Osborn Consulting
101 S Stevens Street, Suite 103
Spokane, Washington 99201
509.867.3654

Date: June 14, 2024
Cc: Tarelle Osborn, PE | Osborn Consulting
Mike Zarecor, PE | Osborn Consulting
Jason Neibergs, PE | Osborn Consulting
Subject: Pend Oreille CD Salmon Recovery Planning Project No. 30-230002 - Sunnyside and Sandy Shores Streambank Stabilization Construction Ready PS&E (100%) Submittal

Dear Mary,

Attached please find the Construction Ready PS&E (100%) Submittal for the Sunnyside and Sandy Shores Streambank Stabilization Project. The package include:

- Construction Ready (100%) Design Drawings
  - Stamped and Signed 06/04/2024 PDF
  - Plans include Property (Easement) Exhibits
- Construction Ready (100%) Engineer's Estimate PDF
- Construction Ready (100%) Specifications:
  - Division 01 PDF and Word
  - Special Provisions for Division 2-9 PDF and Word
    - Stamped and Signed 06/14/2024
  - Appendices PDF

For ease of review, here is a list of key assumptions that were made to finalize the contract documents:

- Added in APWA GSPS that were applicable, but generally followed Spokane CD Hangman Creek example
- Non-prevailing wage
- Requiring bid deposit
- Specifications state that the Pend Oreille CD selects contractors on the appropriate small works roster to assure that a competitive price is established and to award contracts to the lowest responsible bidder
- Current proposed ad and bid opening dates are scheduled based off of July board meeting schedule
- Deleted sections 1-02.8 through 1-02.11 based on conversation with Corey via email
- Using AWPA GSP/WSDOT standards for change orders which is different than Spokane CD example as the size and cost of this project is significantly greater than Hangman Creek. They differ from SCD example stating that the Engineer will issue the Change Order with exactly what they want changed and will be paid by force account. Anything below $25,000 is covered under 1-04.4(1) Minor changes which can also be paid as force account
- Submittal language was added in
- Noted that USACE NWS-2024-335 permit is pending and will need to be added as an addendum when issue.
- The Spokane CD Hangman Creek example Section 1-07.9 referenced paying prevailing wages for the contract and no text mentioning non-prevailing wage contracts which conflicted with this non-prevailing wage contract; therefore the section was revised.

- For Section 1-07.18 the January 4,2024 APWA GSP was included and covers all clauses provided by Corey on June 6th, the minimum limits in the GSP were updated to match what was provided by Corey

Please note, prior to advertisement these items need to be updated and/or confirmed by the district:

- Attach County Permits
    - Insert into Appendix B
- Update Advertisement dates and multiple references to dates throughout the contract documents
- Review changes to Section 1-07.9

Closing,

Kayla Kassa

Kayla Kassa, PE
Civil Engineer
Osborn Consulting

Attachments

cc:

PROJECT DETAILS AND CONTRACT REQUIREMENTS

REQUEST FOR QUOTATIONS

Project Title: **Pend Oreille River Salmon Recovery and Bank Stabilization – Sunnyside/Sandy Shores**

Project Sponsor: Pend Oreille **Conservation District (POCD)**

Description of Project

Sunnyside/Sandy Shores:

The purpose of this project is to stabilize and restore 847 LF of bank along the Pend Oreille River. This geographic area, as determined by Pend Oreille County Public Utility District's Hazard-Occurrence-Erosion Map, is experiencing moderate to high erosion. The slope is less than 1:1 with sparse vegetation in certain locations along the bank. Stabilization is needed to repair the bank toe, erosion scour, and upper bank failure with slope reduction and stabilization. The project is designed with a bio-engineering approach that will help stabilize the banks as well as promote fish habitat. This approach consists of large woody material placement, bank slope regrade, buried riprap, coconut coir logs and matting, and native plantings. The plantings will consist of native riparian species chosen from the Pend Oreille County Shoreline Native Plants List and will be arranged in accordance with engineer drawings using a gridded pattern. The denser plantings along the regraded slope will not only contribute to bank stabilization but also mitigate property loss within the defined project boundaries. This project has been sponsored by the Pend Oreille Conservation District as a Fish Habitat Enhancement Project.

This bid proposal is to provide equipment (all equipment must be leak-free and good operational condition), materials and labor to complete all elements set forth in the final project design narrative and drawings prepared by Osborn Consulting. These detailed plans, specifications, and other pertinent information are attached electronically. **Each respondent is required to submit a written Strategic Construction Work Plan as a part of their proposal** (Section 1-05.3 of Amendments and Special Conditions provides specifics about what should be included in the Work Plan). Project oversight will be provided by POCD personnel and the project design engineer.

The POCD will be responsible for obtaining all environmental permits and the project start date is contingent upon receipt of all required permits. The successful bidder will be provided copies of applicable permits and must adhere to all conditions therein.

Project Location

Sunnyside/Sandy Shores:

1. Head east on State Route 20 E towards Bobier Rd N for 4.9 miles.
2. Continue onto US Route 2 E/W Walnut St for 0.6 miles.
3. Turn left onto Le Clerc Rd S for 5.8 miles.
4. Turn right onto Sandy Shores Rd Dr in 0.2 miles.
5. Turn left onto Sunnyside/Sandy Shores Dr in 0.2 miles.
6. The site will be on the right in 0.3 miles at 231 and 251 Sandy Shores Rd, Newport, WA 99156 as well as 192, 142, 124, 122, 112, 92, 72, 202, and 152 Sunnyside Drive, Newport, WA, 99156.

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RESPONSIVENESS CRITERIA

Site Visit

Respondents are expected to visit the site prior to submitting proposals. Contractors interested in a site review are **required** to contact Corey Brenner, the POCD Project Manager to coordinate an individual preliminary site visit.

Submission of Proposals

The following items are required for a proposal to be considered **responsive**:

A. Complete all parts of the attached **BID PROPOSAL** form including the **SCHEDULE OF QUANTITIES** (**Bid Sheet**) and the **LIST OF SUBCONTRACTORS**. The bid will be considered responsive only if the Bid Proposal form is entirely completed.

B. **A representative of the contractor has visited the site** or has fully reviewed the Plans and Special Provisions and **demonstrates a working knowledge of the entire scope of work** with their written Work Plan submission (see below).

C. **Respondents shall submit a written Strategic Construction Work Plan**. The Strategic Construction Work Plan will be reviewed by the Selection Panel and approved by the Project Manager and Landowner prior to letting a contract for work (**Section 1-05.3 of Amendments and Special Conditions describes contents of Work Plan**).

D. The bidder must provide a **BID DEPOSIT** as described in Section 1-02.7 of the CONTRACT.

E. **Three references are required with the proposal.** These references should include past clients who are familiar with the respondent's quality of work, timeliness, reliability, etc.

F. **Statement of Qualifications and list of similar projects.** Respondents must provide a description of Contractor's qualifications based on the last 5 years of work which demonstrate the ability to work within the permit guidelines for "in-stream work" which includes diversions, pumping, and sediment control. Establishing stable slopes and near-water construction protocol are the highest priorities for this project.

G. Sealed proposals may be delivered personally or by regular mail. Proposals sent by mail should be addressed to: **Attn: Corey Brenner, Riparian Program** Pend Oreille Conservation District, 121 Washington Ave, Newport, WA 99156.

H. Submit sealed bid proposals to POCD, no later than **4:00 p.m., Pacific Standard Daylight Time on Monday, July 29th, 2024**.

RESPONSIBLE BIDDER CRITERIA

In addition to bid **responsiveness**, the POCD selects contractors on the appropriate small works roster to assure that a competitive price is established and to award contracts to the lowest **responsible** bidder, defined in RCW 43.19.1911, as follows:

"(9) In determining "lowest responsible bidder", in addition to price, the following elements shall be given consideration:

(a) The ability, capacity, and skill of the bidder to perform the contract or provide the service required.
(b) The character, integrity, reputation, judgment, experience, and efficiency of the bidder.
(c) Whether the bidder can perform the contract within the time specified.
(d) The quality of performance of previous contracts or services.
(e) The previous and existing compliance by the bidder with laws relating to the contract or services.
(f) Such other information as may be secured having a bearing on the decision to award the contract:

PROVIDED, that in considering bids for purchase, manufacture, or lease, and in determining the "lowest responsible bidder," whenever there is reason to believe that applying the "life cycle costing" technique to bid evaluation would result in lowest total cost to the state, first consideration shall be given by state purchasing activities to the bid with the lowest life cycle cost which complies with specifications. "Life cycle cost" means the total cost of an item to the state over its estimated useful life, including costs of selection, acquisition, operation, maintenance, and where applicable, disposal, as far as these costs can reasonably be determined, minus the salvage value at the end of its estimated useful life. The "estimated useful life" of an item means the estimated time from the date of acquisition to the date of replacement or disposal, determined in any reasonable manner. Nothing in this section shall prohibit any state agency, department, board, commission, committee, or other state-level entity from allowing for preferential purchase of products made from recycled materials or products that may be recycled or reused."

WAGES, BID CLOCK AND PRIMARY CONTACTS

This is NOT a Prevailing Wage Contract. For this project, the POCD is acting as an excepted agency in relation to RCW 39.040.010(3). The work under this contract is for conservation of resources, as described in RCW 89.08.010 and reclamation of waste or undeveloped lands. Therefore, for these activities, the POCD may act in the same capacity of an excepted agency per RCW 89.16.040 which states in part, ". . . and such other districts as are authorized by law for the reclamation or development of waste or undeveloped lands or the rehabilitation of existing reclamation projects, and all such districts and improvement districts shall, for the purposes of this chapter be known as reclamation districts."

Bidders on this work will be required to comply with all applicable federal, state and local laws and regulations. The POCD retains authority to withhold payment(s) for non-compliance with these requirements.

Proposed Schedule

Announcement	07/03/2024
Bids due	07/29/2024
Bid opening	07/30/2024
Contract Awarded	08/09/2024
Project Start	08/19/2024
Project Complete	10/01/2024

Sealed bids will be opened on **Tuesday, July 30th, 2024,** by a Review and Selection panel comprised of POCD employees that are not directly involved with the project. All respondents will receive a Bid Tabulation form with a summary of the bid results as a part of the bid award announcement. This Public Bid Opening will happen at 3pm at 121 N. Washington Ave. Newport, WA 99156 at the Pend Oreille Conservation District Office.

PRIMARY CONTACTS

AGENCY Project Manager	Project Design Engineer
Corey Brenner Riparian Program Manager Pend Oreille Conservation District 121 N Washington Ave Newport, WA 99156 *Phone:* (509) 671-2857 (509) 447-1155 *Email address:* CoreyB@pocd.org Admin@pocd.org	Kayla Kassa, P.E. Osborn Consulting 101 S Stevens St Suite 103 Spokane, WA 99201 Phone: (208) 418-9105 *Email address:* kaylak@osbornconsulting.com

BID PROPOSAL

Bidder _____
Name

_____
Address

_____

For the construction of the Fish Habitat Enhancement Project:

Pend Oreille River Salmon Recovery and Bank Stabilization: Sunnyside/Sandy Shores
hereinafter referred to as "**the Project**."

To:
Pend Oreille Conservation District
121 N Washington Ave
Newport, WA 99156

We, the undersigned, having examined the Invitation to Bidders and the Contract Documents for the construction of the Work, and having investigated the site of **the Project** offer to construct and complete the Work in conformity with said documents, and to enter into an agreement according to the form hereto attached, in consideration of the sum arrived at by the proper extension of units of work shown in the following Schedule of Quantities, or such sum as may be ascertained in accordance with said documents.

We acknowledge receipt, understanding and full consideration of Addenda Number(s)

_____, issued prior to the date for receipt of bids (blank or "NA" if no addenda have been issued).

_____
Signature

BID SHEET

PEND OREILLE RIVER SALMON RECOVERY AND BANK STABILIZATION – SUNNYSIDE/SANDY SHORES

WORK UNDER THIS SCHEDULE INCLUDES:

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	BID TOTAL
1	Mobilization	1	LS		
2	Clearing and Grubbing	1.5	AC		
3	Tree Removal	1	EA		
4	Dock Removal/Replacement	3	EA		
5	Common Borrow, Incl. Haul	666	CY		
6	Fine Grading	32	HR		
7	TESC	1	LS		
8	SWPPP	1	LS		
9	Hydroseed	3,461	SY		
10	Topsoil Type A	1,124	SY		
11	Planting, Group A	1	LS		
12	Planting, Group B	1	LS		
13	Landscape Establishment	1	LS		
14	Rocks for Erosion and Scour Protection, Subangular, Class A	58	CY		
15	Log with Root Wad, Type D	17	EA		
16	Log with Root Wad, Type E	8	EA		
17	Log with no Root Wad, Type F	7	EA		
18	Log with no Root Wad, Type G	1	EA		
19	Log with no Root Wad, Type H	1	EA		
20	Duckbill Anchor (3,000 lb cap.)	34	EA		
				Total Bid Amount:	$
				Sales Tax (7.9%):	$
				Total Project Cost (Sales Tax + Bid Amount):	$

a) Alternate plan proposals (e.g. materials substitutions, innovative equipment, etc.) should be noted with an asterisk (*) and described in the Strategic Construction Work Plan

b) Quantities are approximate and calculated based on dimensions from CAD drawings

c) L.S. = Lump Sum, C.Y. = Cubic Yard

BID SUMMARY

Total Schedule A:_____

(Figures)

_____

_____

(Words)

LIST OF SUBCONTRACTORS
(See Section 1-02.6 of Amendments to the Standard Specification)

For each category of work in this project, the bidder shall identify the category of any work expected to be more than five percent (5%) of the total work and the Subcontractor performing it. Failure to list Subcontractors shall render the bid NONRESPONSIVE.

PROJECT NAME: **Pend Oreille River Salmon Recovery and Bank Stabilization – Sunnyside/Sandy Shores**

Firm Name and Address	Type of Work
1. Subcontractor	
2. Subcontractor	
3. Subcontractor	
4. Subcontractor	
5. Subcontractor	

LIST OF REFERENCES

List at least three references. These references should include past clients who are familiar with the bidder's quality of work, timeliness, reliability, etc.

PROJECT NAME **Pend Oreille River Salmon Recovery and Bank Stabilization – Sunnyside/Sandy Shores**

Name of Reference Company / Contact and Phone Number	Project Name and General Location	Type of Work Performed

STATEMENT OF QUALIFICATIONS

The Contractor should submit a statement of qualifications which addresses the following:

Description of Contractors qualifications based on the last 5 years of work which demonstrate the ability to work within the permit guidelines for “in-stream work” which includes diversions, pumping, and sediment control. Establishing stable slopes and near-water construction protocol are the highest priorities for this project.

LIST OF SIMILAR PROJECTS COMPLETED BY CONTRACTOR
(USE ADDITIONAL SHEET IF NECESSARY)

Contact Name & Phone No.	Description of Work	Date Complete	Cost

BID ACCEPTANCE AFIDAVIT

Should this bid be accepted, we agree to appear at the office of the POCD within five (5) calendar days from the date of the Notice of Acceptance and return the signed contract and to provide the required Certificate(s) of Insurance.

We agree to begin work no later than _____and to proceed so

as to complete the project no later than _____.

Attached hereto is a certified check, cashier's check or contract bond in the amount of

_____ Dollars ($_____)

Payable to the order of the Pend Oreille Conservation District; this amount being five percent (5%) of the base bid, based upon the approximate quantities and prices listed in the respondents Schedule of Quantities. (As per CONTRACT Section 1-02.7.)

DATED this ____ day of _____ 2024, at _____, Washington.

ADDRESS OF BIDDER
(Principal Place of Business)

_____
Firm Name

_____

By _____
Signature

_____

_____

Telephone _____ Printed Name and Title

Fax # _____

If the bidder is a corporation, this proposal must be executed by its duly authorized officials.

Contractor's State Registration Number _____

State Industrial Insurance Number _____

CONSTRUCTION CONTRACT

THIS CONTRACT, made and entered into this ___ day of _____, 2024, shall be the agreed basis of performing the following work by and between the Pend Oreille Conservation District, hereinafter referred to as the Sponsor, and

_____

_____

_____

Telephone _____ Fax _____
hereinafter referred to as the Contractor.

WITNESSETH: Whereas the parties hereto have mutually covenanted and by these presents do covenant and agree with each other as follows:

FIRST: The Contractor agrees to furnish all material, labor, tools, equipment, apparatus, facilities, etc., necessary to perform and complete in a workmanship like manner the work called for in the contract documents entitled:

Project Name: Pend Oreille River Salmon Recovery and Bank Stabilization – Sunnyside/Sandy Shores.

According to the terms of the contract documents which shall include, but shall not be limited to the accepted Proposal, General and Supplemental Conditions, Addenda, Specifications, Drawings, Bond, Advertisement for Bids and this Contract.

SECOND: Time of Completion: The work to be performed under this contract shall commence after August 20th, 2024 (Depending upon receipt of required permits) and be substantially completed by November 01st, 2024 (unless authorized for extension by the project manager).

The Contractor further agrees that, from the compensation otherwise to be paid, the Sponsor may charge actual costs to the Contractor for any time over the agreed to completion date where work remains uncompleted, which sum is agreed upon as the liquidated damages which the Sponsor will sustain in case of the failure of the Contractor to complete the work in the time stipulated. This sum is not to be construed as in any sense a penalty.

THIRD**:** In consideration of the Performance of the Work, herein contained on the part of the Contractor, the Sponsor hereby agrees to pay the Contractor for said work completed according to the Contract Documents, the sum of $_____ plus 7.9% State Sales Tax consisting of the following:

BASE BID and TOTAL CONTRACT AMOUNT $_____

FOURTH: The unit prices are hereby accepted as per the SCHEDULE OF QUANTITIES.

The unit prices shall be utilized for any additive and deductive work within 15% of the TOTAL BID, INCLUDING SALES TAX. The unit price shall provide the contractor with full compensation for the cost of labor, materials, equipment, overhead, profit and any additional costs associated with the unit bid.

FIFTH: The Contractor shall defend, indemnify and hold the District, its officers, officials, employees and volunteers harmless from any and all claims, injuries, damages, losses or suits including attorney fees, arising out of or in connection with the performance of this Agreement, except for injuries and damages caused by the negligence of the District.

Should a court of competent jurisdiction determine that this Agreement is subject to RCW 4.24.115, then, in the event of liability for damages arising out of bodily injury to persons or damages to property caused by or resulting from the concurrent negligence of the Contractor and the District, its officers, officials, employees, and volunteers, the Contractor's liability hereunder shall be only to the extent of the Contractor's negligence. It is further specifically and expressly understood that the indemnification provided herein constitutes the Contractor's waiver of immunity under Industrial Insurance, Title 51 RCW, solely for the purposes of this indemnification. This waiver has been mutually negotiated by the parties. The provisions of this section shall survive the expiration or termination of this Agreement.

IN WITNESS WHEREOF: The Pend Oreille Conservation District has caused this Contract to be subscribed in its behalf and the said Contractor has signed this Contract the day and year first above written.

Contractor:	Sponsor:
_____	Pend Oreille Conservation District
By	By
Title	Title: POCD Director
Date	Date

Washington State Contractor's _____
License No. _____
Federal Tax Id. No. _____
UBI. NO. _____

INTRODUCTION TO THE SPECIAL PROVISIONS

(December 10, 2020 APWA GSP)

The work on this project shall be accomplished in accordance with the *Standard Specifications for Road, Bridge and Municipal Construction*, 2024 edition, as issued by the Washington State Department of Transportation (WSDOT) and the American Public Works Association (APWA), Washington State Chapter (hereafter "Standard Specifications"). The Standard Specifications, as modified or supplemented by these Special Provisions, all of which are made a part of the Contract Documents, shall govern all of the Work.

These Special Provisions are made up of both General Special Provisions (GSPs) from various sources, which may have project-specific fill-ins; and project-specific Special Provisions. Each Provision either supplements, modifies, or replaces the comparable Standard Specification, or is a new Provision. The deletion, amendment, alteration, or addition to any subsection or portion of the Standard Specifications is meant to pertain only to that particular portion of the section, and in no way should it be interpreted that the balance of the section does not apply.

The project-specific Special Provisions are not labeled as such. The GSPs are labeled under the headers of each GSP, with the effective date of the GSP and its source. For example:

(March 8, 2013 APWA GSP)
(April 1, 2013 WSDOT GSP)

Also incorporated into the Contract Documents by reference are:

- *Manual on Uniform Traffic Control Devices for Streets and Highways*, currently adopted edition, with Washington State modifications, if any
- *Standard Plans for Road, Bridge and Municipal Construction*, WSDOT/APWA, current edition

Contractor shall obtain copies of these publications, at Contractor's own expense.

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DIVISION 1
GENERAL REQUIREMENTS

DESCRIPTION OF WORK
(March 13, 1995, WSDOT GSP)

This Contract provides for the improvement of the Sunnyside/Sandy Shores Pend Orielle River Bank Stabilization. Work includes bank stabilization construction consisting of large woody material placement, bank slope regrade, buried riprap, coconut coir logs and matting, native plantings installation; maintenance of erosion and sediment controls; excavation; landscape restoration, temporary traffic control; and other work, all in accordance with the Contract Plans, these Contract Provisions, and the Standard Specifications.

1-01 DEFINITIONS AND TERMS

1-01.3 Definitions
(January 19, 2022 APWA GSP)

Delete the heading **Completion Dates** and the three paragraphs that follow it, and replace them with the following:

Dates

Bid Opening Date
The date on which the Sponsor publicly opens and reads the Bids.

Award Date
The date of the formal decision of the Sponsor to accept the lowest responsible and responsive Bidder for the Work.

Contract Execution Date
The date the Sponsor officially binds the Agency to the Contract.

Notice to Proceed Date
The date stated in the Notice to Proceed on which the Contract time begins.

Substantial Completion Date
The day the Engineer determines the Sponsor has full and unrestricted use and benefit of the facilities, both from the operational and safety standpoint, any remaining traffic disruptions will be rare and brief, and only minor incidental work, replacement of temporary substitute facilities, plant establishment periods, or correction or repair remains for the Physical Completion of the total Contract.

Physical Completion Date
The day all of the Work is physically completed on the project. All documentation required by the Contract and required by law does not necessarily need to be furnished by the Contractor by this date.

Completion Date
The day all the Work specified in the Contract is completed and all the obligations of the Contractor under the contract are fulfilled by the Contractor. All documentation required by the Contract and required by law must be furnished by the Contractor before establishment of this date.

Final Acceptance Date
The date on which the Sponsor accepts the Work as complete.

Supplement this Section with the following:

All references in the Standard Specifications or WSDOT General Special Provisions, to the terms “Department of Transportation”, “Washington State Transportation Commission”, “Commission”, “Secretary of Transportation”, “Secretary”, “Headquarters”, and “State Treasurer” shall be revised to read “Sponsor”.

All references to the terms “State” or “state” shall be revised to read “Sponsor” unless the reference is to an administrative agency of the State of Washington, a State statute or regulation, or the context reasonably indicates otherwise.

All references to “State Materials Laboratory” shall be revised to read “Sponsor designated location”.

All references to “final contract voucher certification” shall be interpreted to mean the Sponsor form(s) by which final payment is authorized, and final completion and acceptance granted.

Wherever, in the Contract, the specifications and other Contract documents, the following words and terms or pronouns in place of them are used, the meaning will be construed as follows:

Board, Board of Directors
The elective body having authority over the Sponsor’s matters as provided by law.

Department, Public Works Department
The agent of the Board of Directors for the Sponsor for the administration of project work; the Executive Director.

County Road Engineer
The Project Engineer for the Sponsor and such agents as are authorized to act on his behalf.

Engineer
The Project Engineer, owners representative acting directly or through his duly authorized representative.

Engineer of Record
The engineer who prepared the plans, specifications, and other design documents.

Laboratory
The laboratory designated by the Project Engineer.

Item of Work
For the purpose of this project, an item of work shall be considered a unit of work. Payment will be made for actual work performed at Unit Contract Price for completed units of work.

Sponsor
The Contracting Agency, Pend Oreille Conservation District

Additive
A supplemental unit of work or group of bid items, identified separately in the Bid Proposal, which may, at the discretion of the Sponsor, be awarded in addition to the base bid.

Alternate
One of two or more units of work or groups of bid items, identified separately in the Bid Proposal, from which the Sponsor may make a choice between different methods or material of construction for performing the same work.

Business Day
A business day is any day from Monday through Friday except holidays as listed in Section 1-08.5.

Contract Bond
The definition in the Standard Specifications for "Contract Bond" applies to whatever bond form(s) are required by the Contract Documents, which may be a combination of a Payment Bond and a Performance Bond.

Contract Documents
See definition for "Contract".

Contract Time
The period of time established by the terms and conditions of the Contract within which the Work must be physically completed.

Notice of Award
The written notice from the Sponsor to the successful Bidder signifying the Sponsor's acceptance of the Bid Proposal.

Notice to Proceed
The written notice from the Sponsor or Engineer to the Contractor authorizing and directing the Contractor to proceed with the Work and establishing the date on which the Contract time begins.

Traffic
Both vehicular and non-vehicular traffic, such as pedestrians, bicyclists, wheelchairs, and equestrian traffic.

1-02 BID PROCEDURES AND CONDITIONS

1-02.1 Prequalification of Bidders

Delete Section 1-02.1 and replace it with the following:

1-02.1 Qualifications of Bidder
(January 24, 2011 APWA GSP)

Before award of a public works contract, a bidder must meet at least the minimum qualifications of RCW 39.04.350(1) to be considered a responsible bidder and qualified to be awarded a public works project.

1-02.2 Plans and Specifications
(June 27, 2011 APWA GSP)

Delete this section and replace it with the following:

The Sponsor shall provide an electronic copy of each contract document (Contract Book, Drawings) to Contractor for project bidding purposes. After contract award, the Sponsor shall supply the Contractor with an electronic copy of the Contract Books (includes Contract Form, General Requirements, Technical Specifications, Bid Form) and set of drawings. Contractor shall be responsible to print copies of contract documents needed for bidding and/or completion of Contractor's work.

1-02.4 Examination of Plans, Specifications, and Site of Work

This section is supplemented with the following:

All prospective bidders are encouraged to visit the site prior to bidding and are required to coordinate a site visit with the Project Manager. All plan holders will be notified of the day, time and place of a site visit to be scheduled by the Project Manager.

1-02.4(1) General
(December 30, 2022 APWA GSP Option B)

The first sentence of the ninth paragraph, beginning with “Prospective Bidder desiring…”, is revised to read:

Prospective Bidders desiring an explanation or interpretation of the Bid Documents, shall request the explanation or interpretation in writing by close of business ***5*** business days preceding the bid opening to allow a written reply to reach all prospective Bidders before the submission of their Bids.

1-02.5 Bid Proposal Forms
(July 31, 2017 APWA GSP)

Delete this section and replace it with the following:

The Bid Proposal Form will identify the project and its location and describe the work. It will also list estimated quantities, units of measurement, the items of work, and the materials to be furnished at the unit bid prices. The bidder shall complete spaces on the proposal form that call for, but are not limited to, unit prices; extensions; summations; the total bid amount; signatures; date; and, where applicable, retail sales taxes and acknowledgment of addenda; the bidder’s name, address, telephone number, and signature; the bidder’s UDBE/DBE/M/WBE commitment, if applicable; a State of Washington Contractor’s

Registration Number; and a Business License Number, if applicable. Bids shall be completed by typing or shall be printed in ink by hand, preferably in black ink. The required certifications are included as part of the Proposal Form.

The Sponsor reserves the right to arrange the proposal forms with alternates and additives, if such be to the advantage of the Sponsor. The bidder shall bid on all alternates and additives set forth in the Proposal Form unless otherwise specified.

1-02.6 Preparation of Proposal

Supplement this Section with the following:

Paragraph five; item #1 is revised to read:

1. The Bidder shall list all Subcontractors expected to perform more than five percent (5%) of the contracted work on the bid form.

This section is further supplemented with the following:

In accordance with the legislative findings and policies set forth in Chapter 39.19 RCW the State of Washington, Sponsor encourages participation in all of its contracts by MWBE firms certified by the Office of Minority and Women's Business Enterprises (OMWBE). Participation may be either on a direct basis in response to this invitation or as a subcontractor to a bidder. However, unless required by federal statutes, regulations, grants, or contract terms referenced in the contract documents, no preference will be included in the evaluation of bids, no minimum level of MWBE participation shall be required as a condition for receiving an award and bids will not be rejected or considered non-responsive on that basis. Any affirmative action requirements set forth in federal regulations or statutes included or referenced in the contract documents will apply.

(January 4, 2024 APWA GSP, Option B)

Supplement the second paragraph with the following:

4. If a minimum bid amount has been established for any item, the unit or lump sum price must equal or exceed the minimum amount stated.

5. Any correction to a bid made by interlineation, alteration, or erasure, shall be initialed by the signer of the bid.

Bid submittals shall include the completed Bid Form (Appendix B).

Confirmation of addenda is required (if any are issued during bid period). To confirm receipt of addenda, list each addendum on the Bid Form with an adjacent signature.

