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12/09/2022

Construction Stormwater General Permit

# Stormwater Pollution Prevention Plan (SWPPP)

for  
**Seatown Electric**

Prepared for:  
**The Washington State Department of Ecology**  
*Northwest Regional Office*

Permittee / Owner	Developer	Operator / Contractor
Seatown Electric	Capital Group PC	TBD

**4200 78<sup>th</sup> St SW, Mukilteo, WA 98275. Tax Parcel Number: 28041000302200**

**Certified Erosion and Sediment Control Lead (CESCL)**

Name	Organization	Contact Phone Number
TBD	TBD	TBD

**SWPPP Prepared By**

Name	Organization	Contact Phone Number
Sabina Gulick	CG Engineering	425.778.8500

**SWPPP Preparation Date**

November 18, 2022

**Project Construction Dates**

Activity / Phase	Start Date	End Date
Construction	TBD	TBD

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## List of Acronyms and Abbreviations

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<b>Acronym / Abbreviation</b>	<b>Explanation</b>
<b>303(d)</b>	Section of the Clean Water Act pertaining to Impaired Waterbodies
<b>BFO</b>	Bellingham Field Office of the Department of Ecology
<b>BMP(s)</b>	Best Management Practice(s)
<b>CESCL</b>	Certified Erosion and Sediment Control Lead
<b>CO<sub>2</sub></b>	Carbon Dioxide
<b>CRO</b>	Central Regional Office of the Department of Ecology
<b>CSWGP</b>	Construction Stormwater General Permit
<b>CWA</b>	Clean Water Act
<b>DMR</b>	Discharge Monitoring Report
<b>DO</b>	Dissolved Oxygen
<b>Ecology</b>	Washington State Department of Ecology
<b>EPA</b>	United States Environmental Protection Agency
<b>ERO</b>	Eastern Regional Office of the Department of Ecology
<b>ERTS</b>	Environmental Report Tracking System
<b>ESC</b>	Erosion and Sediment Control
<b>GULD</b>	General Use Level Designation
<b>NPDES</b>	National Pollutant Discharge Elimination System
<b>NTU</b>	Nephelometric Turbidity Units
<b>NWRO</b>	Northwest Regional Office of the Department of Ecology
<b>pH</b>	Power of Hydrogen
<b>RCW</b>	Revised Code of Washington
<b>SPCC</b>	Spill Prevention, Control, and Countermeasure
<b>su</b>	Standard Units
<b>SWMMEW</b>	Stormwater Management Manual for Eastern Washington
<b>SWMMWW</b>	Stormwater Management Manual for Western Washington
<b>SWPPP</b>	Stormwater Pollution Prevention Plan
<b>TESC</b>	Temporary Erosion and Sediment Control
<b>SWRO</b>	Southwest Regional Office of the Department of Ecology
<b>TMDL</b>	Total Maximum Daily Load
<b>VFO</b>	Vancouver Field Office of the Department of Ecology
<b>WAC</b>	Washington Administrative Code
<b>WSDOT</b>	Washington Department of Transportation
<b>WWHM</b>	Western Washington Hydrology Model

# 1 Project Information

Project/Site Name: Seatown Electric  
Street/Location: 4200 78<sup>th</sup> St SE  
City: Mukilteo State: WA Zip code: 98275  
Subdivision: N/A  
Receiving waterbody: Possession Sound (North)

## 1.1 Existing Conditions

Total acreage (including support activities such as off-site equipment staging yards, material storage areas, borrow areas).

Total acreage: 4.77 ac  
Disturbed acreage: 1.07 ac  
Existing structures: 0.403 ac  
Landscape 1.85 ac landscaping  
topography:  
Drainage patterns: The site generally slopes down from south to north at an average grade of 13%.  
Existing Vegetation: Grass, shrubs, blackberry bushes, and small deciduous trees  
Critical Areas (wetlands, streams, high erosion risk, steep or difficult to stabilize slopes): N/A

List of known impairments for 303(d) listed or Total Maximum Daily Load (TMDL) for the receiving waterbody: Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Chrysene, and Polychlorinated Biphenyls (PCBs).

Table 1 includes a list of suspected and/or known contaminants associated with the construction activity.

No known or suspected contaminants are associated with the site.

**Table 1 – Summary of Site Pollutant Constituents**

Constituent (Pollutant)	Location	Depth	Concentration

## **1.2 Proposed Construction Activities**

Description of site development (example: subdivision):

Warehouse addition. The project will add a warehouse, storage building, fire access turnaround, and route drainage to a new detention vault.

Description of construction activities (example: site preparation, demolition, excavation):

Clearing and excavation of the site area, filling and grading, utility installation, building and driveway construction, and landscaping.

Description of site drainage including flow from and onto adjacent properties. Must be consistent with Site Map in Appendix A:

The site generally slopes downward from the S to the N and drainage in the developed condition is expected to flow in the same direction.

Description of final stabilization (example: extent of revegetation, paving, landscaping):

The proposed buildings and added asphalt driveway will cover a portion of the site with the remaining being existing impervious areas, landscaping, or pasture.

