURB RAMP SECTION D-D
NOT TO SCALE

NOTES:
1. *The Type 1 entrance is a simple entrance without a diversion ridge or settling basin.*
2. *The wooden ramp may be used on either Type 1 or Type 2 entrances in situations where there is curb and the curb is not removed for the construction entrance.*

CONSTRUCTION ENTRANCE TABLE MINIMUM LENGTH	
Length (FT)	*Area Of Exposed Soil (Acre)*
20	*0.25*
50	*0.25 < A < 1.0*
100	*A > 1.0*

CALC. BOOK NO. N/A

SDR DATE January, 2021

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

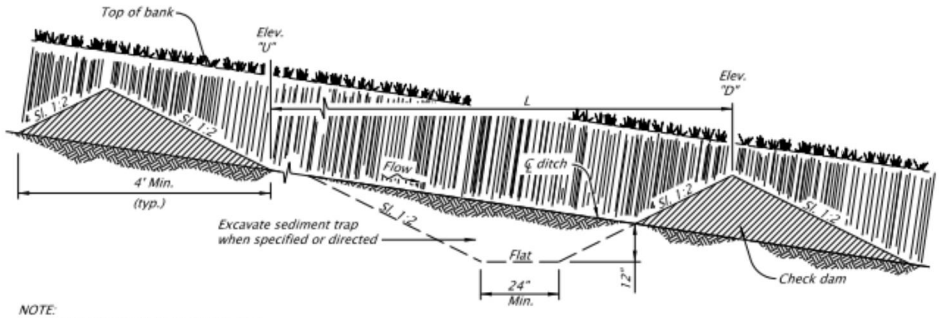
The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

OREGON STANDARD DRAWINGS

CONSTRUCTION ENTRANCES

2021

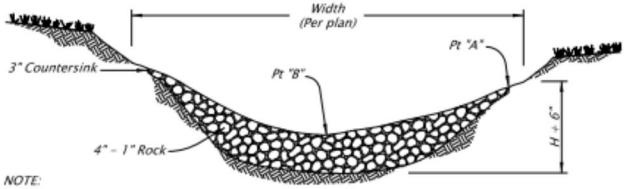
DATE	REVISION DESCRIPTION
Jan 2021	Removed Calc book numbers



NOTE:
L = Spacing along swale or ditch so that Elevation "U" equals Elevation "D".

TYPICAL PROFILE SECTION CHECK DAMS (SHOWN WITH AGGREGATE)

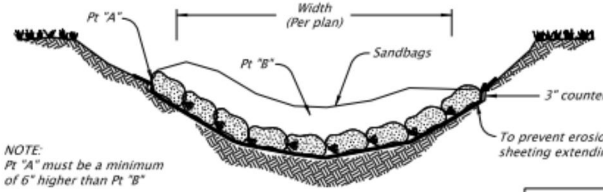
NOT TO SCALE



NOTE:
Pt "A" must be a minimum of 6" higher than Pt "B"

AGGREGATE CHECK DAM - TYPE 1

NOT TO SCALE



To prevent erosion, place 10 mil. polyethylene plastic sheeting extending 3' downslope for energy dissipation

NOTE:
Pt "A" must be a minimum of 6" higher than Pt "B"

SANDBAG CHECK DAM - TYPE 4

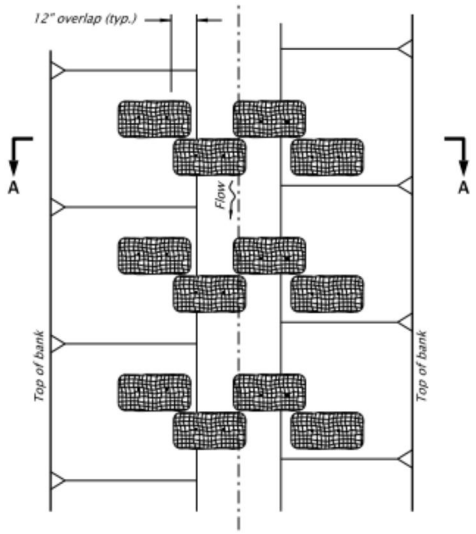
NOT TO SCALE

MAXIMUM CHECK DAM SPACING "L"

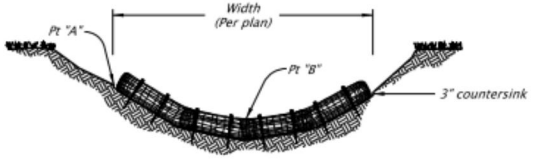
Ditch Grade	H=8"	H=12"	H=18"	H=24"
10%	* *	* *	15'	20'
9%	* *	* *	16'	22'
8%	* *	* *	18'	25'
7%	* *	* *	21'	28'
6%	* *	16'	25'	33'
5%	* *	20'	30'	40'
4%	16'	25'	37'	50'
3%	22'	33'	50'	66'
2%	33'	50'	75'	100'

* * Not allowed H = Min. dam height

NOTES:
1. Type 3 - stake biofilter bags with two 2"x2"x18" (minimum) wood stakes per bag. Drive stakes a minimum of 6" into the ground and flush with the top of the bags. Omit stakes if placed over paved surfaces. Overlap bags 12" minimum at each joint.
2. Type 4 - Tightly abut or overlap ends of sandbags at each joint.
3. Spacing between check dams for all check dam types shall comply with the typical profile section shown above.



PLAN



SECTION A-A

BIOFILTER BAG CHECK DAM - TYPE 3

NOT TO SCALE

CALC. BOOK NO. N/A

SDR DATE January, 2021

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

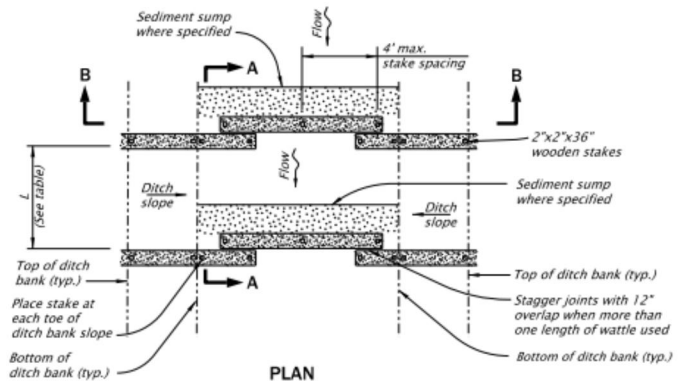
The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

OREGON STANDARD DRAWINGS

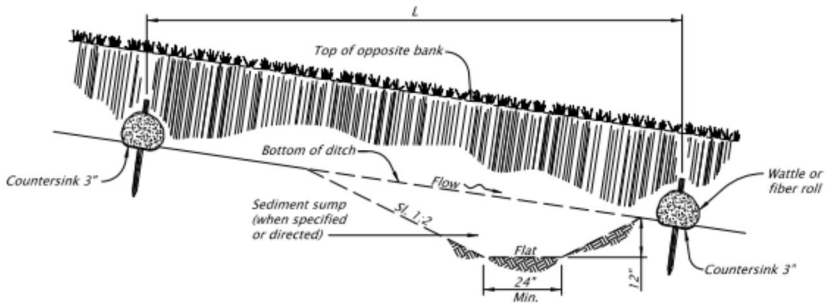
CHECK DAMS TYPE 1, 3 AND 4

2021

DATE	REVISION DESCRIPTION
Jan 2021	Removed Calc book numbers



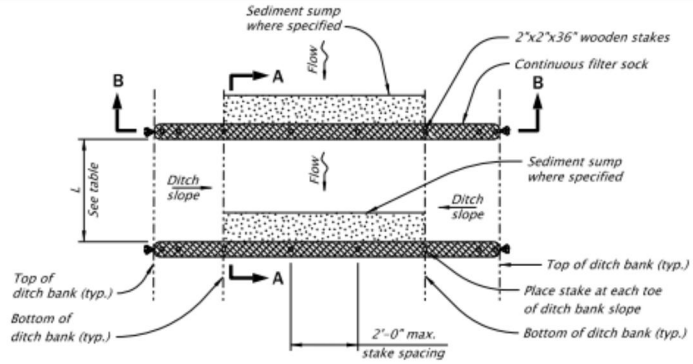
PLAN



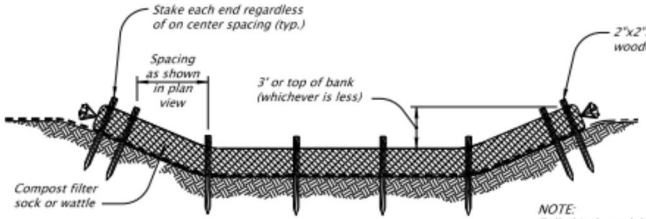
SECTION A-A

WATTLE / FIBER ROLL CHECK DAM - TYPE 2

NOT TO SCALE



PLAN

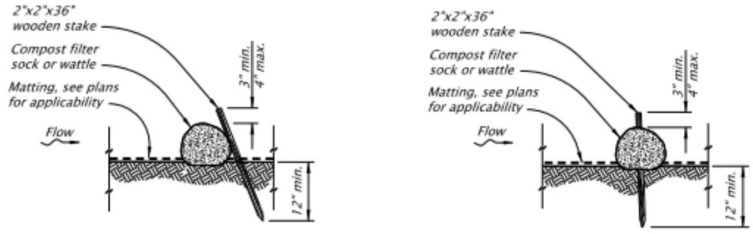


SECTION B-B

NOTE:
Fully biodegradable compost socks are suitable for permanent installation only. Product becomes too fragile to be moved or removed intact.