The Bid Form must be filled out completely, with extension of all Unit Costs to the Total Cost column, subtotal then sales tax applied for the Total Construction Cost (Bid). The

Total Construction Cost will be used for determination of "lowest responsible bidder" and contract award. All math for bids will be verified by POCD with Unit Costs considered accurate.1-02.7 Bid Deposit
(March 8, 2013 APWA GSP)

Supplement this section with the following:

Bid bonds shall contain the following:

1. Sponsor-assigned number for the project;

2. Name of the project;

3. The Sponsor named as obligee;

4. The amount of the bid bond stated either as a dollar figure or as a percentage which represents five percent of the maximum bid amount that could be awarded;

5. Signature of the bidder's officer empowered to sign official statements. The signature of the person authorized to submit the bid should agree with the signature on the bond, and the title of the person must accompany the said signature;

6. The signature of the surety's officer empowered to sign the bond and the power of attorney.

If so stated in the Contract Provisions, bidder must use the bid acceptance affidavit form included in the Contract Provisions.

If so stated in the Contract Provisions, cash will not be accepted for a bid deposit.

1-02.8 Noncollusion Declaration and Lobbying Certification

Delete this Section.

1-02.9 Delivery of Proposal

Replace Section 1-02.9 with the following:

Reference the Notice Inviting Bids for proposal delivery requirements.

1-02.10 Withdrawing, Revising, or Supplementing Proposal

(July 23, 2015 APWA GSP)

Delete this section, and replace it with the following:

After submitting a physical Bid Proposal to the Sponsor, the Bidder may withdraw, revise, or supplement it if:

1. The Bidder submits a written request signed by an authorized person and physically delivers it to the place designated for receipt of Bid Proposals, and

2. The Sponsor receives the request before the time set for receipt of Bid Proposals, and

3. The revised or supplemented Bid Proposal (if any) is received by the Sponsor before the time set for receipt of Bid Proposals.

If the Bidder's request to withdraw, revise, or supplement its Bid Proposal is received before the time set for receipt of Bid Proposals, the Sponsor will return the unopened Proposal package to the Bidder. The Bidder must then submit the revised or supplemented package in its entirety. If the Bidder does not submit a revised or supplemented package, then its bid shall be considered withdrawn.

Late revised or supplemented Bid Proposals or late withdrawal requests will be date recorded by the Sponsor and returned unopened. Mailed, emailed, or faxed requests to withdraw, revise, or supplement a Bid Proposal are not acceptable.

1-02.11 Combination Multiple Proposals

Delete this Section.

1-02.12 Public Opening of Proposals

Delete this section and replace it with the following:

Proposals will be opened and publicly read in the manner and time indicated in the Notice Inviting Bids unless the Bid opening has been delayed or canceled. Bidders, their authorized agents, and other interested parties are invited to be present via Zoom.

If an emergency or unanticipated event interrupts normal work processes of the Sponsor so that Proposals cannot be opened at the time indicated in the call for Bids the time specified for opening of Proposals will be deemed to be extended to the same time of day on the first work day on which the normal work processes of the Sponsor resume.

After the Bid Opening, Bidders may obtain bid results from the Sponsor by calling the number listed on the cover of the bid proposal.

1-02.13 Irregular Proposals

(December 30, 2022 APWA GSP)

Delete this section and replace it with the following:

1. A Proposal will be considered irregular and will be rejected if:
   a. The Bidder is not prequalified when so required;
   b. The authorized Proposal form furnished by the Sponsor is not used or is altered;
   c. The completed Proposal form contains any unauthorized additions, deletions, alternate Bids, or conditions;
   d. The Bidder adds provisions reserving the right to reject or accept the award, or enter into the Contract;
   e. A price per unit cannot be determined from the Bid Proposal;
   f. The Proposal form is not properly executed;
   g. The Bidder fails to submit or properly complete a subcontractor list (WSDOT Form 271-015), if applicable, as required in Section 1-02.6;
   h. The Bidder fails to submit or properly complete a Disadvantaged Business Enterprise Certification (WSDOT Form 272-056), if applicable, as required in Section 1-02.6;
   i. The Bidder fails to submit Written Confirmations (WSDOT Form 422-031) from each DBE firm listed on the Bidder's completed DBE Utilization Certification that they are in agreement with the bidder's DBE participation commitment, if applicable, as required in Section 1-02.6, or if the written confirmation that is submitted fails to meet the requirements of the Special Provisions;
   j. The Bidder fails to submit DBE Good Faith Effort documentation, if applicable, as required in Section 1-02.6, or if the documentation that is submitted fails to demonstrate that a Good Faith Effort to meet the Condition of Award was made;
   k. The Bidder fails to submit a DBE Bid Item Breakdown (WSDOT Form 272-054), if applicable, as required in Section 1-02.6, or if the documentation that is submitted fails to meet the requirements of the Special Provisions;
   l. The Bidder fails to submit DBE Trucking Credit Forms (WSDOT Form 272-058), if applicable, as required in Section 1-02.6, or if the documentation that is submitted fails to meet the requirements of the Special Provisions;
   m. The Bid Proposal does not constitute a definite and unqualified offer to meet the material terms of the Bid invitation; or
   n. More than one Proposal is submitted for the same project from a Bidder under the same or different names.

2. A Proposal may be considered irregular and may be rejected if:
   a. The Proposal does not include a unit price for every Bid item;
   b. Any of the unit prices are excessively unbalanced (either above or below the amount of a reasonable Bid) to the potential detriment of the Sponsor;
   c. Receipt of Addenda is not acknowledged;
   d. A member of a joint venture or partnership and the joint venture or partnership submit Proposals for the same project (in such an instance, both Bids may be rejected); or
   e. If Proposal form entries are not made in ink.

1-02.14 Disqualification of Bidders

(May 17, 2018 APWA GSP, Option A)

Delete this section and replace it with the following:

A Bidder will be deemed not responsible if the Bidder does not meet the mandatory bidder responsibility criteria in RCW 39.04.350(1), as amended.

The Sponsor will verify that the Bidder meets the mandatory bidder responsibility criteria in RCW 39.04.350(1). To assess bidder responsibility, the Sponsor reserves the right to request documentation as needed from the Bidder and third parties concerning the Bidder's compliance with the mandatory bidder responsibility criteria.

If the Sponsor determines the Bidder does not meet the mandatory bidder responsibility criteria in RCW 39.04.350(1) and is therefore not a responsible Bidder, the Sponsor shall notify the Bidder in writing, with the reasons for its determination. If the Bidder disagrees with this determination, it may appeal the determination within two (2) business days of the Sponsor's determination by presenting its appeal and any additional information to the Sponsor. The Sponsor will consider the appeal and any additional information before issuing its final determination. If the final determination affirms that the Bidder is not responsible, the Sponsor will not execute a contract with any other Bidder until at least two business days after the Bidder determined to be not responsible has received the Sponsor's final determination.

1-02.15 Pre Award Information

(December 30, 2022 APWA GSP)

Revise this section to read:

Before awarding any contract, the Sponsor may require one or more of these items or actions of the apparent lowest responsible bidder:

1. A complete statement of the origin, composition, and manufacture of any or all materials to be used,
2. Samples of these materials for quality and fitness tests,
3. A progress schedule (in a form the Sponsor requires) showing the order of and time required for the various phases of the work,
4. A breakdown of costs assigned to any bid item,
5. Attendance at a conference with the Engineer or representatives of the Engineer,
6. Obtain, and furnish a copy of, a business license to do business in the Sponsor or county where the work is located.
7. Any other information or action taken that is deemed necessary to ensure that the bidder is the lowest responsible bidder.

1-02.16 Addenda and Interpretations of Documents (NEW SECTION)

No oral interpretation of the meaning of the plans, specifications, or other pre-bid documents will be made to any bidder. Every request for such interpretation shall be submitted in writing, addressed to the Sponsor's contact person (listed on the cover page of these contract documents), and to be given consideration, shall be received at least three (3) working days prior to date fixed for Bid Opening. Any and all such interpretations and supplemental instructions will be in the form of written addenda to the Specifications which, if issued, will be

mailed or otherwise delivered to each prospective bidder. Failure of any bidder to receive any such addendum shall not relieve such bidder from any obligation under his bid as submitted. All addenda so issued shall become a part of the Contract documents.

1-02.17 Bid Amounts (NEW SECTION)

This section is added:

The Bidder agrees to hold the base bid prices for forty-five (45) days from date of bid opening.

1-03 AWARD AND EXECUTION OF CONTRACT

1-03.1 Consideration of Bids
(December 30, 2022 APWA GSP)

Revise the first paragraph to read:

After opening and reading proposals, the Sponsor will check them for correctness of extensions of the prices per unit and the total price. If a discrepancy exists between the price per unit and the extended amount of any bid item, the price per unit will control. If a minimum bid amount has been established for any item and the bidder's unit or lump sum price is less than the minimum specified amount, the Sponsor will unilaterally revise the unit or lump sum price, to the minimum specified amount and recalculate the extension. The total of extensions, corrected where necessary, including sales taxes where applicable and such additives and/or alternates as selected by the Sponsor, will be used by the Sponsor for award purposes and to fix the Awarded Contract Price amount and the amount of the contract bond.

1-03.1(1) Identical Bid Totals
(December 30, 2022 APWA GSP)

Revise this section to read:

After opening Bids, if two or more lowest responsive Bid totals are exactly equal, then the tie-breaker will be the Bidder with an equal lowest bid, that proposed to use the highest percentage of recycled materials in the Project, per the form submitted with the Bid Proposal. If those percentages are also exactly equal, then the tie-breaker will be determined by drawing as follows: Two or more slips of paper will be marked as follows: one marked "Winner" and the other(s) marked "unsuccessful". The slips will be folded to make the marking unseen. The slips will be placed inside a box. One authorized representative of each Bidder shall draw a slip from the box. Bidders shall draw in alphabetic order by the name of the firm as registered with the Washington State Department of Licensing. The slips shall be unfolded and the firm with the slip marked "Winner" will be determined to be the successful Bidder and eligible for Award of the Contract. Only those Bidders who submitted a Bid total that is exactly equal to the lowest responsive Bid, and with a proposed recycled materials percentage that is exactly equal to the highest proposed recycled materials amount, are eligible to draw.

1-03.3 Execution of Contract
(January 4, 2024 APWA GSP Option B)

Revise this section to read:

Within 3 calendar days of Award date (not including Saturdays, Sundays and Holidays), the successful Bidder shall provide the information necessary to execute the Contract to the Sponsor. The Bidder shall send the contact information, including the full name, email address, and phone number, for the authorized signer and bonding agent to the Sponsor.

Copies of the Contract Provisions, including the unsigned Form of Contract, will be available for signature by the successful bidder on the first business day following award. The number of copies to be executed by the Contractor will be determined by the Sponsor.

Within ten (10) calendar days after the award date, the successful bidder shall return the signed Sponsor-prepared contract, an insurance certification as required by Section 1-07.18, a satisfactory bond as required by law and Section 1-03.4, the Transfer of Coverage form for the Construction Stormwater General Permit with sections I, III, and VIII completed when provided. Before execution of the contract by the Sponsor, the successful bidder shall provide any pre-award information the Sponsor may require under Section 1-02.15.

Until the Sponsor executes a contract, no proposal shall bind the Sponsor nor shall any work begin within the project limits or within Sponsor-furnished sites. The Contractor shall bear all risks for any work begun outside such areas and for any materials ordered before the contract is executed by the Sponsor.

If the bidder experiences circumstances beyond their control that prevents return of the contract documents within the calendar days after the award date stated above, the Sponsor may grant up to a maximum of ten (10) additional calendar days for return of the documents, provided the Sponsor deems the circumstances warrant it.

1-03.4 Contract Bond
(July 23, 2015 APWA GSP)

Delete the first paragraph and replace it with the following:

The successful bidder shall provide executed payment and performance bond(s) for the full contract amount. The bond may be a combined payment and performance bond; or be separate payment and performance bonds. In the case of separate payment and performance bonds, each shall be for the full contract amount. The bond(s) shall:

2. Be signed by an approved surety (or sureties) that:
    a. Is registered with the Washington State Insurance Commissioner, and
    b. Appears on the current Authorized Insurance List in the State of Washington published by the Office of the Insurance Commissioner,
3. Guarantee that the Contractor will perform and comply with all obligations, duties, and conditions under the Contract, including but not limited to the duty and obligation to indemnify, defend, and protect the Sponsor against all losses and claims related directly or indirectly from any failure:
    a. Of the Contractor (or any of the employees, subcontractors, or lower tier subcontractors of the Contractor) to faithfully perform and comply with all contract obligations, conditions, and duties, or

b. Of the Contractor (or the subcontractors or lower tier subcontractors of the Contractor) to pay all laborers, mechanics, subcontractors, lower tier subcontractors, material person, or any other person who provides supplies or provisions for carrying out the work;

4. Be conditioned upon the payment of taxes, increases, and penalties incurred on the project under titles 50, 51, and 82 RCW; and
5. Be accompanied by a power of attorney for the Surety's officer empowered to sign the bond; and
6. Be signed by an officer of the Contractor empowered to sign official statements (sole proprietor or partner). If the Contractor is a corporation, the bond(s) must be signed by the president or vice president, unless accompanied by written proof of the authority of the individual signing the bond(s) to bind the corporation (i.e., corporate resolution, power of attorney, or a letter to such effect signed by the president or vice president).

1-03.7 Judicial Review
(December 30, 2022 APWA GSP)

Revise this section to read:

All decisions made by the Sponsor regarding the Award and execution of the Contract or Bid rejection shall be conclusive subject to the scope of judicial review permitted under Washington Law. Such review, if any, shall be timely filed in the Superior Court of the county where the Sponsor headquarters is located, provided that where an action is asserted against a county, RCW 36.01.050 shall control venue and jurisdiction.

1-04 SCOPE OF THE WORK

1-04.2 Coordination of Contract Documents, Plans, Special Provisions, Specifications, and Addenda
(December 30, 2022 APWA GSP)

Revise the second paragraph to read:

Any inconsistency in the parts of the contract shall be resolved by following this order of precedence (e.g., 1 presiding over 2, 2 over 3, 3 over 4, and so forth):

1. Addenda,
2. Proposal Form,
3. Special Provisions,
4. Contract Plans,
5. Standard Specifications,
6. Sponsor's Standard Plans or Details (if any), and
7. WSDOT Standard Plans for Road, Bridge, and Municipal Construction.

1-04.4 Changes

(January 19, 2022 APWA GSP)

The first two sentences of the last paragraph of Section 1-04.4 are deleted.

1-04.6 Variation in Estimated Quantities

Delete this section and replace in its entirety with the following:

The quantities shown for each bid item in the Proposal are to provide a common proposal for bidders. Actual quantities will be determined in the field as the work progresses, and will be paid at the original bid price, regardless of final quantity.

1-05 CONTROL OF WORK

1-05.2 Authority of Assistants and Inspectors

This Section is supplemented with the following:

The presence or absence of an Inspector at the Work site will be at the sole discretion of the Sponsor and will not in any way relieve the Contractor of its responsibility to properly perform the Work as required by the Contract Provisions.

The Inspector does not purport to be a safety expert and is not engaged in that under this Contract. The Inspector may inform the Contractor of conditions that may constitute safety issues or violations. Such information will be provided solely to cooperate with and assist the Contractor and shall not make the Inspector or the Engineer responsible for the enforcement of safety laws, rules, regulations or procedures. After receiving information relating to safety issues, the Contractor shall make its own examination and analysis of the situation reported and take such action, if any, that the Contractor determines to be appropriate. The Inspector’s performance of project representation and observation services shall not make the Inspector responsible for the enforcement of safety laws, rules, regulations or procedures; nor shall it make the Inspector responsible for construction means, methods, techniques, sequences, or procedures, or for the Contractor’s ability to properly perform the Work, all of which are entirely the responsibility of the Contractor.

1-05.3 Plans and Working Drawings

This section is supplemented with the following:

Each Respondent shall submit a written Strategic Construction Work Plan. The Strategic Construction Work Plan will be reviewed by the Sponsor and approved by the Engineer prior to letting a contract for work. Plans should include at a minimum:

1. A list of construction personnel and the supervisory chain of responsibility.
2. Procedures and sequence for bank shaping, woody debris and riprap placement, and all final grading and disposal required (In accordance with the design specifications).
3. Erosion & Pollution Control Plan/BMPs.
4. Materials sourcing and specification.
5. Alternate plan proposals (e.g. materials substitutions, innovative equipment, etc.)
6. Designated materials staging areas.
7. Haul routes for equipment.

1-05.4 Conformity With and Deviations From Plans and Stakes

Section 1-05.4 is supplemented with the following:

This section covers surveying for vertical and horizontal control of the Stream Bank Stabilization project.

Vertical control for construction will be referenced to a "reference elevation" at the project site (to be defined by surveyor) with an assumed elevation. The engineer (or representative) will show the Contractor exactly where and what this reference elevation is at the project site. The Contractor is responsible for all vertical control for project construction (e.g. operate a laser level), with intermittent checks by the engineer (or representative).

Horizontal control for construction will be provided by the engineer, who will place wood stakes at the outside corners for Stream Bank (as shown on drawings), as well as off-set stakes to preserve these locations during project excavation.

A Professional Land Surveyor (PLS) is required. Tolerances for horizontal control for Stream Bank sloping, placement of riprap and large woody debris within 0.5 of specified locations. The large woody debris, riprap, and bank sloping shall be installed within 0.2 feet vertical of the specified elevations.

Monument Positions and Property Corners

All lot corners or corners of tracts, section corners or permanent markers of subdivisions therein as well as street monuments and right-of-way monuments shall be carefully noted and maintained by the Contractor. Some monuments are shown on the Plans and there may be others. The Contractor shall notify the Engineer of any existing federal, state, county, Sponsor, and private land monuments encountered prior to pipeline construction. The Contractor shall preserve such monuments intact and undisturbed or they shall be referenced by a land surveyor licensed to practice in the State of Washington prior to any disturbance. Any such pin, pipe, stone, plaque, or monument

that is removed or disturbed by the Contractor shall be accurately located and replaced by a licensed surveyor at the expense of the Contractor. Replacement of survey monuments and lot corners shall conform in all respects to the requirements of RCW 58.09 and Chapter 332 120 WAC. Applicable permits as required by the Washington Department of Natural Resources shall be obtained by the contractor's surveyor.

1-05.7 Removal of Defective and Unauthorized Work

(October 1, 2005 APWA GSP)

Supplement this section with the following:

If the Contractor fails to remedy defective or unauthorized work within the time specified in a written notice from the Engineer, or fails to perform any part of the work required by the Contract Documents, the Engineer may correct and remedy such work as may be identified in the written notice, with Sponsor forces or by such other means as the Sponsor may deem necessary.

If the Contractor fails to comply with a written order to remedy what the Engineer determines to be an emergency situation, the Engineer may have the defective and unauthorized work corrected immediately, have the rejected work removed and replaced, or have work the Contractor refuses to perform completed by using Sponsor or other forces. An emergency situation is any situation when, in the opinion of the Engineer, a delay in its remedy could be potentially unsafe, or might cause serious risk of loss or damage to the public.

Direct or indirect costs incurred by the Sponsor attributable to correcting and remedying defective or unauthorized work, or work the Contractor failed or refused to perform, shall be paid by the Contractor. Payment will be deducted by the Engineer from monies due, or to become due, the Contractor. Such direct and indirect costs shall include in particular, but without limitation, compensation for additional professional services required, and costs for repair and replacement of work of others destroyed or damaged by correction, removal, or replacement of the Contractor's unauthorized work.

No adjustment in contract time or compensation will be allowed because of the delay in the performance of the work attributable to the exercise of the Sponsor's rights provided by this Section.

The rights exercised under the provisions of this section shall not diminish the Sponsor's right to pursue any other avenue for additional remedy or damages with respect to the Contractor's failure to perform the work as required.

1-05.8 Vacant

Section 1-05.8, including title, is replaced with the following.

1-05.8 Submittals

1-05.8(1) General

Submittals covered by these requirements include manufacturers' information, Shop Drawings, test procedures, test results, samples, requests for substitutions, and miscellaneous work-related submittals. Submittals shall also include, but not be limited to, all materials, fabricated items, schedules, plans, and all other submittals specifically listed elsewhere in the Contract Documents. The Contractor shall furnish all drawings, specifications, descriptive data, certificates, samples, tests, methods, schedules, and manufacturer's installation and other instructions as specifically required in the Contract Documents to demonstrate fully that the materials and equipment to be furnished and the methods of work comply with the provisions and intent of the Contract Documents.

1-05.8(2) Contractor's Responsibilities

The Contractor shall be responsible for the accuracy and completeness of the information contained in each submittal and shall assure that the material, equipment, or method of work shall be as described in the submittal. The Contractor shall verify that all features of all products conform to the specified requirements. Submittal documents shall be clearly edited to indicate only those items, models, or series of equipment, which are being submitted for review. All extraneous materials shall be crossed out or otherwise obliterated. The Contractor shall ensure that there is no conflict with other submittals and notify the Sponsor in each case where his submittal may affect the work of another contractor or the Sponsor. The Contractor shall completely coordinate submittals among his subcontractors and suppliers including those submittals complying with applicable technical sections.

The Contractor shall coordinate submittals with the work so that work will not be delayed. The Contractor shall coordinate and schedule different categories of submittals, so that one will not be delayed for lack of coordination with another. No extension of time will be allowed because of failure to properly coordinate, schedule or provide complete submittals, or not allowing for sufficient review and processing time by the Sponsor.

The Contractor shall not proceed with any portion of work related to a submittal until the Contractor has obtained from the Sponsor a submittal marked "No Exceptions Taken", or "Make Corrections Noted".

The Contractor shall certify on each submittal document that he has reviewed the submittal, verified field conditions, and complied with the Contract Documents by signing and dating the submittal transmittal form.

The Contractor may authorize in writing a material or equipment supplier to deal directly with the Sponsor with regard to a submittal. These dealings shall be limited to contract interpretations to clarify and expedite the work. In such cases, the Contractor is not absolved from his responsibilities defined herein.

1-05.8(3) Request for Substitution or Deviation

Whenever materials or equipment are indicated in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the naming of the item or supplier is intended to establish the type, function, and quality required. Unless expressly

stated otherwise, materials or equipment of other suppliers may be accepted if sufficient information is submitted by the CONTRACTOR to allow the ENGINEER to determine that the material or equipment proposed is equivalent or equal to that named.

The Contractor shall bear all actual costs incurred by the Sponsor associated with review of a proposed substitution or deviation regardless of whether the substitution or deviation is ultimately approved by the Sponsor.

Requests for substitution or deviation for other equipment or material shall be in writing and shall be accompanied with sufficient information to permit the Sponsor to identify the nature and scope of the request. Information to be provided along with the request shall include:

1. All submittal information required for the specified equipment, including all deviations from the specified requirements necessitated by the proposed substitution.

2. Materials of construction, including material specifications and references.

3. Performance data, including performance curves and guaranteed power consumption, over the range of specified operating conditions.

4. Dimensional drawings, showing required access and clearances, including any changes to the work required to accommodate the proposed substitution or deviation.

5. Where controls are a part of the proposed substitution or deviation, piping, process and instrumentation drawings (PIDs), produced in the project format and with project-specific symbols, along with control descriptions.

6. Where controls specified in the project manual require modification to accommodate the proposed substitution or deviation, piping, process and instrumentation drawings (PIDs), produced in project format and with project-specific symbols, with all required modifications clearly highlighted.

7. Information and performance characteristics for all system components and ancillary devices to be furnished as a part of the proposed substitution or deviation.

8. Reproducible contract drawings, marked up to illustrate the alterations to all structural, architectural, mechanical, electrical, and HVAC systems required to accommodate the proposed substitution or deviation.

9. A list of installations of the proposed substitution or deviation indicating application, location, owner and date of first use.

Upon receipt of written application for substitution or deviation from the Contractor, including the information specified above, the Sponsor will estimate the cost of evaluating the request and present the estimate to the Contractor. The Contractor is advised that the estimate is based upon the best information available to the Sponsor at the time; however, the actual cost, based on time and expense, will be documented and applied in the final analysis of the substitution or deviation request. If the Contractor wishes to proceed with the request, he shall advise the Sponsor in writing and submit sufficient additional information as may be

requested by the Sponsor. No evaluation will take place until such time as the Contractor has agreed to the estimate in writing and has authorized the Sponsor to deduct the actual cost of the evaluation from monthly progress payments due the Contractor.

1-05.8(4) Categories of Submittals

Shop Drawings: Per Section 1-06.1.

Samples: Per Section 1-06.1.

Administrative Submittals: Submittals that are not Shop Drawings or Samples, or that do not reflect quality of product or method of construction. May include, but not be limited to:

1. Applications for payment.
2. Construction photographs.
3. Progress reports.
4. Progress schedules.
5. Schedule of values.
6. Schedule of estimated progress payments.
7. Training materials.
8. Training schedules.
9. Submittals required by laws, regulations, and governing agencies.

Quality Control Submittals: May include, but not be limited to:

1. Manufacturer's instructions.
2. Certificates/Certifications:
    a. Manufacturer's.
    b. Inspection.
3. Governing Agency's.
4. Manufacturer's field service reports.
5. Manufacturer's test reports.
6. Operation and maintenance data.
7. Operation and maintenance manuals.
8. Quality control plan.
9. Reports (inspection and test).
10. Statements of qualifications.
11. Test specimens.

Submittals (Product Data) for Information Only: Required Submittals (Product Data) for Information Only are not subject to submittal review procedures and shall be provided where specified as part of the work under this contract and its acceptability determined under normal inspection procedures.

1-05.8(5) Submittal Transmittal Procedure

When the Contract Documents require a submittal, the Contractor shall submit the specified information to the designated Sponsor representative via e-mail in Adobe PDF format.

Unless otherwise specified, submittals shall be accompanied by transmittal forms to be provided by Sponsor. A separate form shall be used for each specific item, class of material, equipment, and items specified in separate, discrete sections, for which the submittal is required. The form shall be signed by the Contractor's review or authorized representative. Submittal documents common to more than one piece of equipment shall be identified with all the appropriate equipment numbers. Submittals for various items shall be made with a single form when the items taken together constitute a manufacturer's package or are so functionally related that expediency indicates checking or review of the group or package as a whole.

A unique number, sequentially assigned, shall be noted on the transmittal form accompanying each item submitted. Original submittal numbers shall have the following format: "XXX"; where "XXX" is the sequential number assigned by the Contractor. Resubmittals shall have the following format: "XXX-Y"; where "XXX" is the originally assigned submittal number and "Y" is a sequential letter assigned for resubmittals, i.e., A, B, or C being the 1st, 2nd, and 3rd resubmittals, respectively. Submittal 025–B, for example, is the second resubmittal of submittal 025.

Submittals which are incomplete and/or do not have all the information required to be submitted, including but not limited to a signed and dated submittal transmittal form, and copy of marked-up specifications and/or drawings when specified, are not acceptable and will be returned without review. All submittal information provided by subcontractors shall be transmitted through the Contractor and shall bear the Contractor's signature.

1-05.8(6) Submittal Review Procedure

Unless otherwise specified, within 14 calendar days after receipt of a submittal for review and comment, the Sponsor shall review the submittal and return the reviewed copy with the transmittal cover sheet via e-mail in Adobe PDF format.

1. If the review indicates that the material or equipment complies with the project manual, submittal copies will be marked "NO EXCEPTIONS TAKEN." In this event, the Contractor may begin to incorporate the material or equipment covered by the submittal.

2. If the review indicates limited corrections are required, copies will be marked "MAKE CORRECTIONS NOTED." The Contractor may begin incorporating the material and equipment covered by the submittal in accordance with the noted corrections. Where submittal information will be incorporated in O&M data, a corrected copy shall be provided.

3. If the review reveals that the submittal is insufficient or contains incorrect data, copies will be marked "AMEND AND RESUBMIT." Except at his own risk, the Contractor shall not undertake work covered by this submittal until it has been revised, resubmitted and returned marked either "NO EXCEPTIONS TAKEN" or "MAKE CORRECTIONS NOTED."

4. If the review indicates that the material, equipment, or work method does not comply with the Contract Documents, copies of the submittal will be marked “REJECTED – SEE REMARKS.” Submittals with deviations which have not been identified clearly may be rejected. Except at his own risk, the Contractor shall not undertake the work covered by such submittals until a new submittal is made and returned marked either “NO EXCEPTIONS TAKEN” or “MAKE CORRECTIONS NOTED.”

5. If the review indicates that the submittal is Product Data or a Required Submittal (Product Data) for Information Only the submittal will be marked “PRODUCT DATA/NOT REVIEWED. Acceptability of the material, equipment, or work shall be determined under normal inspection procedures.