*Contaminated Site Information:*

Proposed activities regarding contaminated soils or groundwater (example: on-site treatment system, authorized sanitary sewer discharge):

N/A

## **2 Construction Stormwater Best Management Practices (BMPs)**

The SWPPP is a living document reflecting current conditions and changes throughout the life of the project. These changes may be informal (i.e., hand-written notes and deletions). Update the SWPPP when the CESCL has noted a deficiency in BMPs or deviation from original design.

### **2.1 The 13 Elements**

#### **2.1.1 Element 1: Preserve Vegetation / Mark Clearing Limits**

To protect adjacent properties and to reduce the area of soil exposed to construction, the limits of construction will be clearly marked before land-disturbing activities begin. Trees that are to be preserved, as well as all sensitive areas and their buffers, shall be clearly delineated in the field. In general, natural vegetation and native topsoil shall be retained in an undisturbed state to the maximum extent possible.

A protective barrier shall be placed around the protected trees prior to land preparation or construction activities, and shall remain in place until all construction activity is terminated. No equipment, chemicals, soil deposits or construction materials shall be placed within the protective barriers. Any landscaping activities subsequent to the removal of the barriers shall be accomplished with light machinery or hand labor.

High Visibility Fence will be placed around the areas of disturbance on the property.

List and describe BMPs:

- Preserving Natural Vegetation (BMP C101)
- High Visibility Fence (BMP C103)

Installation Schedules: Install BMPs prior to clearing and grading.

Inspection and Maintenance plan: As needed.

Responsible Staff: CESCL.

### **2.1.2 Element 2: Establish Construction Access**

Limit vehicle access to one route, if possible.

Construction access or activities occurring on unpaved areas shall be minimized, yet where necessary, access points shall be stabilized to minimize the tracking of sediment onto public roads. Street sweeping, street cleaning, or wheel wash/tire baths may be necessary if the stabilized construction access is not effective. If sediment is tracked off site, clean the affected roadway thoroughly at the end of each day, or more necessary as needed. All wheel wash wastewater shall be controlled on-site and CANNOT be discharged into waters of the State.

There are two existing entrances to the site, one in the NE corner and one in the SE corner that may be used as stabilized construction entrances.

List and describe BMPs: N/A

Installation Schedules: N/A

Inspection and Maintenance plan: N/A

Responsible Staff: N/A



### 2.1.3 Element 3: Control Flow Rates

Stormwater will flow along the existing grade during construction. A detention vault will be constructed for permanent stormwater control. Stormwater can be directed to the detention facility for sediment control. Otherwise, silt fences will be used to mitigate sediment flow.

Will you construct stormwater retention and/or detention facilities?

Yes  No

Will you use permanent infiltration ponds or other low impact development (example: rain gardens, bio-retention, porous pavement) to control flow during construction?

Yes  No

List and describe BMPs:

- Silt Fence (BMP C233)

Installation Schedules: Install BMPs prior to grading.

Inspection and Maintenance plan: As needed.

Responsible Staff: CESCL.

#### **2.1.4 Element 4: Install Sediment Controls**

Stormwater must be filtered prior to being discharged to an infiltration system or leaving the construction site. Sediment control BMPs will be installed as one of the first steps of grading. These BMPs must be functional before other land-disturbing activities, especially grading and filling, take place.

A silt fence will be installed at the downstream portions of the clearing limits.

If sediment controls are ineffective and turbid water is observed discharging from the site, additional energy dissipation BMPs and sediment control BMPs should be installed such as wattles. It may also be necessary to stabilize soils per Element 5 that are not being worked on.

List and describe BMPs:

- Silt Fence (BMP C233)

Installation Schedules: Install BMPs prior to clearing and grading.

Inspection and Maintenance plan: Repair sediment controls as needed. Remove sediment from pond as needed.

Responsible Staff: CESCL.

### 2.1.5 Element 5: Stabilize Soils

Stabilize exposed and unworked soils by the BMPs listed below to prevent erosion. Protect stockpiles with plastic covering or other approved sediment trapping measures. Stabilize exposed soils with Temporary and Permanent Seeding, Mulching, Sodding, Topsoiling/Compost, or Surface Roughening. Minimize soil compaction by applying gravel base early on areas to be paved.

The ESC Supervisor shall be familiar with BMPs for soil stabilization and dust control and implement these BMPs where needed on the proposed site.

#### **West of the Cascade Mountains Crest**

Season	Dates	Number of Days Soils Can be Left Exposed
During the Dry Season	May 1 – September 30	7 days
During the Wet Season	October 1 – April 30	2 days

Soils must be stabilized at the end of the shift before a holiday or weekend if needed based on the weather forecast.

Anticipated project dates: Start date: TBD End date: TBD

Will you construct during the wet season?

Yes  No

List and describe BMPs:

- Temporary and Permanent Seeding (BMP C120)
- Mulching (BMP C121)
- Nets and Blankets (BMP C122)
- Plastic Covering (BMP C123)
- Sodding (BMP C124)
- Topsoiling/Composting (BMP C125)
- Surface Roughening (BMP C130)
- Dust Control (BMP C140)

Installation Schedules: As needed as soil is exposed.

Inspection and Maintenance plan: End of the shift before a holiday or weekend and prior to forecasted rain events.

Responsible Staff: CESCL.

### **2.1.6 Element 6: Protect Slopes**

All cut and fill slopes will be designed, constructed, and protected in a manner that minimizes erosion.

Will steep slopes be present at the site during construction?