COMPOST FILTER SOCK CHECK DAM - TYPE 6

NOT TO SCALE



FIBER ROLL AND COMPOST SOCK STAKING ALTERNATIVES

NOT TO SCALE

MAXIMUM CHECK DAM SPACING "L"

Ditch Grade	H=8"	H=12"	H=18"	H=24"
10%	* *	* *	15'	20'
9%	* *	* *	16'	22'
8%	* *	* *	18'	25'
7%	* *	* *	21'	28'
6%	* *	16'	25'	33'
5%	* *	20'	30'	40'
4%	16'	25'	37'	50'
3%	22'	33'	50'	66'
2%	33'	50'	75'	100'

* * Not allowed H = Min. dam height

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

CALC. BOOK NO. N/A

SDR DATE January, 2021

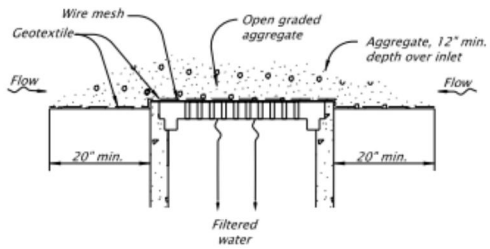
NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

OREGON STANDARD DRAWINGS

CHECK DAMS TYPE 2 AND 6

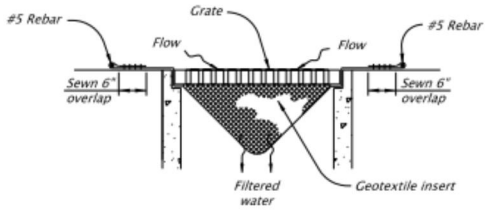
2021

DATE	REVISION DESCRIPTION
Jan 2021	Removed Calc book numbers



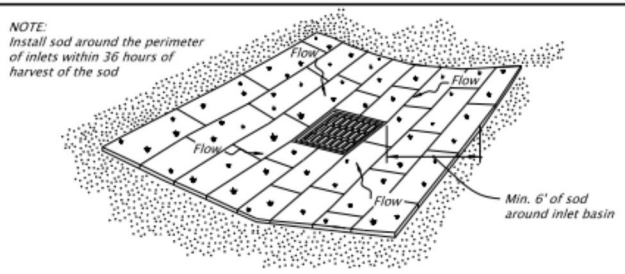
GEOTEXTILE/WIRE MESH/AGGREGATE - TYPE 2

NOT TO SCALE



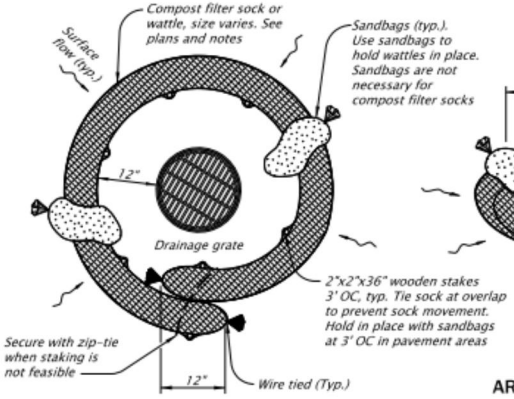
PREFABRICATED FILTER INSERT - TYPE 3

NOT TO SCALE

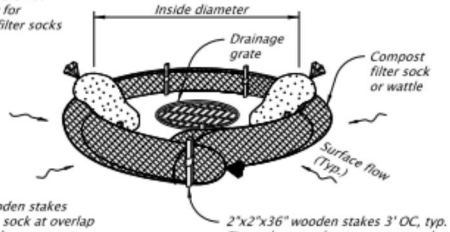


SOD PROTECTION - TYPE 6

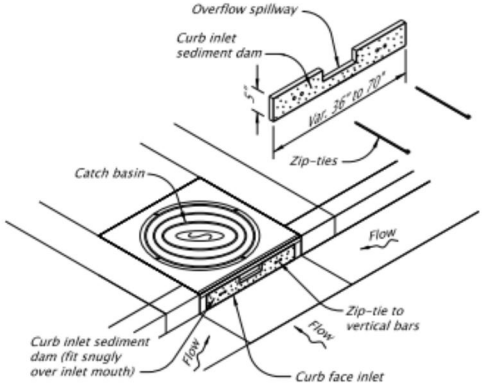
NOT TO SCALE



AREA DRAIN PLAN

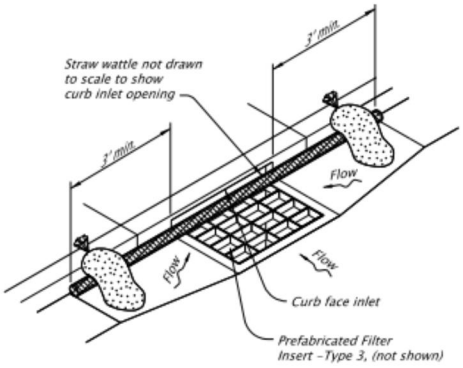


AREA DRAIN PERSPECTIVE VIEW



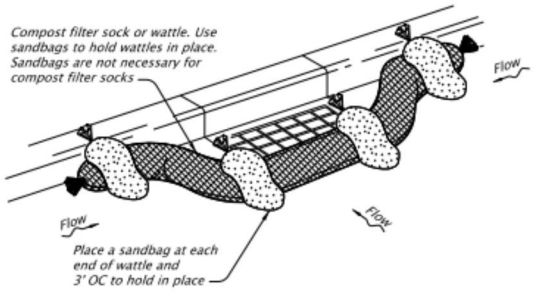
CURB INLET SEDIMENT DAM - TYPE 10

NOT TO SCALE



WATTLE BARRIER WITH FILTER INSERT - TYPE 11

NOT TO SCALE



CURB INLET PERSPECTIVE VIEW

COMPOST FILTER SOCK OR WATTLE - TYPE 7

NOT TO SCALE

NOTES:

Type 2 – Geotextile/wire mesh/aggregate
Place the wire mesh over the grate.
Place sediment fence geotextile over the wire mesh and perimeter area around structure.
Install aggregate over the geotextile fabric.

Type 3 – Prefabricated filter inserts
Install prefabricated filter inserts according to the plans, special provisions, and manufacturer recommendations.
Prefabricated inserts with provisions for overflow are allowed only when accompanied by additional BMP's to prevent the potential of sediments entering project storm systems.
Field fabricated inserts are not allowed.

Type 7 – Compost filter sock
Drive 2"x2" wood stakes a minimum of 6" into ground and flush with the top of the sock.
Overlap ends of sock per manufacturers recommendations (12"min., 36" max.).
Use 8" to 12" dia sock on curbside in traffic areas.

(Type 7 cont.)
Use 12" to 18" dia sock in non-traffic areas or areas where the larger socks can be used safely.
use synthetic mesh socks for temporary installations.

Type 10 – Curb inlet sediment dam
Fit curb inlet sediment dam snugly into inlet mouth. Curb inlet sediment dam is required for use with inlet filter insert where at-grade inlet grate and curb inlet are combined at a catch basin.

Type 11 – Wattle barrier with filter insert
Install prefabricated filter insert per Type 3 detail.
Install wattles over opening and 36" to each side of opening tight against curb. Adjust wattle to force storm water to flow through filter insert or wattle prior to leaving the site.
Adjust, replace or modify the inlet protection as needed to prevent sediment laden water from entering the catch basin.

CALC. BOOK NO. N/A

SDR DATE January, 2021

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

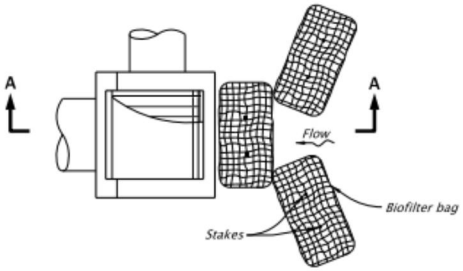
The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

OREGON STANDARD DRAWINGS

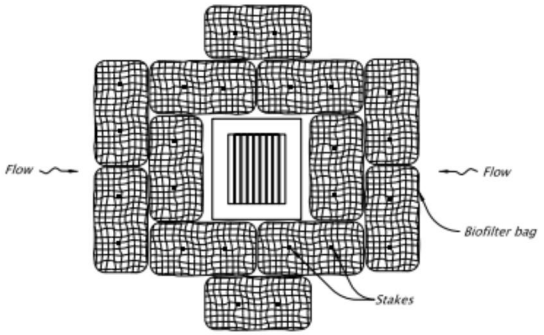
INLET PROTECTION
TYPE 2, 3, 6, 7, 10 AND 11

2021

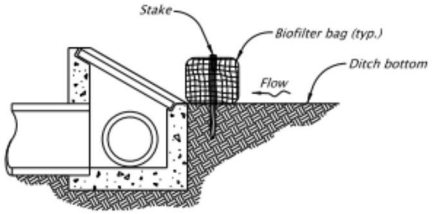
DATE	REVISION DESCRIPTION
Jan 2021	Removed Calc book numbers
Jan 2021	Moved notes up from overlapping the sheet border