1-05.8(6)A Effect of Review of Contractor’s Submittals

Review of drawings or information regarding materials or equipment the Contractor proposes to provide, shall not relieve the Contractor of his responsibility for errors therein and shall not be regarded as an assumption of risks or liability by the Sponsor, or by any delegated representative, officer or employee thereof, and the Contractor shall have no claim under the contract on account of the failure, or partial failure, of material, or equipment so reviewed. A mark of “NO EXCEPTIONS TAKEN” or “MAKE CORRECTIONS NOTED” shall mean that the Sponsor has no objection to the Contractor, upon his own responsibility, using the plan or method of work proposed, or providing the materials or equipment proposed.

Approval of shop drawings or other submittals by the Sponsor is only for general conformance with the design concept of the product and general compliance with the Contract Documents. Any action required is subject to the requirements of the Plans and Specifications. The Contractor is responsible for dimensions which shall be confirmed and correlated at the job site, coordination of his work with that of all other trades, and the satisfactory performance of his work.

1-05.8(7) Required Submittals

The Contractor shall provide the Sponsor all required submittals identified in the Special Provisions and Standard Specifications Sections, or shown on Contract Plans, which are described in the following subsections.

1-05.8(7)A Submittals for the Pre-construction Conference

The following items shall be submitted at the pre-construction conference prior to the Notice to Proceed. Email copies to the Sponsor prior to conference. If the pre-construction conference is held in-person, bring 3 sets of hard copies of these submittals.

1. Contractor’s and Subcontractor’s Contact Information – Names and 24-hour contact telephone numbers of contractor’s and each subcontractor’s key personnel identified in Standard Specifications Section 1-05.13. Electronic copy shall be in MS Word.

2. Contractor's Labor Classifications and Rates: Classification of all workers to be employed by the Contractor and its subcontractors in the work, excluding the Contractor's Superintendent and General Foremen (if any), and; straight-time and overtime Weighted Wage Rates for each submitted labor classification, computed as required in Standard Specification Section 1-09.6. Update and resubmit the entire labor classification file whenever worker classifications are changed, added or deleted. Electronic copy shall be in MS Excel.

3. Contractor's Equipment Classifications and Rates: Make and model of each item of equipment and small tools to be employed by the Contractor and its subcontractors in the work, and; working and standby (idle) hourly rates for each submitted item of equipment, computed as required by Standard Specification Section 1-09.6 and the AGC/WSDOT Equipment Rental Rate Agreement referenced therein. Update and resubmit this entire equipment classification file whenever equipment or small tools classifications are changed, added or deleted. Electronic copy shall be in MS Excel.

4. Contractor's Progress Schedule (Type A): Progress schedule identified in Special Provisions Section 1-08.3(2) A. Format shall be Microsoft Project.

5. Master Submittal Control Spreadsheet: List all required submittals in an Excel Spreadsheet, with assigned number, reference, description, review status, and comments. The Sponsor will review and comment on the document for revisions by the Contractor. The spreadsheet shall be reviewed at each meeting to ensure timely submission and review of the submittal documentation.

6. Schedule of Values, including cost breakdown for lump sum items, if applicable.

7. Shop drawings for time-critical material items, including pipe and appurtenances, manholes, valves, and fittings. **These items are time-critical therefore submittals shall be provided at the time of the pre-construction conference to avoid delay in ordering these items.**

8. Traffic Control Plans

9. List of all Subcontractors, including:

    a. Percentage value of work assigned.
    b. Principal contact(s).
    c. Address
    d. Telephone and fax numbers.

10. List of all requested exceptions to the Contract Documents.

1-05.8(7)B Construction Submittals

The following items shall be submitted, as applicable, at least three weeks prior to the associated construction activity to allow ample time for review and resubmittal if necessary.

- Catalog information and data sheets for all materials to be installed on project

(that was not previously provided).
- Erosion Control Plans
- Staging Plan
- Construction Sequencing Plans

- Any other construction-related submittal identified elsewhere in the Contract Documents.

1-05.8(7)C Additional Administrative Submittals

The following administrative submittals shall be submitted when noted:

- Additional submittals where identified in the Contract Documents and as requested by the Engineer.

1-05.10 Guarantees

Add the following paragraphs to this section:

The Contractor shall return to the project and repair or replace all defects in workmanship and material discovered within one year after Final Acceptance of the Work. The Contractor shall start work to remedy any such defects within 7 calendar days of receiving Sponsor's written notice of a defect and shall complete such work within the time stated in the Sponsor's notice. In case of an emergency, where damage may result from delay or where loss of services may result, such corrections may be made by the Sponsor's own forces or another contractor, in which case the cost of corrections shall be paid by the Contractor. In the event the Contractor does not accomplish corrections within the time specified, the work will be otherwise accomplished and the cost of same shall be paid by the Contractor.

When corrections of defects are made, the Contractor shall then be responsible for correcting all defects in workmanship and materials in the corrected work for one year after acceptance of the corrections by Sponsor.
This guarantee is supplemental to and does not limit or affect the requirements that the Contractor's work comply with the requirements of the Contract or any other legal rights or remedies of the Sponsor.

1-05.11 Final Inspection

Delete this section and replace it with the following:

1-05.11 Final Inspections and Operational Testing
(October 1, 2005 APWA GSP)

1-05.11(1) Substantial Completion Date

When the Contractor considers the work to be substantially complete, the Contractor shall so notify the Engineer and request the Engineer establish the Substantial Completion Date.

The Contractor's request shall list the specific items of work that remain to be completed in order to reach physical completion. The Engineer will schedule an inspection of the work with the Contractor to determine the status of completion. The Engineer may also establish the Substantial Completion Date unilaterally.

If, after this inspection, the Engineer concurs with the Contractor that the work is substantially complete and ready for its intended use, the Engineer, by written notice to the Contractor, will set the Substantial Completion Date. If, after this inspection the Engineer does not consider the work substantially complete and ready for its intended use, the Engineer will, by written notice, so notify the Contractor giving the reasons therefor.

Upon receipt of written notice concurring in or denying substantial completion, whichever is applicable, the Contractor shall pursue vigorously, diligently and without unauthorized interruption, the work necessary to reach Substantial and Physical Completion. The Contractor shall provide the Engineer with a revised schedule indicating when the Contractor expects to reach substantial and physical completion of the work.

The above process shall be repeated until the Engineer establishes the Substantial Completion Date and the Contractor considers the work physically complete and ready for final inspection.

1-05.11(2) Final Inspection and Physical Completion Date

When the Contractor considers the work physically complete and ready for final inspection, the Contractor by written notice, shall request the Engineer to schedule a final inspection. The Engineer will set a date for final inspection. The Engineer and the Contractor will then make a final inspection and the Engineer will notify the Contractor in writing of all particulars in which the final inspection reveals the work incomplete or unacceptable. The Contractor shall immediately take such corrective measures as are necessary to remedy the listed deficiencies. Corrective work shall be pursued vigorously, diligently, and without interruption until physical completion of the listed deficiencies. This process will continue until the Engineer is satisfied the listed deficiencies have been corrected.

If action to correct the listed deficiencies is not initiated within 7 days after receipt of the written notice listing the deficiencies, the Engineer may, upon written notice to the Contractor, take whatever steps are necessary to correct those deficiencies pursuant to Section 1-05.7.
The Contractor will not be allowed an extension of contract time because of a delay in the performance of the work attributable to the exercise of the Engineer's right hereunder.

Upon correction of all deficiencies, the Engineer will notify the Contractor and the Sponsor, in writing, of the date upon which the work was considered physically complete. That date shall constitute the Physical Completion Date of the contract, but shall not imply acceptance of the work or that all the obligations of the Contractor under the contract have been fulfilled.

1-05.11(3) Operational Testing

It is the intent of the Sponsor to have at the Physical Completion Date a complete and operable system. Therefore when the work involves the installation of machinery or other mechanical equipment; street lighting, electrical distribution or signal systems; irrigation

systems; buildings; or other similar work it may be desirable for the Engineer to have the Contractor operate and test the work for a period of time after final inspection but prior to the physical completion date. Whenever items of work are listed in the Contract Provisions for operational testing they shall be fully tested under operating conditions for the time period specified to ensure their acceptability prior to the Physical Completion Date. During and following the test period, the Contractor shall correct any items of workmanship, materials, or equipment which prove faulty, or that are not in first class operating condition. Equipment, electrical controls, meters, or other devices and equipment to be tested during this period shall be tested under the observation of the Engineer, so that the Engineer may determine their suitability for the purpose for which they were installed. The Physical Completion Date cannot be established until testing and corrections have been completed to the satisfaction of the Engineer.

The costs for power, gas, labor, material, supplies, and everything else needed to successfully complete operational testing, shall be included in the unit contract prices related to the system being tested, unless specifically set forth otherwise in the proposal.

Operational and test periods, when required by the Engineer, shall not affect a manufacturer's guaranties or warranties furnished under the terms of the contract.

1-05.13 Superintendents, Labor, and Equipment of Contractor
(August 14, 2013 APWA GSP)

Delete the sixth and seventh paragraphs of this section.

1-05.15 Method of Serving Notices
(January 4, 2024 APWA GSP)

Revise the second paragraph to read:

All correspondence from the Contractor shall be directed to the Engineer. All correspondence from the Contractor constituting any notification, notice of protest, notice of dispute, or other correspondence constituting notification required to be furnished under the Contract, must be in paper format, hand delivered or sent via mail delivery service to the Engineer's office. Electronic copies such as e-mails or electronically delivered copies of correspondence will not constitute such notice and will not comply with the requirements of the Contract.

Add the following new section:

1-05.17 Oral Agreements (NEW SECTION)

No oral agreement or conversation with any officer, agent, or employee of the Sponsor, either before or after execution of the contract, shall affect or modify any of the terms or obligations contained in any of the documents comprising the contract. Such oral agreement or conversation shall be considered as unofficial information and in no way binding upon the Sponsor, unless subsequently put in writing and signed by the Sponsor.

1-06 CONTROL OF MATERIAL

1-06.6 Recycled Materials

(January 4, 2016 APWA GSP)

Delete this section, including its subsections, and replace it with the following:

The Contractor shall make their best effort to utilize recycled materials in the construction of the project. Approval of such material use shall be as detailed elsewhere in the Standard Specifications.

Prior to Physical Completion the Contractor shall report the quantity of recycled materials that were utilized in the construction of the project for each of the items listed in Section 9-03.21. The report shall include hot mix asphalt, recycled concrete aggregate, recycled glass, steel furnace slag and other recycled materials (e.g. utilization of on-site material and aggregates from concrete returned to the supplier). The Contractor's report shall be provided on DOT form 350-075 Recycled Materials Reporting.

1-07 LEGAL RELATIONS AND RESPONSIBILITIES TO THE PUBLIC

1-07.1 Laws to be Observed

(October 1, 2005 APWA GSP)

Supplement this section with the following:

In cases of conflict between different safety regulations, the more stringent regulation shall apply.

The Washington State Department of Labor and Industries shall be the sole and paramount administrative agency responsible for the administration of the provisions of the Washington Industrial Safety and Health Act of 1973 (WISHA).

The Contractor shall maintain at the project site office, or other well known place at the project site, all articles necessary for providing first aid to the injured. The Contractor shall establish, publish, and make known to all employees, procedures for ensuring immediate removal to a hospital, or doctor's care, persons, including employees, who may have been injured on the project site. Employees should not be permitted to work on the project site before the Contractor has established and made known procedures for removal of injured persons to a hospital or a doctor's care.

The Contractor shall have sole responsibility for the safety, efficiency, and adequacy of the Contractor's plant, appliances, and methods, and for any damage or injury resulting from their failure, or improper maintenance, use, or operation. The Contractor shall be solely and completely responsible for the conditions of the project site, including safety for all persons and property in the performance of the work. This requirement shall apply continuously, and not be limited to normal working hours. The required or implied duty of the Engineer to conduct construction review of the Contractor's performance does not, and shall not, be intended to include review and adequacy of the Contractor's safety measures in, on, or near the project site.

Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the work.

In carrying out its responsibilities according to the Contract Documents, Contractor shall protect the lives and health of employees performing the work and other persons who may be affected by the work; prevent damage to materials, supplies and equipment whether on site or stored off-site; and prevent damage to other property at the site or adjacent thereto. Contractor shall comply with chapter 296-800 WAC and all applicable laws, ordinances, rules, regulations and orders of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss; shall erect and maintain all necessary safeguards for such safety and protection; and shall notify Sponsors of adjacent property and utilities when prosecution of the work may affect them.

Contractor shall maintain an accurate record of exposure data on all incidents relating to the work resulting in death, traumatic injury, occupational disease, or damage to property, materials, supplies or equipment. Contractor shall immediately report any such incident to Sponsor and appropriate jurisdictions. The Sponsor shall, at all times, have a right of access to all records of exposure.

All work shall be performed with due regard for the safety of the public. Contractor shall perform the work so as to cause a minimum of interruption of vehicular traffic or inconvenience to pedestrians. All arrangements to care for such traffic shall be Contractor's responsibilities. All expenses involved in the maintenance of traffic by way of detours shall be borne by Contractor.

In an emergency affecting the safety of life or the work or of adjoining property, Contractor is permitted to act, at its discretion, to prevent such threatened loss or injury, and Contractor shall so act if authorized or instructed.

Nothing provided in this section shall be construed as imposing any duty upon the Sponsor with regard to, or as constituting any express or implied assumption of control or responsibility over, project site safety, or over any other safety conditions relation to employees or agents of the Contractor or any of its Subcontractors, or the public.

1-07.2 State Taxes

Delete this section, including its sub-sections, in its entirety and replace it with the following:

1-07.2 State Taxes

(June 27, 2011 APWA GSP)

The Washington State Department of Revenue has issued special rules on the State sales tax. Sections 1-07.2(1) through 1-07.2(3) are meant to clarify those rules. The Contractor should contact the Washington State Department of Revenue for answers to questions in this area. The Sponsor will not adjust its payment if the Contractor bases a bid on a misunderstood tax liability.

The Contractor shall include all Contractor-paid taxes in the unit bid prices or other contract amounts. In some cases, however, state retail sales tax will not be included. Section 1-07.2(2) describes this exception.

The Sponsor will pay the retained percentage (or release the Contract Bond if a FHWA-funded Project) only if the Contractor has obtained from the Washington State Department of Revenue a certificate showing that all contract-related taxes have been paid (RCW 60.28.051). The Sponsor may deduct from its payments to the Contractor any amount the Contractor may owe the Washington State Department of Revenue, whether the amount owed relates to this contract or not. Any amount so deducted will be paid into the proper State fund.

1-07.2(1) State Sales Tax — Rule 171

WAC 458-20-171, and its related rules, apply to building, repairing, or improving streets, roads, etc., which are owned by a municipal corporation, or political subdivision of the state, or by the United States, and which are used primarily for foot or vehicular traffic. This includes storm or combined sewer systems within and included as a part of the street or road drainage system and power lines when such are part of the roadway lighting system. For work performed in such cases, the Contractor shall include Washington State Retail Sales Taxes in the various unit bid item prices, or other contract amounts, including those that the Contractor pays on the purchase of the materials, equipment, or supplies used or consumed in doing the work.

1-07.2(2) State Sales Tax — Rule 170

WAC 458-20-170, and its related rules, apply to the constructing and repairing of new or existing buildings, or other structures, upon real property. This includes, but is not limited to, the construction of streets, roads, highways, etc., owned by the state of Washington; water mains and their appurtenances; sanitary sewers and sewage disposal systems unless such sewers and disposal systems are within, and a part of, a street or road drainage system; telephone, telegraph, electrical power distribution lines, or other conduits or lines in or above streets or roads, unless such power lines become a part of a street or road lighting system; and installing or attaching of any article of tangible personal property in or to real property, whether or not such personal property becomes a part of the realty by virtue of installation.

For work performed in such cases, the Contractor shall collect from the Sponsor, retail sales tax on the full contract price. The Sponsor will automatically add this sales tax to each payment to the Contractor. For this reason, the Contractor shall not include the retail sales tax in the unit bid item prices, or in any other contract amount subject to Rule 170, with the following exception.

Exception: The Sponsor will not add in sales tax for a payment the Contractor or a subcontractor makes on the purchase or rental of tools, machinery, equipment, or consumable supplies not integrated into the project. Such sales taxes shall be included in the unit bid item prices or in any other contract amount.

1-07.2(3) Services

The Contractor shall not collect retail sales tax from the Sponsor on any contract wholly for professional or other services (as defined in Washington State Department of Revenue Rules 138 and 244).

1-07.3 Fire Prevention and Merchantable Timber Requirements

This section is deleted in entirety.

1-07.5 Permits and Licenses

1-07.5(2) State Departments of Fish and Wildlife

Section 1-07.5(2) is supplemented with the following:

(April 2, 2018 WSDOT GSP)

The following Provisions summarize the requirements, in addition to those required elsewhere in the Contract, imposed upon the Sponsor by the Washington State Department of Fish and Wildlife. Throughout the work, the Contractor shall comply with the following requirements:

Additional permit requirements will be provided once permits are obtained by the Sponsor.

The Contractor may begin Work below the Ordinary High-Water Line on July 1, 2024 and must complete all the Work by September 30, 2024.

(August 3, 2009 WSDOT GSP)

All costs to comply with this special provision for the environmental commitments and requirements are incidental to the contract and are the responsibility of the Contractor. The Contractor shall include all related costs in the associated bid prices of the contract.

1-07.5(5) U.S. Army Corps of Engineers

Section 1-07.5(5) is supplemented with the following:

(April 2, 2018 WSDOT GSP)

The following provisions summarize the requirements, in addition to those required elsewhere in the Contract, imposed upon the Sponsor by the U.S. Army Corps of Engineers. Throughout the work, the Contractor shall comply with the following requirements:

Additional permit requirements will be provided once permits are obtained by the Sponsor.

The Contractor may conduct Work waterward of the Ordinary High-Water Line in accordance with the Section 404/401 Clean Water Act Authorization permit from the USACE to be issued as an addendum. .

All costs to comply with the requirements of the USACE-issued permit, including costs for the forage fish spawning survey and Work delays, are incidental to the contract and are the responsibility of the Contractor. The Contractor shall include all related costs in the associated bid prices of the contract.

1-07.6 Permits and Licenses

Section 1-07.6 is supplemented with the following:

The Sponsor will be obtaining the below-listed permit(s) for this project and once received they will be forwarded to the Contractor. Copies of these permits, including a copy of the Transfer of Coverage form, when applicable, are required to be onsite at all times.

The engineer's opinion is that all work required by the permit (e.g. water control) is shown on the drawings, or would be considered routine construction requirements near any watercourse (e.g. tracked equipment not allowed in river).

POCD assumes that the required permit will be obtained by end of June 2024, and on-site Stream Bank Stabilization construction work could be completed during July, August and September 2024.

Contact with the permitting agencies, concerning the below-listed permit(s), shall be made through the Engineer with the exception of when the Construction Stormwater General Permit coverage is transferred to the Contractor, direct communication with the Department of Ecology is allowed. The Contractor shall be responsible for obtaining Ecology's approval for any Work requiring additional approvals (e.g. Request for Chemical Treatment Form). The Contractor shall obtain additional permits as necessary. All costs to obtain and comply with additional permits shall be included in the applicable Bid items for the Work involved.

SEPA Determination of Nonsignificance

Joint Aquatic Resource Permit (JARPA)

Hydraulic Project Approval (HPA)

Section 404/401 of Clean Water Act Authorization from the U.S. Army Corps of Engineers

1-07.8 High Visibility Apparel

First paragraph is modified to read:

The Contractor shall require all personnel at the work site under their control (including Subcontractors and lower tier subcontractors) and working outside of vehicles and potentially in presence of traffic on private or public roads, to comply with the following:

1-07.9 Wages

Section 1-07.9(1) is revised as follows:

Remove all references to prevailing wages.

This is NOT a Prevailing Wage Contract. For this project, the POCD is acting as an excepted agency in relation to RCW 39.040.010(3). The work under this contract is for conservation of resources, as described in RCW 89.08.010 and reclamation of waste or undeveloped lands. Therefore, for these activities, the POCD may act in the same capacity of an excepted agency per RCW 89.16.040 which states in part, ". . . and such other districts as are authorized by law

for the reclamation or development of waste or undeveloped lands or the rehabilitation of existing reclamation projects, and all such districts and improvement districts shall, for the purposes of this chapter be known as reclamation districts."

1-07.11 Requirements for Nondiscrimination

1-07.11(2) Contractual Requirements

(January 24, 2024 WSDOT GSP)

Section 1-07.11(2) is supplemented with the following:

11. The contractor shall comply with the following non-discrimination provisions, and the contractor shall ensure the nondiscrimination provisions are included in all subcontracts:

    a. Nondiscrimination Requirement. During the term of this Contract, the Contractor, including all subcontractors, shall not discriminate on the bases enumerated at RCW 49.60.530(3). In addition, the Contractor, including all subcontractors, shall give written notice of this nondiscrimination requirement to any labor organizations with which the Contractor, or subcontractor, has a collective bargaining or other agreement.

    b. Obligation to Cooperate. The Contractor, including all subcontractors, shall cooperate and comply with any Washington state agency investigation regarding any allegation that the Contractor, including any subcontractor, has engaged in discrimination prohibited by this Contract pursuant to RCW 49.60.530(3).

    c. Default. Notwithstanding any provision to the contrary, the Sponsor may suspend the Contract in accordance with Section 1-08.6, upon notice of a failure to participate and cooperate with any state agency investigation into alleged discrimination prohibited by this Contract, pursuant to RCW 49.60.530(3). Any such suspension will remain in place until the Sponsor receives notification that Contractor, including any subcontractor, is cooperating with the investigating state agency. In the event the Contractor, or subcontractor, is determined to have engaged in discrimination identified at RCW 49.60.530(3), the Sponsor may terminate this Contract in whole or in part in accordance with Section 1-08.10(1), and in addition to the sanctions listed in Section 1-07.11(5), the Contractor, subcontractor, or both, may be referred for debarment as provided in RCW 39.26.200. The Contractor or subcontractor may be given a reasonable time in which to cure this noncompliance, including implementing conditions consistent with any court-ordered injunctive relief or settlement agreement.

    d. Remedies for Breach. Notwithstanding any provision to the contrary, in the event of Contract termination or suspension for engaging in discrimination, the Contractor, subcontractor, or both, shall be liable for contract damages as authorized by law including, but not limited to, any cost difference between the original contract and the replacement or cover contract and all administrative costs directly related to the replacement contract, which damages are distinct from any penalties imposed under Chapter 49.60, RCW.

The Sponsor shall have the right to deduct from any monies due to Contractor or subcontractor, or that thereafter become due, an amount for damages Contractor or subcontractor will owe Sponsor for default under this Provision.

1-07.13 Contractor's Responsibility for Work

1-07.13(1) General

Section 1-07.13(1) is supplemented with the following:

It shall be the responsibility of the Contractor to coordinate all work to be performed under this Contract, including the ordering and acquisition of all equipment and materials. This coordination shall encompass all work to be performed by the Contractor, their subcontractor, the Sponsor and any public utilities that may be involved.

The Contractor shall submit a performance bond in accordance with the Sponsor, State of Washington, Public Works performance and payment bond requirements. The performance bond shall be in the full amount of Contract.

Whether or not there appears here or elsewhere herein specific reference to guarantees of all items of materials, equipment, and workmanship, they nevertheless shall be so guaranteed against mechanical, structural, or other defects for which the Contractor is responsible that may develop or become evident within a period of one year from and after acceptance of the work by the Sponsor. Such guarantees shall include care of backfilling of ditches or at structures should the fill settle to such extent as to require refilling or resurfacing roadway surfaces to restore the original or intended condition or grade.

This guarantee shall be understood to imply prompt attention to any remedy of such defects as those mentioned above if and as they occur after the Contractor shall have written notice of their existence. If the defect, in the opinion of the Sponsor, is of such nature as to demand immediate repair, the Sponsor shall have the right to correct and cost thereof shall be borne by the Contractor.

To support the above guarantee, the Contractor's performance bond shall remain in full force and effect for one year following the acceptance of the Project by the Sponsor. The bond shall be executed by a surety company authorized to do business within the State of Washington and it shall be subject to the approval of the attorney for the Sponsor.

1-07.15 Temporary Water Pollution Prevention

1-07.15(1) Spill Prevention, Control, and Countermeasures Plan

This Section is replaced with the following:

A Spill Prevention, Control, and Countermeasures Plan is not required. Waiver of the formal SPCC Plan does not remove the Contractor's responsibility to implement all practical measures to avoid spills, responsibility for spill response if any spill occurs, and following the spill prevention guidelines listed under 1-07.15 (1) (7); e.g. Contractor to supply spill response kits on-site, daily inspection of all equipment for external petroleum- based products or leaks.

1-07.16(1)B Preconstruction Photographs (NEW SECTION)

The Sponsor will take preconstruction photographs immediately prior to construction initiation in order to provide a substantiated record of the condition of existing improvement. These photographs shall be considered as indicative of the nature of the original improvements in determining the adequacy or inadequacy of restoration.

In addition, the Contractor may also wish to document the existing conditions for themselves in the event of a claim situation from an adjacent property owner.

1-07.16(3) Fences, Mailboxes, Incidentals

Add the following new subsection:

1-07.16(3)A Easements and Permits (NEW SECTION)

Where portions of the work are located on public or private property, easements and permits have been or shall be obtained by the Sponsor, including easements for the designated long-term and short-term construction areas. Easements will provide for the use of property for construction purposes to the extent indicated on the easements. Copies of these easements and permits are available upon request to the Sponsor. It shall be the Contractor's responsibility to determine the adequacy of the easement obtained in every case and to abide by all requirements and provisions of the easement. The Contractor shall confine his construction operations to within the easement limits or street right-of-way limits or make special arrangements with the property owners, tenants, and/or appropriate public agency for the additional area required. Any damage to property, either inside or outside the limits of the easements provided by the Sponsor, shall be the responsibility of the Contractor as specified herein. Before final payment will be authorized by the Engineer, the Contractor will be required to furnish the Sponsor with written releases from property owners or public agencies where side agreements, or special easements have been made by the Contractor or where the Contractor's operations, for any reason, have not been kept within the construction right-of-way obtained by the Sponsor.

1-07.17 Utilities and Similar Facilities

Add the following new sections:

1-07.17(3) Utility Owners (NEW SECTION)

The sponsor or responsible authority of any utilities on the sites should be notified if emergencies arise during the progress of the work. Outside normal working hours, report emergencies and initiate contact with the appropriate individual by calling 911.

1-07.17(4) Temporary Utilities (NEW SECTION)

Contractor shall supply and maintain all necessary and temporary electrical services and required water as needed for construction of this project. Any water required on site will be hauled by the Contractor from a safe and legal source. No water, at any time, may be drawn from the site stream, except to dewater work area to facilitate construction as described in the

plans, or as specifically and legally permitted by an existing water right for irrigation or by special permit from Washington Department of Fish and Wildlife. Contractor will be responsible for the acquisition of any such water withdrawal permits.

1-07.18 Public Liability and Property Damage Insurance

Delete this section in its entirety, and replace it with the following:

Replace "State of Washington" or "State" with Pend Oreille Conservation District as a named or additional insured. Insurance limits for Owners and Contractors Protective Insurance and Commercial General Liability shall be $1 million (each policy) for the Sunnyside & Sandy Shores-Pend Oreille Streambank Stabilization Project. Insurance coverage for Products and Completed Operations is required.

1-07.18 Insurance

(January 4, 2024 APWA GSP)

1-07.18(1) General Requirements

A. The Contractor shall procure and maintain the insurance described in all subsections of section 1-07.18 of these Special Provisions, from insurers with a current A. M. Best rating of not less than A-: VII and licensed to do business in the State of Washington. The Sponsor reserves the right to approve or reject the insurance provided, based on the insurer's financial condition.

B. The Contractor shall keep this insurance in force without interruption from the commencement of the Contractor's Work through the term of the Contract and for thirty (30) days after the Physical Completion date, unless otherwise indicated below.

C. If any insurance policy is written on a claims-made form, its retroactive date, and that of all subsequent renewals, shall be no later than the effective date of this Contract. The policy shall state that coverage is claims made and state the retroactive date. Claims-made form coverage shall be maintained by the Contractor for a minimum of 36 months following the Completion Date or earlier termination of this Contract, and the Contractor shall annually provide the Sponsor with proof of renewal. If renewal of the claims made form of coverage becomes unavailable, or economically prohibitive, the Contractor shall purchase an extended reporting period ("tail") or execute another form of guarantee acceptable to the Sponsor to assure financial responsibility for liability for services performed.

D. The Contractor's Automobile Liability, Commercial General Liability and Excess or Umbrella Liability insurance policies shall be primary and non-contributory insurance as respects the Sponsor's insurance, self-insurance, or self-insured pool coverage. Any insurance, self-insurance, or self-insured pool coverage maintained by the Sponsor shall be excess of the Contractor's insurance and shall not contribute with it.

E. The Contractor shall provide the Sponsor and all additional insureds with written notice of any policy cancellation, within two business days of their receipt of such notice.

