

# Training for designers

## 1200-CA Permit and Erosion and Sediment Control



Permit language influences design

**Permit update requires changes to Erosion and Sediment Control Plan design and to compliance with permit requirements during construction**



**This training addresses Permit changes required for ESCP design**

# National Pollution Discharge Elimination System

- NPDES was developed out of the Clean Water Act of 1972
- NPDES Permits exist to prevent water pollution
- Sediment discharged into water is pollution
- Oregon's Department of Environmental Quality (DEQ) is the regulatory body administering the NPDES' requirements.
- DEQ's NPDES Permit for agencies that conduct multiple projects of similar type is the 1200-CA

The 1200-CA permit regulates discharges of stormwater from construction sites where 1 acre, or more, of ground is disturbed, or phased projects where the combined disturbance is 1 acre or more

Also regulated are construction projects less than 1 acre that may discharge, to waters of the state, wetlands and stormwater that may contain pollutants

# First 1200-CA Update Since 2003

- Changes to the Permit will affect ESCP design. Different features and greater detail is required.

Permit Documents are located in the [ODOT Erosion & Sediment Control web page](#) under **Guidance Materials**

- Suite of 5 Permit documents include:
  - 1200-CA Permit – Final
  - Permit Evaluation Report (PER) an interpretation and guidance document for DEQ inspectors
  - Appendix A – Provides direction on Environmental Management Plan (EMP)
  - Appendix B – Provides direction on Buffer Zones
  - DEQ response to comments from permittees

# Qualifications to Design ESCP on DEQ Regulated Projects

- Oregon Registered Professional Engineer
- Oregon Registered Landscape Architect
- Oregon Certified Geologist

For Sediment Traps, Active Chemical Treatments and specialized BMPs, these same professionals provide designs in areas for which they are qualified.

# Design ESCP so Contractor will:

- Prevent Erosion
- Control Sedimentation
- Control Runoff Volume & Velocity
- Prevent Contamination of Stormwater
- Prevent Water Pollution from Construction activities
- Comply With 1200-CA Permit
- Comply with ODOT's Project Specifications

# Erosion & Sediment Control Plan (ESCP) consists of:

- **The Erosion Control Plan for each stage of construction with**
- **Environmental Management Plan attachment (When required)**
- **Narrative and 01030 Special Provision**
- Implementation of the ESCP
- Monitoring Erosion & Sediment Control (ESC) features
- Monitoring receiving waters
- Maintenance & repair of ESC features
- Updates to ESCP to keep document representative of current Project status
- Reporting updates, maintenance & repair actions, non-compliance & violations and clean-ups and BMP repair.



# Issues To Address in Design

- Expected volume, frequency, intensity and duration of rainfall (or snow melt),
- Run-on flow to the site from upslope, impervious surfaces or drainage features,
- Soil types and their infiltration or erodability characteristics,
- Slope length and steepness,
- Protection of sensitive resources,
- Emergency situations and BMPs to have on hand to address emergency situations.

# Design Resources:

- <https://www.oregon.gov/deq/wq/wqpermits/Pages/Stormwater-Construction.aspx> DEQ's Stormwater web address
- <https://www.oregon.gov/odot/GeoEnvironmenta/1/Pages/Erosion.aspx> ODOT's Erosion Control web address – See Guidance Materials
- <https://www.oregon.gov/odot/GeoEnvironmenta/1/Pages/Erosion-Manual.aspx> ODOT's Erosion Control Manual



# Cover Sheet Required Elements

- Site map & vicinity map,
- Designer, & contractor personnel information,
- Description of property & existing conditions,
- Description of project and types of work,
- General notes,
- Sheet index and list of Standard Drawings,
- Matrix identifying BMPs at each phase of work,
- Inspection & monitoring requirements.

Fill in all the blanks on Cover Sheet template. Much of this information is also be provided in Narrative.

(Prior to beginning work, Contractor will infill information unknown during design)

**DEQ requires submittal of Erosion & Sediment Control Plan (ESCP) prior to construction. Plan on providing ESCP as discrete package, with Cover Sheet, at Advance Plans**



**Submittal opens DEQ's project file, but is not officially a review. DEQ can request revisions**

# Your DEQ Online (YDO)

All Submittals to DEQ Must Be Sent Through the Electronic YDO Portal, including:

- Erosion & Sediment Control Plans (ESCP)
- Environmental Management Plans when required (EMP)
- Monitoring Reports
- ESCP Updates
- Corrective Action Reports
- Payments

Selected ODOT Staff are YDO “Responsible Officers” with signing authority. Designers may be delegated YDO Project access as “consultants”, but not have signing or submittal authority.