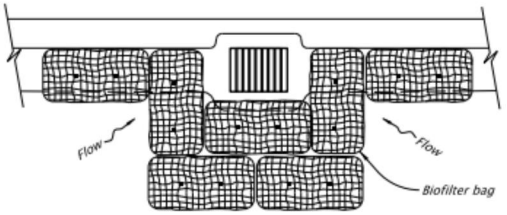
PLAN
DITCH INLET



PLAN
AREA DRAIN



SECTION A-A
DITCH INLET



PLAN
CATCH BASIN

BIOFILTER BAGS - TYPE 4

NOT TO SCALE

NOTES:

1. *Stake biofilter bags with 2"x2"x36" wood stakes, and use a minimum 2 stakes per bag. Drive stakes a minimum of 6" into the ground and flush with the top of the bags.*
2. *Omit stakes when bags are placed on pavement surface.*
3. *Overlap all bag joints 6".*
4. *Biofilter bags used on active roadways are easily displaced and made ineffective if struck by vehicles. If struck by a cyclist, falls with injury could result. On active roadways alternative inlet protection should be considered.*

CALC. BOOK NO. N/A

SDR DATE January, 2021

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

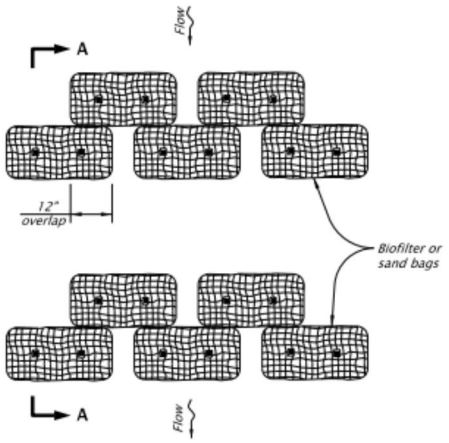
The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

OREGON STANDARD DRAWINGS

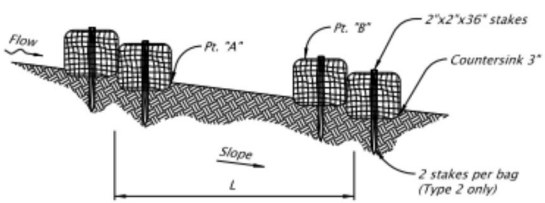
INLET PROTECTION TYPE 4

2021

DATE	REVISION DESCRIPTION
Jan 2021	Removed Calc book numbers



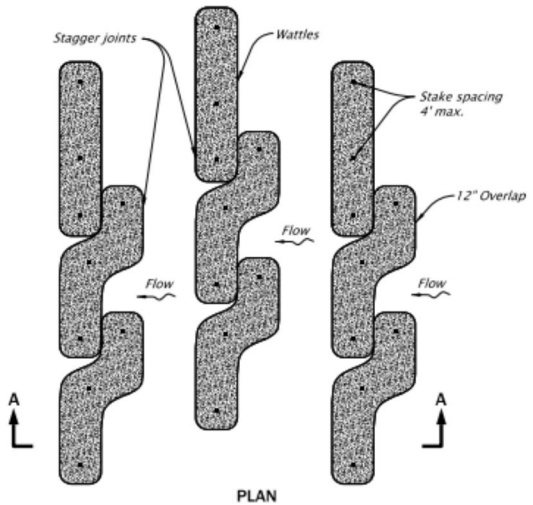
PLAN



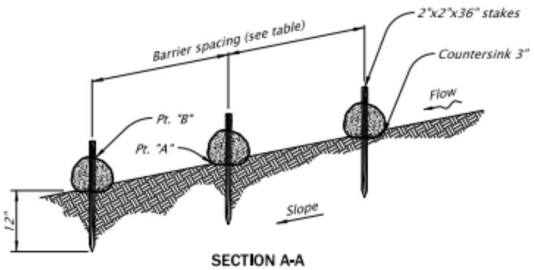
SECTION A-A

BIOFILTER BAG / SAND BAG BARRIER - TYPE 2 AND 4

NOT TO SCALE



PLAN



SECTION A-A

FIBER ROLL BARRIER - TYPE 3

NOT TO SCALE

NOTES:

1. *For Type 2 barrier, drive stakes flush with top of bag and into undisturbed ground a min. of 12". Omit stakes if bags are placed on paved surface.*
2. *For Type 2 and Type 4 barriers, space bags (L) so that the elevation of point "A" is less than or equal to the elevation of point "B".*

Type 2 – Biofilter bags
Type 3 – Wattles
Type 4 – Sand bags

BARRIER SPACING		
INSTALL PARALLEL ALONG CONTOURS AS FOLLOWS		
% SLOPE	% SLOPE	MAXIMUM SPACING ON SLOPE
10% Flatter	1:10 or Flatter	300'
10 > % ≥ 15	10 > X ≥ 7.5	150'
15 > % ≥ 20	7.5 > X ≥ 5	100'
20 > % ≥ 30	5 > X ≥ 3	50'
Steeper than 30%	Steeper than 1:3	25'

CALC. BOOK NO. N/A

SDR DATE January, 2021

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

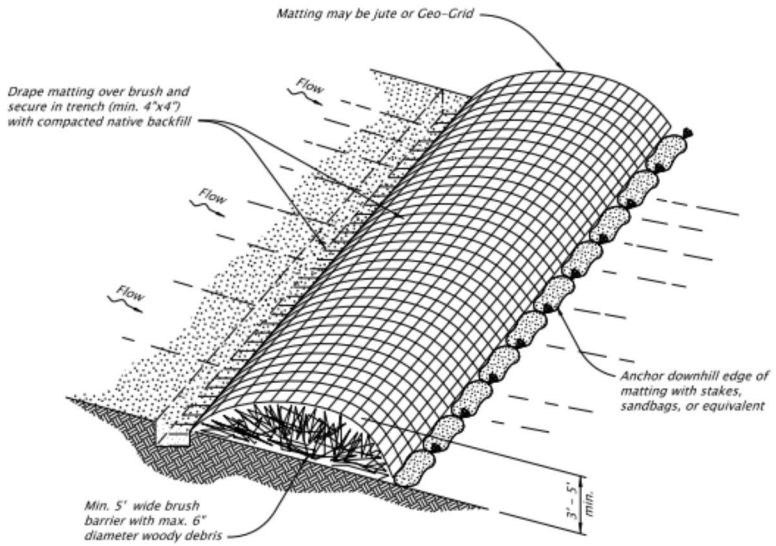
The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

OREGON STANDARD DRAWINGS

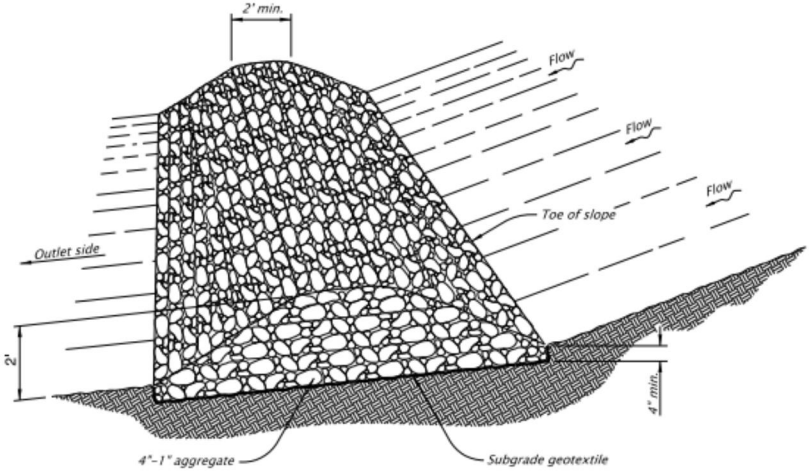
SEDIMENT BARRIER TYPE 2, 3 AND 4

2021

DATE	REVISION DESCRIPTION
Jan 2021	Removed Calc book numbers



BRUSH BARRIER - TYPE 5
NOT TO SCALE



AGGREGATE BARRIER - TYPE 6
NOT TO SCALE

NOTES:
1. Direct diverted flows from the outlet side of the rock filter berm/dams onto a stabilized area, such as vegetation and or rock, or into a sediment trapping facility.
2. Embed barrier a min. of 4" into the existing ground/embankments.
3. Use 1:3 or flatter side slope. Within the safety clear zone, use 1:6 or flatter side slopes.
4. Use 4"-1" clean aggregate.