F. The Contractor shall not begin work under the Contract until the required insurance has been obtained and approved by the Sponsor

G. Failure on the part of the Contractor to maintain the insurance as required shall constitute a material breach of contract, upon which the Sponsor may, after giving five business days' notice to the Contractor to correct the breach, immediately terminate the Contract or, at its discretion, procure or renew such insurance and pay any and all premiums in connection therewith, with any sums so expended to be repaid to the Sponsor on demand, or at the sole discretion of the Sponsor, offset against funds due the Contractor from the Sponsor.

H. All costs for insurance shall be incidental to and included in the unit or lump sum prices of the Contract and no additional payment will be made.

I. Under no circumstances shall a wrap up policy be obtained, for either initiating or maintaining coverage, to satisfy insurance requirements for any policy required under this Section. A "wrap up policy" is defined as an insurance agreement or arrangement under which all the parties working on a specified or designated project are insured under one policy for liability arising out of that specified or designated project.

1-07.18(2) Additional Insured

All insurance policies, with the exception of Workers Compensation, and of Professional Liability and Builder's Risk (if required by this Contract) shall name the following listed entities as additional insured(s) using the forms or endorsements required herein:

- the Sponsor and its officers, elected officials, employees, agents, and volunteers

The above-listed entities shall be additional insured(s) for the full available limits of liability maintained by the Contractor, irrespective of whether such limits maintained by the Contractor are greater than those required by this Contract, and irrespective of whether the Certificate of Insurance provided by the Contractor pursuant to 1-07.18(4) describes limits lower than those maintained by the Contractor.

For Commercial General Liability insurance coverage, the required additional insured endorsements shall be at least as broad as ISO forms CG 20 10 10 01 for ongoing operations and CG 20 37 10 01 for completed operations.

1-07.18(3) Subcontractors

The Contractor shall cause each subcontractor of every tier to provide insurance coverage that complies with all applicable requirements of the Contractor-provided insurance as set forth herein, except the Contractor shall have sole responsibility for determining the limits of coverage required to be obtained by subcontractors.

The Contractor shall ensure that all subcontractors of every tier add all entities listed in 1-07.18(2) as additional insureds, and provide proof of such on the policies as required by that section as detailed in 1-07.18(2) using an endorsement as least as broad as ISO CG 20 10 10 01 for ongoing operations and CG 20 37 10 01 for completed operations.

Upon request by the Sponsor, the Contractor shall forward to the Sponsor evidence of insurance and copies of the additional insured endorsements of each subcontractor of every tier as required in 1-07.18(4) Verification of Coverage.

1-07.18(4) Verification of Coverage

The Contractor shall deliver to the Sponsor a Certificate(s) of Insurance and endorsements for each policy of insurance meeting the requirements set forth herein when the Contractor delivers the signed Contract for the work. Failure of Sponsor to demand such verification of coverage with these insurance requirements or failure of Sponsor to identify a deficiency from the insurance documentation provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.

Verification of coverage shall include:

1. An ACORD certificate or a form determined by the Sponsor to be equivalent.

2. Copies of all endorsements naming Sponsor and all other entities listed in 1-07.18(2) as additional insured(s), showing the policy number. The Contractor may submit a copy of any blanket additional insured clause from its policies instead of a separate endorsement.

3. Any other amendatory endorsements to show the coverage required herein.

4. A notation of coverage enhancements on the Certificate of Insurance shall not satisfy these requirements – actual endorsements must be submitted.

Upon request by the Sponsor, the Contractor shall forward to the Sponsor a full and certified copy of the insurance policy(s). If Builders Risk insurance is required on this Project, a full and certified copy of that policy is required when the Contractor delivers the signed Contract for the work.

1-07.18(5) Coverages and Limits

The insurance shall provide the minimum coverages and limits set forth below. Contractor's maintenance of insurance, its scope of coverage, and limits as required herein shall not be construed to limit the liability of the Contractor to the coverage provided by such insurance, or otherwise limit the Sponsor's recourse to any remedy available at law or in equity.

All deductibles and self-insured retentions must be disclosed and are subject to approval by the Sponsor. The cost of any claim payments falling within the deductible or self-insured retention shall be the responsibility of the Contractor. In the event an additional insured incurs a liability subject to any policy's deductibles or self-insured retention, said deductibles or self-insured retention shall be the responsibility of the Contractor.

1-07.18(5)A Commercial General Liability

Commercial General Liability insurance shall be written on coverage forms at least as broad as ISO occurrence form CG 00 01, including but not limited to liability arising from premises, operations, stop gap liability, independent contractors, products-completed operations, personal and advertising injury, and liability assumed under an insured contract. There shall be no exclusion for liability arising from explosion, collapse or underground property damage.

The Commercial General Liability insurance shall be endorsed to provide a per project general aggregate limit, using ISO form CG 25 03 05 09 or an equivalent endorsement.

Contractor shall maintain Commercial General Liability Insurance arising out of the Contractor's completed operations for at least three years following Substantial Completion of the Work.

Such policy must provide the following minimum limits:

$1,000,000	Each Occurrence
$2,000,000	General Aggregate
$2,000,000	Products & Completed Operations Aggregate
$2,000,000	Personal & Advertising Injury each offence
$2,000,000	Stop Gap / Employers' Liability each accident

1-07.18(5)B Automobile Liability

Automobile Liability shall cover owned, non-owned, hired, and leased vehicles; and shall be written on a coverage form at least as broad as ISO form CA 00 01. If the work involves the transport of pollutants, the automobile liability policy shall include MCS 90 and CA 99 48 endorsements.

Such policy must provide the following minimum limit:

$1,000,000	Combined single limit each accident

1-07.18(5)C Workers' Compensation

The Contractor shall comply with Workers' Compensation coverage as required by the Industrial Insurance laws of the State of Washington.

1-07.23 Public Convenience and Safety

1-07.23(1) Construction Under Traffic

Section 1-07.23(1) is supplemented with the following:

The Contractor shall do whatever work is necessary for safety and be solely and completely responsible for conditions of the job site, including safety of all persons (including employees) and property during the Contract period. This requirement shall apply continuously and not be limited to normal working hours.

The Contractor shall at all times provide proper facilities for safe access to the work by authorized government officials.

Work areas shall be barricaded to prevent public access and provide a buffer between the work zone and the public.

GENERAL REQUIREMENTS

The Contractor shall conform with the following requirements where applicable:

1. At all times, the Contractor shall furnish, install, and maintain additional signage and other measures to safely route vehicular and pedestrian traffic through the

construction area and protect the public from construction activities during both working and non-working hours.

2. Maintain access to the Sponsor of Port Orchard pump station.

3. Where roadways are closed to traffic during working hours and open to traffic during non- working hours, the Contractor shall cover or remove all signage that does not apply to the existing condition (open or closed).

4. All signage and traffic control devices installed by the Contractor shall be in accordance with the MUTCD.

5. All additional signage and traffic control measures needed to provide detours, to route pedestrians and vehicles through the construction area, and to protect the public and workers shall be furnished by the Contractor and the cost thereof included in the lump sum payment item for the temporary traffic control.

Add the following new section:

1-07.23(3) Communication/Dissemination of Information (NEW SECTION)

It shall be the Contractor's responsibility to coordinate daily, all construction activities and scheduling, with local residents, businesses, and the Engineer for work within the construction segment. Coordination shall include, but not be limited to:

a. Time and location of all roadway and sidewalk closures (minimum 5 working days' notice).

b. Schedule and location of active trench construction and restoration as it affects parking restrictions and driveway closures (minimum 2 working days' notice). Driveway closures are limited to working hours and are to be open for non-working hours.

c. Schedule and location of all utility shut-offs to specific properties (minimum 5 working days' notice).

d. At each weekly construction meeting, the Contractor shall provide a list of upcoming notifications. This shall be an agenda item at each meeting. Submit to Sponsor staff a copy of any notifications that will be sent out at least one week prior to dissemination to allow the Sponsor to review and ensure completeness of the list.

1-07.24 Rights of Way
(July 23, 2015 APWA GSP)

Delete this section and replace it with the following:

Street Right of Way lines, limits of easements, and limits of construction permits are indicated in the Plans. The Contractor's construction activities shall be confined within these limits, unless arrangements for use of private property are made.

Generally, the Sponsor will have obtained, prior to bid opening, all rights of way and easements, both permanent and temporary, necessary for carrying out the work. Exceptions to this are noted in the Bid Documents or will be brought to the Contractor's attention by a duly issued Addendum.

Whenever any of the work is accomplished on or through property other than public Right of Way, the Contractor shall meet and fulfill all covenants and stipulations of any easement agreement obtained by the Sponsor from the owner of the private property. Copies of the easement agreements may be included in the Contract Provisions or made available to the Contractor as soon as practical after they have been obtained by the Engineer.

Whenever easements or rights of entry have not been acquired prior to advertising, these areas are so noted in the Plans. The Contractor shall not proceed with any portion of the work in areas where right of way, easements or rights of entry have not been acquired until the Engineer certifies to the Contractor that the right of way or easement is available or that the right of entry has been received. If the Contractor is delayed due to acts of omission on the part of the Sponsor in obtaining easements, rights of entry or right of way, the Contractor will be entitled to an extension of time. The Contractor agrees that such delay shall not be a breach of contract.

Each property owner shall be given 48 hours notice prior to entry by the Contractor. This includes entry onto easements and private property where private improvements must be adjusted.

The Contractor shall be responsible for providing, without expense or liability to the Sponsor, any additional land and access thereto that the Contractor may desire for temporary construction facilities, storage of materials, or other Contractor needs. However, before using any private property, whether adjoining the work or not, the Contractor shall file with the Engineer a written permission of the private property owner, and, upon vacating the premises, a written release from the property owner of each property disturbed or otherwise interfered with by reasons of construction pursued under this contract. The statement shall be signed by the private property owner, or proper authority acting for the owner of the private property affected, stating that permission has been granted to use the property and all necessary permits have been obtained or, in the case of a release, that the restoration of the property has been satisfactorily accomplished. The statement shall include the parcel number, address, and date of signature. Written releases must be filed with the Engineer before the Completion Date will be established.

1-08 PROSECUTION AND PROGRESS

Add the following new section:

1-08.0 Preliminary Matters (NEW SECTION)

Add the following new sections:

1-08.0(1) Preconstruction Conference (NEW SECTION)

Prior to the Contractor beginning the work, a preconstruction conference will be held between the Contractor, the Engineer and such other interested parties as may be invited. The purpose of the preconstruction conference will be:

1. To review the initial progress schedule;

2. To establish a working understanding among the various parties associated or affected by the work;

3. To establish and review procedures for progress payment, notifications, approvals, submittals, etc.;

4. To establish normal working hours for the work;

5. To review safety standards and traffic control; and

6. To discuss such other related items as may be pertinent to the work.

See Section1-05.8(7)A for a list of submittals expected from the Contractor for the preconstruction conference.

1-08.0(2) Hours of Work (NEW SECTION)

(December 8, 2014 APWA GSP)

Except in the case of emergency or unless otherwise approved by the Engineer, the normal working hours for the Contract shall be any consecutive 8-hour period between 7:00 a.m. and 6:00 p.m. Monday through Friday, exclusive of a lunch break. If the Contractor desires different than the normal working hours stated above, the request must be submitted in writing prior to the preconstruction conference, subject to the provisions below. The working hours for the Contract shall be established at or prior to the preconstruction conference.

All working hours and days are also subject to local permit and ordinance conditions (such as noise ordinances).

If the Contractor wishes to deviate from the established working hours, the Contractor shall submit a written request to the Engineer for consideration. This request shall state what hours are being requested, and why. Requests shall be submitted for review no later than 5 days prior to the day(s) the Contractor is requesting to change the hours.

If the Sponsor approves such a deviation, such approval may be subject to certain other conditions, which will be detailed in writing. For example:

1. On non-Federal aid projects, requiring the Contractor to reimburse the Sponsor for the costs in excess of straight-time costs for Sponsor representatives who worked during such times. (The Engineer may require designated representatives to be present during the work. Representatives who may be deemed necessary by the Engineer include, but are not limited to: survey crews; personnel from the Sponsor's material testing lab; inspectors; and other Sponsor employees or third party consultants when, in the opinion of the Engineer, such work necessitates their presence.)

2. Considering the work performed on Saturdays, Sundays, and holidays as working days with regard to the contract time.

3. Considering multiple work shifts as multiple working days with respect to contract time even though the multiple shifts occur in a single 24-hour period.

4. If a 4-10 work schedule is requested and approved the non working day for the week will be charged as a working day.

5. If Davis Bacon wage rates apply to this Contract, all requirements must be met and recorded properly on certified payroll.

1-08.0(3) Weekly Construction Meetings

Weekly meetings shall be held at a mutually agreed-upon location and day of the week and time. The purpose of the meeting will be to discuss the work, resolve any quantity or force account disagreements, review the Contractor's Progress and Schedule, and review the as-built drawings. The Sponsor shall develop an agenda for each weekly meeting. The Contractor shall prepare an updated 3-week look-ahead schedule and submit it to the Engineer a minimum of 24 hours before each weekly meeting.

1-08.1 Subcontracting

1-08.1(7) Payments to Subcontractors and Lower-Tier Subcontractors

1-08.1(7)A Payment Certification

(December 30, 2022 APWA GSP)

Delete this section.

1-08.1(9) Required Subcontract Clauses

1-08.1(9)B Clauses Required in Subcontracts of All Tiers

(January 24, 2024 WSDOT GSP)

Section 1-08.1(9)B is supplemented with the following:

16. Requirements for Nondiscrimination – Item 11 from Section1-07.11(2).

1-08.3 Progress Schedule

1-08.3(2) Progress Schedule Types

1-08.3(2)A Type A Progress Schedule

(December 30, 2022 APWA GSP)

Revise this section to read:

The Contractor shall submit 5 copies of a Type A Progress Schedule no later than at the preconstruction conference, or some other mutually agreed upon submittal time. The schedule may be a critical path method (CPM) schedule, bar chart, or other standard schedule format. Regardless of which format used, the schedule shall identify the critical path. The Engineer will evaluate the Type A Progress Schedule and approve or return the schedule for corrections within 15 calendar days of receiving the submittal.

1-08.4 Prosecution of Work

Delete Section 1-08.4 in its entirety, and replace it with the following:

1-08.4 Notice to Proceed and Prosecution of Work

A Notice to Proceed will be given within five (5) calendar days after the contract has been executed and the contract bond and evidence of insurance have been approved and filed by the Sponsor. The Contractor shall not commence with the work until the Notice to Proceed has been given by the Engineer. The Contractor shall diligently pursue the work to the physical completion date within the time specified in the contract. Voluntary shutdown or slowing of operations by the Contractor shall not relieve the Contractor of the responsibility to complete the work within the time(s) specified in the contract.

It is critical that the Contractor order materials and begin construction as soon as possible to meet these deadlines.

- State In-water work window – July 15 – September 30, 2024 (HPA)
- Federal In-water work window – in accordance with the Section 404/401 Clean Water Act Authorization permit from the USACE to be issued as an addendum.

1-08.5 Time for Completion

Section 1-08.5 is supplemented with the following:
(March 13, 1995 WSDOT GSP)

The project construction schedule is contingent on approval of the

Army Corps of Engineers Joint Aquatic Resources Permit, Washington Department of Fish and Wildlife Hydraulic Permit and approval by the Pend Oreille County SEPA process by end of July, 2024. If the required permit is not obtained by end of July 2024, this will be considered a "Change" per WSDOT Standard Specification 1-04.4 (Item 7) "Ordering the Contractor to delay the Work." If this delay occurs, the Sponsor will work with all permitting agencies to authorize the bank stabilization construction ASAP. Possible delay of Contractor on-site work after July 1, 2024 will result in a Change Order to adjust unit prices to whenever the on-site construction is authorized, and can reasonably be worked into the Contractor's schedule.

All work required for this project shall be completed by October 1st, 2024, or 4 weeks from Contractor mobilization to the site.

Revise the third and fourth paragraphs to read:

Contract time shall begin on the first working day following the fifth calendar day after the Notice to Proceed date. If the Contractor starts work on the project at an earlier date, then contract time shall begin on the first working day when onsite work begins.

Each working day shall be charged to the contract as it occurs, until the contract work is physically complete. If substantial completion has been granted and all the authorized working days have been used, charging of working days will cease. Each week the Engineer will provide the Contractor a statement that shows the number of working days: (1) charged to the contract the week before; (2) specified for the physical completion of the contract; and (3) remaining for the physical completion of the contract. The statement will also show the nonworking days and all partial or whole days the Engineer declares as unworkable. The statement will be identified as a Written Determination by the Engineer. If the Contractor does not agree with the Written Determination of working days, the Contractor shall pursue the protest procedures in accordance with Section 1-04.5. By failing to follow the procedures of Section 1-04.5, the Contractor shall be deemed as having accepted the statement as correct. If the Contractor is approved to work 10 hours a day and 4 days a week (a 4-10 schedule) and the fifth day of the week in which a 4-10 shift is worked would ordinarily be charged as a working day, then the fifth day of that week will be charged as a working day whether or not the Contractor works on that day.

Revise the sixth paragraph to read:

The Engineer will give the Contractor written notice of the completion date of the contract after all the Contractor's obligations under the contract have been performed by the Contractor. The following events must occur before the Completion Date can be established:

1. The physical work on the project must be complete; and
2. The Contractor must furnish all documentation required by the contract and required by law, to allow the Sponsor to process final acceptance of the contract. The following documents must be received by the Project Engineer prior to establishing a completion date:

   b. Material Acceptance Certification Documents
   d. Final Contract Voucher Certification

   f. g. Property owner releases per Section 1-07.24

1-08.6 Suspension of Work

Section 1-08.6 is supplemented with the following:

The Engineer may order suspension of all or any part of the work if unsuitable weather, private utility relocation efforts by others, and other such conditions beyond the control of the Contractor prevent satisfactory and timely performance of the work.

If the work is suspended for these reasons, the period of work stoppage will be counted as unworkable days. The Engineer will set the number of unworkable days (or parts of days) by deciding how long the suspension delayed the entire project.

1-08.8 Extensions of Time

Section 1-08.8 is supplemented with the following:

The Contractor shall consider and make allowances for normal seasonal weather patterns in the scheduling and sequencing of the work in order to complete the work by the specified deadlines. The Owner will not extend the specified completion dates for reasons of unfavorable weather unless the Contractor can demonstrate that weather patterns have been extraordinary and the Contractor has made a good faith effort to limit the amount of area exposed to the weather at any given time.

Due to the nature of the project, the Contractor shall anticipate there will be numerous unforeseen conflicts with underground utilities. The Owner will have representatives on site during working hours to make decisions when a deviation from the design is required. The time required for the Contractor and the Owner to make adjustments for unforeseen conditions shall not be grounds for additional compensation due to delay nor an extension of the completion deadline. The only exceptions to this rule are as follows:

1. The Owner has failed to make a decision within 8 working hours when an unforeseen conflict is discovered on a critical path time of work.
2. The unforeseen conflict involves hazardous materials or historical artifacts which prevent the Contractor for proceeding with critical path elements of the work.

1-08.9 Liquidated Damages

Section 1-08.9 is supplemented with the following:

The Contractor further agrees that, from the compensation otherwise to be paid, the Sponsor may charge actual costs to the Contract for any time over the agreed to completion date where work remains uncompleted, which sum is agreed upon as the actual damages which the Sponsor will sustain in case of the failure of the Contractor to complete the work in the time stipulated and this sum is not to be construed as in any sense a penalty. These actual costs will be, but not limited to:

1. Any fines by Permitting Agencies for work not being completed within the time frame stipulation in the permit.

2. Any costs imposed by the local authorities due to the work not being completed on time.

3. Additional special inspections and engineering services that might be required.

4. It is not the intent of Sponsor to recoup our extra management expenses.

(March 3, 2021 APWA GSP, Option B)

Revise the second and third paragraphs to read:

Accordingly, the Contractor agrees:

1. To pay (according to the following formula) liquidated damages for each working day beyond the number of working days established for Physical Completion, and

2. To authorize the Engineer to deduct these liquidated damages from any money due or coming due to the Contractor.

Liquidated Damages Formula

LD=0.15C/T

Where:

LD = liquidated damages per working day (rounded to the nearest dollar)
C = original Contract amount
T = original time for Physical Completion

When the Contract Work has progressed to Substantial Completion as defined in the Contract, the Engineer may determine the Contract Work is Substantially Complete. The Engineer will notify the Contractor in writing of the Substantial Completion Date. For overruns in Contract time occurring after the date so established, the formula for liquidated damages shown above will not apply. For overruns in Contract time occurring after the Substantial Completion Date, liquidated damages shall be assessed on the basis of direct engineering and related costs assignable to the project until the actual Physical Completion Date of all the Contract Work. The Contractor shall complete the remaining Work as promptly as possible. Upon request by the Project Engineer, the Contractor shall furnish a written schedule for completing the physical Work on the Contract.

1-09 MEASUREMENT AND PAYMENT

1-09.1 Measurement of Quantities

Section 1-09.1 is supplemented with the following:

The Contractor is advised that all volume measurements listed on the Bid Form (CY = cubic yard) are based on "neat-line" AutoCAD estimates, and the Contractor (for bidding) needs to consider that some materials have a high in-place density (existing soils) or shall be compacted (backfill around Large Woody Debris, or riprap per the engineering design specifications). On-site excavation of soils will result in "swell" of the excavated materials, and the Contractor's haul count (to on-site stockpiles and/or backfill) may exceed the Bid Form quantity by 20% to 40% volume. Similarly, the Contractor's "haul" volume for materials to be compacted on-site may exceed the Bid Form amounts by 20% to 40% since the density of some hauled materials (e.g. native soils for backfill) will be less than in-place compacted density. For all excavation and/or backfill of native soils, or supply of crushed rock if measured by the cubic yard (to be

compacted), the Contractor shall assume that "haul" (loose materials) may exceed the listed quantity by up to 40% without additional payment.

1-09.7 Mobilization
(December 10, 2020 APWA GSP)

Delete this Section and replace it with the following:

Mobilization consists of preconstruction expenses and the costs of preparatory Work and operations performed by the Contractor which occur before 10 percent of the total original amount of an individual Bid Schedule is earned from other Contract items on that Bid Schedule. Items which are not to be included in the item of Mobilization include but are not limited to:

1. Any portion of the Work covered by the specific Contract item or incidental Work which is to be included in a Contract item or items.
2. Profit, interest on borrowed money, overhead, or management costs.
3. Any costs of mobilizing equipment for force account Work.

Based on the lump sum Contract price for “Mobilization”, partial payments will be made as follows:

1. When 5 percent of the total original Bid Schedule amount is earned from other Contract items on that original Bid Schedule, excluding amounts paid for materials on hand, 50 percent of the Bid Item for mobilization on that original Bid Schedule, 5 percent of the total of that original Bid Schedule, or 5 percent of the total original Contract amount, whichever is the least, will be paid.
2. When 10 percent of the total original Bid Schedule amount is earned from other Contract items on that original Bid Schedule, excluding amounts paid for materials on hand, 100 percent of the Bid Item for mobilization on that original Bid Schedule, 10 percent of the total of that original Bid Schedule, or 10 percent of the total original Contract amount, whichever is the least, will be paid.
3. When the Substantial Completion Date has been established for the project, payment of any remaining amount Bid for mobilization will be paid.

Nothing herein shall be construed to limit or preclude partial payments otherwise provided by the Contract.

1-09.8 Payment for Material on Hand

Delete all the provisions of Section 1-09.8 and substitute with the following:

For lump sum pay items, the Owner will pay 75% of the actual invoice value for materials on hand with an invoice value over $5,000. Unit price bid items will not be reimbursed when on hand.

1-09.9 Payments
(March 13, 2012 APWA GSP)

Delete the first four paragraphs and replace them with the following:

The basis of payment will be the actual quantities of Work performed according to the Contract and as specified for payment.

The Contractor shall submit a breakdown of the cost of lump sum bid items at the Preconstruction Conference, to enable the Project Engineer to determine the Work performed on a monthly basis. A breakdown is not required for lump sum items that include a basis for incremental payments as part of the respective Specification. Absent a lump sum breakdown, the Project Engineer's determination of the cost of work shall be final.

Progress payments for completed work and material on hand will be based upon progress estimates prepared by the Engineer. A progress estimate cutoff date will be established at the preconstruction conference.

The initial progress estimate will be made not later than 30 days after the Contractor commences the work, and successive progress estimates will be made every month thereafter until the Completion Date. Progress estimates made during progress of the work are tentative, and made only for the purpose of determining progress payments. The progress estimates are subject to change at any time prior to the calculation of the final payment.

The value of the progress estimate will be the sum of the following:

1. Unit Price Items in the Bid Form — the approximate quantity of acceptable units of work completed multiplied by the unit price.

2. Lump Sum Items in the Bid Form — based on the approved Contractor's lump sum breakdown for that item, or absent such a breakdown, based on the Engineer's determination.

3. Materials on Hand — 100 percent of invoiced cost of material delivered to Job site or other storage area approved by the Engineer.

4. Change Orders — entitlement for approved extra cost or completed extra work as determined by the Engineer.

Progress payments will be made in accordance with the progress estimate less:

1. Retainage per Section 1-09.9(1), on non FHWA-funded projects;

2. The amount of progress payments previously made; and

3. Funds withheld by the Sponsor for disbursement in accordance with the Contract Documents.

Progress payments for work performed shall not be evidence of acceptable performance or an admission by the Sponsor that any work has been satisfactorily completed. The determination of payments under the contract will be final in accordance with Section 1-05.1.

1-09.11 Disputes and Claims

1-09.11(3) Time Limitation and Jurisdiction

(December 30, 2022 APWA GSP)

Revise this section to read:

For the convenience of the parties to the Contract it is mutually agreed by the parties that all claims or causes of action which the Contractor has against the Sponsor arising from the Contract shall be brought within 180 calendar days from the date of final acceptance (Section 1-05.12) of the Contract by the Sponsor; and it is further agreed that all such claims or causes of action shall be brought only in the Superior Court of the county where the Sponsor headquarters is located, provided that where an action is asserted against a county, RCW 36.01.050 shall control venue and jurisdiction. The parties understand and agree that the Contractor's failure to bring suit within the time period provided, shall be a complete bar to all such claims or causes of action. It is further mutually agreed by the parties that when claims or causes of action which the Contractor asserts against the Sponsor arising from the Contract are filed with the Sponsor or initiated in court, the Contractor shall permit the Sponsor to have timely access to all records deemed necessary by the Sponsor to assist in evaluating the claims or action.

1-09.13 Claims Resolution

1-09.13(3) Claims $250,000 or Less

Delete this section and any subsections in entirety and replace with the following section:

1-09.13(3) Claims, any value

The Contractor and the Sponsor mutually agree that claims, whatever the value, submitted in accordance with Section 1-09.11 and not resolved by nonbinding arbitration ADR processes, shall be resolved by litigation unless the parties mutually agree to resolve the claim through binding arbitration. Each party is responsible for its own attorney fees and litigation costs.

1-09.13(4) Claims in Excess of $250,000

Delete this section in entirety.

1-10 TEMPORARY TRAFFIC CONTROL

1-10.1 General Traffic Control

Section 1-10.1 is supplemented with the following:

1. General Description

It is the intent of these Specifications to minimize traffic disruptions caused by the Contractor's operations while allowing construction work to proceed in an efficient and safe manner. Vehicular and pedestrian access must be maintained at all times during construction.

2. General Requirements
   The Contractor shall keep all traffic lanes clear of equipment and materials during non-working hours. To distinguish construction vehicles from private vehicles, construction vehicles shall be equipped with flashing or rotating amber lights.

3. Unforeseen Conditions
   When unforeseen conditions occur which require traffic control, the Contractor shall cooperate with the Engineer in immediately providing appropriate traffic control to ensure the safety of the traveling public and the personnel and equipment working on this project. Immediate notification shall be given to the police, fire, and bus services if emergency land closure/detour routes are needed.

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END OF DIVISION 1

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Special Provisions

For Construction of:

Pend Oreille River Salmon Recovery and Bank Stabilization: Sunnyside/Sandy Shores

Division 2 titled “Earthwork”, Division 8 titled “Miscellaneous Construction” and Division 9 titled “Materials” shall be deemed approved by the signature and stamp below.

Prepared by: Kayla Kassa, PE
Civil Engineer
Osborn Consulting

2-01 Clearing, Grubbing and Roadside Clearing
2-02 Removal of Structures and Obstructions
8-01 Erosion Control and Water Pollution Control
8-02 Roadside Restoration
8-33 Rock for Erosion and Scour Protection
8-34 Rootwad Toe Protection
9-09 Timber and Lumber
9-14 Erosion Control and Roadside Planting

6/14/2024

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DIVISION 2:
EARTHWORK

2-01 CLEARING, GRUBBING, AND ROADSIDE CLEANUP

2-01.1 Description

(March 13, 1995 WSDOT GSP)

Supplement this section with the following:

Clearing and grubbing on this project shall be performed within the following limits:

The Contractor shall clear, grub, and clean up all areas within the limits shown on the Plans except that trees or vegetation indicated on the Plans to remain or those flagged in the field by the Engineer to remain, shall remain and shall be protected by the Contractor. The Contractor shall have a certified Arborist assess all existing trees “to remain” for hazardous conditions prior to the start and end of work. The Contractor shall be responsible for verifying which existing trees and vegetation are to be cleared and grubbed. The Contractor shall stake the limits for clearing and grubbing and shall provide high visibility fencing around all vegetation to remain and protect. Clearing and grubbing shall not proceed until the Engineer has approved the staked limits and the high visibility fencing for vegetation protection.