# Your DEQ Online (YDO)

YDO Electronic Portal is software that is new to most users. More information is available through DEQ:

[Department of Environmental Quality :  
Modernization Project Underway: Your DEQ Online :  
Online Services : State of Oregon](#)

The software will require training and familiarization.

Signup for YDO through the DEQ web page requires submission of personal information. Analog signup, through the mail does not require personal information.

# **ESCP for DEQ-Regulated Projects the require following:**

- ESCP preparer, & professional stamp,
- Name and location of Project site,
- Contractors working on Project site,
- Names & position for all staff designing, installing & maintaining ESC BMPs during construction,
- Contractor's Erosion & Sediment Control Manager (ESCM), including name, title, contact information & certification information,
- EMP if applicable,
- Site description – combines narrative, plan sheets,
- Existing conditions, topography, soil types etc.,
- Proposed conditions.

Not all required information will be available during design



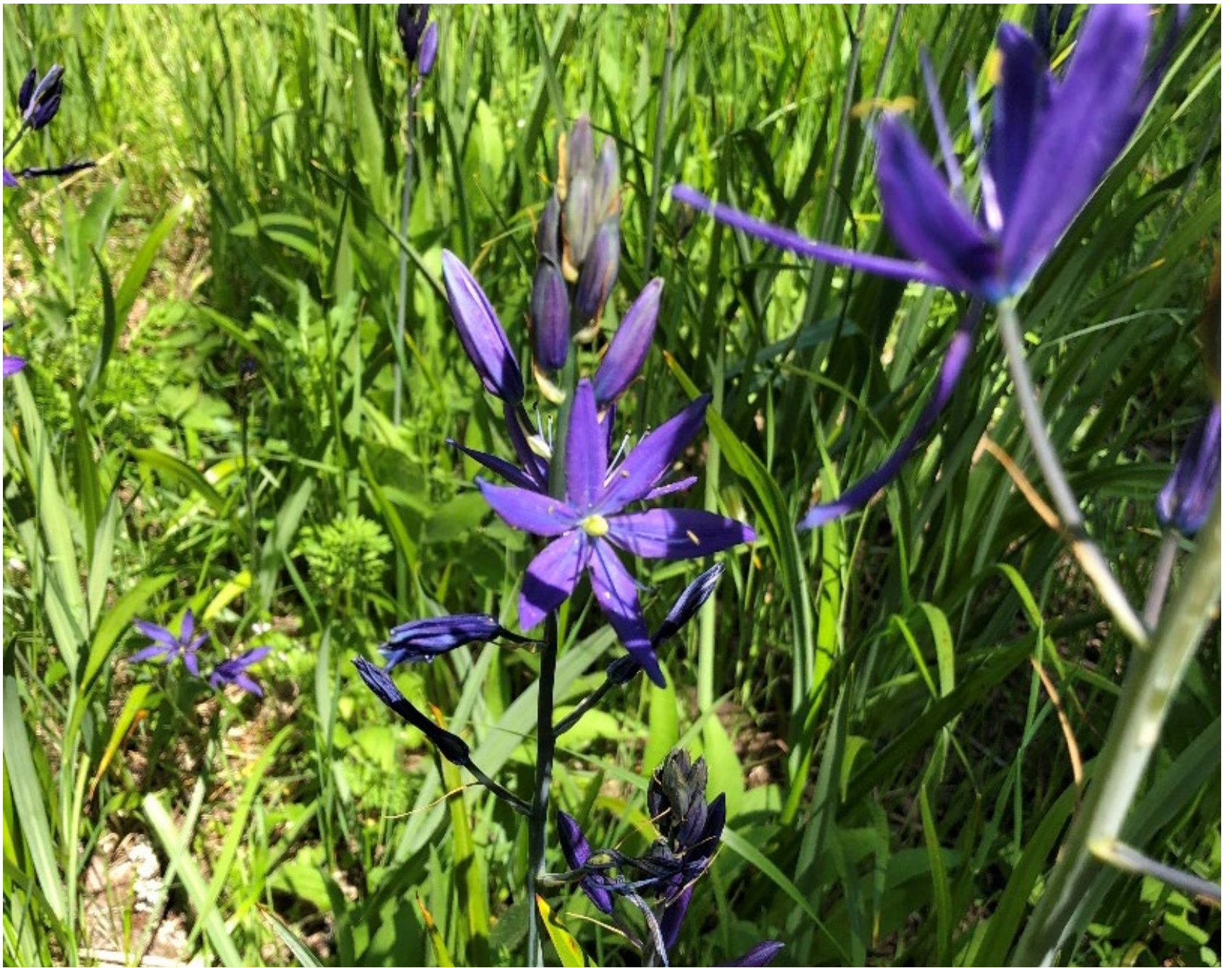
# Site description (in narrative and on Cover Sheet) includes the following:

- Description of construction activities,
- Size (or length) of Project site and total area of soil disturbance,
- Nearby waters and their 303 impairment status,
- On site support areas such as staging (**Support areas not on ODOT land are not covered by ODOT's 1200-CA and erosion control design is by others**),
- Schedule information including start for each phase of construction, work suspensions, & removal of all BMPs. (Contractor's ESCM to provide revisions)
- Potential pollution generating activities,
- Description of engineered soils (if used)

# **Erosion & Sedimentation prevention**

**measures** - Provide on Plans and Specifications:

- Location & type of BMPs for erosion prevention, sediment control and runoff control for each phase of construction,
- Perimeter controls, track out controls, stabilization measures (stabilization is soil cover),
- Maintenance procedures for each BMP type,
- Schedule for installation & duration of BMPs,
- Seed mix, final stabilization – include 01030 special provision with ESCP .
- Sediment basin designs must be stamped by qualified professional and have calculations available.



# New Permit Conditions!

- Flocculent treatment designs must be stamped by QUALIFIED professional
- Use of treatment chemicals (flocculants) must be accompanied with assurance that water quality standard are maintained.
- Sediment trap is required where sub-base is treated with cementitious material & runoff is possible. (coordinate with Roadway designer)

ESCP must provide sheets with appropriate BMPs for **each phase of construction**. DEQ considered phases as the following:

- 1) Demolition, clearing, grading excavating and land development
- 2) Streets and utilities
- 3) Vertical construction
- 4) Final landscaping and site stabilization

Linear construction does not follow the DEQ model.

For linear construction and roadway projects, **phases of construction** correspond to areas of disturbance.

Show BMPs to be installed at each phase.  
Differentiate BMPs from new phase from earlier phase BMPs that remain in place

Where topography changes during phased work – show how (flow arrows are good indicators)

Traffic Control Plans often identify work phases

Coordinate with Roadway designers to assure accuracy of ESCP work phasing

# **Design ESCP and provide BMPs to prevent any discharge of the following:**

- Visually turbid discharge - <10 NTU !
- A discharge that contributes an exceedance of water quality standards
- Concrete waste, concrete waste water or concrete wash water,
- Fuels, oils or other pollutants,
- Soaps, solvents or detergents from washing equipment
- Wheel wash waste water
- Other pollutants or contaminants

Potentially contaminated sites must have **Environmental Management Plan (EMP)**

with spill prevention control and countermeasure plans. This will require ESCP designers coordinate with Haz-Mat

Roadside/shoulder soils are dirty & ODOT deals with this routinely and successfully –  
EMP repackages existing information

Prohibited discharges remain similar to what we currently and successfully address



# EMP Information is in Appendix A

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

February 2022

Includes:

- Contaminated Media Management Plan guidelines,
- Contaminated Media Management Plan Application,
- Active Chemical Treatment Systems guidelines,
- Active Chemical Treatment Management Plan Application

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](http://www.oregon.gov/DEQ)

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Environmental  
Quality

# Buffer Zones

- Retain and protect Buffer Zones of natural, undisturbed vegetation between work and water bodies
- Buffer Zones are 50' in width
- Where space or ROW is limited, additional and/or redundant BMPs can provide equivalent protection
- TMDL limited waters get additional protection
- Appendix B provides detailed guidance on BMP equivalency and protections for TMDL s

# Buffer Zones Information is in Appendix B

## Appendix B – Natural Buffer Zone Requirements

February 2022

### Includes:

- Requirements for Providing Buffers
- Compliance Alternatives,
- Compliance Exceptions,
- ESC Equivalences to Buffers,
- Equivalencies Tables.
- Management Plan Application