CALC. BOOK NO. N/A

SDR DATE January, 2021

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

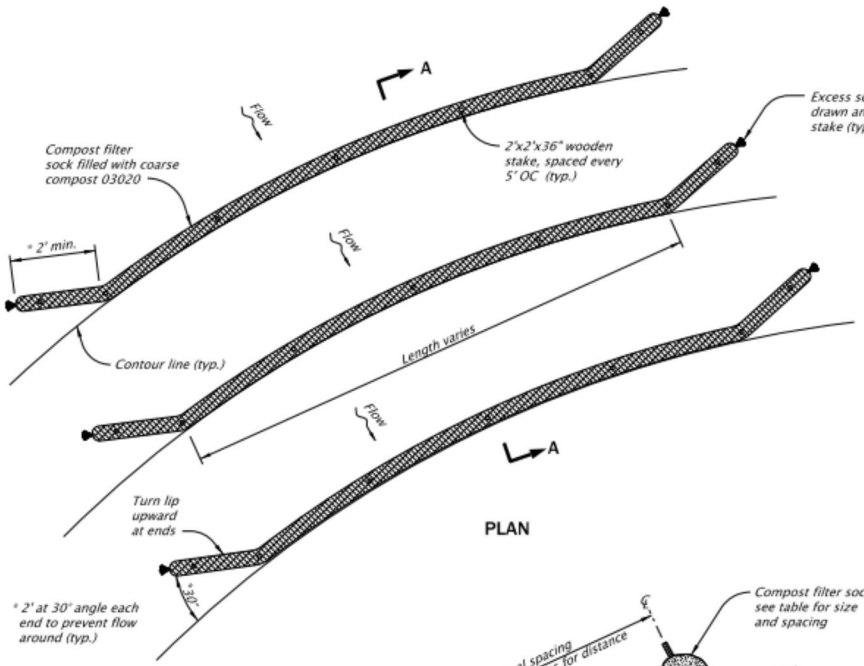
The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

OREGON STANDARD DRAWINGS

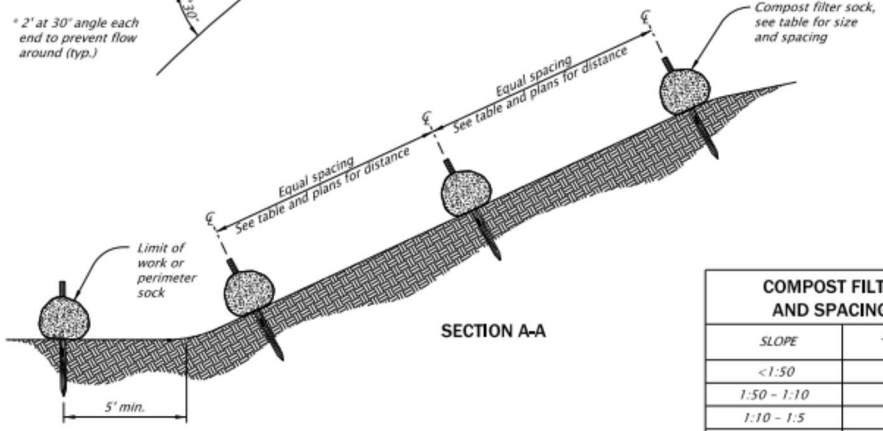
SEDIMENT BARRIER TYPE 5 AND 6

2021

DATE	REVISION DESCRIPTION
Jan 2021	Removed Calc book numbers

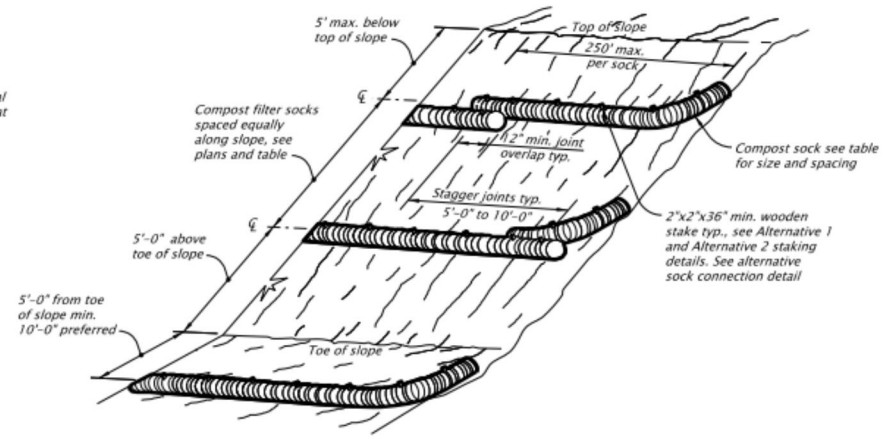


PLAN

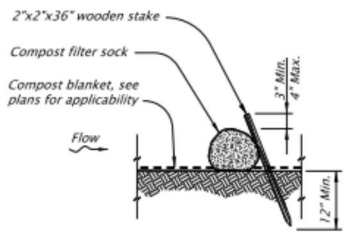


SECTION A-A

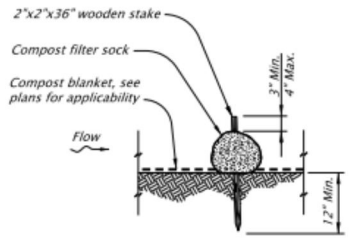
NOTE:
Fully biodegradable compost sock mesh is recommended for permanent installations. Where compost socks must be moved or removed, synthetic sock mesh should be used.



SLOPE APPLICATION - PERSPECTIVE VIEW



ALTERNATIVE 1 (Staking)



ALTERNATIVE 2 (Staking)

COMPOST FILTER SOCK DIAMETER AND SPACING BASED ON SLOPE		
SLOPE	*SPACING (ft)*	*DIAMETER (in)*
<1:50	*250*	*8*
1:50 – 1:10	*125*	*12*
1:10 – 1:5	*100*	*12*
1:5 – 1:2	*50*	*18*
>1:2	*25*	*18*

COMPOST FILTER SOCK
NOT TO SCALE

CALC. BOOK NO. N/A

SDR DATE January, 2021

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

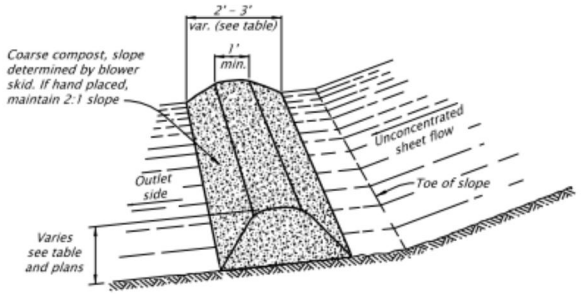
The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

OREGON STANDARD DRAWINGS

SEDIMENT BARRIER TYPE 8

2021

DATE	REVISION DESCRIPTION
Jan 2021	Removed Calc book numbers



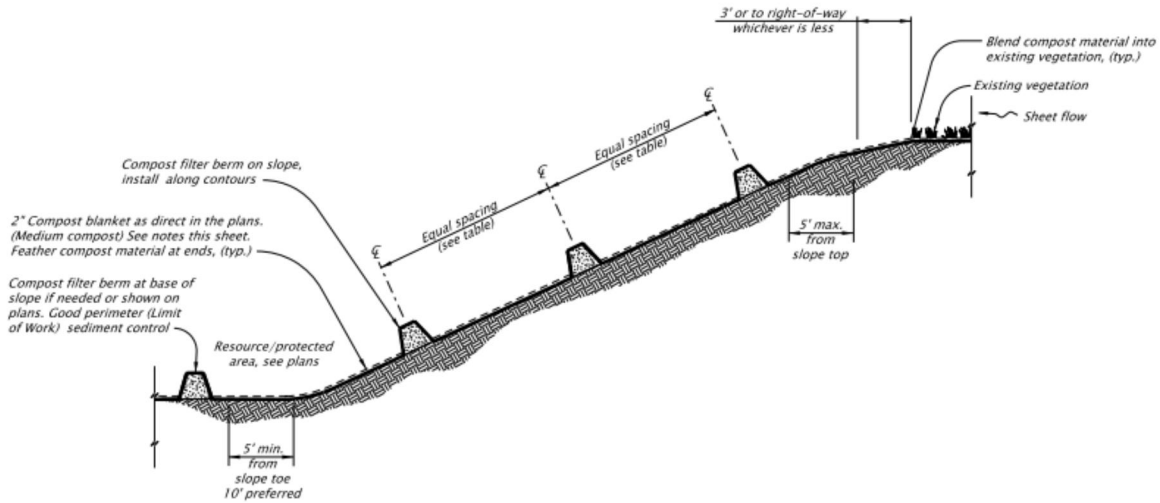
COMPOST FILTER BERM - TYPE 9

NOT TO SCALE

COMPOST FILTER BERM DIMENSIONS AND SPACING BASED ON SLOPE				
SLOPE	BERM SPACING	BERM DIMENSIONS		
		HEIGHT	BOTTOM WIDTH	TOP WIDTH
> 50:1	250 ft	1 ft	2 ft (min.)	1 ft
50:1 - 10:1	125 ft	1 ft	2 ft (min.)	1 ft
10:1 - 5:1	100 ft	1 ft	2 ft (min.)	1 ft
3:1 - 2:1	50 ft	1.3 ft	2.6 ft (min.)	1 ft
> 2:1		1.5 ft	3 ft (min.)	1 ft

NOTES:

1. Compost filter berm's are sediment control devices for areas where runoff occurs as sheet flow. See Section 00280, Oregon Standard Specifications.
2. The maximum drainage area for a continuous berm shall be 1/4 acre per 100 linear feet of filter berm.
3. Where possible, berm's should be placed away from the toe of slopes a minimum of 5 feet (10 feet preferred) to allow for energy dissipation and sediment storage.
4. Direct the outlet side of filter berm, located at base of slope, onto a stabilized area, such as vegetation and/or aggregate.
5. Place filter berm's along or on the ground contour with the ends of the filter berm turned up slope. Adequate area shall be provided behind berm for ponding.
6. Compost filter berm's may be vegetated with temporary or permanent seeding after placement.
7. If placed in area with existing ground vegetation, cut vegetation to 2-4 inches above grade at berm footprint. Do not remove existing vegetation or cut back outside berm footprint unless directed by Agency.
8. If soils are exposed apply compost blanket per details and specifications.