Existing landscaping and vegetation, including grass and lawn areas, which are outside the limit of work shall be protected from damage by the Contractor’s operations. All damaged landscaping due to the Contractor’s operations outside the limits, or that is designated to remain, shall be replaced in coordination with the applicable property owner(s) at the Contractor’s expense. The Contractor shall request an Arborist if any existing trees are impacted during construction to review the health and safety of the tree(s). If a tree is determined to be impacted and a potential hazard, the tree shall be removed and disposed of according to 2-01.3(2) Grubbing.

Replacement tree species shall be provided at the rate of three (3) trees per (1) one tree impacted. The minimum caliper of replacement tree is 2-inch caliper, and replacement species must be approved by engineer.

POCD shall be notified of impact to tree(s) must be within 1 business day from impact.

Only hand clearing and grubbing shall be used within the drip line of trees to remain and as indicated in the Contract Documents. Hand clearing and grubbing shall include removal of all material as defined in Grubbing 2-01.3(2) but completed by manual means. No equipment on tracks or wheels shall be used for Hand Clearing and Grubbing. Small, motorized tools such as hand-held trimmers used by trained personnel may be allowed as approved by the Authorized Representative.

Trees identified for removal will not be used as large woody material per Section 8-34 and shall be grubbed in accordance with the requirements of Section 2-01.3(2).

Clearing and Grubbing of Invasive Vegetation

All woody invasive weeds and woody invasive ornamental vegetation shall be removed within the limit of work. Grub out plant crowns, root balls, and runners of all invasive weeds and invasive ornamental vegetation within the work limits.

Tree Removal

All trees identified for removal which should be used and retained as large woody material per Section 8-34, shall be removed entirely, including complete removal of the tree, branches, stump, and root ball. Following removal of the root ball, underground roots shall be removed to the extent feasible to prevent regrowth and to facilitate grading as indicated on the Plans. All debris resulting from the removal, including limbs, branches, and wood, shall be disposed of off-site.

The Contractor shall remove and dispose of all tree trunks and debris not used for log structure from the site.

2-01.2 Disposal of Usable Material and Debris

2-01.2(1) Disposal Method No. 1 - Open Burning

Replace this section with the following:

Open burning is not permitted.

2-01.2(2) Disposal Method No. 2 – Waste Site

(*******)

Supplement this section with the following:

Refuse and debris shall be loaded and hauled to a waste site secured by the Contractor and shall be disposed of to meet all requirements of state, county, and municipal regulations regarding health, safety, and public welfare.

2-01.2(3) Disposal Method No. 3 – Chipping

(*******)

Replace the third and fourth sentences of this section with the following:

Chips may be used as on-site mulch if they meet the requirements of Section 9-14.5 and are obtained from trees removed according to the Plans or as ordered by a certified Arborist. Trees must be chipped separately from other grubbing which may contain invasive seeds.

2-01.3 Construction Requirements

2-01.3(2) Grubbing

(*******)

Replace the first paragraph with the following:

Where trees are removed grubbing shall include complete removal of the tree, stump, and root ball and shall be used and retained as large woody material per Section 8-34. Stump and root removal shall be sufficient to facilitate grading and construction as indicated on the Plans.

2-01.5 Payment

(*******)

Supplement this section with the following:

"Clearing and Grubbing," per lump sum.

Tree removal including stump and root ball removal and backfill and compaction of resulting trenches or pits shall be included in the unit contract price for "Clearing and Grubbing."

The lump sum contract price for "Clearing and Grubbing" shall include all costs associated with furnishing all labor, materials, tools, Arborist report and equipment for completion of clearing and grubbing as indicated on the Plans and specified herein including, but not limited to, clearing and grubbing, stockpiling, waste haul, coordination with property owners and Contracting Agency, protecting landscaping to remain, restoration/replacement of those items identified to be saved that are damaged by the Contractor.

2-02 REMOVAL OF STRUCTURES AND OBSTRUCTIONS

2-02.1 Description

(*******)

Supplement this section with the following:

The Work shall consist of removing, handling, and disposing of deleterious material or debris encountered during work as indicated on the Plans within the Project site including, but not limited to riprap, buried logs or debris, and all other structures and obstructions (unless a separate bid item has been provided for this work). Three existing dock walkways shall be disassembled for access to site construction, the existing structures will be placed outside project boundaries and remain owners' possession and re-installed upon project completion (Dock Walk Ways). There are two stair structures, which shall be removed from the existing stream bank. The structure that will not be re-installed (stairways) shall be hauled away for off-site disposal.

2-03 ROADWAY EXCAVATION AND EMBANKMENT

2-03.3 Construction Requirements

2-03.3(20) Fine Grading

(******)

Add the following new section:

Streambank construction shall include fine grading. Fine grading may be strategically directed in the field by the Engineer of Record to create the correct streambank grade in the streambank construction area. This bid item may include minor adjustments to large woody material, coir log, and rock toe protection placement. The Contractor shall provide notice to the Engineer 72-hours prior to performing fine grading and schedule one day for the Engineer of Record to be on site during fine grading.

2-03.3(20)K Common Borrow Including Haul

(******)

Supplement this section with the following:

The Contractor shall take survey measurements prior to breaking ground and of final elevations for quantifying measurements. Contractor shall submit survey measurements to the Engineer of Record.

2-03.4 Measurement

Supplement this section with the following:

Measurement for “Fine Grading” shall be per hour of Engineer of Record directed fine grading.

“Common Borrow Including Haul,” per Cubic Yard.

2-03.5 Payment

(******)

Supplement this section with the following:

The Bid item price for “Common Borrow Including Haul” shall include all costs for the work required for excavation, shaping, loading, placing, stockpiling, and disposing of excavated materials.

“Fine Grading," per hour.

The Bid item price for “Fine Grading” shall include all costs for the work required to perform field directed grading through the re-grade areas.

END OF DIVISION 2

DIVISION 8:
MISCELLANEOUS CONSTRUCTION

8-01 EROSION CONTROL AND WATER POLLUTION CONTROL

8-01.1 Description

(******)

Supplement this section with the following:

Work shall include installation of temporary erosion control devices including, but not limited to high visibility silt fence, coir logs, stabilized construction entrance, biodegradable erosion control blanket, and providing for street cleaning to prevent the transport of sediment and other debris from leaving the site.

Work shall include installation of steep slope protection including but not limited to coir logs biodegradable erosion control blankets.

All disturbed areas shall be planted, seeded or mulched as described in Section 8-01.3(2). The Contractor shall submit the proposed plan for seeding or mulching to the Engineer for approval five days prior to application.

This work also consists of preparing the Erosion Control Plan, inspecting water pollution and erosion control items, documenting, and testing stormwater discharge.

Water

The Contractor shall make, at the Contractor's expense, whatever arrangements may be necessary to ensure an adequate supply of water required for erosion control, plant establishment, and recommended watering by Engineer to maintain health of procured plants on site, installed, and in decline.

The Contractor shall also furnish all necessary hose, equipment, attachments and accessories for the adequate irrigation of planted areas as may be required to complete the work as specified. All costs shall be considered incidental to and included in the bid items involved and no additional compensation shall be made.

8-01.2 Materials

(******)

Supplement this section with the following:

- Coir Erosion Control Blanket — Special Provision 9-14.6(2)
- Coconut Coir Logs — Special Provision 9-14.6(7)
- High Visibility Fencing — Special Provision 9-14.6(8)

- High Visibility Silt Fence — Special Provision 9-14.6(9)
- Stabilized Construction Entrance — Special Provision 9-14.6(10)
- Deck Mats — Special Provision 9-14.6(11)

8-01.3 Construction Requirements

(******)

Supplement this section with the following:

BMP's must be implemented as described in the 2019 Stormwater Management Manual for Eastern Washington (2019 SWMMEW):

- 1.1. BMP C101E: Preserving Natural Vegetation
- 1.2. BMP C120E: Temporary and Permanent Seeding
- 1.3. BMP C150E: Materials on Hand

Weed-Free Straw shall be certified weed-free, dry and supplied in bales approximately 14"x14"x36"-long (conventional bales). After seeding, straw shall be spread over areas that were excavated or filled, including slopes near the Large Woody Debris. Straw to be spread at an application rate about 1 bale per 500 feet 2 ground area. Payment will be per bale delivered to the site and spread.

Erosion-Control Seeds shall be a mix of native (Eastern Washington) plants specifically intended for erosion-control and commercially available.

Excavation and fill areas to be raked to create a rough surface prior to seed application. Seeds shall be spread by hand at an application rate 1 pound of seeds scattered over 500 to 1,000 ft 2 ground area.

Coconut Erosion Control Blanket shall be installed according to the manufacturer's instructions, a copy of which shall be submitted to the Engineer with the item's request for approval of material.

These specifications are the minimum water pollution/erosion control requirements. Additional requirements or modifications of these specifications may be set forth in the related permits. See the HPA requirements. All provisions listed in the HPA are requirements the Contractor shall perform work in accordance with. If there are any discrepancies in the Contract Documents or the requirements in the HPA, the more restrictive requirement shall be considered the requirement. Additional measures, beyond what are set forth herein, may be necessary in order to accommodate the Contract schedule, or materials and construction methods employed by the Contractor.

It is the Contractor's responsibility to assess water pollution/erosion control needs to maintain water quality in accordance with the requirements, conditions, and regulations of applicable codes, orders, ordinances, laws, specifications and permits. This assessment shall be reflected in the Contractor's bid.

The Contractor shall install and maintain all temporary and permanent erosion control Best Management Practices (BMPs) in accordance with the Contract Plans, Standard Specifications, these specifications, the Temporary Erosion & Sediment Control (TESC) Plan,

permit conditions or as directed by the Engineer prior to clearing, grubbing, or grading or as necessary, as work progresses. Erosion control BMPs as referenced on the Plans and described in these specifications are based on the Storm Water Management Manual for Eastern Washington (Ecology manual), 2019.

To the degree possible, the Contractor shall coordinate this temporary work with permanent drainage and erosion control work the Contract requires. The Contractor shall ensure that materials, equipment, and experienced labor are available and on-hand to implement additional erosion control BMPs to address unanticipated situations.

The Contractor shall coordinate with the Engineer on required erosion control BMPs prior to beginning construction activities. As construction progresses and seasonal conditions dictate, more erosion control BMPs may be required to ensure complete erosion control. Therefore, during the course of construction, it shall be the obligation and responsibility of the Contractor to address any new conditions that may be created by his or her activities or seasonal conditions. Additional erosion control BMPs may be required by the Engineer in the event of an emergency, and as weather and field conditions dictate.

Temporary erosion protection shall be furnished, installed, and maintained for the duration of this Project to protect environmentally sensitive areas, sloped surfaces, adjacent areas and/or water bodies or conveyance systems. Temporary erosion protection may include the use of straw, jute matting, wattles, heavy plastic sheeting, or other forms of ground cover on areas disturbed by construction. Sloped surfaces shall be restored and protected in such a manner that surface runoff does not erode the embankments, slopes, or ground surfaces, nor create surface channels, or ruts.

The Contractor shall be required to supplement and/or update the erosion control plan and/or details included in the Plans, as may be required during the course of the Project. The included plan and/or details are provided solely for the establishment of basic erosion control measures and is not intended to be a complete plan.

8-01.3(1) General

Supplement this section with the following:

The Contractor shall bear sole responsibility for damage to completed portions of the project and to property located off the project caused by erosion, siltation, runoff, or other related items resulting from the Contractor’s actions. The Contractor shall also bear sole responsibility for any pollution of rivers, streams, groundwater, or other water which may occur as a result of construction operations. The Contractor shall be responsible for damage and clean-up of any sedimentation or pollution caused by the Contractor’s operations or actions.

If the Contractor does not meet the Engineer’s requirements, the Engineer may (without further notice) provide the necessary erosion control and deduct all of the costs thereof from any payments due or coming due the Contractor.

8-01.3(1)A Submittals

(******)

Supplement this section with the following:

The Contractor shall provide a phone list of the project manager, the site superintendent, the foreman and other key personnel who can be reached at any time in the event of on-site problems.

8-01.3(1)B Erosion and Sediment Control (ESC) Lead

(******)

Supplement this section with the following:

The Erosion and Sediment Control (ESC) Lead shall be responsible for the monitoring, reporting and recordkeeping requirements as specified in the Construction Stormwater General Permit.

8-01.3(1)C Water Management

(******)

Supplement this section with the following:

The Contractor shall be responsible for preventing water pollution due to construction materials, methods, or equipment. Repair, replacement, or corrective action shall be implemented immediately where needed or as directed by the Engineer.

Equipment shall be free of excessive fluid leaks and in good working order. The Contractor shall designate fueling area(s) and receive approval of the Engineer prior to using the fueling area(s). All equipment must be fueled and serviced in the designated area(s). The Contractor shall clean up, dispose, and restore any area contaminated with fuel, grease, oil, solvents, etc. at no additional cost to POCD. Disposal of the contaminants shall be in accordance with WDOE requirements.

At no time shall concrete, concrete by-products, vehicle fluids, paint, chemicals, or other polluting matter be permitted to be discharged to the temporary or permanent drainage system or to be discharged from the project site to surface waters. Violators are subject to fines and are responsible for all costs associated with clean up and restoration.

If the Engineer, under Washington State Department of Transportation (WSDOT) Standard Specifications Section 1-08.6, orders the Work suspended, the Contractor shall continue to control erosion, pollution, and runoff during the suspension.

8-01.3(1)F Surface Water Pollution Prevention Plan

Add the following new section:

The Contractor shall submit for approval a Surface Water Pollution Prevention Plan (SWPPP) that meets all requirements outlined by the Washington State Department of Ecology (Ecology) for any projects greater than 1 acre in area. If provided as part of the contract documents, the Contractor shall adopt, review and revise the SWPPP or create a site specific document as required above and obtain approval by Department of Ecology. SWPPP shall

be reviewed/amended monthly or earlier as needed for changes to the site conditions. Any changes made to the SWPPP shall be submitted for review by the Owner prior to submittal to Ecology.

(******)

Supplement this section with the following:

A draft Stormwater Pollution Prevention Plan (SWPPP) is provided in **Appendix C**. The Contractor shall update the SWPPP in accordance with his operation, schedule, and site conditions. The Contractor shall coordinate with the Contracting Agency in updating the SWPPP. The SWPPP is to remain onsite throughout the duration of construction.

8-01.3(1)G Reporting

(******)

Add the following new section:

Spill

If any hazardous materials, including diesel fuel, gasoline, or hydraulic fluid, etc. is discharged to surface waters or the storm drain system, the Contractor shall immediately report by phone to:

1. The Washington State Department of Ecology (Ecology) – 509-329-3400; and
2. The owner's representative.

The Contractor shall also submit a detailed written report to the Washington State Department of Ecology (Ecology, Eastern Region Office, 4601 N Monroe, Spokane, WA 99205-1295) within five (5) days that describes the nature of the event, corrective action taken and/or planned, steps to be taken to prevent a recurrence, results of any samples taken, and any other pertinent information. A copy of the report shall also be provided to POCD.

Fish Kill or Distress

The Contractor shall immediately report by phone to:

1. Washington State Department of Fish and Wildlife Area Habitat Biologist Jeff Lawlor, Office: 509-892-1001; and
2. The owner's representative.

Archaeology

If artifacts are observed, the Contractor shall call a professional archaeologist to evaluate the discovery. If human skeletal remains are observed, the Contractor shall call:

1. Pend Oreille County Medical Examiner: 509-447-4414
2. Newport Police: 509-447-5611or 911
3. The owner's representative.
4. The local Medical Examiner
5. City Police or 911

If there is no response and there is a need for immediate help, call Dr. Whitlam at the Washington State Department of Archaeology and Historic Preservation, Office: 360-586-3080.

8-01.3(3) Placing Coir Erosion Control Blanket

(******)

Supplement this section with the following:

Biodegradable erosion control blanket shall be placed on all stream side slopes as shown in the Plans. Biodegradable erosion control blanket shall be placed on all stream side slopes steeper than 2H:1V as shown in the Plans for streambank stabilization.

The Contractor shall provide a copy of the manufacturer's recommended installation procedures to the Engineer prior to beginning installation.

8-01.3(6)A Coir Logs

(******)

Replace this section with the following:

Before placing coir logs, the Contractor shall notify the Engineer so that s/he can visually confirm the excavation meets the lines, grades, and dimensions shown on the Plans.

Coir logs shall be placed along the streambank and buried with compacted soil in conformity the lines, grades, and details shown on the Plans. The final installation shall provide a well graded structure.

The Contractor shall provide a copy of the manufacturer's recommended installation procedures to the Engineer for review and approval prior to beginning installation.

8-01.3(15) Maintenance

(******)

Supplement this section with the following:

The Contractor shall inspect and maintain the temporary and permanent erosion control BMPs in a satisfactory working condition until such time that construction is complete, and the potential for erosion has passed. BMP maintenance activities shall be noted in the monitoring logbook.

The Contractor shall inspect daily on working days and immediately following a storm event, all areas containing permanent and temporary erosion control BMPs. The Contractor shall implement necessary repairs to or replacement of erosion control BMPs promptly. Repairs or replacement shall be performed immediately following a storm event and during prolonged rainfall.

Temporary Suspension of Work

It is the Contractor's responsibility to control water pollution and erosion resulting from his or her activities. All minimum required BMPs shall be installed and fully operational. If the Contractor is unable to satisfactorily abate water pollution or erosion problems due to adverse weather or construction methods, the Engineer shall suspend all or parts of the work until such problems are resolved to the satisfaction of the Engineer. The Contractor shall work diligently to implement additional BMPs or alternate construction methods to control water pollution and erosion and/or complete those parts of the project not affected by the suspension until the Engineer authorizes the suspended work to begin again.

Monitoring

The Contractor shall implement any monitoring requirements set forth in the Contract Documents.

To document the effectiveness of the Contractor's efforts to control erosion, the Engineer may take samples to monitor the runoff flow for Total Suspended Solids (TSS) concentrations to analyze discharge quality from the project site.

The State Surface Water Quality Standards (WAC 173.201A) for turbidity are:

1. No more than five (5) Nephelometric Turbidity Units (NTU) increase over background levels when background turbidity is 50 NTU or less; or
2. No more than a 10% increase over background levels when background turbidity is greater than 50 NTU.

A copy of the monitoring report will be provided to the Contractor. Based on the effectiveness of the Contractor's erosion control measures, work may be suspended during periods of rainfall or when rain is forecasted, if water quality protection cannot be maintained.

The following enforcement procedure will be employed to ensure compliance with this specification and applicable codes, regulations, laws and permits:

Minor Violations: These include maintenance of existing BMPs and addressing minor deficiencies (more straw mulch, repairing silt fence, covering stockpiles, etc.). Minor Violations are those which have not yet resulted in water pollution, sediment, or turbid water leaving the site. Initial notice of minor violations may be verbal or written. Failure to correct these violations within the time set forth by the Engineer shall result in written Correction Notice.

Correction Notice: Failure to comply with Initial Notice of Minor Violation(s) and/or a release of pollutants, turbid water, or sediment from the site shall result in a Correction Notice. The Correction Notice shall: 1) identify the work which needs to be performed to control water pollution or erosion; and 2) establish a specific timeframe for completion of such work. Other work on the site may be suspended as directed by the Engineer until the corrections are completed.

Stop Work Order: Failure to address a Correction Notice within the timeframe specified shall result in the issuance of a Stop Work Order. Upon issuance of the Stop Work Order, all work on the site not directly related to correcting the water pollution or erosion problems shall be suspended as directed by the Engineer. Work on other aspects of site shall not resume until such problems are resolved to the satisfaction of the Engineer and the Stop Work Order is removed.

Suspension of Work: Work shall be suspended if three Stop Work Orders are issued. No work, other than maintenance activities, shall take place unless authorized in writing by the Engineer.

When work is suspended, Section 1-08.7, Maintenance During Suspension of the Standard Specifications shall apply. The Contractor shall be responsible for the maintenance of all aspects of project during the suspension of work including but not limited to any erosion control BMPs, all at no additional cost to project Sponsor; and 2) such suspension of work shall not constitute a basis for claims or adjustments in costs.

8-01.3(17) Deck Mats

(******)

Add the following new section:

Deck mats shall be installed per manufacturer specifications to minimize impacts to sensitive areas along the temporary access road, as shown in the plans. A minimum of 12 inches of bark or woodchip mulch meeting the requirements listed in Section 9-14.5(3) shall be placed under the deck mats.

8-01.4 Measurement

Supplement this section with the following:

Measurement for “Temporary Erosion and Sediment Control” shall be per lump sum.

“Temporary Erosion and Sediment Control” includes all labor, equipment, materials, and supervision utilized to install, modify, and maintain the items shown on the plan set and in Section 8-01.

8-01.5 Payment

(******)

Supplement this section with the following:

Payment will be made in accordance with Section 1-04.1, for the following bid item(s):

“Temporary Erosion and Sediment Control,” per lump sum.

The lump sum contract price for “Temporary Erosion and Sediment Control,” including all incidental work, shall be full compensation for all labor, materials, tools and equipment necessary to satisfactorily complete the work as defined in the Standard Specifications, these Special Provisions, and the Plans.

Inspecting, maintaining, cleaning, replacing and removing of erosion/water pollution control BMPs shall be considered incidental to and included in the various items.

Trenching for coir log placement is incidental to coir log installation.

8-02 ROADSIDE RESTORATION

8-02.3 Construction Requirements

8-02.3(1) Responsibility During Construction

Supplement this section with the following:

Throughout planting operations, the Contractor shall keep the premises clean, free of excess soils, plants, and other materials, including refuse and debris, resulting from the Contractor's work. At the end of each workday, and as each planting area is completed, it shall be neatly dressed, and all surrounding walks and paved areas shall be swept to remove soil and plant debris. At the conclusion of work, the Contractor shall remove surplus soils, materials, and debris from the construction site.

The planting plan is designed to replicate natural plant communities in species composition and arrangement. Even spacing and straight row planting are not desired.

Planting location is within the areas shown on Plans. Trees shall not be installed in areas with standing or ponding water.

Plant procurement, transport, storage, handling, planting techniques, care of existing soil and vegetation, and watering are to be performed per landscape industry standards.

All plant material shall be healthy, nursery-grown stock. Weak or damaged plants will be rejected by the Engineer.

Depending on the availability of natural rainfall, the Contractor will need to provide supplemental watering to ensure plant survival until the end of the warranty period.

The Contractor shall warrant 100 percent plant survival through a 1-year warranty period. Plants shall be in a healthy and flourishing condition.

Prior to plant installation, the Contractor shall notify the Engineer of any conditions that are judged to impair plant survival. Alternatives will be approved by the Resident Engineer prior to plant substitution.

8-02.3(4) Topsoil

8-02.3(4)A Topsoil Type A

Supplement this section with the following:

Contractor shall only use Topsoil Type A as indicated in Section 8-02.3(4)A.

All topsoil shall contain a minimum of 10 percent organic matter in accordance with AASHTO T267 Determination of Organic Content in Soils by Loss-on-Ignition.

Topsoil Type A shall meet the following requirements:

- Cation exchange capacity (CEC) of Topsoil Type A shall be a minimum of 5 milliequivalents CEC/100 g dry soil (U.S. EPA Method 9081)

- Organic content greater than 8-percent but less than 15-percent as measured on a dry weight basis using AASHTO T267 Determination of Organic Content in Soils by Loss on Ignition.
- Topsoil Type A shall be 60-percent to 70-percent Sandy Loam and 40-percent to 30-percent Fine Compost by volume. Sandy Loam shall be defined by the U.S. Department of Agriculture Soil Classification System.
- The Fine Compost shall conform to the requirements of Section 9-14.5(8) of the Standard Specifications.

Topsoil Type A shall be a commercially available three-way mix approved by the City.

- Measurement shall be by “Square Yard”

8-02.3(4)B Topsoil Type B

Supplement this section with the following:

The top 5 inches of existing topsoil from shrub and groundcover planting Area (Type B) shall be salvaged on site in windrows as located on the Plans no more than 6' tall x 12' wide, and length per plan. Soil stockpile areas shall be protected and not be disturbed during or after construction. No Driving shall be allowed over stockpiles.

Topsoil type B is to be comprised only of topsoil from the project site. If contractor removes top layer of soil (duff), they shall replace it at no cost to POCD.

Contractor shall only use Topsoil type B as indicated in Section 8-02.3(4)B. In the case that there is not enough existing soil at a given project site, Contractor shall resort to using Topsoil Type A as indicated in Section 8-02.3(4)A.

8-02.3(8) Planting

(******)

Supplement this section with the following:

Planting materials shall be native plants, nursery grown near Pend Oreille County, Washington.

Plants shall be handled to avoid all damage, including breaking, brushing, root damage, sunburn, drying, freezing or other injuries. Plants must be covered during transport. Plants shall not be bound with wire or rope in a manner that could damage branches. Protect plant roots with shade and wet soil in the time period between delivery and installation. Do not lift container stock by trunks, stems, or tops. Do not remove from containers until ready to plant.

The Contractor shall provide supplemental water to all plants as necessary to keep moisture levels appropriate to the species’ horticultural requirements. Plants shall not be allowed to dry out. All plants shall be watered thoroughly immediately upon installation. Soak all containerized plants thoroughly prior to installation. Plants whose roots have dried out from exposure will not be accepted at installation inspection. All rejected plants shall be immediately removed from the site.

All plants shall be tagged for easy identification for future monitoring.

Plants shall be normal in pattern of growth, healthy, well-branched, vigorous, with well-developed root systems and free of pests and disease. Damages, diseased, pest-infested, scraped, bruised, dried-out, burned, broken or defective plants will be rejected. Plants with pruning wounds over 1 inch in diameter will be rejected.

Plant substitutions are not permitted without the permission of the project biologist. Same-species substitutions of larger or smaller sized plants and the substitution of bare-root plants for container plants also require permission of the Contracting Agency. Small plants and bare root plants often experience less transplant shock and adapt more quickly to site conditions, resulting in a higher success rate. However, same-species substitutions will only be approved based on certain site-specific conditions. Landscaping varieties are not acceptable substitutions.

Immediately before installation, plants with minor root damage (some broken and/or twisted roots) must be root-pruned. Matted or circling roots of containerized plantings must be pruned or straightened, and the sides of the root ball must be roughened from top to bottom to a depth of 1/2 inch in two or four places. Plants with any other type of root damage will be rejected. All rejected plants will be immediately removed from the site.

Wetland Planting: Pit plant all wetland plants in combined site soil and medium compost, blended, during excavation for planting. Place 3 inches of medium compost Top mulch evenly across all wetland planted areas.

If plantings fall over for any reason, they shall be replanted or replaced, as necessary.

Most shrubs and trees do not require staking. If the plant can stand alone without staking in a moderate wind, do not use a stake. However, if the plant needs support, then use a stake with strapping or webbing placed as low as possible on the trunk to loosely brace the tree with two stakes. Do not brace the plant tightly or too high on the stem. If the plant is unable to sway, it will further lose the ability to support itself. Do not use wire in a rubber hose for strapping or other strapping that exerts pressure on the bark under normal conditions. As soon as supporting the plant becomes unnecessary, remove the stakes. All stakes shall be removed minimum 14 days prior to the completion of the 1-year warranty period.

8-02.3(13) Plant Establishment

(******)

Revise this section with the following:

Plant establishment shall be for 1 year. See standard specification 8-02.3(8) for requirements. Remove any requirement specified beyond the 1 year requirement

8-02.4 Measurement

(******)

Supplement this section with the following:

Measurement for “Topsoil Type A” shall be per Square Yard along the grade and slope of the area covered immediately after placement.

8-02.5 Payment

(******)

Supplement this section with the following:

The unit Contract price for “Topsoil Type A” shall be full payment for all costs including weed control pre-treatment of topsoil areas, excavation, stockpiling, protection of stockpile including covering if needed, and spreading in landscape areas for the specified Work.

(******)

Replace the item “Plant Establishment Year ___” with the following:

“Plant Establishment – 1 Year”, per lump sum

The lump sum cost for “Plant Establishment – 1 Year” shall include all labor and materials to ensure 100% survival of all plant material planted. In addition, provide supplemental water for the plants during the growing season and monitor the level of irrigation applied, reducing or increasing run times as necessary to ensure adequate water is applied. 100% weed removal in all planting areas is required as is compost replacement, to maintain required depth of compost. Remove the tree stakes a minimum of 14 days prior to the end of the 1-year plant establishment period.

8-33 ROCK FOR EROSION AND SCOUR PROTECTION

(******)

Add the following new section:

8-33.1 Description

This work shall consist of placing rocks along the streambank and buried with compacted soil in conformity with the locations, lines, and dimensions shown on the Plans.