Yes  No

List and describe BMPs:

- Temporary and Permanent Seeding (BMP C120)
- Nets and Blankets (BMP C122)
- Plastic Covering (BMP C123)

Installation Schedules: Install BMPs prior to grading and as needed to minimize erosion.

Inspection and Maintenance plan: As needed.

Responsible Staff: CESCL.

### **2.1.7 Element 7: Protect Drain Inlets**

All storm drain inlets and culverts made operable during construction shall be protected to prevent unfiltered or untreated water from entering the drainage conveyance system. However, the first priority is to keep all access roads clean of sediment and keep street wash water separate from entering storm drains until treatment can be provided.

Storm Drain Inlet Protection will be implemented for all drainage inlets and culverts that could potentially be impacted by sediment-laden runoff on and near the project site.

Inlet protection should be provided as shown on the C2.1 Plan. Inlet protection devices will be cleaned, or removed and replaced, when sediment has filled the device by one third (1/3) or as specified by the manufacturer.

List and describe BMPs:

- Storm Drain Inlet Protection (BMP C220)

Installation Schedules: Before land disturbance for existing catch basins and as new catch basins are made operable.

Inspection and Maintenance plan: Inlets will be inspected weekly at a minimum and daily during storm events.

Responsible Staff: CESCL.

### **2.1.8 Element 8: Stabilize Channels and Outlets**

Where site runoff is to be conveyed in channels, or discharged to a stream or some other natural drainage point, efforts will be taken to prevent downstream erosion.

The project site is located west of the Cascade Mountain Crest. As such, all temporary on-site conveyance channels shall be designed, constructed, and stabilized to prevent erosion from the expected peak 10 minute velocity of flow from a Type 1A, 10-year, 24-hour recurrence interval storm for the developed condition. Alternatively, the 10-year, 1-hour peak flow rate indicated by an approved continuous runoff simulation model, increased by a factor of 1.6, shall be used.

Provide stabilization, including armoring material, adequate to prevent erosion of outlets, adjacent stream banks, slopes, and downstream reaches, will be installed at the outlets of all conveyance systems.

List and describe BMPs:

- Channel Lining (BMP C202)

Installation Schedules: Install BMPs prior to grading.

Inspection and Maintenance plan: As needed.

Responsible Staff: CESCL.

### 2.1.9 Element 9: Control Pollutants

The following pollutants are anticipated to be present on-site:

**Table 2 – Pollutants**

Pollutant (List pollutants and source, if applicable)
Concrete
Concrete process water
Concrete slurry
Asphalt materials
Utility materials

List and describe BMPs:

- Concrete Handling (BMP C151)
- Sawcutting and Surfacing Pollution Prevention (BMP C152)
- Material Delivery, Storage and Containment (BMP C153)

Installation Schedules: As needed as pollutant source materials are used on-site.

Inspection and Maintenance plan: As needed.

Responsible Staff: CESCL.

Will maintenance, fueling, and/or repair of heavy equipment and vehicles occur on-site?

Yes  No

Will wheel wash or tire bath system BMPs be used during construction?

Yes  No

Will pH-modifying sources be present on-site?

Yes  No

**Table 3 – pH-Modifying Sources**

<input type="checkbox"/>	None
<input checked="" type="checkbox"/>	Bulk cement
<input checked="" type="checkbox"/>	Cement kiln dust
<input checked="" type="checkbox"/>	Fly ash
<input checked="" type="checkbox"/>	Other cementitious materials
<input type="checkbox"/>	New concrete washing or curing waters
<input type="checkbox"/>	Waste streams generated from concrete grinding and sawing
<input checked="" type="checkbox"/>	Exposed aggregate processes
<input type="checkbox"/>	Dewatering concrete vaults
<input type="checkbox"/>	Concrete pumping and mixer washout waters

<input type="checkbox"/>	Recycled concrete
<input type="checkbox"/>	Recycled concrete stockpiles
<input type="checkbox"/>	Other (i.e., calcium lignosulfate) [please describe:        ]

Concrete trucks must not be washed out onto the ground, or into storm drains, open ditches, streets, or streams. Excess concrete must not be dumped on-site, except in designated concrete washout areas with appropriate BMPs installed.

Will uncontaminated water from water-only based shaft drilling for construction of building, road, and bridge foundations be infiltrated provided the wastewater is managed in a way that prohibits discharge to surface waters?

Yes  No



### 2.1.10 Element 10: Control Dewatering

Dewatering is not anticipated to be associated with this construction project.

If necessary, only clean, non-turbid dewatering water (such as well-point groundwater) may be discharged to systems tributary to, or directly into, surface waters of the State, provided the dewatering flow does not cause erosion or flooding of receiving waters.

**Table 4 – Dewatering BMPs**

<input type="checkbox"/>	Infiltration
<input type="checkbox"/>	Transport off-site in a vehicle (vacuum truck for legal disposal)
<input type="checkbox"/>	Ecology-approved on-site chemical treatment or other suitable treatment technologies
<input type="checkbox"/>	Sanitary or combined sewer discharge with local sewer district approval (last resort)
<input type="checkbox"/>	Use of sedimentation bag with discharge to ditch or swale (small volumes of localized dewatering)

List and describe BMPs: N/A.

Installation Schedules: N/A.