COMPOST FILTER BERM SERIES

NOT TO SCALE

CALC. BOOK NO. N/A

SDR DATE January, 2021

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

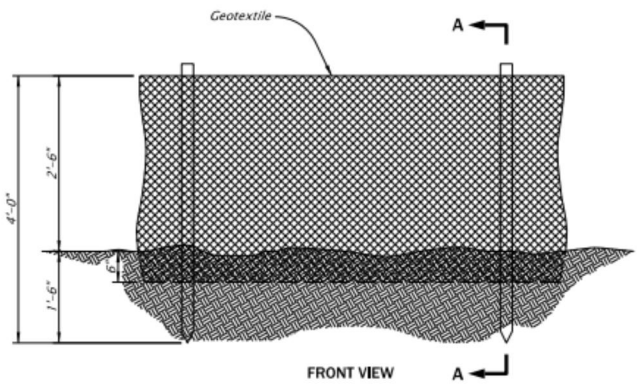
The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

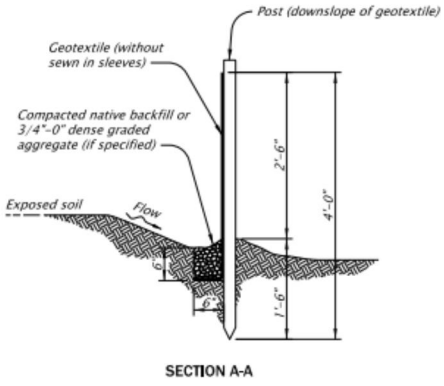
OREGON STANDARD DRAWINGS

SEDIMENT BARRIER TYPE 9

2021

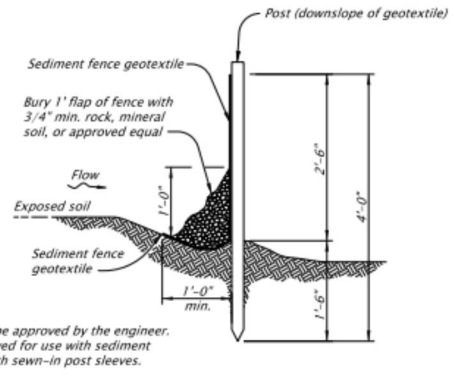
DATE	REVISION DESCRIPTION
Jan 2021	Removed Calc book numbers





SEDIMENT FENCE AND GEOTEXTILE BURY DETAIL - TYPE 1

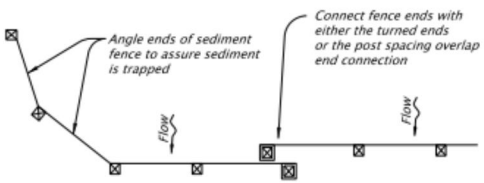
NOT TO SCALE



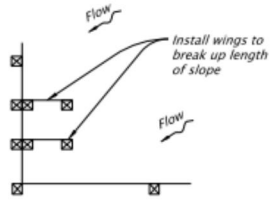
NOTES:
1. Use must be approved by the engineer.
2. Not approved for use with sediment fencing with sewn-in post sleeves.

ALTERNATE SEDIMENT FENCE WITHOUT TRENCHING - TYPE 2

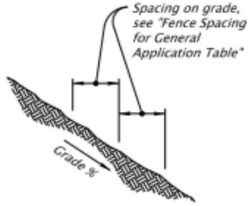
NOT TO SCALE



PLAN VIEW



TERMINATION AT CORNER OR PROPERTY LINE



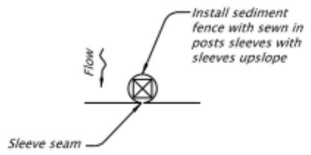
GENERAL NOTES:
1. Use 2"x2" wood fence posts.
2. Posts to be installed on downhill side of sediment fence geotextile. Position posts to prevent separation from geotextile.
3. Compact filter fabric trench backfill and soil on uphill side of fence.
4. Locate fence no closer than three feet to the toe of a slope.
5. Wing spacing shall comply with "Fence Spacing for General Application Table".

FENCE SPACING FOR GENERAL APPLICATION TABLE

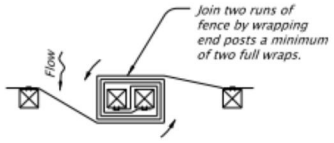
INSTALL PARALLEL ALONG CONTOURS AS FOLLOWS	
GRADE	MAXIMUM SPACING ON GRADE
Grade < 10%	300'
10% ≤ Grade < 15%	150'
15% ≤ Grade < 20%	100'
20% ≤ Grade < 30%	50'
30% ≤ Grade	25'

POST SPACING TABLE

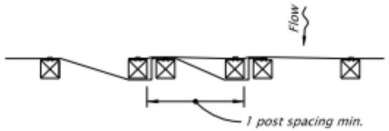
6'	Sediment Fence with Geotextile elongation less than 50%
4'	Sediment Fence with Geotextile elongation 50% or more



GEOTEXTILE WITH POST SLEEVES



TURNED ENDS CONNECTION



POST SPACING OVERLAP CONNECTION

GEOTEXTILE END CONNECTIONS

NOT TO SCALE

CALC. BOOK NO. N/A

SDR DATE January, 2021

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

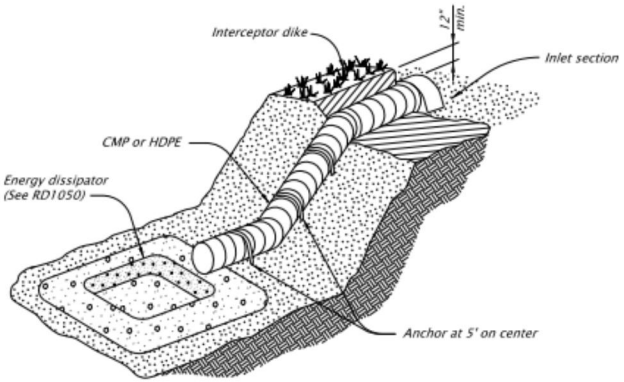
The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

OREGON STANDARD DRAWINGS

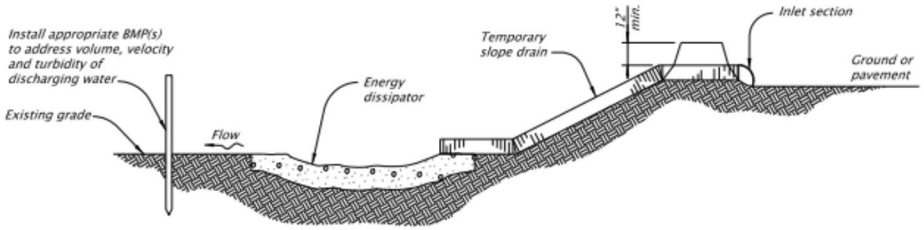
SEDIMENT FENCE

2021

DATE	REVISION DESCRIPTION
Jan 2021	Removed Calc book numbers



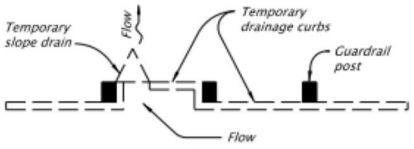
PERSPECTIVE



PROFILE

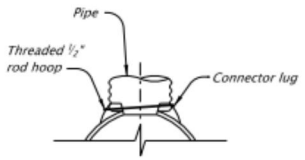
TEMPORARY SLOPE DRAIN
NOT TO SCALE

NOTES:
1. Temporary slope drains shall be used at the top of fill slopes as the embankment is constructed to prevent erosion.
2. Temporary drainage curbs shall be used in conjunction with temporary slope drains to prevent erosion on completed slopes and to direct flow into end section.
3. All dimensions not indicated will be as directed.

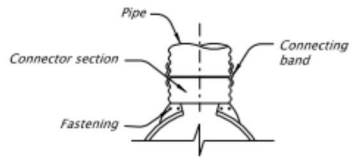


PLAN

TEMPORARY DRAIN AT GUARDRAIL
NOT TO SCALE

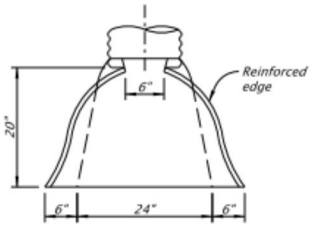


OPTION 1

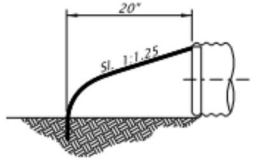


OPTION 2

CONNECTION DETAILS
NOT TO SCALE

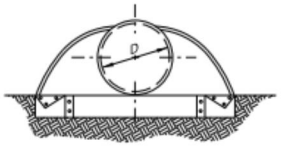


PLAN



SIDE VIEW

PIPE SIZE TABLE		
PIPE		CONTRIBUTING AREA TO SLOPE DRAIN (sq ft)
Slope (min.)	D in. (min.)	
3.8%	6	A < 200
2.5%	8	200 ≤ A < 500
1.9%	10	500 ≤ A < 850
1.5%	12	850 ≤ A < 1400
–	special design reqd.	1400 ≤ A



FRONT VIEW

INLET SECTION DETAILS
NOT TO SCALE

CALC. BOOK NO. N/A

SDR DATE January, 2021

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

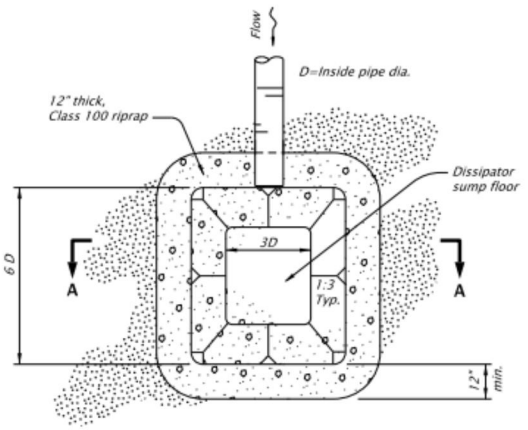
The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

OREGON STANDARD DRAWINGS

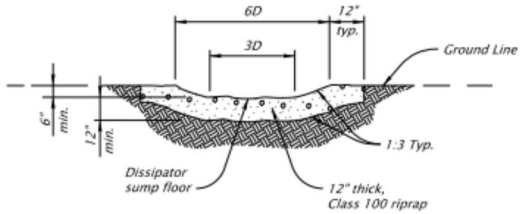
TEMPORARY SLOPE DRAIN WITH ENERGY DISSIPATOR

2021

DATE	REVISION DESCRIPTION
Jan 2021	Removed Calc book numbers



PLAN



SECTION A-A

NOTES:
1. All dimensions not indicated will be as directed.
2. Install level spreader, sediment barrier(s), check dam(s) or other appropriate BMP(s) to address volume, velocity and turbidity of discharge water.