8-33.2 Materials

Materials shall meet the requirements of the following sections:

- Rock for erosion and scour protection (Subangular) Special Provision 9-13.4(1)
- Grading Requirement – Class A Special Provision 9-13.4(2)

8-33.3 Construction Requirements

Before placing subangular rocks, the Contractor shall notify the Engineer so that s/he can visually confirm the excavation meets the lines, grades, and dimensions shown on the Plans.

Rocks shall be placed along the streambank and buried with compacted soil in conformity the lines, grades, and details shown on the Plans. The final installation shall provide a well graded

structure that meets the requirements for suitable shape and conforms to Class A grading. No angular rock shall be placed within the channel.

8-33.4 Measurement

Measurement for “Rocks for Erosion and Scour Protection, Subangular, Class A” shall be per cubic yard, complete in place.

8-33.5 Payment

Payment will be made in accordance with Section 1-04.1 for the following bid item(s):

“Rocks for Erosion and Scour Protection, Subangular, Class A,” per cubic yard.

The Bid item price for “Rocks for Erosion and Scour Protection” shall include all costs for the work required to furnish and install the rocks indicated in Contract including delivery, excavation, compacting, and shaping.

The unit contract bid price(s) above, including all incidental work, shall be full compensation for all labor, materials, tools and equipment necessary to satisfactorily complete the work as defined in the Plans and these Special Provisions.

8-34 ROOTWAD TOE PROTECTION

(******)

Add the following new section:

8-34.1 Description

This Work consists of placing Large Woody Material (LWM) for Habitat and Bank Protection, meeting the locations, lines, and reference points as shown on the Plans and as directed by the Engineer of Record. The work shall also include excavation for trenches, backfill and compaction.

8-34.2 Materials

Materials shall meet the requirements of the following sections:

- Logs — Special Provision 9-09.4
- Duckbill Anchors — Special Provision 9-09.4(1)

Logs

All trees or tree parts larger than 18 inches in diameter and longer than 10 feet removed during clearing and grubbing shall be salvaged and stockpiled for potential use in log structures. Rootwads and limbs shall be kept intact to the extent feasible. Those removed trees conforming to requirements in Special Provision 9-09.4 shall be marked. The remaining removed trees shall be further incorporated into the log structures and other areas below OHWM as field directed by the Engineer of Record. The source(s) for additional logs required to complete the installation of the log structures, shall be approved by the Engineer or client prior to delivery to the site.

Log structures include logs with rootwad attached and logs without rootwad. Log types and sizes shall follow Special Provision 9-09.4.

8-34.3 Construction Requirements

8-34.3(2) Log Sorting and Handling

The Contractor shall identify a log stockpile area and a log staging area that are outside of the log structure construction area. Prior to any structure installation, the Contractor shall sort all logs salvaged from the site. Logs and piles shall be grouped by DBH. The Engineer of Record will identify significant logs to be brought to the staging area and used in specific log structures. Logs shall be handled in such a way as to minimize damage to rootwads and limbs during hauling, stockpiling, and placement.

8-34.3(3) Rootwad Toe Protection Installation

Before placing logs with and without rootwads, the Contractor shall notify the Engineer of Record so that s/he can visually confirm the excavation meets the lines, grades, and dimensions shown on the Plans. All rootwads shall be staked and reviewed by the Engineer of Record prior to installation.

Logs with and without rootwads shall be placed along the streambank and buried with compacted soil in conformity the lines, grades, and details shown on the Plans. The final installation shall provide a well graded structure.

8-34.3(4) Duckbill Anchor (3,000 Pound Capacity)

Duckbill anchors will be utilized to secure certain logs as indicated in the Rootwad Toe Protection Layout Table in the plans. Install duck bill anchors per manufacturer specifications, securing the anchor to the midpoint of the log. Duckbill anchor installation shall be approved by the engineer prior to backfilling over the rootwad toe protection structure.

8-34.4 Measurement

Measurement for log structures shall be:

- Type D, 15' Log with Rootwad DBH 24" per each.
- Type E, 15' Log with Rootwad DBH 18" per each.
- Type F, 25' Log without Rootwad DBH 18" per each.
- Type G, 20' Log without Rootwad DBH 18" per each.
- Type H, 15' Log without Rootwad DBH 18" per each.

Measurement for duckbill anchors shall be:

- Duckbill Anchor (3,000 Pound Capacity.), per each.

8-34.5 Payment

Payment will be made in accordance with Section 1-04.1 for the following bid item(s):

The unit Contract price for “Log Type D” shall be full payment for all costs including duckbill anchor installation, excavation, stockpiling, protection of stockpile including covering if needed, and spreading in landscape areas for the specified Work.

The unit Contract price for “Log Type E” shall be full payment for all costs including duckbill anchor installation, excavation, stockpiling, protection of stockpile including covering if needed, and spreading in landscape areas for the specified Work.

The unit Contract price for “Log Type F” shall be full payment for all costs including duckbill anchor installation, excavation, stockpiling, protection of stockpile including covering if needed, and spreading in landscape areas for the specified Work.

The unit Contract price for “Log Type G” shall be full payment for all costs including duckbill anchor installation, excavation, stockpiling, protection of stockpile including covering if needed, and spreading in landscape areas for the specified Work.

The unit Contract price for “Log Type H” shall be full payment for all costs including duckbill anchor installation, excavation, stockpiling, protection of stockpile including covering if needed, and spreading in landscape areas for the specified Work.

Excavation for all log types is incidental to log placement.

The unit contract bid price(s) above, including all incidental work, shall be full compensation for all labor, materials, tools and equipment necessary to satisfactorily complete the work as defined in the Plans and these Special Provisions.

END OF DIVISION 8

DIVISION 9:
MATERIALS

9-09 TIMBER AND LUMBER

9-09.4 Logs

(******)

Add the following new section:

Logs used to construct log structures shall be of locally native pine and fir species, sound quality, and free of rot, insect damage, large knots, or any preservative such as creosote. Logs shall not be encrusted with silt and fines. Trees to be removed within the project limits shall be reused for log structures if they meet the criteria in this Special Provision.

Types and sizes of logs shall be as follows:

Log Type	DBH (inches)	Minimum Length (feet)*	Rootwad Diameter (feet)
D	24	15	4-5
E	18	15	4-5
F	18	25	-
G	18	20	-
H	18	15	-

* Log length excludes rootwad length

Type D and E logs shall have an attached rootwad. Type F, G and H logs shall be straight sections of log without rootwad and shall not contain tree limbs or roots. Diameter at breast height (DBH) shall be measured 4.5 feet from the base end of the log. Rootwads shall have a length of 3 feet ± 0.5 feet. Type and size of each log shall be selected as shown in the Plans.

9-09.4(1) Duckbill Anchor

Duckbill anchors to include an attached ¼ inch by 42 inches galvanized aircraft cable with a 3,000 lb. working load limit (in normal soil conditions).

9-14 EROSION CONTROL AND ROADSIDE PLANTING

9-14.2 Topsoil

9-14.2(1) Topsoil Type A

Supplement this section with the following:

Topsoil Type "A" mix shall meet the following requirements:

- 3-way topsoil as provided by Pacific Topsoils, Inc. – 1-800-884-7645, or
- 3-way topsoil as provided by Cedar Grove Composting– 1-877-764-5748, or
- Approved equal

9-14.2 Seed

Supplement this section with the following:

Seed shall be a mix of dwarf, drought tolerant grasses and microclover per the following Seed Mix Blend:

- 35% ± 5% Quatro Tetrapliod Sheep Fescue (*Festuca ovina*)
- 30% ± 5% Eureka II Hard Fescue (*Festuca ovina duriuscula*)
- 30% ± 5% Banfield Perennial Ryegrass (*Lolium perenne*)
- 5% ± 1% Microclover (*Trifolium repens v. microclover*)

Application rate: 5 lbs. per 1000 square feet.

9-14.3 Fertilizer

Supplement this section with the following:

Fertilizer shall be as follows:

- Lawn/sod: 15% nitrogen, 22% phosphoric acid, 15% soluble potash (15-22-15)
- Trees: 16% nitrogen, 4% phosphoric acid, 8% soluble potash (16-4-8).
- Shrubs: 24% nitrogen, 8% phosphoric acid, 16% soluble potash (24-8-16)

Fertilizer shall be a slow release variety of a type and brand suitable for the use specified. Application rate shall be per manufacturer's recommendation.

9-14.6 Erosion Control Devices

Add the following new section:

9-14.6(2) Coir Erosion Control Blanket

(******)

Replace this section with the following:

Erosion control blankets for stream side slopes shall consist of KoirMat 700 fabric or approved equal. KoirMat 700 consists of high strength woven coconut fiber coir fabric. The coir fabric shall meet the following minimum requirements:

Unit weight	**20.6 oz/SY (700 g/sq.m.)**
Dry tensile strength (Machine direction)	1512 lbs./ft (22.06 kN/m)
Dry tensile strength (cross direction)	1032 lbs./ft (15.05 kN/m)
Wet tensile strength (Machine direction)	924 lbs./ft (13.48 kN/m)
Wet tensile strength (Cross direction)	684 lbs./ft (9.97 kN/m)

Elongation at failure Wet (Machine direction)	69%
Elongation at failure Wet (Cross direction)	34%
Open area (max.)	50%
Thickness	0.35 in (9 mm)

The biodegradable erosion control blanket shall be composed of 100% biodegradable material and shall be made of natural plant fibers unaltered by synthetic materials. All blanket material shall effectively perform the intended erosion control function until permanent vegetation has been established, or for a minimum of 6 months, whichever comes first.

9-14.6(7) Coir Log

Add the following new section:

Coir logs should be 10 feet in length and 20 inches in diameter with a weight of 15 pounds per foot, density of 7 or 9 pounds per cubic foot made up of durable coconut fiber.

9-14.6(11) Deck Mats

Add the following new section:

Deck mats or approved equal.

END OF DIVISION 9

STANDARD PLANS

APPENDICES

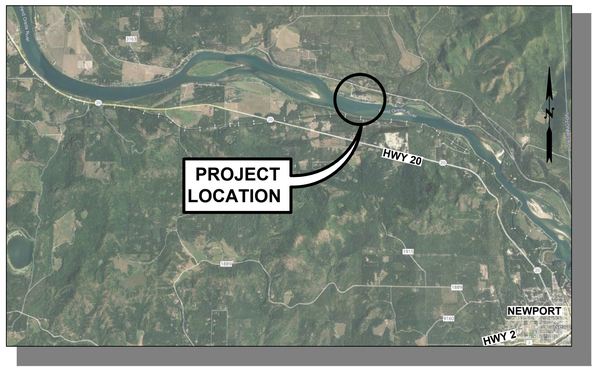
Appendix A: Sunnyside/Sandy Shores – Pend Oreille Streambank Stabilization Project Plans

Appendix B: Permits

Appendix C: SWPPP Draft

SEC. 34, T.32, R.45, PEND OREILLE COUNTY, WASHINGTON

SUNNYSIDE & SANDY SHORES - PEND OREILLE STREAMBANK STABILIZATION PROJECT OVERVIEW



VICINITY MAP

N.T.S.

GENERAL NOTES

1. THIS PROJECT MUST BE CONSTRUCTED BASED ON THE DETAILS AND SITE PLAN PROVIDED IN THIS PLAN SET. ANY PROJECT COMPONENT NOT SPECIFIED WITHIN THIS PLAN SHALL BE INSTALLED ACCORDING TO THE NRCS STREAM RESTORATION DESIGN STANDARDS (NATIONAL ENGINEERING HANDBOOK PART 654).

2. THE PROJECT LIMITS MUST BE CLEARLY MARKED PRIOR TO ANY CONSTRUCTION ACTIVITIES. PROJECT LIMITS MUST BE APPROVED BY POCD OR THE ENGINEER PRIOR TO CONSTRUCTION.

3. TEMPORARY EROSION AND SEDIMENT CONTROL (TESC) BMPS MUST BE INSTALLED PRIOR TO EARTH DISTURBING ACTIVITIES IN A WORK AREA. ALL BMPS MUST BE INSTALLED AS SHOWN IN THE SITE PLAN AND TESC DETAILS. ALL BANK STABILIZATION WORK MUST BE CONDUCTED DURING LOW FLOW. TESC BMPS MUST BE APPROVED BY POCD OR THE ENGINEER PRIOR TO ANY EARTH DISTURBING ACTIVITIES.

4. NO CONSTRUCTION RELATED ACTIVITY SHALL CONTRIBUTE TO THE DEGRADATION OF THE ENVIRONMENT, ALLOW MATERIAL TO ENTER SURFACE OR GROUNDWATER, OR ALLOW PARTICULATE EMISSIONS TO ENTER THE ATMOSPHERE, WHICH EXCEED STATE OR FEDERAL STANDARDS. ANY ACTIONS THAT POTENTIALLY ALLOW A DISCHARGE TO STATE WATERS MUST HAVE PRIOR APPROVAL FROM THE WASHINGTON STATE DEPARTMENT OF ECOLOGY, AND APPROVAL FROM POCD OR THE ENGINEER.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT, FLAGGERS, AND ANY OTHER NEEDED ACTIONS TO PROTECT THE LIFE, HEALTH, AND SAFETY OF THE PUBLIC, AND TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED BY THE CONTRACTOR. ANY ACTIVITY THAT MAY INTERRUPT NORMAL TRAFFIC FLOW SHALL REQUIRE AT LEAST ONE FLAGGER FOR EACH LANE OF AFFECTED TRAFFIC. MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) SHALL APPLY.

6. ANY CHANGES TO THE DESIGN OR SPECIFICATIONS MUST BE APPROVED BY THE ENGINEER AND A POCD REPRESENTATIVE.

7. ALL DAMAGES INCURRED TO PUBLIC AND/OR PRIVATE PROPERTY BY THE CONTRACTOR DURING THE COURSE OF CONSTRUCTION SHALL BE PROMPTLY REPAIRED TO THE SATISFACTION OF THE POCD REPRESENTATIVE BEFORE PROJECT APPROVAL AND/OR THE RELEASE OF THE PROJECTS PERFORMANCE BOND.

UTILITIES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTHS OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION, WHETHER OR NOT THESE UTILITIES ARE SHOWN ON THE PLANS. THE CONTRACTOR SHALL EXERCISE ALL CARE TO AVOID DAMAGE TO ANY UTILITY. IF CONFLICTS WITH EXISTING UTILITIES ARISE DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND THE POCD REPRESENTATIVE. ANY CHANGES REQUIRED SHALL BE APPROVED BY THE ENGINEER AND A POCD REPRESENTATIVE PRIOR TO COMMENCEMENT OF RELATED CONSTRUCTION ON THE PROJECT.

2. PER RCW SECTION 19.122, CALL 811 BETWEEN TEN (10) AND TWO (2) BUSINESS DAYS BEFORE BEGINNING EXCAVATION WHERE ANY UNDERGROUND UTILITIES MAY BE LOCATED. FAILURE TO DO SO COULD MEAN BEARING SUBSTANTIAL REPAIR COSTS.

PROJECT LOCATION

ABBREVIATIONS

A	ANGLE
APPROX	APPROXIMATELY
BMP(S)	BEST MANAGEMENT PRACTICES
CRZ	CRITICAL ROOT ZONE
CY	CUBIC YARD
D	DEPTH
DEG	DEGREE
DIA	DIAMETER
EA	EACH
EG	EXISTING GRADE
ESC	ECOLOGICAL SITE CLASSIFICATION
ESMT	EASEMENT
FG	FINISHED GRADE
FT	FOOT, FEET
GIS	GEOGRAPHIC INFORMATION SYSTEM
H	HORIZONTAL
ID	IDENTIFICATION
IN	INCH
IN-SITU	INTEGRATED DURING MATERIAL SYNTHESIS
L	LENGTH
LF	LINEAR FOOT
LIN	LINEAR
LT	LEFT
LWM	LARGE WOODY MATERIAL
MUTCH	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
N.T.S.	NOT TO SCALE
N/A	NOT APPLICABLE
NAD	NORTH AMERICAN DATUM
NAVD	NORTH AMERICAN VERTICAL DATUM
OHWM	ORDINARY HIGH WATER MARK
POCD	PEND OREILLE CONSERVATION DISTRICT
QTY	QUANTITY
RTP	ROCK TOE PROTECTION
RWC	REVISED CODE OF WASHINGTON
SF	SQUARE FOOT
SPEC	SPECIFICATION
ST	STREET
TESC	TEMPORARY EROSION AND SEDIMENT CONTROL
TOES	TOE OF BANK
TOPS	TOP OF BANK
TYP	TYPICAL
V	VERTICAL
W	WIDTH
W/	WITH
W/O	WITHOUT
WA	WASHINGTON
WSDOT	WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
WSE, WSEL	WATER SURFACE ELEVATION

PROPERTY OWNER	PROPERTY ADDRESS	PEND OREILLE COUNTY PARCEL NO.
JAMES KENSOK	251 SANDY SHORES RD NEWPORT, WA 99156	453233539012
JAMES TAYLOR	231 SANDY SHORES RD NEWPORT, WA 99156	453233539013
STEVEN NOLTING	72 SUNNYSIDE DRIVE NEWPORT, WA 99156	453233539021
GREG NOLTING	92 SUNNYSIDE DRIVE NEWPORT, WA 99156	453233539022
JOHNSON LIVING TRUST	112 SUNNYSIDE DRIVE NEWPORT, WA 99156	453233539023
DARLENE DONEGAN	122 SUNNYSIDE DRIVE NEWPORT, WA 99156	453233539024
COLNAL BLANCHARD	152 SUNNYSIDE DRIVE NEWPORT, WA 99156	453233567003

SHEET INDEX

100% BID SET

811 Know what's below. Call before you dig.

KAYLA H. KASSA — STATE OF WASHINGTON — 22022037 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED BY M. ZARECOR
DRAWN BY M. MECHAM
CHECKED BY E. ESTELLE

Osborn Consulting

101 S STEVENS ST STE 103, SPOKANE, WA 99201

www.osbornconsulting.com

NO.	DATE	REVISION	BY

POCD 2

121 N WASHINGTON AVE, NEWPORT, WA 99156

SUNNYSIDE & SANDY SHORES STREAMBANK STABILIZATION

COVER SHEET

JOB# / DWG: 30-230002

DATE: 06/04/2024

SCALE: H: N/A V: N/A

SHEET: 1 of 9

FILE NAME: C:\PW_OSBORN_WORKING\DMS31993\30-230002_P_POCD_SUNNYSIDE.DWG
PLOT TIME: 6/5/2024 12:17 PM
USER NAME:KAYLA KASSA

SEC. 34, T.32, R.45, PEND OREILLE COUNTY, WASHINGTON

PROPERTY POINTS		
POINT #	NORTHING	EASTING
2000	471427.74	2546758.36
2001	471421.29	2546811.76
2002	471434.49	2546813.65
2003	471444.11	2546838.76
2004	471522.24	2546850.80
2005	471556.03	2546830.97
2006	471635.31	2546844.76
2007	471638.39	2546827.03
2008	471608.86	2546821.89
2009	471610.90	2546805.35
2010	471576.24	2546797.51
2011	471575.19	2546802.94
2012	471540.53	2546796.73
2013	471541.38	2546789.60
2014	471494.08	2546778.83
2015	471494.59	2546802.89
2016	471526.41	2546806.87
2017	471524.92	2546828.36
2018	471518.65	2546832.03
2019	471457.40	2546822.60
2020	471444.97	2546788.23
2021	471421.29	2546811.76
2022	471419.99	2546820.23
2023	471408.95	2546869.26
2024	471403.33	2546902.69

PROPERTY POINTS		
POINT #	NORTHING	EASTING
2025	471402.24	2546910.58
2026	471385.46	2547009.54
2027	471353.98	2547006.87
2028	471340.59	2547105.71
2029	471368.18	2547108.07
2030	471357.61	2547183.10
2031	471353.91	2547257.69
2032	471296.03	2547252.66
2033	471300.82	2547176.94
2034	471312.57	2547100.43
2035	471322.57	2547104.02
2036	471336.10	2547004.85
2037	471340.74	2546970.86
2038	471342.95	2546905.63
2039	471356.50	2546831.10
2040	471373.09	2546740.55
2041	471423.10	2546510.31
2042	471434.28	2546466.17
2043	471455.65	2546438.73
2044	471475.83	2546339.21
2045	471500.09	2546259.26
2046	471546.90	2546096.19
2047	471592.40	2545964.43
2048	471574.98	2545959.46
2049	471592.78	2545898.70

PROPERTY POINTS		
POINT #	NORTHING	EASTING
2050	471611.52	2545838.12
2051	471626.39	2545842.43
2052	471634.87	2545816.97
2053	471677.44	2545833.60
2054	471653.03	2545904.58
2055	471634.70	2545976.52
2056	471621.62	2545972.78
2057	471609.69	2545969.36
2058	471564.06	2546101.64
2059	471493.32	2546343.53
2060	471473.29	2546442.31
2061	471464.17	2546474.12
2062	471485.88	2546479.86
2063	471474.64	2546529.57
2064	471467.68	2546558.85
2065	471461.55	2546586.25
2066	471456.03	2546605.61
2067	471450.32	2546628.94
2068	471435.71	2546690.27
2069	471428.93	2546739.02
2070	471427.74	2546758.36

PROPERTY OWNER	PROPERTY ADDRESS	PEND OREILLE COUNTY PARCEL NO.	TOTAL AREA (SF)	RIPARIAN ENHANCMENT AREA (SF)	TEMPORARY CONSTRUCTION AREA (SF)
JAMES KENSOK	251 SANDY SHORES RD NEWPORT, WA 99156	453233539012	15,032	4,113	-
JAMES TAYLOR	231 SANDY SHORES RD NEWPORT, WA 99156	453233539013	13,098	4,674	-
STEVEN NOLTING	72 SUNNYSIDE DRIVE NEWPORT, WA 99156	453233539021	15,104	4,079	-
GREG NOLTING	92 SUNNYSIDE DRIVE NEWPORT, WA 99156	453233539022	12,982	3,487	-
JOHNSON LIVING TRUST	112 SUNNYSIDE DRIVE NEWPORT, WA 99156	453233539023	14,535	3,888	-
DARLENE DONEGAN	122 SUNNYSIDE DRIVE NEWPORT, WA 99156	453233539024	15,805	3,976	-
COLNAL BLANCHARD	152 SUNNYSIDE DRIVE NEWPORT, WA 99156	453233567003	19,290	5,341	-
RICHARD KOKER	124 SUNNYSIDE DRIVE NEWPORT, WA 99156	453233569001	13,526	4,500	7,152
JEFFERY NOLTING	142 SUNNYSIDE DRIVE NEWPORT, WA 99156	453233569002	13,393	4,523	-
JEFFERY LOONEY	192 SUNNYSIDE DRIVE NEWPORT, WA 99156	453234569005	14,061	4,252	-
JUDI LEEPER	202 SUNNYSIDE DRIVE NEWPORT, WA 99156	453234569006	13,898	4,336	-

PROPERTY EXHIBIT NOTES:

1. ALL PARCEL BOUNDARIES ARE DERIVED FROM PUBLICLY AVAILABLE PEND OREILLE COUNTY GIS DATA. THE PARCEL BOUNDARIES HAVE NOT BEEN SURVEYED OR OTHERWISE VERIFIED AGAINST PROPERTY LEGAL DESCRIPTIONS.
2. FOR THE PURPOSES OF THIS EXHIBIT, RIPARIAN ENHANCEMENT AREAS WERE ASSIGNED TO A PROPERTY OWNER BY EXTENDING THE PARCEL LINES THAT DIVIDE EACH ADJACENT PROPERTY TOWARDS THE PEND OREILLE RIVER.
3. THE TEMPORARY CONSTRUCTION AREA SHOWN ON PARCELS 453233569004, 453233539019, 453233539018, 453233539017, 453233539015 WILL BE BELOW THE ORDINARY HIGH WATER MARK. DUE TO THIS AN ACCESS AGREEMENT WILL NOT BE REQUIRED FOR THESE PARCELS, AND THE AREAS ARE NOT INCLUDED IN THE TABLE.

811 Know what's below. Call before you dig.

100% BID SET

KAYLA H. KASSA — STATE OF WASHINGTON — 22022037 — REGISTERED PROFESSIONAL ENGINEER

FILE NAME: C:\PW_OSBORN_WORKING\DWS31993\30-230002_P_POCD_SUNNYSIDE.DWG
PLOT TIME: 6/5/2024 12:17 PM
USER NAME:KAYLA KASSA

DESIGNED BY M. ZARECOR	Osborn Consulting	101 S STEVENS ST STE 103, SPOKANE, WA 99201			
DRAWN BY M. MECHAM		www.osbornconsulting.com			
CHECKED BY E. ESTELLE			NO.	DATE	REVISION BY

POCD 2 — 121 N WASHINGTON AVE, NEWPORT, WA 99156

SUNNYSIDE & SANDY SHORES STREAMBANK STABILIZATION

PROPERTY EXHIBIT

JOB# / DWG	30-230002
DATE	06/04/2024
SCALE	H: 1" = 40' V: N/A
SHEET	2 of 9

SEC. 34, T.32, R.45, PEND OREILLE COUNTY, WASHINGTON

QUANTITY TABLE 1[1]		
ITEM DESCRIPTION	ITEM UNIT	ITEM QTY.
PROJECT AREA	ACRE	0.43
BANK STABILIZATION LENGTH	FT	152
CUT VOLUME	CY	0
FILL VOLUME	CY	98
ROCK TOE PROTECTION	CY	11.2
LOG W/ ROOTWAD	EACH	4
LOG W/O ROOTWAD	EACH	2
COIR LOGS	EACH	8

[1] QUANTITIES SHOWN IN TABLE APPLY TO THIS SHEET ONLY

LEGEND

- SILT FENCE
- PROPOSED TOE OF SLOPE
- PROJECT LIMITS
- OHWM — ORDINARY HIGH WATER MARK
- TOES — EXISTING TOE OF SLOPE
- TOPS — EXISTING TOP OF SLOPE
- EXISTING PARCEL LINE
- ROCK TOE PROTECTION
- GROUP 1 PLANTING AREA
- GROUP 2 PLANTING AREA
- COIR LOG
- LOG WITH ROOTWAD
- LOG WITHOUT ROOTWAD
- TEMPORARY ACCESS PATH
- STAGING AREA
- TEMPORARY ACCESS PATH WITH DECK MATS
- STABILIZED CONSTRUCTION ENTRANCE
- EXISTING TREE
- CRITICAL ROOT ZONE

N

SCALE: 1" = 20'
0 20 40 60

GENERAL NOTES:

1. CONTRACTOR MAY NOT ENTER AREAS OUTSIDE OF THE PROJECT LIMITS WITHOUT WRITTEN PERMISSION FROM THE LANDOWNER AND POCD.
2. SEE SHEET 7 FOR LWM DETAILS, LAYOUT POINT TABLE, AND DIMENSIONS.
3. ALL EXISTING TREES ARE TO REMAIN AND BE PROTECTED IN PLACE UNLESS OTHERWISE MARKED.
4. ALL AREAS OUTSIDE OF THE PLANTING LIMITS MUST BE RESTORED TO PRE-PROJECT CONDITION

100% BID SET

811 Know what's below. Call before you dig.

KAYLA H. KASSA — STATE OF WASHINGTON — 22022037 — REGISTERED PROFESSIONAL ENGINEER

FILE NAME: C:\PW_OSBORN_WORKING\DMS31993\30-230002_P_POCD_SUNNYSIDE.DWG
PLOT TIME: 6/5/2024 12:17 PM
USER NAME:KAYLA KASSA

DESIGNED BY M. ZARECOR DRAWN BY M. MECHAM CHECKED BY E. ESTELLE	Osborn Consulting	101 S STEVENS ST STE 103, SPOKANE, WA 99201 www.osbornconsulting.com	NO.	DATE	REVISION	BY	POCD 2 — 121 N WASHINGTON AVE, NEWPORT, WA 99156

SUNNYSIDE & SANDY SHORES STREAMBANK STABILIZATION
SITE PLAN

JOB# / DWG	DATE
30-230002	06/04/2024
SCALE H: 1" = 20' V: N/A	SHEET 3 of 9

SEC. 34, T.32, R.45, PEND OREILLE COUNTY, WASHINGTON

QUANTITY TABLE 2[1]		
ITEM DESCRIPTION	ITEM UNIT	ITEM QTY.
PROJECT AREA	ACRE	0.72
BANK STABILIZATION LENGTH	FT	542
CUT VOLUME	CY	0
FILL VOLUME	CY	365
ROCK TOE PROTECTION	CY	40.0
LOG W/ ROOTWAD	EACH	15
LOG W/O ROOTWAD	EACH	5
COIR LOGS	EACH	34