Inspection and Maintenance plan: N/A.

Responsible Staff: CESCL.

### **2.1.11 Element 11: Maintain BMPs**

All temporary and permanent Erosion and Sediment Control (ESC) BMPs shall be maintained and repaired as needed to ensure continued performance of their intended function.

Maintenance and repair shall be conducted in accordance with each particular BMP specification (see *Volume II of the SWMMWW* or *Chapter 7 of the SWMMEW*).

Visual monitoring of all BMPs installed at the site will be conducted at least once every calendar week and within 24 hours of any stormwater or non-stormwater discharge from the site. If the site becomes inactive and is temporarily stabilized, the inspection frequency may be reduced to once every calendar month.

All temporary ESC BMPs shall be removed within 30 days after final site stabilization is achieved or after the temporary BMPs are no longer needed.

Trapped sediment shall be stabilized on-site or removed. Disturbed soil resulting from removal of either BMPs or vegetation shall be permanently stabilized.

Additionally, protection must be provided for all BMPs installed for the permanent control of stormwater from sediment and compaction. BMPs that are to remain in place following completion of construction shall be examined and restored to full operating condition. If sediment enters these BMPs during construction, the sediment shall be removed and the facility shall be returned to conditions specified in the construction documents.

### 2.1.12 Element 12: Manage the Project

The project will be managed based on the following principles:

- Projects will be phased to the maximum extent practicable and seasonal work limitations will be taken into account.
- Inspection and monitoring:
  - Inspection, maintenance and repair of all BMPs will occur as needed to ensure performance of their intended function.
  - Site inspections and monitoring will be conducted in accordance with Special Condition S4 of the CSWGP. Sampling locations are indicated on the Site Map. Sampling station(s) are located in accordance with applicable requirements of the CSWGP.
- Maintain an updated SWPPP.
  - The SWPPP will be updated, maintained, and implemented in accordance with Special Conditions S3, S4, and S9 of the CSWGP.

As site work progresses the SWPPP will be modified routinely to reflect changing site conditions. The SWPPP will be reviewed monthly to ensure the content is current.

**Table 5 – Management**

<input checked="" type="checkbox"/>	Design the project to fit the existing topography, soils, and drainage patterns
<input checked="" type="checkbox"/>	Emphasize erosion control rather than sediment control
<input checked="" type="checkbox"/>	Minimize the extent and duration of the area exposed
<input checked="" type="checkbox"/>	Keep runoff velocities low
<input checked="" type="checkbox"/>	Retain sediment on-site
<input checked="" type="checkbox"/>	Thoroughly monitor site and maintain all ESC measures
<input checked="" type="checkbox"/>	Schedule major earthwork during the dry season
<input type="checkbox"/>	Other (please describe)

**Table 6 – BMP Implementation Schedule**

<b>Phase of Construction Project</b>	<b>Stormwater BMPs</b>	<b>Date</b>	<b>Wet/Dry Season</b>
Pre-construction	Preserving Natural Vegetation (BMP C101)	TBD	Dry
Pre-construction	High Visibility Fence (BMP C103)	TBD	Dry
Pre-construction	Silt Fence (BMP C233)	TBD	Dry
Land disturbance	Temporary and Permanent Seeding (BMP C120)	TBD	Dry
Land disturbance	Mulching (BMP C121)	TBD	Dry
Land disturbance	Nets and Blankets (BMP C122)	TBD	Dry
Land disturbance	Plastic Covering (BMP C123)	TBD	Dry
Land disturbance	Sodding (BMP C124)	TBD	Dry
Land disturbance	Topsoiling/Composting (BMP C125)	TBD	Dry
Land disturbance	Surface Roughening (BMP C130)	TBD	Dry
Land disturbance	Dust Control (BMP C140)	TBD	Dry
Land disturbance	Channel Lining (BMP C202)	TBD	Dry
Land disturbance	Storm Drain Inlet Protection (BMP C220)	TBD	Dry
Construction	Sawcutting and Surfacing Pollution Prevention (BMP C152)	TBD	Dry
Construction	Material Delivery, Storage and Containment (BMP C153)	TBD	Dry

### **2.1.13 Element 13: Protect Low Impact Development (LID) BMPs**

Detention will be the primary means of stormwater management for the roofs and other hard surfaces on this project. The detention vault will need to be protected from compaction during construction. This can be done by placing orange protective fencing around the vault as it is constructed in order to avoid compaction from vehicle traffic.

### 3 Pollution Prevention Team

Table 7 – Team Information

<b>Title</b>	<b>Name(s)</b>	<b>Phone Number</b>
<b>Certified Erosion and Sediment Control Lead (CESCL)</b>	TBD	TBD
<b>Resident Engineer</b>	CG Engineering	425.778.8500
<b>Emergency Ecology Contact</b>	TBD	TBD
<b>Emergency Permittee/ Owner Contact</b>	Brandon Phillips	206.683.6335
<b>Non-Emergency Owner Contact</b>	Brandon Phillips	360.732.8696
<b>Monitoring Personnel</b>	TBD	TBD
<b>Ecology Regional Office</b>	Northwest Regional Office	425.649.7000

## 4 Monitoring and Sampling Requirements

Monitoring includes visual inspection, sampling for water quality parameters of concern, and documentation of the inspection and sampling findings in a site log book. A site log book will be maintained for all on-site construction activities and will include:

- A record of the implementation of the SWPPP and other permit requirements
- Site inspections
- Stormwater sampling data

File a blank form under Appendix D.