TEMPORARY SCOUR BASIN / ENERGY DISSIPATOR

NOT TO SCALE

CALC. BOOK NO. N/A

SDR DATE January, 2021

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

OREGON STANDARD DRAWINGS

TEMPORARY SCOUR BASIN / ENERGY DISSIPATOR

2021

DATE	REVISION DESCRIPTION
Jan 2021	Removed Calc book numbers

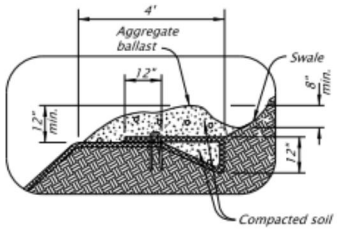


FIGURE A1:
TOP OF BANK ANCHOR TRENCH, H>3' AND TERMINAL SLOPE
NOT TO SCALE

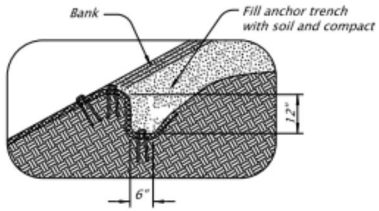


FIGURE A2:
TOP OF BANK ANCHOR TRENCH, H<3'
NOT TO SCALE

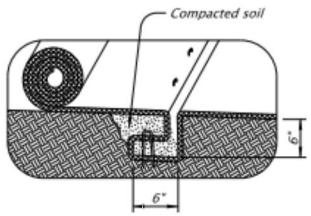


FIGURE A3:
CHANNEL CHECK SLOT
NOT TO SCALE

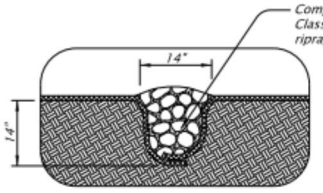


FIGURE A4:
CHANNEL CHECK SLOT WITH ROCK BACKFILL
NOT TO SCALE

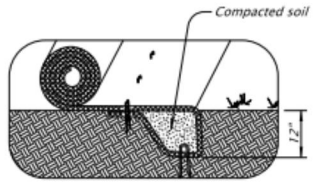
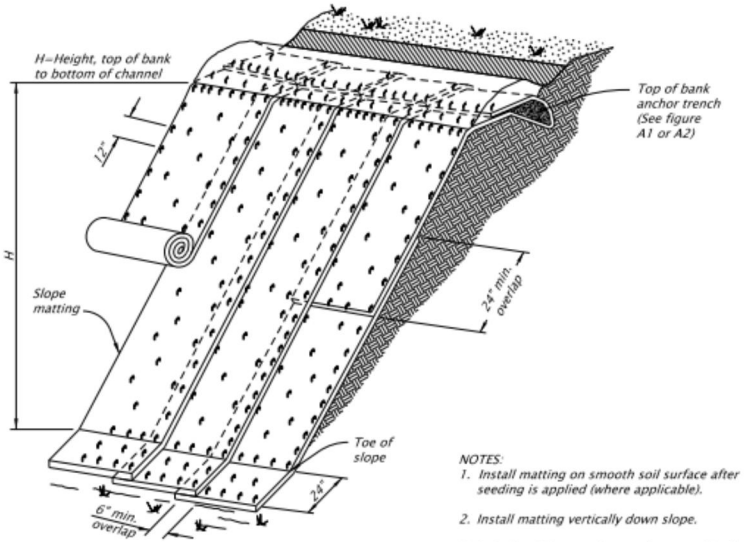
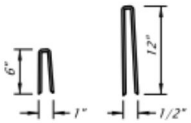


FIGURE A5:
INITIAL CHANNEL ANCHOR TRENCH
NOT TO SCALE



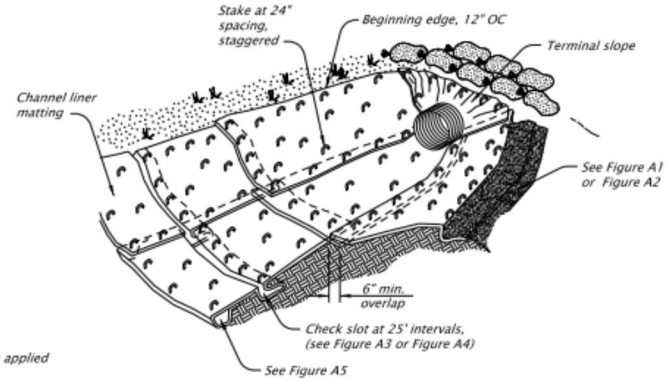
SLOPE MATTING ISOMETRIC VIEW
NOT TO SCALE

NOTES:
1. Install matting on smooth soil surface after seeding is applied (where applicable).
2. Install matting vertically down slope.
3. Install matting so edge overlaps are shingled away from prevailing winds.
4. Place fastener at 12" OC on matting edges
5. Overlap upper mat over lower mat, and fasten.
6. Stagger alternate rows of fasteners placed at 24" OC
7. Extend mat 24" beyond toe of slope; fold mat back under 4" and fasten.
8. Matting Types A through E: Furnish fully biodegradable product. Matting with plastic or photodegradable components will not be accepted.



STAPLES
NOT TO SCALE

NOTES:
1. Install matting on smooth soil surface after seeding is applied (where applicable).
2. Install channel liner matting, in the direction of water flow. Anchor upstream end of mat with check slot for culvert outfalls, place mat under pipe 12" minimum upstream from pipe outlet.
3. Construct check slots across channel bottom at 25' spacing and at the end of each mat (Fig. A3 or A4).
4. Overlap side channel liner matting edges 6" over the center channel liner matting and fasten edges 12" OC Continue overlap and stapling pattern for each additional side channel liner mat.
5. Lap upstream matting end 12" over beginning edge of downstream matting. Fasten 12" OC
6. Anchor top edge of side channel matting in trench and fasten 12" OC (Fig. A2).
7. Fasten matting interior at 24" OC with staggered spacing.
8. Construct initial anchor trench at downstream end of matting and terminal slope anchor at upstream end.
9. Matting Types A through E: Furnish fully biodegradable product. Matting with plastic or photodegradable components will not be accepted.



CHANNEL MATTING ISOMETRIC VIEW
NOT TO SCALE

CALC. BOOK NO. N/A

SDR DATE January, 2021

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

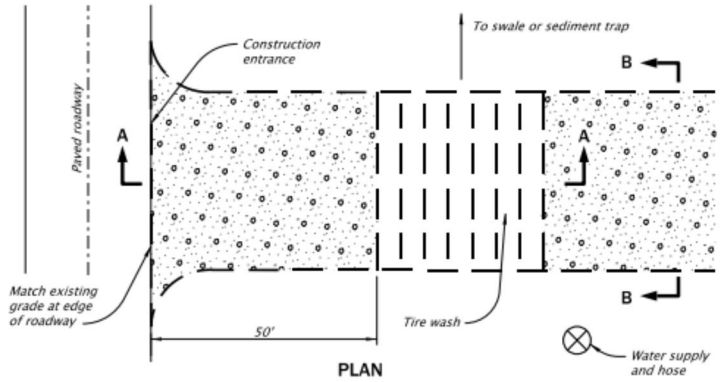
The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

OREGON STANDARD DRAWINGS

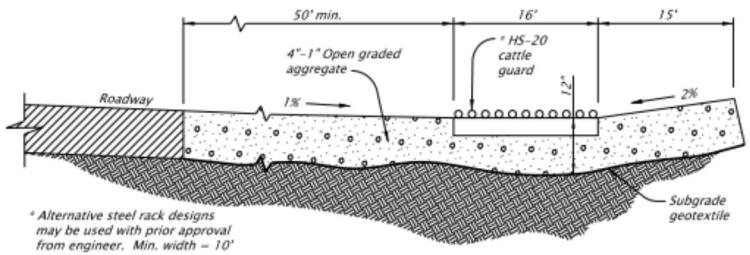
SLOPE AND CHANNEL MATTING

2021

DATE	REVISION DESCRIPTION
Jan 2021	Removed Calc book numbers

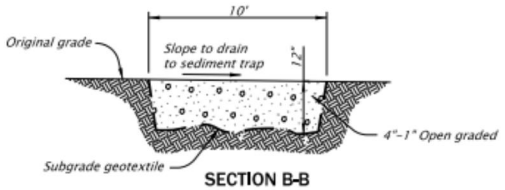


PLAN



* Alternative steel rack designs may be used with prior approval from engineer. Min. width = 10'