[1] QUANTITIES SHOWN IN TABLE APPLY TO THIS SHEET ONLY

LEGEND

- SILT FENCE
- PROPOSED TOE OF SLOPE
- PROJECT LIMITS
- OHWM — ORDINARY HIGH WATER MARK
- TOES — EXISTING TOE OF SLOPE
- TOPS — EXISTING TOP OF SLOPE
- EXISTING PARCEL LINE
- ROCK TOE PROTECTION
- GROUP 1 PLANTING AREA
- GROUP 2 PLANTING AREA
- COIR LOG
- LOG WITH ROOTWAD
- LOG WITHOUT ROOTWAD
- TEMPORARY ACCESS PATH
- STAGING AREA
- TEMPORARY ACCESS PATH WITH DECK MATS
- STABILIZED CONSTRUCTION ENTRANCE
- EXISTING TREE
- CRITICAL ROOT ZONE

N

SCALE: 1" = 20'
0 20 40 60

GENERAL NOTES:

1. CONTRACTOR MAY NOT ENTER AREAS OUTSIDE OF THE PROJECT LIMITS WITHOUT WRITTEN PERMISSION FROM THE LANDOWNER AND POCD.
2. SEE SHEET 7 FOR LWM DETAILS, LAYOUT POINT TABLE, AND DIMENSIONS.
3. ALL EXISTING TREES ARE TO REMAIN AND BE PROTECTED IN PLACE UNLESS OTHERWISE MARKED.
4. ALL AREAS OUTSIDE OF THE PLANTING LIMITS MUST BE RESTORED TO PRE-PROJECT CONDITION

100% BID SET

811 Know what's below. Call before you dig.

KAYLA H. KASSA — STATE OF WASHINGTON — 22022037 — REGISTERED PROFESSIONAL ENGINEER

FILE NAME: C:\PW_OSBORN_WORKING\DMS31993\30-230002_P_POCD_SUNNYSIDE.DWG
PLOT TIME: 6/5/2024 12:16 PM
USER NAME:KAYLA KASSA

DESIGNED BY M. ZARECOR DRAWN BY M. MECHAM CHECKED BY E. ESTELLE	Osborn Consulting	101 S STEVENS ST STE 103, SPOKANE, WA 99201 www.osbornconsulting.com	NO.	DATE	REVISION	BY	POCD 2 — 121 N WASHINGTON AVE, NEWPORT, WA 99156

SUNNYSIDE & SANDY SHORES STREAMBANK STABILIZATION
SITE PLAN

JOB# / DWG	DATE
30-230002	06/04/2024
SCALE H: 1" = 20' V: N/A	SHEET 4 of 9

SEC. 34, T.32, R.45, PEND OREILLE COUNTY, WASHINGTON

QUANTITY TABLE 3[1]		
ITEM DESCRIPTION	ITEM UNIT	ITEM QTY.
PROJECT AREA	ACRE	0.40
BANK STABILIZATION LENGTH	FT	155
CUT VOLUME	CY	0
FILL VOLUME	CY	98
ROCK TOE PROTECTION	CY	7.0
LOG W/ ROOTWAD	EACH	6
LOG W/O ROOTWAD	EACH	2
COIR LOGS	EACH	6

[1] QUANTITIES SHOWN IN TABLE APPLY TO THIS SHEET ONLY

LEGEND

- SILT FENCE
- PROPOSED TOE OF SLOPE
- PROJECT LIMITS
- OHWM — ORDINARY HIGH WATER MARK
- TOES — EXISTING TOE OF SLOPE
- TOPS — EXISTING TOP OF SLOPE
- EXISTING PARCEL LINE
- ROCK TOE PROTECTION
- GROUP 1 PLANTING AREA
- GROUP 2 PLANTING AREA
- COIR LOG
- LOG WITH ROOTWAD
- LOG WITHOUT ROOTWAD
- TEMPORARY ACCESS PATH
- STAGING AREA
- TEMPORARY ACCESS PATH WITH DECK MATS
- STABILIZED CONSTRUCTION ENTRANCE
- EXISTING TREE
- CRITICAL ROOT ZONE

N

SCALE: 1" = 20'

0 20 40 60

GENERAL NOTES:

1. CONTRACTOR MAY NOT ENTER AREAS OUTSIDE OF THE PROJECT LIMITS WITHOUT WRITTEN PERMISSION FROM THE LANDOWNER AND POCD.
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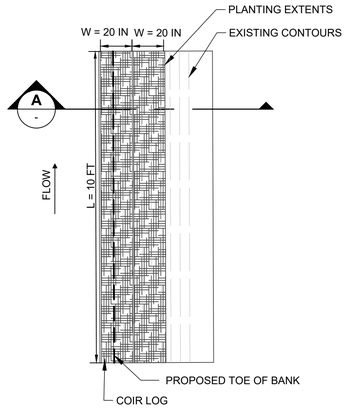
DESIGNED BY M. ZARECOR DRAWN BY M. MECHAM CHECKED BY E. ESTELLE	Osborn Consulting	101 S STEVENS ST STE 103, SPOKANE, WA 99201 www.osbornconsulting.com	NO.	DATE	REVISION	BY	POCD 2 — 121 N WASHINGTON AVE, NEWPORT, WA 99156

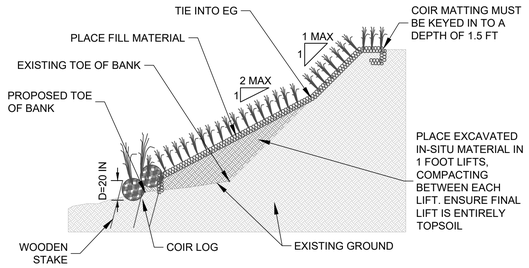
SUNNYSIDE & SANDY SHORES STREAMBANK STABILIZATION

SITE PLAN

JOB# / DWG	DATE
30-230002	06/04/2024
SCALE H: 1" = 20' V: N/A	SHEET 5 of 9



PLAN VIEW

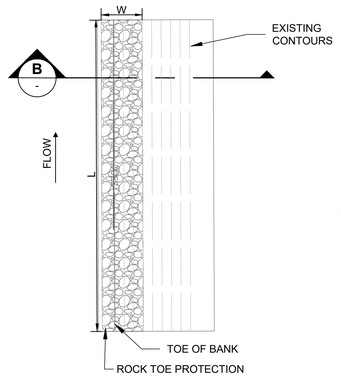


SECTION VIEW A

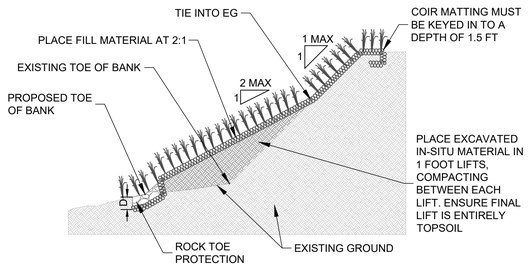
CONSTRUCTION NOTES

1. STRIP AND STOCKPILE TOP SOIL TO A DEPTH OF AT LEAST 1 FOOT FOR THE ENTIRE COIR LOG TOE PROTECTION FOOTPRINT.
2. DIG A TRENCH FOR THE COIR LOGS ALONG THE EXISTING TOE OF THE BANK. THE TRENCH SHOULD BE AT A DEPTH OF HALF THE COIR LOG DIAMETER. PLACE COIR MATTING PER MANUFACTURER INSTRUCTIONS BELOW COIR LOG TOE PROTECTION.
3. INSTALL COIR LOGS AT THE TOE OF THE SLOPE TO A DEPTH OF 10 IN (1/2 HEIGHT OF LOG).
4. COIR LOGS SHALL BE PLACED IN STACKS OF TWO STAKED IN WITH WOODEN STAKES AT A MINIMUM DEPTH OF 36 IN. TIE THE STAKE TO THE COIR LOG WITH COIR TWINE, BY WEAVING THE TWINE THROUGH THE NETTING ON THE COIR LOG. STAKES SHOULD BE INSTALLED STAGGERING AT 24 IN (OR 12 IN ON ALTERNATING SIDES). STAKES SHOULD BE DRIVEN FLUSH WITH THE TOP OF THE COIR LOG.
5. TIE THE END OF THE COIR LOGS WITH COIR TWINE TO PROVIDE A CONTINUOUS LINEAR SYSTEM.
6. PLACE FILL MATERIAL AT A MAXIMUM OF 2:1 SLOPE FOLLOWING SPECIFICATION SECTIONS 2-03 AND 8-02.
7. THE COIR MATTING USED FOR THIS INSTALLATION MUST BE COIR MAT 70, OR AN APPROVED ALTERNATIVE. COIR MATTING MUST BE STAKED ACCORDING TO THE MANUFACTURER SPECIFICATIONS. SEE TESC DETAIL ON SHEET 8 FOR INSTALLATION SPECIFICS. INSTALL PLANTS ACCORDING TO SPECIFICATIONS SECTION 8-01.3.(3) AND 8-02. PLANT BANKS AS SPECIFIED ON SHEET 9.

1 COIR LOG TOE PROTECTION
2,3,4 N.T.S.



PLAN VIEW



SECTION VIEW B: ROCK TOE PROTECTION PLACEMENT

ROCK TOE PROTECTION LAYOUT TABLE

RTP ID	DEPTH	LENGTH	WIDTH	VOLUME	Class
	D - FT	L - FT	W - FT	CY	N/A
RTP1	1	23	8	6.8	Class A
RTP2	1	14	8	4.1	Class A
RTP3	1	20	8	5.9	Class A
RTP4	1	30	8	8.9	Class A
RTP5	1	33	8	9.8	Class A
RTP6	1	18	8	5.3	Class A
RTP7	1	19	8	5.6	Class A
RTP8	1	12	8	3.6	Class A
RTP9	1	8	8	2.4	Class A
RTP10	1	15	8	4.4	Class A

CONSTRUCTION NOTES

1. STRIP AND STOCKPILE TOP SOIL TO A DEPTH OF AT LEAST 1 FOOT FOR THE ENTIRE ROCK TOE PROTECTION FOOTPRINT.
2. EXCAVATE TRENCH IF NEEDED AND PLACE COIR MATTING BELOW ROCK TOE PROTECTION PER MANUFACTURER SPECIFICATIONS.
3. INSTALL ROCK TOE PROTECTION. FILL VOIDS WITH STOCKPILED TOP SOIL. REFER TO "ROCK TOE PROTECTION LAYOUT TABLE" FOR ROCK TOE PROTECTION SIZING AND INSTALLATION DIMENSIONS.
4. THE COIR MATTING USED FOR THIS INSTALLATION MUST BE COIR MAT 70, OR AN APPROVED ALTERNATIVE. COIR MATTING MUST BE STAKED ACCORDING TO THE MANUFACTURER SPECIFICATIONS. SEE TESC DETAIL ON SHEET 8 FOR INSTALLATION SPECIFICS.
5. PLACE FILL MATERIAL AT A MAXIMUM OF 2:1 SLOPE FOLLOWING SPECIFICATION SECTIONS 2-03 AND 8-02.
6. PLANT BANKS AS SPECIFIED IN THE PLANTING DETAILS AND VEGETATION SCHEDULE.

2 ROCK TOE PROTECTION
2,3,4 N.T.S.

811 Know what's below. Call before you dig.

100% BID SET

KAYLA H KASSA, STATE OF WASHINGTON, 22022037, REGISTERED PROFESSIONAL ENGINEER

DESIGNED BY M. ZARECOR	Osborn Consulting	101 S STEVENS ST STE 103, SPOKANE, WA 99201	
DRAWN BY M. MECHAM		www.osbornconsulting.com	
CHECKED BY E. ESTELLE			

NO.	DATE	REVISION	BY

POCD 2 — 121 N WASHINGTON AVE, NEWPORT, WA 99156

SUNNYSIDE & SANDY SHORES STREAMBANK STABILIZATION

CONSTRUCTION DETAILS

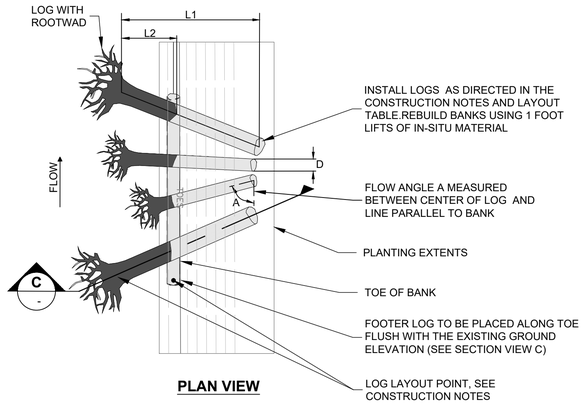
JOB# / DWG	30-230002
DATE	06/04/2024
SCALE	H: N/A V: N/A
SHEET	6 of 9

FILE NAME: C:\PW_OSBORN_WORKING\DMS31993\30-230002_P_POCD_SUNNYSIDE.DWG
PLOT TIME: 6/5/2024 12:18 PM
USER NAME:KAYLA KASSA

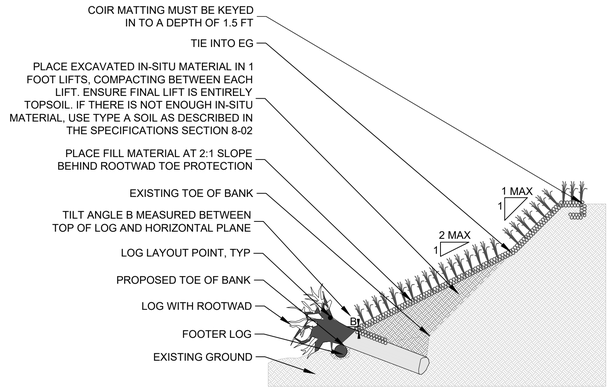
ROOTWAD TOE PROTECTION LAYOUT TABLE

LOG ID	LOG WITH ROOTWAD	ANCHOR TYPE	LOG LAYOUT POINT NORTHING	LOG LAYOUT POINT EASTING	DIAMETER[2]	TOTAL LENGTH[1, 2]	EXPOSED LENGTH[1, 2]	FLOW ANGLE[2]	TILT ANGLE[2]
	N/A	N/A	FT	FT	D- FT	L1-FT	L2-FT	A - DEG	B-DEG
LWM 1	NO	DB-88	471321.5	2547158.0	1.5	15	0.0	0	0
LWM 2	YES	DB-88	471321.9	2547165.9	2.0	10	0.7	70	3
LWM 3	NO	DB-88	471324.5	2547140.4	1.5	25	0.0	0	0
LWM 4	YES	DB-88	471324.0	2547134.3	2.00	10	1.2	69	3
LWM 5	YES	DB-88	471321.3	2547125.8	1.50	15	5.2	92	0
LWM 6	YES	DB-88	471326.0	2547120.4	1.50	12	1.5	91	2
LWM 7	NO	DB-88	471358.1	2546957.2	1.5	25	0.0	0	0
LWM 8	YES	DB-88	471357.6	2546953.5	2.00	10	1.2	70	3
LWM 9	YES	DB-88	471354.8	2546945.0	1.50	15	5.2	93	0
LWM 10	YES	DB-88	471359.6	2546939.6	1.50	12	1.2	92	2
LWM 11	NO	DB-88	471376.2	2546858.2	1.5	25	0.0	0	0
LWM 12	YES	DB-88	471376.0	2546851.5	2.00	10	1.2	70	3
LWM 13	YES	DB-88	471373.2	2546843.0	1.50	15	5.2	93	0
LWM 14	YES	DB-88	471376.8	2546836.9	1.50	12	2.6	92	2
LWM 15	NO	DB-88	471401.8	2546690.2	1.5	25	0.0	0	0
LWM 16	YES	DB-88	471399.1	2546682.7	2.00	10	1.7	79	3
LWM 17	YES	DB-88	471395.9	2546674.1	1.50	15	5.2	103	0
LWM 18	YES	DB-88	471398.4	2546667.9	1.50	12	2.6	102	2
LWM 19	NO	DB-88	471418.4	2546602.4	1.5	20	0.0	0	0
LWM 20	YES	DB-88	471418.1	2546597.0	2.00	10	1.2	63	3
LWM 21	YES	DB-88	471415.4	2546590.4	1.50	15	5.2	87	0
LWM 22	YES	DB-88	471420.1	2546585.0	1.50	12	2.5	86	2
LWM 23	NO	DB-88	471446.6	2546505.2	1.5	25	0.0	0	0
LWM 24	YES	DB-88	471447.5	2546497.2	2.00	10	1.2	63	3
LWM 25	YES	DB-88	471444.7	2546488.7	1.50	15	5.2	86	0
LWM 26	YES	DB-88	471449.5	2546483.3	1.50	12	2.6	85	2
LWM 27	NO	DB-88	471611.2	2545915.9	1.5	25	0.0	0	0
LWM 28	YES	DB-88	471611.1	2545912.3	2.00	10	1.2	70	3
LWM 29	YES	DB-88	471609.5	2545901.6	1.50	15	5.2	93	0
LWM 30	YES	DB-88	471613.8	2545896.5	1.50	12	2.6	92	2
LWM 31	NO	DB-88	471619.3	2545891.0	1.5	25	0.0	0	0
LWM 32	YES	DB-88	471619.4	2545883.8	2.00	10	1.2	70	3
LWM 33	YES	DB-88	471618.5	2545875.4	1.50	15	5.2	93	0
LWM 34	YES	DB-88	471622.3	2545870.2	1.50	12	2.6	92	2

[1] LENGTH MEASUREMENTS DO NOT INCLUDE THE ROOTWAD, AND BEGIN AT THE LAYOUT POINT.
[2] SEE DETAIL PLAN VIEW AND SECTION VIEW FOR DIMENSION LOCATIONS



PLAN VIEW



SECTION VIEW C: ROOTWAD TOE PROTECTION PLACEMENT

CONSTRUCTION NOTES:

1. STRIP AND STOCKPILE TOP SOIL TO A DEPTH OF AT LEAST 1 FOOT FOR THE ENTIRE ROOTWAD TOE PROTECTION FOOTPRINT.
2. DIG A TRENCH FOR THE HORIZONTAL FOOTER LOG ALONG THE EXISTING TOE OF THE BANK. THE TRENCH SHOULD BE DEEP ENOUGH FOR THE FOOTER LOG TO BE FLUSH WITH THE EXISTING GROUND ON THE STREAM BED SIDE OF THE LOG. PLACE FOOTER LOG IN TRENCH.
3. DIG A TRENCH FOR THE UPSTREAM-MOST ROOTWAD THAT IS WIDER THAN THE LOG DIAMETER (D), LONGER THAN THE BURIED LENGTH (L1-L2), AND AT THE CORRECT FLOW ANGLE (A) . THE TRENCH SHOULD BE SLOPED AT THE TILT ANGLE (B), STARTING AT THE TOP OF THE FOOTER LOG.
4. PLACE ROOTWAD IN THE TRENCH SO THAT IT RESTS ON TOP OF THE FOOTER LOG PER THE EXPOSED LENGTH AND TILT ANGLES SPECIFIED IN THE ROOTWAD TOE PROTECTION LAYOUT TABLE.
5. MEASURE ALL DIMENSIONS LISTED IN THE LOG DETAIL TABLE TO CONFIRM CORRECT LOG PLACEMENT PRIOR TO BACKFILLING AND RE-GRADING THE BANK.
6. REPEAT STEPS 2 THROUGH 5 FOR EACH ADDITIONAL ROOTWAD.
7. ONCE ALL ROOTWADS HAVE BEEN PLACED, INSTALL DUCKBILL ANCHOR TO EACH LOG PER MANUFACTURER SPECIFICATION, SEE SPECIFICATION SECTION 8-34.3(4). REBUILD THE BANKS USING THE IN-SITU MATERIAL AND MATCHING THE EXISTING CONDITIONS. IF EXISTING BANK SLOPE EXCEEDS 2H:1V, REGRADE BANKS AT A 2:1 SLOPE FOLLOWING SPECIFICATION SECTIONS 2-03 AND 8.02. PLACE THE FILL MATERIAL IN 1 FOOT LIFTS, COMPACTING BETWEEN THE PLACEMENT OF EACH LAYER. EXCESS WOODY MATERIAL MAY BE PLACED IN THE BACKFILL AREA IF PRESENT. ENSURE PREVIOUSLY STOCKPILED TOP SOIL IS PLACED AT THE BANK SURFACE.
8. THE COIR MATTING USED FOR THIS INSTALLATION MUST BE COIR MAT 70, OR AN APPROVED ALTERNATIVE. COIR MATTING MUST BE STAKED ACCORDING TO THE MANUFACTURER SPECIFICATIONS. SEE EROSION AND SEDIMENT CONTROL DETAIL ON SHEET 8 FOR INSTALLATION SPECIFICS.
9. PLANT BANKS AS SPECIFIED IN THE PLANTING DETAILS AND VEGETATION SCHEDULE.
10. REFER TO ROOTWAD TOE PROTECTION LAYOUT TABLE FOR LOG SIZING AND INSTALLATION DIMENSIONS.
11. THE LOG LAYOUT POINT IS LOCATED AT THE CROWN OF THE ROOTWAD.

3 / 2,3,4 ROOTWAD TOE PROTECTION
N.T.S.

Know what's below. Call before you dig.

100% BID SET

KYLA H. KASSA
STATE OF WASHINGTON
22022037
REGISTERED PROFESSIONAL ENGINEER

DESIGNED BY	DRAWN BY	CHECKED BY
M. ZARECOR	M. MECHAM	E. ESTELLE

Osborn Consulting
101 S STEVENS ST STE 103, SPOKANE, WA 99201
www.osbornconsulting.com

NO.	DATE	REVISION	BY

POCD 2
121 N WASHINGTON AVE, NEWPORT, WA 99156

SUNNYSIDE & SANDY SHORES STREAMBANK STABILIZATION
CONSTRUCTION DETAILS

JOB# / DWG	DATE
30-230002	06/04/2024
SCALE H: N/A V: N/A	SHEET 7 of 9

FILE NAME: C:\PW_OSBORN_WORKING\DMS31993\30-230002_P_POCD_SUNNYSIDE.DWG
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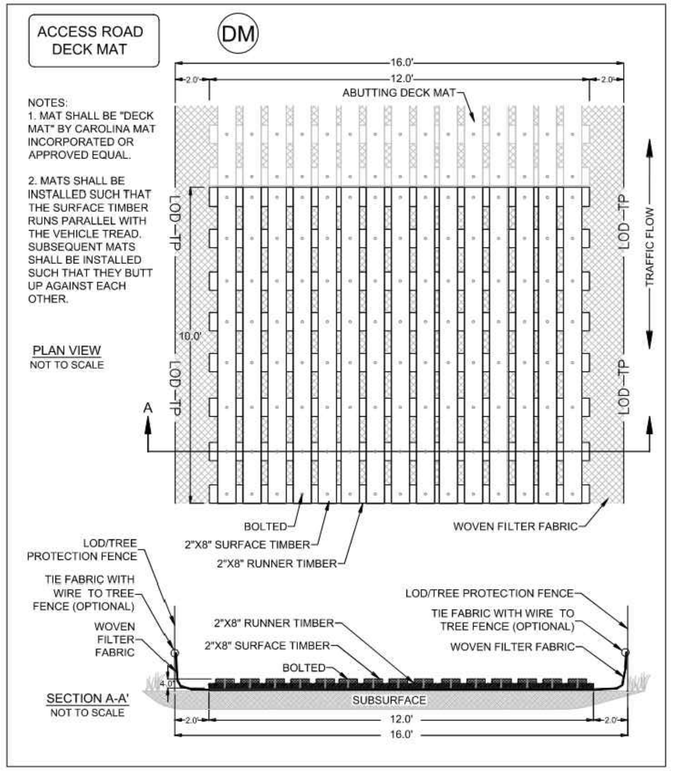
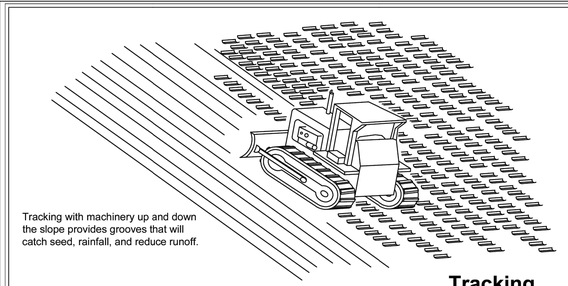
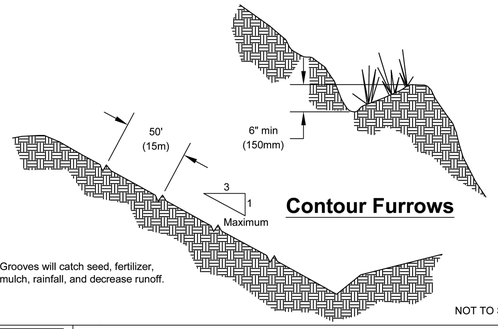




Tracking



Contour Furrows

NOT TO SCALE

DEPARTMENT OF ECOLOGY
State of Washington

Surface Roughening by Tracking and Contour Furrows

Revised June 2016

TREE PROTECTION NOTES

1. DO NOT USE THE AREA BEYOND THE PROJECT LIMITS FOR ANY REASON UNLESS APPROVED IN WRITING BY THE OWNER.
2. FOR TREES OUTSIDE THE PROJECT AREA, PREVENT FLOODING OF THE SOIL AND PROTECT ROOT AREAS FROM RUNOFF OF OIL OR OTHER CONTAINMENTS.
3. THE FOLLOWING STEPS SHALL BE IMPLEMENTED FOR REMOVAL OF TREES WITHIN THE CRITICAL ROOT ZONE OF A TREE TO REMAIN:
   - 3.1. REMOVE TREE BRANCHES OF TREES TO BE REMOVED TO AVOID DAMAGE TO THE CANOPY OF TREES TO REMAIN.
   - 3.2. NO HEAVY MACHINERY SHALL BE USED FOR THE TREE REMOVAL, ONLY HAND TOOLS MY BE UTILIZED.
   - 3.3. GRIND STUMPS TO 6 INCHES BELOW FINISHED GRADE. DO NOT EXCAVATE.
4. CUT OFF ROOTS CLEANLY WITH APPROPRIATE TOOL WHEN ROOTS ARE EXPOSED DUE TO APPROVED GRADING ACTIVITIES. AVOID ALL TEARS AND BREAKS IN ROOT SURFACES. DURING THE TIME OF EXPOSURE KEEP ROOTS MOIST WITH WET MULCH, COMPOST, OR TOPSOIL. HAND DIG TRENCHES IN AREAS WITH EXTENSIVE ROOTS. LEAVE INTACT AND UNDAMAGED ROOTS LARGER THAN TWO INCHES IN DIAMETER.
5. CONTRACTOR SHALL NOTIFY POCD IF ANY TREES TO REMAIN ARE IMPACTED DURING CONSTRUCTION.
6. AREAS OUTSIDE OF THE PROJECT LIMITS MUST REMAIN FREE OF WEEDS AND TRASH THROUGHOUT CONSTRUCTION.
7. DO NOT ALTER GRADES OUTSIDE OF THE PROJECT LIMITS.
8. IN AREAS WHERE THE TEMPORARY ACCESS ROAD IS WITHIN THE CRZ OF TREES TO REMAIN, AND AS SHOWN ON THE SITE PLANS:
   - 8.1. A 1 FOOT THICK LAYER OF MULCH OR HOG FUEL MUST BE PLACED ON THE ACCESS ROAD.
   - 8.2. DECK MATS MEETING THE SPECIFICATIONS OF THE ACCESS ROAD DECK MAT DETAIL ON THIS SHEET, OR AN ALTERNATIVE APPROVED BY THE ENGINEER, MUST BE PLACED ON TOP OF THE MULCH OR HOG FUEL LAYER.

1 - TREE PROTECTION
N.T.S.

TEMPORARY EROSION AND SEDIMENT CONTROL NOTES

1. IN ADDITION TO THE BMP DETAILS SHOWN ON THIS SHEET AND THE ENCLOSED WSDOT TESC DETAIL SHEETS, THE FOLLOWING BMPS MUST BE IMPLEMENTED AS DESCRIBED IN THE 2019 STORMWATER MANAGEMENT MANUAL FOR EASTERN WASHINGTON (2019 SWMMEW):
   - 1.1. BMP C101E: PRESERVING NATURAL VEGETATION
   - 1.2. BMP C120E: TEMPORARY AND PERMANENT SEEDING
   - 1.3. BMP C150E: MATERIALS ON HAND
2. APPROVAL OF THIS ESC PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G., SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.).
3. THE IMPLEMENTATION OF THIS ESC PLAN AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC BMPS IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED AND VEGETATION/LANDSCAPING IS ESTABLISHED.
4. CLEARLY FLAG THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE APPLICANT FOR THE DURATION OF CONSTRUCTION.
5. CONSTRUCT THE ESC BMPS SHOWN ON THIS PLAN IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM, ROADWAYS, OR VIOLATE APPLICABLE WATER STANDARDS.
6. THE ESC BMPS SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, UPGRADE THESE ESC BMPS AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT-LADEN WATER DO NOT LEAVE THE SITE.
7. THE APPLICANT SHALL INSPECT THE ESC BMPS DAILY AND MAINTAIN THEM AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONALITY.
8. INSPECT AND MAINTAIN THE ESC BMPS ON INACTIVE SITES A MINIMUM OF ONCE A MONTH OR WITHIN THE 48 HOURS FOLLOWING A MAJOR STORM EVENT (24-HOUR STORM EVENT WITH A 10 YEAR OR GREATER RECURRENCE INTERVAL).
9. INSTALL STABILIZED CONSTRUCTION ENTRANCES AT THE BEGINNING OF CONSTRUCTION AND MAINTAIN FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.