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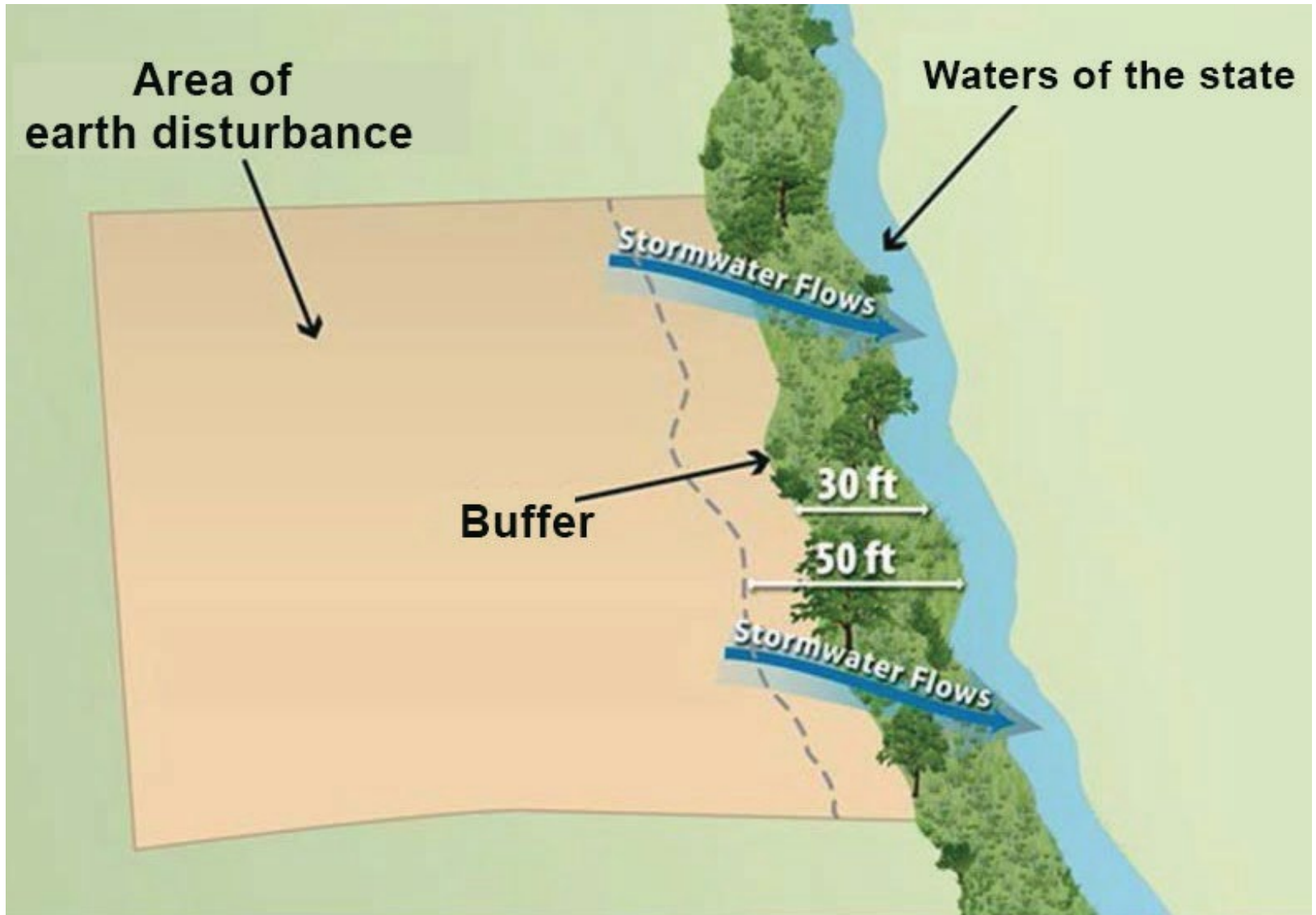
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restoring, maintaining and  
enhancing the quality of  
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water.



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Environmental  
Quality

# Buffer Zone (typ)



# Design for Sediment Traps

- Stamped by qualified engineer or LA
- Designed to a 2 hr/24 hr. storm or 3600 Cubic foot per acre
- Locate outside buffers or flood plains
- Drain from basin's surface water
- Discharge into energy dissipater
- Baker tanks are viable alternative

# **ENGINEERED SOILS– Road sub-base amended with cementitious material:**

- Where runoff is possible from engineered soils, capture runoff in sediment trap
- Designers provide bid items to test runoff for pH and for neutralizing alkalinity prior to discharge.

Chemical treatment designs to neutralize alkalinity must be stamped by qualified professional and approved by DEQ prior to use

Design knowing all permit conditions are required all year. No “wet season”.

Provide adequate quantity and variety of BMPs and emergency materials



# Cost Estimate

- Lower threshold for inspection after rain
- Greater frequency of ESCP updates
- Increased ESCM duties
- pH monitoring (when required)
- Qualified operator(s) for active chemical treatment facilities
- Lump Sum Bid Item “Erosion Control” includes many more task

Accommodate Cost Increases &  
Additional Bid Items in Estimate



# Scope Work for Additional Tasks

- Cover Sheet & required Project research
- Survey for greater detail of site plan
- Environmental Management Plans (EMP)
- Sheets for each phase of construction
- Drafting hours are increased
- Buffer Zones
- Qualified professional for treatment system design (when used)
- Free standing ESCP package for DEQ submittal
- Calculations for Sediment Traps (when used)

Find Scoping document at <HTTP://xxxxxx>



Erosion & Sediment Control Plans (ESCP) will require more information: More notes, narrative, calculations for sediment basins, list of all possible pollutants, buffers, tree root zones, spill prevention procedures

Designers will provide more detail to designs and need to scope more time and resources to satisfy the increase in Permit requirements



Questions?