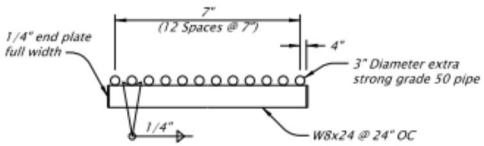
SECTION A-A



SECTION B-B

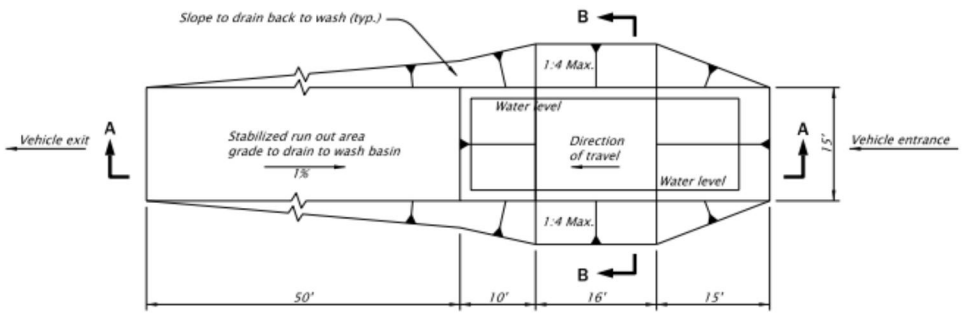
TIRE WASH - TYPE 1 (MANUAL HOSE WASH)

NOT TO SCALE

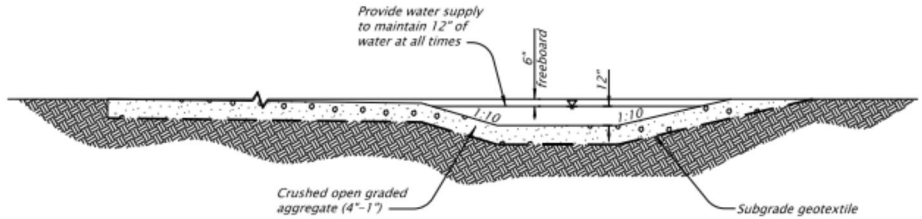


HS-20 CATTLE GUARD

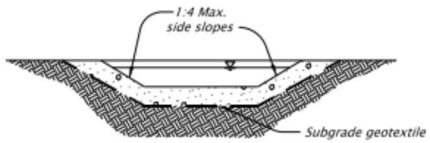
NOT TO SCALE



PLAN



SECTION A-A



SECTION B-B

TIRE WASH - TYPE 2

NOT TO SCALE

CALC. BOOK NO. N/A

SDR DATE January, 2021

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

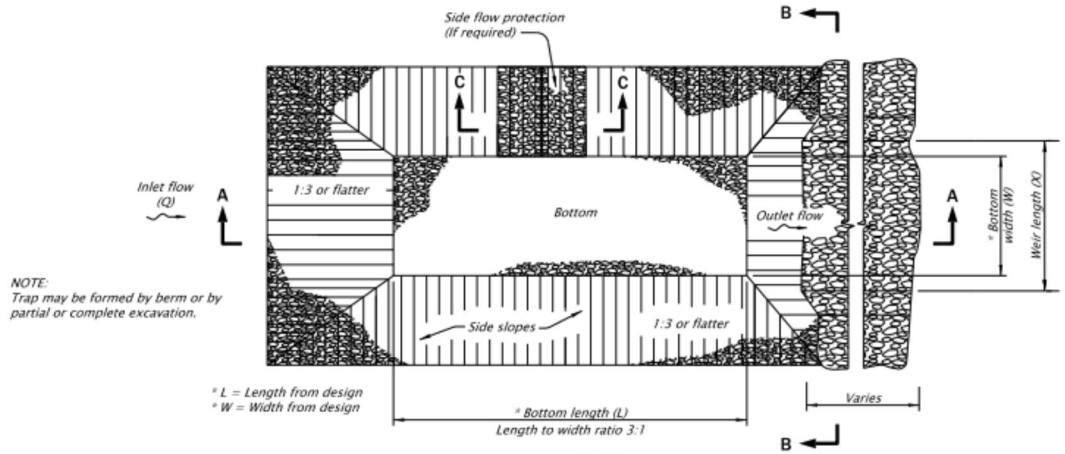
The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

OREGON STANDARD DRAWINGS

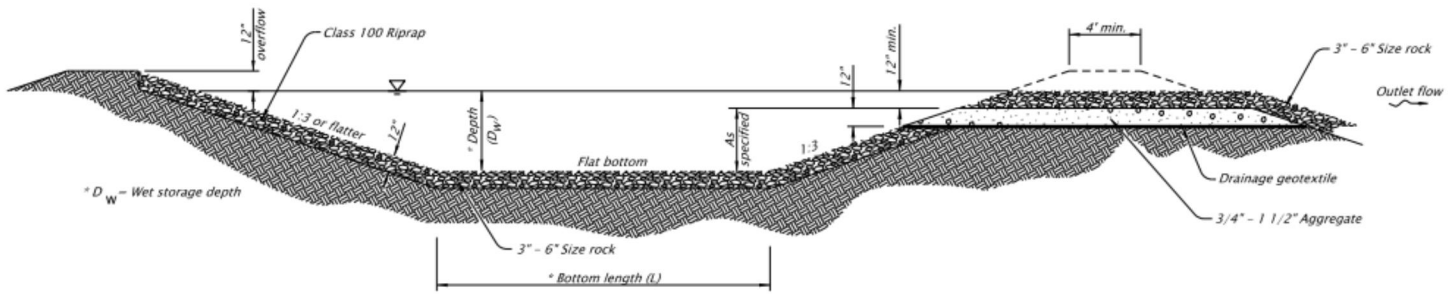
TIRE WASH FACILITY TYPE 1 AND 2

2021

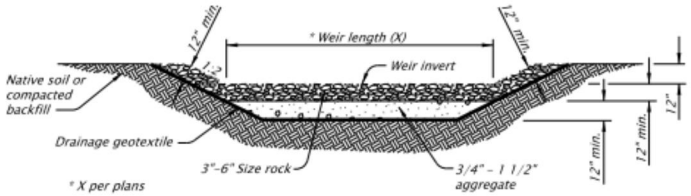
DATE	REVISION DESCRIPTION
Jan 2021	Removed Calc book numbers



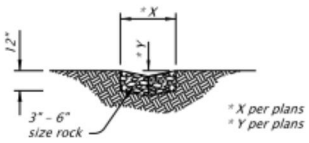
PLAN



SECTION A-A



SECTION B-B



SECTION C-C

SEDIMENT TRAP

NOT TO SCALE

CALC. BOOK NO. N/A

SDR DATE January, 2021

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

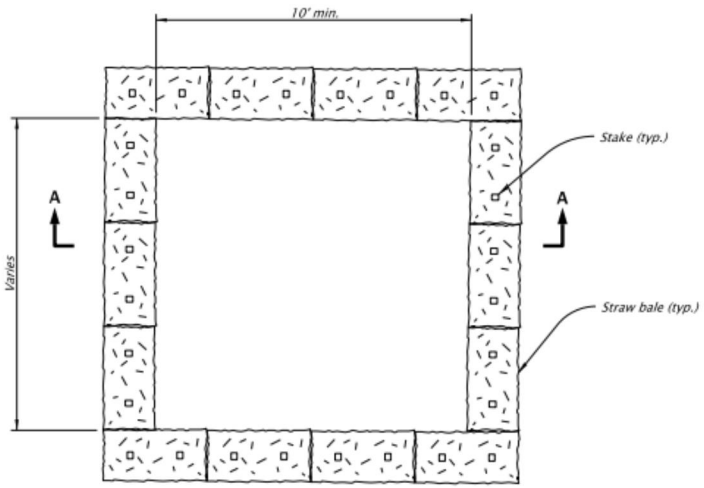
The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

OREGON STANDARD DRAWINGS

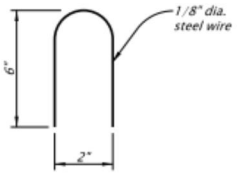
SEDIMENT TRAP

2021

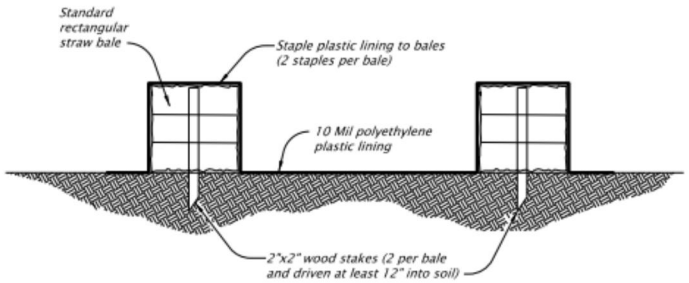
DATE	REVISION DESCRIPTION
Jan 2021	Removed Calc book numbers