The site log book must be maintained on-site within reasonable access to the site and be made available upon request to Ecology or the local jurisdiction.

Numeric effluent limits may be required for certain discharges to 303(d) listed waterbodies. See CSWGP Special Condition S8 and Section 5 of this template.

### 4.1 Site Inspection

Site inspections will be conducted at least once every calendar week and within 24 hours following any discharge from the site. For sites that are temporarily stabilized and inactive, the required frequency is reduced to once per calendar month.

The discharge point(s) are indicated on the Site Map (see Appendix A) and in accordance with the applicable requirements of the CSWGP.

### 4.2 Stormwater Quality Sampling

#### 4.2.1 Turbidity Sampling

Requirements include calibrated turbidity meter or transparency tube to sample site discharges for compliance with the CSWGP. Sampling will be conducted at all discharge points at least once per calendar week.

Method for sampling turbidity:

**Table 8 – Turbidity Sampling Method**

<input type="checkbox"/>	Turbidity Meter/Turbidimeter (required for disturbances 5 acres or greater in size)
<input checked="" type="checkbox"/>	Transparency Tube (option for disturbances less than 1 acre and up to 5 acres in size)

The benchmark for turbidity value is 25 nephelometric turbidity units (NTU) and a transparency less than 33 centimeters.

If the discharge's turbidity is 26 to 249 NTU or the transparency is less than 33 cm but equal to or greater than 6 cm, the following steps will be conducted:

1. Review the SWPPP for compliance with Special Condition S9. Make appropriate revisions within 7 days of the date the discharge exceeded the benchmark.

2. Immediately begin the process to fully implement and maintain appropriate source control and/or treatment BMPs as soon as possible. Address the problems within 10 days of the date the discharge exceeded the benchmark. If installation of necessary treatment BMPs is not feasible within 10 days, Ecology may approve additional time when the Permittee requests an extension within the initial 10-day response period.
3. Document BMP implementation and maintenance in the site log book.

If the turbidity exceeds 250 NTU or the transparency is 6 cm or less at any time, the following steps will be conducted:

1. Telephone or submit an electronic report to the applicable Ecology Region's Environmental Report Tracking System (ERTS) within 24 hours.
  - **Central Region** (Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, Yakima): (509) 575-2490 or [http://www.ecy.wa.gov/programs/spills/forms/nerts\\_online/CRO\\_nerts\\_online.html](http://www.ecy.wa.gov/programs/spills/forms/nerts_online/CRO_nerts_online.html)
  - **Eastern Region** (Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman): (509) 329-3400 or [http://www.ecy.wa.gov/programs/spills/forms/nerts\\_online/ERO\\_nerts\\_online.html](http://www.ecy.wa.gov/programs/spills/forms/nerts_online/ERO_nerts_online.html)
  - **Northwest Region** (King, Kitsap, Island, San Juan, Skagit, Snohomish, Whatcom): (425) 649-7000 or [http://www.ecy.wa.gov/programs/spills/forms/nerts\\_online/NWRO\\_nerts\\_online.html](http://www.ecy.wa.gov/programs/spills/forms/nerts_online/NWRO_nerts_online.html)
  - **Southwest Region** (Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Lewis, Mason, Pacific, Pierce, Skamania, Thurston, Wahkiakum,): (360) 407-6300 or [http://www.ecy.wa.gov/programs/spills/forms/nerts\\_online/SWRO\\_nerts\\_online.html](http://www.ecy.wa.gov/programs/spills/forms/nerts_online/SWRO_nerts_online.html)
2. Immediately begin the process to fully implement and maintain appropriate source control and/or treatment BMPs as soon as possible. Address the problems within 10 days of the date the discharge exceeded the benchmark. If installation of necessary treatment BMPs is not feasible within 10 days, Ecology may approve additional time when the Permittee requests an extension within the initial 10-day response period
3. Document BMP implementation and maintenance in the site log book.
4. Continue to sample discharges daily until one of the following is true:
  - Turbidity is 25 NTU (or lower).
  - Transparency is 33 cm (or greater).
  - Compliance with the water quality limit for turbidity is achieved.
    - 1 - 5 NTU over background turbidity, if background is less than 50 NTU
    - 1% - 10% over background turbidity, if background is 50 NTU or greater
  - The discharge stops or is eliminated.



### 4.2.2 pH Sampling

pH monitoring is required for “Significant concrete work” (i.e., greater than 1000 cubic yards poured concrete over the life of the project). The use of recycled concrete or engineered soils (soil amendments including but not limited to Portland cement-treated base [CTB], cement kiln dust [CKD] or fly ash) also requires pH monitoring.

For significant concrete work, pH sampling will start the first day concrete is poured and continue until it is cured, typically three (3) weeks after the last pour.

For engineered soils and recycled concrete, pH sampling begins when engineered soils or recycled concrete are first exposed to precipitation and continues until the area is fully stabilized.