PLAN



STAPLE DETAIL
NOT TO SCALE



SECTION A-A

CONCRETE TRUCK WASH OUT FACILITY
NOT TO SCALE

CALC. BOOK NO. N/A

SDR DATE January, 2021

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

OREGON STANDARD DRAWINGS

CONCRETE TRUCK WASH OUT

2021

DATE	REVISION DESCRIPTION

APPENDIX H

GLOSSARY OF TERMS

GLOSSARY OF TERMS

Active Chemical Treatment System	The use of chemicals (e.g., cationic treatment chemicals, electrocoagulation, flocculants, filtration, anionic polyacrylamide, polymers, hydrochloric or sulfuric acid) to remove pollutants from water (stormwater runoff or from dewatering) before discharge from a permitted site.
Active Treatment System	The use of pumps or other non-passive means to facilitate the removal of pollutants from water (stormwater runoff or from dewatering) before discharge from a permitted site.
Backwash Water	Refers to pumping water backwards through the filter media, sometimes including intermittent use of compressed air during the process. Backwashing is a form of preventive maintenance so that the filter media can be reused.
Best Management Practices (BMPs)	Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural or managerial practices to prevent or reduce the pollution of waters of the state. BMPs include treatment systems, erosion and sediment control, source control, and operating procedures and practices to control site runoff, spillage or leaks, and waste disposal.
Clean Water Act or CWA	the Federal Water Pollution Control Act enacted by Public Law 92-500, as amended by Public Laws 95-217, 95-576, 96-483, and 97-117; USC 1251 et seq.
Common Plan of Development or Sale	A plan to subdivide a parcel of land into separate parts for separate sale. This can be for residential, commercial, or industrial development. A construction activity is part of a larger common plan of development if it is completed in one or more of the following ways: in separate stages, in separate phases, and/or in combination with other construction activities.
Construction Activities	Including but not limited to, clearing, grading, excavating, grubbing, stumping, demolition, and land disturbing activities. Construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the facility as defined in 40 CFR 122.26(b)(15).
Construction Support Activity	A construction-related activity that specifically supports the construction activity and involves earth disturbance or pollutant-generating activities of its own and can include activities associated with concrete or asphalt batch plants, equipment staging yards, materials storage areas, excavated material disposal areas, and borrow areas.
Contamination	Are generally understood to be caused by a known or unknown "Release", as defined by ORS 465.200 (22), from a known or suspected source.
Conveyance System	A sewer, ditch, pipe, channel, swale or similar component that is designed to carry water or any combination of such components.
CO2 Sparging	A technique in which carbon dioxide gas, sometimes introduced by dry ice, is bubbled through a liquid in order to lower the pH of the liquid.
County	The public entity, the Linn County Road Department, performing the construction activity regulated by this permit that has submitted an application and received notice of registration under this general permit by DEQ..

Detention	The temporary storage of stormwater to improve quality or reduce the volumetric flow rate of discharge or both.
Dewatering	The removal and disposal of surface water or groundwater during site construction.
Director	Director of the Oregon Department of Environmental Quality.
Discharge Point	The location where stormwater leaves the site. It includes the location where stormwater is discharged to surface water or a stormwater conveyance system.
Earth Disturbance	Actions taken to alter the existing vegetation and/or underlying soil of a site, such as clearing, grading, site preparation (e.g., excavating, cutting, and filling), soil compaction, and movement and stockpiling of topsoil.
Encroach(ing)	To intrude beyond a specified boundary without right or permission.
Engineered Soils	Soils on site amended with cementitious compounds.
Erosion	The movement of soil particles or rock fragments by water or wind.
Erosion and Sediment Control BMPs	BMPs that are intended to prevent erosion and sedimentation, such as preserving natural vegetation, seeding, mulching and matting, plastic covering, sediment fences, and sediment traps and ponds. Erosion and sediment control BMPs are synonymous with stabilization and structural BMPs.
Farm Use Land	Cropland, grassland, rangeland, pasture, and other land on which agricultural or forest-related products or livestock are produced. Agricultural lands include cropped woodland, marshes, incidental areas included in the agricultural operation, and other types of land used for the production of livestock.
Hazardous Materials	The materials defined in 40 CFR part 302 Designation, Reportable Quantities, and Notification.
Linear Construction Site	Examples of linear construction projects include, but are not limited to, pipeline projects, highway construction, highway resurfacing and maintenance, airport runway construction and resurfacing tunnels, mass transit systems, and railroads.
Local Government	Any county, city, town, or service district.
National Pollutant Discharge Elimination System (NPDES)	The national program under Section 402 of the Clean Water Act for regulation of point source discharges of pollutants to waters of the United States.
Native Topsoil	Top layer of soil on site.
Natural Buffer Zone	An area of undisturbed natural cover surrounding surface waters within which construction activities are restricted. Natural cover includes the natural vegetation, exposed rock, and barren ground that existed prior to commencement of land disturbing activities.
Natural Vegetation	Vegetation that occurs spontaneously without regular management, maintenance, or species introductions or removals. This also includes invasive species.
Non-Stormwater Pollution Controls	General site and materials management measures that directly or indirectly aid in minimizing the discharge of sediment and other construction related pollutants from the construction site.

Owner	for the purposes of this permit, any person with a legal interest in the permitted activities or the property on which the permitted activities occur.
Person	Not only individuals, but also includes corporations, associations, firms, partnerships, joint stock companies, public and municipal corporations, political subdivisions, the state and any agencies thereof and the federal government and any agencies thereof.
pH Neutralization	To bring the pH between 6.5 and 8.5 standard units.
Pollutant as defined in 40 CFR §122.2	Dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, domestic sewage sludge (biosolids), munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, soil, cellar dirt and industrial, municipal, and agricultural waste discharge into water. It does not mean sewage from vessels within the meaning of section 312 of the FWPCA, nor does it include dredge or fill material discharged in accordance with a permit issued under section 404 of the FWPCA.
Pollution or Water Pollution as defined by ORS 468B.005(3)	Such alteration of the physical, chemical or biological properties of any waters of the state, including change in temperature, taste, color, turbidity, silt or odor of the waters, or such discharge of any liquid, gaseous, solid, radioactive or other substance into any waters of the state, which will or tends to, either by itself or in connection with any other substance, create a public nuisance or which will or tends to render such waters harmful, detrimental or injurious to public health, safety or welfare, or to domestic, commercial, industrial, agricultural, recreational or other legitimate beneficial uses or to livestock, wildlife, fish or other aquatic life or the habitat thereof.
Project Completion	Means that construction activities are completed on the 1200-CA permit covered project site and that final stabilization criteria listed in the permit conditions are met.
Runoff Controls	BMPs that are designed to control the peak volume and flow rate or to prevent scour due to concentrated flows.
Sediment	Mineral or organic matter, typically deposited by water, air or ice.
Sediment Basin/Impoundment (also includes traps/ponds)	A sediment basin is a temporary pond built on a construction site to capture eroded or disturbed soil that is washed off during storm events, and protect the water quality of a nearby stream, river, lake or bay. The sediment-laden soil settles in the pond before the runoff is discharged.
Sequence	The phased order that land disturbing activities are performed.
Shared Control	A stormwater control, such as a sediment basin or pond, used by two or more operators that is installed and maintained for the purpose of minimizing and controlling pollutant discharges from a construction site with multiple registrants associated with a common plan of development or sale.
Steep Slope	Defined as those that are 70 percent or greater in grade.
Site	The area where the construction activity is physically located or conducted.
Storm Event	EPA defines a storm event at 40 CFR 122.21(g)(7)(ii) as a rainfall event with greater than 0.1 inch of rainfall.

Stormwater as defined by 40 CFR §122.26(b)(13)	Stormwater runoff, snow melt runoff and surface runoff and drainage.
Stormwater Control	The effort to remove pollutants from construction site runoff, improve water quality, and control quantity before the water reaches bodied of water.
Stormwater Conveyance	A sewer, ditch, or swale that is designed to carry stormwater; a stormwater conveyance may also be referred to as a storm drain or storm sewer.
Stumping	I defined as "to clear the land of stumps."
Surface Runoff	That portion of stormwater that does not infiltrate into the ground or evaporate, but instead flows onto adjacent land or watercourses or is routed to stormwater conveyance systems.
Surface Water	All water naturally open to the atmosphere; for example, rivers, lakes, reservoirs, ponds, streams, impoundments, oceans, estuaries, springs, etc.
Thawing Conditions	When frozen water onsite melts and creates runoff that may possibly discharge.
Total Maximum Daily Load (TMDL)	A calculation of the maximum amount of a pollutant that a waterbody can receive and still meet state water quality standards. It is the sum of the allowable loads of a single pollutant from all contributing point and nonpoint sources. Percentages of the TMDL are allocated by DEQ to the various pollutant sources.
Toxic Substances	Are materials that are poisonous to living organisms.
Treatment Chemicals	Polymers, flocculants or other chemicals that, among other things, are used to reduce turbidity in stormwater discharges by chemically bonding to the suspended silts and other soil materials and causing them to bind together and settle out. Common examples of treatment chemicals are chitosan, cationic PAM and anionic polyacrylamide.
Turbidity	The optical condition of waters caused by suspended or dissolved particles or colloids that scatter and absorb light rays instead of transmitting light in straight lines through the water column. Turbidity may be expressed as nephelometric turbidity units (NTUs) measured with a calibrated turbidity meter.
Underground Injection Control (UIC)	Any system, structure, or activity that is created to place fluid below the ground or sub-surface (e.g., sumps, infiltration galleries, drywells, trench drains, drill holes, etc.).
Visibly Turbid Discharge	Refers to the cloudiness in the water discharged caused by sediment and other matter in the water column.
Water or Waters of the State as defined by ORS 468B005(10)	Lakes, bays, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, wetlands, estuaries, marshes, inlets, canals, the Pacific Ocean within the territorial limits of the State of Oregon and all other bodies of surface or underground waters, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters which do not combine or effect a junction with natural surface or underground waters), which are wholly or partially within or bordering the state or within its jurisdiction.