If the measured pH is 8.5 or greater, the following measures will be taken:

1. Prevent high pH water from entering storm sewer systems or surface water.
2. Adjust or neutralize the high pH water to the range of 6.5 to 8.5 su using appropriate technology such as carbon dioxide (CO<sub>2</sub>) sparging (liquid or dry ice).
3. Written approval will be obtained from Ecology prior to the use of chemical treatment other than CO<sub>2</sub> sparging or dry ice.

Method for sampling pH:

**Table 9 – pH Sampling Method**

<input type="checkbox"/>	pH meter
<input checked="" type="checkbox"/>	pH test kit
<input type="checkbox"/>	Wide range pH indicator paper

## 5 Discharges to 303(d) or Total Maximum Daily Load (TMDL) Waterbodies

### 5.1 303(d) Listed Waterbodies

Is the receiving water 303(d) (Category 5) listed for turbidity, fine sediment, phosphorus, or pH?

Yes  No

List the impairment(s): N/A

### 5.2 TMDL Waterbodies

Waste Load Allocation for CSWGP discharges: N/A

List and describe BMPs: N/A

Discharges to TMDL receiving waterbodies will meet in-stream water quality criteria at the point of discharge.

The Construction Stormwater General Permit Proposed New Discharge to an Impaired Water Body form is included in Appendix F.

## **6 Reporting and Record Keeping**

### **6.1 Record Keeping**

#### **6.1.1 Site Log Book**

A site log book will be maintained for all on-site construction activities and will include:

- A record of the implementation of the SWPPP and other permit requirements
- Site inspections
- Sample logs

#### **6.1.2 Records Retention**

Records will be retained during the life of the project and for a minimum of three (3) years following the termination of permit coverage in accordance with Special Condition S5.C of the CSWGP.

Permit documentation to be retained on-site:

- CSWGP
- Permit Coverage Letter
- SWPPP
- Site Log Book

Permit documentation will be provided within 14 days of receipt of a written request from Ecology. A copy of the SWPPP or access to the SWPPP will be provided to the public when requested in writing in accordance with Special Condition S5.G.2.b of the CSWGP.

#### **6.1.3 Updating the SWPPP**

The SWPPP will be modified if:

- Found ineffective in eliminating or significantly minimizing pollutants in stormwater discharges from the site.
- There is a change in design, construction, operation, or maintenance at the construction site that has, or could have, a significant effect on the discharge of pollutants to waters of the State.

The SWPPP will be modified within seven (7) days if inspection(s) or investigation(s) determine additional or modified BMPs are necessary for compliance. An updated timeline for BMP implementation will be prepared.

## 6.2 Reporting

### 6.2.1 Discharge Monitoring Reports

**Cumulative soil disturbance is one (1) acre or larger; therefore,** Discharge Monitoring Reports (DMRs) will be submitted to Ecology monthly. If there was no discharge during a given monitoring period the DMR will be submitted as required, reporting “No Discharge”. The DMR due date is fifteen (15) days following the end of each calendar month.

DMRs will be reported online through Ecology’s WQWebDMR System.

### 6.2.2 Notification of Noncompliance

If any of the terms and conditions of the permit is not met, and the resulting noncompliance may cause a threat to human health or the environment, the following actions will be taken:

1. Ecology will be notified within 24-hours of the failure to comply by calling the applicable Regional office ERTS phone number (Regional office numbers listed below).
2. Immediate action will be taken to prevent the discharge/pollution or otherwise stop or correct the noncompliance. If applicable, sampling and analysis of any noncompliance will be repeated immediately and the results submitted to Ecology within five (5) days of becoming aware of the violation.
3. A detailed written report describing the noncompliance will be submitted to Ecology within five (5) days, unless requested earlier by Ecology.

Anytime turbidity sampling indicates turbidity is 250 NTUs or greater, or water transparency is 6 cm or less, the Ecology Regional office will be notified by phone within 24 hours of analysis as required by Special Condition S5.A of the CSWGP.

- **Central Region** at (509) 575-2490 for Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, or Yakima County
- **Eastern Region** at (509) 329-3400 for Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, or Whitman County
- **Northwest Region** at (425) 649-7000 for Island, King, Kitsap, San Juan, Skagit, Snohomish, or Whatcom County
- **Southwest Region** at (360) 407-6300 for Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Lewis, Mason, Pacific, Pierce, Skamania, Thurston, or Wahkiakum

Include the following information:

1. Your name and / Phone number
2. Permit number
3. City / County of project
4. Sample results

5. Date / Time of call
6. Date / Time of sample
7. Project name

In accordance with Special Condition S4.D.5.b of the CSWGP, the Ecology Regional office will be notified if chemical treatment other than CO<sub>2</sub> sparging is planned for adjustment of high pH water.

**A. Site Map**



**Figure A-1. Site map.**

## B. BMP Detail

BMP details are shown on the approved TESC plan. Additional/alternative BMPs are listed below and available for download from the Ecology Construction Stormwater website:

<http://www.ecy.wa.gov/programs/wq/stormwater/construction/index.html>

### **Element #1 - Mark Clearing Limits**

- BMP C101: Preserving Natural Vegetation
- BMP C102: Buffer Zones
- BMP C103: High Visibility Plastic or Metal Fence
- BMP C233: Silt Fence

### **Element #2 - Establish Construction Access**

- BMP C105: Stabilized Construction Entrance/Exit
- BMP C106: Wheel Wash
- BMP C107: Construction Road/Parking Area Stabilization

### **Element #3 - Control Flow Rates**

- BMP C203: Water Bars
- BMP C207: Check Dams
- BMP C209: Outlet Protection
- BMP C235: Wattles
- BMP C240: Sediment Trap
- BMP C241: Temporary Sediment Pond

### **Element #4 - Install Sediment Controls**

- BMP C231: Brush Barrier
- BMP C232: Gravel Filter Berm
- BMP C233: Silt Fence
- BMP C234: Vegetated Strip
- BMP C235: Wattles
- BMP C240: Sediment Trap
- BMP C241: Temporary Sediment Pond
- BMP C250: Construction Stormwater Chemical Treatment
- BMP C251: Construction Stormwater Filtration

### **Element #5 - Stabilize Soils**

- BMP C120: Temporary and Permanent Seeding
- BMP C121: Mulching
- BMP C122: Nets and Blankets
- BMP C123: Plastic Covering
- BMP C124: Sodding
- BMP C125: Topsoiling/Composting
- BMP C126: Polyacrylamide for Soil Erosion Protection
- BMP C130: Surface Roughening
- BMP C131: Gradient Terraces
- BMP C140: Dust Control

### **Element #6 - Protect Slopes**

- BMP C120: Temporary and Permanent Seeding

- BMP C121: Mulching
- BMP C122: Nets and Blankets
- BMP C123: Plastic Covering
- BMP C124: Sodding
- BMP C130: Surface Roughening
- BMP C131: Gradient Terraces
- BMP C200: Interceptor Dike and Swale
- BMP C201: Grass-Lined Channels
- BMP C203: Water Bars
- BMP C204: Pipe Slope Drains
- BMP C205: Subsurface Drains
- BMP C206: Level Spreader
- BMP C207: Check Dams
- BMP C208: Triangular Silt Dike (Geotextile-Encased Check Dam)

**Element #7 - Protect Drain Inlets**

- BMP C220: Storm Drain Inlet Protection

**Element #8 - Stabilize Channels and Outlets**

- BMP C202: Channel Lining
- BMP C122: Nets and Blankets
- BMP C207: Check Dams
- BMP C209: Outlet Protection

**Element #9 – Control Pollutants**

- BMP C151: Concrete Handling
- BMP C152: Sawcutting and Surfacing Pollution Prevention
- BMP C153: Material Delivery, Storage and Containment
- BMP C154: Concrete Washout Area
- BMP C250: Construction Stormwater Chemical Treatment
- BMP C251: Construction Stormwater Filtration
- BMP C252: High pH Neutralization Using CO<sub>2</sub>
- BMP C253: pH Control for High pH Water
- See Volume IV – Source Control BMPs

**Element #10 - Control Dewatering**

- BMP C203: Water Bars
- BMP C236: Vegetative Filtration

**Element #11: Maintain BMPs**

- BMP C150: Materials On Hand
- BMP C160: Certified Erosion and Sediment Control Lead

**Element #12: Manage the Project**

- BMP C150: Materials On Hand
- BMP C160: Certified Erosion and Sediment Control Lead
- BMP C162: Scheduling

**Element #13: Protect LID BMPs**

- BMP C103: High Visibility Fence



## C. Correspondence

## D. Site Inspection Form

**Project Name** \_\_\_\_\_ **Permit #** \_\_\_\_\_ **Inspection Date** \_\_\_\_\_ **Time** \_\_\_\_\_

Name of Certified Erosion Sediment Control Lead (CESCL) or qualified inspector if *less than one acre*

Print Name: \_\_\_\_\_

Approximate rainfall amount since the last inspection (in inches): \_\_\_\_\_

Approximate rainfall amount in the last 24 hours (in inches): \_\_\_\_\_

Current Weather Clear  Cloudy  Mist  Rain  Wind  Fog

**A. Type of inspection:** Weekly  Post Storm Event  Other

**B. Phase of Active Construction** (*check all that apply*):

Pre Construction/installation of erosion/sediment controls	<input type="checkbox"/>	Clearing/Demo/Grading	<input type="checkbox"/>	Infrastructure/storm/roads	<input type="checkbox"/>
Concrete pours	<input type="checkbox"/>	Vertical Construction/buildings	<input type="checkbox"/>	Utilities	<input type="checkbox"/>
Offsite improvements	<input type="checkbox"/>	Site temporary stabilized	<input type="checkbox"/>	Final stabilization	<input type="checkbox"/>

**C. Questions:**

1. Were all areas of construction and discharge points inspected? Yes \_\_\_ No \_\_\_
2. Did you observe the presence of suspended sediment, turbidity, discoloration, or oil sheen? Yes \_\_\_ No \_\_\_
3. Was a water quality sample taken during inspection? (*refer to permit conditions S4 & S5*) Yes \_\_\_ No \_\_\_
4. Was there a turbid discharge 250 NTU or greater, or Transparency 6 cm or less?\* Yes \_\_\_ No \_\_\_
5. If yes to #4 was it reported to Ecology? Yes \_\_\_ No \_\_\_
6. Is pH sampling required? pH range required is 6.5 to 8.5. Yes \_\_\_ No \_\_\_

If answering yes to a discharge, describe the event. Include when, where, and why it happened; what action was taken, and when.

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\*If answering yes to # 4 record NTU/Transparency with continual sampling daily until turbidity is 25 NTU or less/ transparency is 33 cm or greater.

Sampling  
Results:

Date:

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Parameter	Method (circle one)	Result			Other/Note
		NTU	cm	pH	
<i>Turbidity</i>	tube, meter, laboratory				
<i>pH</i>	Paper, kit, meter				

**D. Check the observed status of all items. Provide "Action Required" details and dates.**

Element #	Inspection	BMPs Inspected			BMP needs maintenance	BMP failed	Action required (describe in section F)
		yes	no	n/a			
1 Clearing Limits	Before beginning land disturbing activities are all clearing limits, natural resource areas (streams, wetlands, buffers, trees) protected with barriers or similar BMPs? (high visibility recommended)						
2 Construction Access	Construction access is stabilized with quarry spalls or equivalent BMP to prevent sediment from being tracked onto roads?						
	Sediment tracked onto the road way was cleaned thoroughly at the end of the day or more frequent as necessary.						
3 Control Flow Rates	Are flow control measures installed to control stormwater volumes and velocity during construction and do they protect						

	downstream properties and waterways from erosion?						
	If permanent infiltration ponds are used for flow control during construction, are they protected from siltation?						
4 Sediment Controls	All perimeter sediment controls (e.g. silt fence, wattles, compost socks, berms, etc.) installed, and maintained in accordance with the Stormwater Pollution Prevention Plan (SWPPP).						
	Sediment control BMPs (sediment ponds, traps, filters etc.) have been constructed and functional as the first step of grading.						
	Stormwater runoff from disturbed areas is directed to sediment removal BMP.						
5 Stabilize Soils	Have exposed un-worked soils been stabilized with effective BMP to prevent erosion and sediment deposition?						
	Are stockpiles stabilized from erosion, protected with sediment trapping measures and located away from drain inlet, waterways, and drainage channels?						
	Have soils been stabilized at the end of the shift, before a holiday or weekend if needed based on the weather forecast?						
6 Protect Slopes	Has stormwater and ground water been diverted away from slopes and disturbed areas with interceptor dikes, pipes and or swales?						
	Is off-site storm water managed separately from stormwater generated on the site?						
	Is excavated material placed on uphill side of trenches consistent with safety and space considerations?						
	Have check dams been placed at regular intervals within constructed channels that are cut down a slope?						
7 Drain Inlets	Storm drain inlets made operable during construction are protected.						
	Are existing storm drains within the influence of the project protected?						

8 Stabilize Channel and Outlets	Have all on-site conveyance channels been designed, constructed and stabilized to prevent erosion from expected peak flows?						
	Is stabilization, including armoring material, adequate to prevent erosion of outlets, adjacent stream banks, slopes and downstream conveyance systems?						
9 Control Pollutants	Are waste materials and demolition debris handled and disposed of to prevent contamination of stormwater?						
	Has cover been provided for all chemicals, liquid products, petroleum products, and other material?						
	Has secondary containment been provided capable of containing 110% of the volume?						
	Were contaminated surfaces cleaned immediately after a spill incident?						
	Were BMPs used to prevent contamination of stormwater by a pH modifying sources?						
	Wheel wash wastewater is handled and disposed of properly.						
10 Control Dewatering	Concrete washout in designated areas. No washout or excess concrete on the ground.						
	Dewatering has been done to an approved source and in compliance with the SWPPP.						
	Were there any clean non turbid dewatering discharges?						
11 Maintain BMP	Are all temporary and permanent erosion and sediment control BMPs maintained to perform as intended?						
12 Manage the Project	Has the project been phased to the maximum degree practicable?						
	Has regular inspection, monitoring and maintenance been performed as required by the permit?						
	Has the SWPPP been updated, implemented and records maintained?						
13 Protect LID	Is all Bioretention and Rain Garden Facilities protected from sedimentation with appropriate BMPs?						

	Is the Bioretention and Rain Garden protected against over compaction of construction equipment and foot traffic to retain its infiltration capabilities?						
	Permeable pavements are clean and free of sediment and sediment laden-water runoff. Muddy construction equipment has not been on the base material or pavement.						
	Have soiled permeable pavements been cleaned of sediments and pass infiltration test as required by stormwater manual methodology?						
	Heavy equipment has been kept off existing soils under LID facilities to retain infiltration rate.						

**E. Check all areas that have been inspected. ✓**

All in place BMPs    
  All disturbed soils    
  All concrete wash out area    
  All material storage areas    
  All discharge locations    
  All equipment storage areas    
  All construction entrances/exits

**F. Elements checked "Action Required" (section D) describe corrective action to be taken. List the element number; be specific on location and work needed. Document, initial, and date when the corrective action has been completed and inspected.**

Element #	Description and Location	Action Required	Completion Date	Initials

*Attach additional page if needed*

**Sign the following certification:**

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

Inspected by: \_\_\_\_\_ (Signature) \_\_\_\_\_ Date: \_\_\_\_\_  
 (print)  
 Title/Qualification of \_\_\_\_\_  
 Inspector: \_\_\_\_\_

## **E. Construction Stormwater General Permit (CSWGP)**

## **F. 303(d) List Waterbodies / TMDL Waterbodies Information**



## **G. Contaminated Site Information**

## H. Engineering Calculations