2 - TEMPORARY EROSION AND SEDIMENT CONTROL
N.T.S.

100% BID SET

811 Know what's below. Call before you dig.

KAYLA H. KASSA — STATE OF WASHINGTON — 23022037 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED BY M. ZARECOR	Osborn Consulting	101 S STEVENS ST STE 103, SPOKANE, WA 99201	
DRAWN BY M. MECHAM		www.osbornconsulting.com	
CHECKED BY E. ESTELLE			

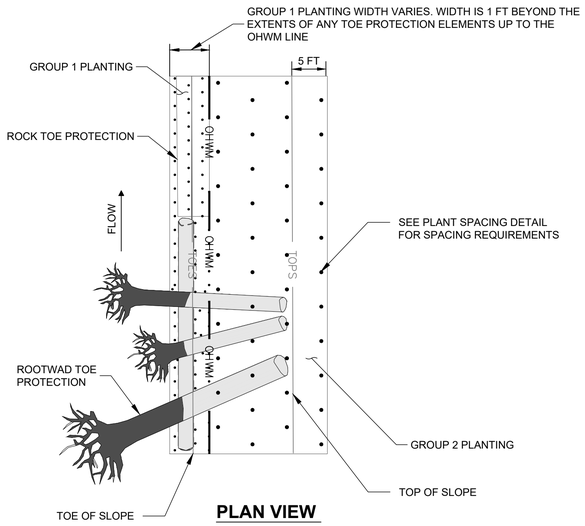
NO.	DATE	REVISION	BY

POCD 2 — 121 N WASHINGTON AVE, NEWPORT, WA 99156

SUNNYSIDE & SANDY SHORES STREAMBANK STABILIZATION
CONSTRUCTION DETAILS

JOB# / DWG: 30-230002
DATE: 06/04/2024
SCALE: H: N/A V: N/A
SHEET: 8 of 9

FILE NAME: C:\PW_OSBORN_WORKING\DMS31993\30-230002_P_POCD_SUNNYSIDE.DWG
PLOT TIME: 6/5/2024 12:18 PM
USER NAME:KAYLA KASSA

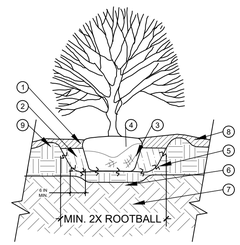


PLAN VIEW

PLANTING NOTES:

1. PLANTING MUST BE DONE WHEN STOCK IS DORMANT BETWEEN OCTOBER 1 AND MARCH 31.
2. PLANTING ROWS SHOULD BE OFFSET AS SHOWN IN THE PLAN VIEW DETAIL.
3. IF AN AREA CAN NOT BE PLANTED DUE TO EXISTING VEGETATION OR PHYSICAL BARRIERS (E.G. LOGS), THE EXCESS PLANTS SHOULD BE PLANTED IN THE NEAREST AVAILABLE LOCATION. THESE UN-PLANTABLE AREAS DO NOT REDUCE THE QUANTITY OF PLANTS SPECIFIED FOR THE SITE IN THE VEGETATION SCHEDULE.
4. ANY INVASIVE PLANTS WITHIN THE PLANTING AREA SHALL BE REMOVED BY HAND PRIOR TO PLANTING.
5. REFER TO THE PLANTING SCHEDULE FOR SPECIES AND QUANTITIES AND SPACING IN EACH PLANTING GROUP. REFER TO THE PLANT SPACING DETAIL FOR PLANT PLACEMENT.
6. CONTAINER PLANTS MUST BE PLANTED ACCORDING TO SECTION 8-02.
7. LIVESTAKES MUST BE PLANTED ACCORDING TO THE LIVESTAKE PLANTING DETAIL.

1 NATIVE PLANTING GROUPS
N.T.S.



KEYNOTES:

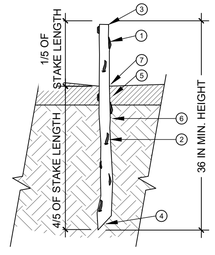
1. 3 IN MIN. TOP MULCH - FEATHER BACK FROM STEM.
2. PREPARED PLANTING SOIL.
3. REMOVE BURLAP.
4. SET SO FIRST ROOT EMERGING FROM MAIN STEM IS 1 IN ABOVE FINISHED GRADE.
5. ROUGHEN SIDES AND BOTTOM OF HOLE.
6. COMPACT SOIL FOR FIRM BASE.
7. PREPARED SUBGRADE AND PLANTING SOIL.
8. WHEN PLANTING SHRUBS WITHIN PLANTING BED, EXTEND TOP MULCH TO EDGE OF BED.
9. 6 IN BERM AROUND PLANTING PIT.

GENERAL NOTES:

A. DO NOT PLANT IN WET CONDITIONS, PROVIDE DRAINAGE FROM EACH PLANTING PIT IF NECESSARY.

B. SPACING TO BE TRIANGULAR UNLESS SHOWN OTHERWISE.

2 1-GALLON PLANTING
N.T.S.



KEYNOTES:

1. MINIMUM 2 NODES ABOVE GROUND.
2. MINIMUM 2 NODES UNDERGROUND.
3. SQUARE CUT ON TOP.
4. ANGLE CUT 30° ON BOTTOM.
5. TAMP SOIL AND COMPOST MULCH AROUND CUTTING FOR FULL CONTACT AT NODES
6. PRE-DIG HOLES WITH POLE IF EXISTING SOIL IS TOO HARD FOR EASY INSERTION.
7. CUTTINGS TO BE PLANTED PERPENDICULAR TO GROUND SURFACE.

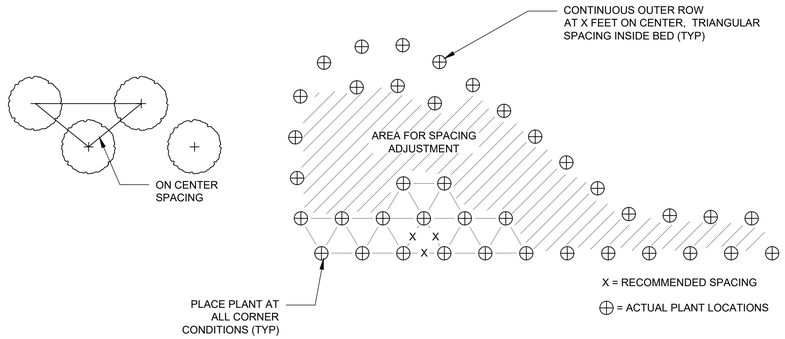
GENERAL NOTES:

A. CUTTINGS TO BE BETWEEN 3/4 IN AND 1-1/2 IN IN DIAMETER.

B. CUTTINGS SHALL CONFORM TO REQUIREMENTS ESTABLISHED IN WSDOT SPEC SECTION 8-02.3(8)A AND SHALL BE PLANTED ONLY DURING THERIN SPECIFIED PLANTING WINDOW OF OCTOBER 1 THROUGH MARCH 1.

C. LIVE STAKES TO BE PLACED IN COIR LOGS AT PROVIDED PLANT SPACING.

3 LIVESTAKE PLANTING
N.T.S.



4 PLANT SPACING
N.T.S.

Planting Group	Common Name	Scientific Name	Planting Type	Spacing Length (ft)	Spacing Width (ft)	Area Per Plant (ft)	Planting Area (ft)	Number of Plants Ea.
Group 1	redosier dogwood	Cornus stolonifera	Livestake	4	4	16	15134	946
	peach leaf wilow	Salix amygdaloides	Livestake					
	coyote willoa	Salix exigua	Livestake					
	mackenzie's willow	Salix sitchensis	Livestake					
	pacific willow	Salix uciandra	Livestake					
Group 2	vine maple	Acer circanatum	1 - Gallon	5	5	25	16011	641
	hawthorn	crataegus dougasii	1 - Gallon					
	hybrid poplar	populas Hybrid	1 - Gallon					
	service berry	almenchair anlifolia	1 - Gallon					
	thinleaf alder	alnus incana	1 - Gallon					
	black cottonwood	populus trichocarpa	1 - Gallon					
	western larch	larix occidentalis	1 - Gallon					
	quaking aspen	populs tremuloides	1 - Gallon					
	water birch	betula occidentalis	1 - Gallon					
	western white pine	pinus monticola	1 - Gallon					
	elderberry	sambucus cerulea	1 - Gallon					
	ponderosa pine	pinus ponderosa	1 - Gallon					
	tall oregon grape	mahonia aquifolia	1 - Gallon					
	nine bark	physocarpus capitatus	1 - Gallon					
	cedar	thuja plicata	1 - Gallon					
	woods rose	rosa woodsii	1 - Gallon					
	common snowberry	symphoricarpos albus	1 - Gallon					
	douglas spirea	spirea douglasii	1 - Gallon					

[1] A MINIMUM OF 3 SPECIES FROM GROUP 1 MUST BE PLANTED IN THE GROUP 1 PLANTING AREA. NO SINGLE SPECIES SHALL MAKE UP MORE THAN 1/3 OF GROUP 1 PLANTINGS.
[2] A MINIMUM OF 5 SPECIES FROM GROUP 2 MUST BE PLANTED IN THE GROUP 2 PLANTING AREA. NO SINGLE SPECIES SHALL MAKE UP MORE THAN 1/5 OF GROUP 2 PLANTINGS.
[3] 1-GALLON SIZE PLANTS MAY BE SUBSTITUTED FOR BARE ROOTS WITH APPROVAL FROM POCD STAFF OR THE ENGINEER. BARE ROOT PLANTING DENSITY MUST BE DOUBLE THE SPECIFIED 1-GALLON DENSITY.

Know what's below. Call before you dig.

100% BID SET

KAYLA H. KASSA — STATE OF WASHINGTON — 22022037 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED BY M. ZARECOR DRAWN BY M. MECHAM CHECKED BY E. ESTELLE	Osborn Consulting	101 S STEVENS ST STE 103, SPOKANE, WA 99201 www.osbornconsulting.com	NO.	DATE	REVISION	BY	POCD 2 — 121 N WASHINGTON AVE, NEWPORT, WA 99156

SUNNYSIDE & SANDY SHORES STREAMBANK STABILIZATION
PLANTING DETAILS

JOB# / DWG: 30-230002 | DATE: 06/04/2024
SCALE: H: N/A V: N/A | SHEET: 9 of 9

FILE NAME: C:\PW_OSBORN_WORKING\DMS31993\30-230002_P_POCD_SUNNYSIDE.DWG
PLOT TIME: 6/5/2024 12:18 PM
USER NAME:KAYLA KASSA

HYDRAULIC PROJECT APPROVAL

Washington Department of
Fish & Wildlife
PO Box 43234
Olympia, WA 98504-3234
(360) 902-2200

Issued Date: May 09, 2024
Project End Date: May 08, 2029

Permit Number: 2024-1-56+01
FPA/Public Notice Number: N/A
Application ID: 34743

PERMITTEE	AUTHORIZED AGENT OR CONTRACTOR
Pend Oreille Conservation District	Osborn Consulting
ATTENTION: Corey Brenner	ATTENTION: Kayla Kassa
121 N Washington Avenue	101 S Stevens St, Suite 103
Newport, WA 99156	Spokane, WA 99201

Project Name: Transfer from 34677: Sunnyside-Sandy Shores - Pend Oreille Riverbank Stabilization

Project Description: The Sunnyside-Sandy Shores shoreline sites have a moderate to high rate of bank erosion. The slope is less than 1:1 with sparse vegetation in certain locations along the bank. Stabilization is needed to repair the bank toe, erosion scour, and upper bank failure with slope reduction and stabilization measures per the engineer drawings attached (Exhibit B). The project consists of bank stabilization and restoration including large woody material placement, bank slope regrade, repair with ribbon strip cobbles and riprap, and native plantings. Large woody material and riparian vegetation planting will also benefit riparian habitat. Plantings will include native riparian vegetation selected from the Pend Oreille County Shoreline Native Plants List. Plantings will be placed in a gridded pattern per the engineer drawings (Exhibit B). Dense plantings along the regraded slope will contribute to bank stabilization and reduce property loss within the project limits.

PROVISIONS

TIMING - PLANS - INVASIVE SPECIES CONTROL

1. TIMING LIMITATION: Work below the ordinary high water line must only occur between July 1 and September 30.

2. RE-VEGETATION: You must complete re-vegetation by no later than May 1 of the year following construction, and you must monitor the success of the re-vegetation for three years.

3. APPROVED PLANS: You must accomplish the work per plans and specifications submitted with the application and approved by the Washington Department of Fish and Wildlife, entitled Sunnyside-Sandy Shores - Pend Oreille Riverbank Stabilization, dated April 8, 2024, except as modified by this Hydraulic Project Approval. You must have a copy of these plans available on site during all phases of the project construction.

4. INVASIVE SPECIES CONTROL: Thoroughly clean all equipment and gear before arriving and leaving the job site to prevent the transport and introduction of aquatic invasive species. Properly dispose of any water and chemicals used to clean gear and equipment. You can find additional information in the Washington Department of Fish and Wildlife's Invasive Species Management Protocols (November 2012), available online at http://wdfw.wa.gov/publications/01490/wdfw01490.pdf.

NOTIFICATION REQUIREMENTS

5. NOTIFICATION: You, your agent, or contractor must contact the Washington Department of Fish and Wildlife by e-mail at HPAapplications@dfw.wa.gov; mail to Post Office Box 43234, Olympia, Washington 98504-3234; or fax to (360) 902-2946 at least three business days before starting work. The notification must include the permittee's name, project location, starting date, and the Hydraulic Project Approval permit number.

6. FISH KILL/ WATER QUALITY PROBLEM NOTIFICATION: If a fish kill occurs or fish are observed in distress at the

job site, immediately stop all activities causing harm. Immediately notify the Washington Department of Fish and Wildlife of the problem. If the likely cause of the fish kill or fish distress is related to water quality, also notify the Washington Military Department Emergency Management Division at 1-800-258-5990. Activities related to the fish kill or fish distress must not resume until the Washington Department of Fish and Wildlife gives approval. The Washington Department of Fish and Wildlife may require additional measures to mitigate impacts.

STAGING, JOB SITE ACCESS, AND EQUIPMENT

7. Establish staging areas (used for equipment storage, vehicle storage, fueling, servicing, and hazardous material storage) in a location and manner that will prevent contaminants such as petroleum products, hydraulic fluid, fresh concrete, sediments, sediment-laden water, chemicals, or any other toxic or harmful materials from entering waters of the state.

8. Limit the removal of native bankline vegetation to the minimum amount needed to construct the project.

9. Limit the use of equipment waterward of the ordinary high water line to that necessary to gain position for the work.

10. Design and locate new temporary access roads to prevent erosion and sediment delivery to waters of the state.

11. Check equipment daily for leaks and complete any required repairs in an upland location before using the equipment in or near the water.

CONSTRUCTION-RELATED SEDIMENT, EROSION AND POLLUTION CONTAINMENT

12. Work in the dry watercourse (when no natural flow is occurring in the work area, or when flow is diverted around the job site).

13. Protect all disturbed areas from erosion. Maintain erosion and sediment control until all work and cleanup of the job site is complete.

14. All erosion control materials that will remain onsite must be composed of 100% biodegradable materials.

15. Straw used for erosion and sediment control, must be certified free of noxious weeds and their seeds.

16. Stop all hydraulic project activities except those needed to control erosion and siltation, if flow conditions arise that will result in erosion or siltation of waters of the state.

17. Prevent project contaminants, such as petroleum products, hydraulic fluid, fresh concrete, sediments, sediment-laden water, chemicals, or any other toxic or harmful materials, from entering or leaching into waters of the state.

18. Deposit waste material from the project, such as construction debris, silt, excess dirt, or overburden, in an upland area above the limits of anticipated floodwater unless the material is approved by the Washington Department of Fish and Wildlife for reuse in the project.

19. Deposit all trash from the project at an appropriate upland disposal location.

CONSTRUCTION MATERIALS

20. Store all construction and deconstruction material in a location and manner that will prevent contaminants such as petroleum products, hydraulic fluid, fresh cement, sediments, sediment-laden water, chemicals, or any other toxic or harmful materials from entering waters of the state.

21. Do not stockpile construction material waterward of the ordinary high water line.

22. Use only clean, suitable material as fill material (no trash, debris, car bodies, tires, asphalt, concrete, etc.).

STREAM BANK PROTECTION

23. The length of the bank protection must not exceed 430 feet.

24. Establish the waterward distance of the structure from a permanent benchmark(s) (fixed objects) shown on the approved plans. Locate and mark the benchmark(s) in the field prior to the start of work. Protect the benchmark to serve as a post-project reference for ten years.

HYDRAULIC PROJECT APPROVAL

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25. Install the toe to protect the integrity of bank protection material.

26. Bury the base of the structure deep enough to prevent undermining.

27. Use fir, cedar, or other coniferous species to construct the log or rootwad fish habitat structure(s).

28. Use clean angular rock to construct the bank protection.

29. Do not release overburden material into the waters of the state when resloping the bank.

30. Place bank protection or shoreline stabilization material and biodegradable filter blanket material from the bank or a barge. Dumping material onto the bank face may occur only if the toe is established and the material can be confined to the bank face.

31. Place geotextile cloth or biodegradable filter blanket material on the bank before placing the bank protection material.

32. Avoid damaging existing woody vegetation when placing bank protection material.

DEMOBILIZATION AND CLEANUP

33. Seed areas disturbed by construction activities with a native seed mix suitable for the site that has at least one quick-establishing plant species.

34. Replant the job site with the plant species composition and planting densities shown on the approved plans.

35. Complete replanting of riparian vegetation during the first dormant season (late fall or early spring) after project completion per the approved plan. Maintain plantings for at least three years to ensure at least eighty percent of the plantings survive. Failure to achieve the eighty percent survival in year three will require you to submit a plan with follow-up measures to achieve requirements or reasons to modify requirements.

36. Upon completion of the project, remove all materials or equipment from the site and dispose of all excess spoils and waste materials in an upland area above the limits of anticipated floodwater.

37. Remove temporary erosion and sediment control methods after job site is stabilized or within three months of project completion, whichever is sooner.

LOCATION #1:	192 Sunnyside Dr., Newport, WA 99156					
WORK START:	May 9, 2024			WORK END:	May 8, 2029	
WRIA		Waterbody:			Tributary to:	
62 - Pend Oreille		Pend Oreille River			Columbia River	
1/4 SEC:	Section:	Township:	Range:	Latitude:	Longitude:	County:
NE 1/4	33	32 N	45 E	48.231954	-117.111365	Pend Oreille
Location #1 Driving Directions						
Head east on State Route 20 E towards Bobier Rd N for 4.9 miles. Continue onto US Route 2 E/W Walnut St for 0.6 miles. Turn left onto Le Clerc Rd S for 5.8 miles. Turn right onto Sandy Shores Rd Dr in 0.2 miles. Turn left onto Sunnyside Dr in 0.2 miles. The site will be on the right in 0.3 miles.						

APPLY TO ALL HYDRAULIC PROJECT APPROVALS

Washington Department of
Fish & Wildlife
PO Box 43234
Olympia, WA 98504-3234
(360) 902-2200

HYDRAULIC PROJECT APPROVAL

Issued Date: May 09, 2024
Project End Date: May 08, 2029

Permit Number: 2024-1-56+01
FPA/Public Notice Number: N/A
Application ID: 34743

This Hydraulic Project Approval pertains only to those requirements of the Washington State Hydraulic Code, specifically Chapter 77.55 RCW. Additional authorization from other public agencies may be necessary for this project. The person(s) to whom this Hydraulic Project Approval is issued is responsible for applying for and obtaining any additional authorization from other public agencies (local, state and/or federal) that may be necessary for this project.

This Hydraulic Project Approval shall be available on the job site at all times and all its provisions followed by the person (s) to whom this Hydraulic Project Approval is issued and operator(s) performing the work.

This Hydraulic Project Approval does not authorize trespass.

The person(s) to whom this Hydraulic Project Approval is issued and operator(s) performing the work may be held liable for any loss or damage to fish life or fish habitat that results from failure to comply with the provisions of this Hydraulic Project Approval.

Failure to comply with the provisions of this Hydraulic Project Approval could result in civil action against you, including, but not limited to, a stop work order or notice to comply, and/or a gross misdemeanor criminal charge, possibly punishable by fine and/or imprisonment.

All Hydraulic Project Approvals issued under RCW 77.55.021 are subject to additional restrictions, conditions, or revocation if the Department of Fish and Wildlife determines that changed conditions require such action. The person(s) to whom this Hydraulic Project Approval is issued has the right to appeal those decisions. Procedures for filing appeals are listed below.

MINOR MODIFICATIONS TO THIS HPA: You may request approval of minor modifications to the required work timing or to the plans and specifications approved in this HPA unless this is a General HPA. If this is a General HPA you must use the Major Modification process described below. Any approved minor modification will require issuance of a letter documenting the approval. A minor modification to the required work timing means any change to the work start or end dates of the current work season to enable project or work phase completion. Minor modifications will be approved only if spawning or incubating fish are not present within the vicinity of the project. You may request subsequent minor modifications to the required work timing. A minor modification of the plans and specifications means any changes in the materials, characteristics or construction of your project that does not alter the project's impact to fish life or habitat and does not require a change in the provisions of the HPA to mitigate the impacts of the modification. If you originally applied for your HPA through the online Aquatic Protection Permitting System (APPS), you may request a minor modification through APPS. A link to APPS is at http://wdfw.wa.gov/licensing/hpa/. If you did not use APPS you must submit a written request that clearly indicates you are seeking a minor modification to an existing HPA. Written requests must include the name of the applicant, the name of the authorized agent if one is acting for the applicant, the APP ID number of the HPA, the date issued, the permitting biologist, the requested changes to the HPA, the reason for the requested change, the date of the request, and the requestor's signature. Send by mail to: Washington Department of Fish and Wildlife, PO Box 43234, Olympia, Washington 98504-3234, or by email to HPAapplications@dfw.wa.gov. You should allow up to 45 days for the department to process your request.

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Project End Date: May 08, 2029

Permit Number: 2024-1-56+01
FPA/Public Notice Number: N/A
Application ID: 34743

MAJOR MODIFICATIONS TO THIS HPA: You may request approval of major modifications to any aspect of your HPA. Any approved change other than a minor modification to your HPA will require issuance of a new HPA. If you originally applied for your HPA through the online Aquatic Protection Permitting System (APPS), you may request a major modification through APPS. A link to APPS is at http://wdfw.wa.gov/licensing/hpa/. If you did not use APPS you must submit a written request that clearly indicates you are requesting a major modification to an existing HPA. Written requests must include the name of the applicant, the name of the authorized agent if one is acting for the applicant, the APP ID number of the HPA, the date issued, the permitting biologist, the requested changes to the HPA, the reason for the requested change, the date of the request, and the requestor's signature. Send your written request by mail to: Washington Department of Fish and Wildlife, PO Box 43234, Olympia, Washington 98504-3234. You may email your request for a major modification to HPAapplications@dfw.wa.gov. You should allow up to 45 days for the department to process your request.

APPEALS INFORMATION

If you wish to appeal the issuance, denial, conditioning, or modification of a Hydraulic Project Approval (HPA), Washington Department of Fish and Wildlife (WDFW) recommends that you first contact the department employee who issued or denied the HPA to discuss your concerns. Such a discussion may resolve your concerns without the need for further appeal action. If you proceed with an appeal, you may request an informal or formal appeal. WDFW encourages you to take advantage of the informal appeal process before initiating a formal appeal. The informal appeal process includes a review by department management of the HPA or denial and often resolves issues faster and with less legal complexity than the formal appeal process. If the informal appeal process does not resolve your concerns, you may advance your appeal to the formal process. You may contact the HPA Appeals Coordinator at (360) 902-2534 for more information.

A. INFORMAL APPEALS: WAC 220-660-460 is the rule describing how to request an informal appeal of WDFW actions taken under Chapter 77.55 RCW. Please refer to that rule for complete informal appeal procedures. The following information summarizes that rule.

A person who is aggrieved by the issuance, denial, conditioning, or modification of an HPA may request an informal appeal of that action. You must send your request to WDFW by mail to the HPA Appeals Coordinator, Department of Fish and Wildlife, Habitat Program, PO Box 43234, Olympia, Washington 98504-3234; e-mail to HPAapplications@dfw.wa.gov; fax to (360) 902-2946; or hand-delivery to the Natural Resources Building, 1111 Washington St SE, Habitat Program, Fifth floor. WDFW must receive your request within 30 days from the date you receive notice of the decision. If you agree, and you applied for the HPA, resolution of the appeal may be facilitated through an informal conference with the WDFW employee responsible for the decision and a supervisor. If a resolution is not reached through the informal conference, or you are not the person who applied for the HPA, the HPA Appeals Coordinator or designee may conduct an informal hearing or review and recommend a decision to the Director or designee. If you are not satisfied with the results of the informal appeal, you may file a request for a formal appeal.

B. FORMAL APPEALS: WAC 220-660-470 is the rule describing how to request a formal appeal of WDFW actions taken under Chapter 77.55 RCW. Please refer to that rule for complete formal appeal procedures. The following information summarizes that rule.

HYDRAULIC PROJECT APPROVAL

Washington Department of
Fish & Wildlife
PO Box 43234
Olympia, WA 98504-3234
(360) 902-2200

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FPA/Public Notice Number: N/A
Application ID: 34743

A person who is aggrieved by the issuance, denial, conditioning, or modification of an HPA may request a formal appeal of that action. You must send your request for a formal appeal to the clerk of the Pollution Control Hearings Boards and serve a copy on WDFW within 30 days from the date you receive notice of the decision. You may serve WDFW by mail to the HPA Appeals Coordinator, Department of Fish and Wildlife, Habitat Program, PO Box 43234, Olympia, Washington 98504-3234; e-mail to HPAapplications@dfw.wa.gov; fax to (360) 902-2946; or hand-delivery to the Natural Resources Building, 1111 Washington St SE, Habitat Program, Fifth floor. The time period for requesting a formal appeal is suspended during consideration of a timely informal appeal. If there has been an informal appeal, you may request a formal appeal within 30 days from the date you receive the Director's or designee's written decision in response to the informal appeal.

C. FAILURE TO APPEAL WITHIN THE REQUIRED TIME PERIODS: If there is no timely request for an appeal, the WDFW action shall be final and unappealable.

Habitat Biologist	Jeffrey.Lawlor@dfw.wa.gov		for Director
Jeff Lawlor	509-892-1001, Ext:321		WDFW

Construction Stormwater General Permit (CSWGP)

Construction Stormwater and Erosion Control Plan (CSECP)

for

Pend Oreille River Salmon Recovery Management Plan

Prepared for:

The Washington State Department of Ecology

Eastern Regional Office

Permittee / Owner	Developer	Operator / Contractor
POCD	N/A	TBD

Certified Erosion and Sediment Control Lead (CESCL)

Name	Organization	Contact Phone Number
TBD	TBD	TBD

CSECP Prepared By

Name	Organization	Contact Phone Number
Kayla Kassa	Osborn Consulting, Inc.	(509) 309-2753

CSECP Preparation Date

5 / 31 / 2023

Project Construction Dates

Activity / Phase	Start Date	End Date
Construction / Start	TBD	TBD

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E. Construction Stormwater General Permit (CSWGP)
F. 303(d) List Waterbodies / TMDL Waterbodies Information
G. Contaminated Site Information
H. Engineering Calculations

List of Acronyms and Abbreviations

Acronym / Abbreviation	Explanation
303(d)	Section of the Clean Water Act pertaining to Impaired Waterbodies
BFO	Bellingham Field Office of the Department of Ecology
BMP(s)	Best Management Practice(s)
CESCL	Certified Erosion and Sediment Control Lead
CO_2	Carbon Dioxide
CRO	Central Regional Office of the Department of Ecology
CSECP	Construction Stormwater and Erosion Control Plan
CSWGP	Construction Stormwater General Permit
CWA	Clean Water Act
DMR	Discharge Monitoring Report
DO	Dissolved Oxygen
Ecology	Washington State Department of Ecology
EPA	United States Environmental Protection Agency
ERO	Eastern Regional Office of the Department of Ecology
ERTS	Environmental Report Tracking System
ESC	Erosion and Sediment Control
GULD	General Use Level Designation
NPDES	National Pollutant Discharge Elimination System
NTU	Nephelometric Turbidity Units
NWRO	Northwest Regional Office of the Department of Ecology
pH	Power of Hydrogen
RCW	Revised Code of Washington
ROW	Right-of-way
SPCC	Spill Prevention, Control, and Countermeasure
su	Standard Units
SWMMEW	Stormwater Management Manual for Eastern Washington
SWMMWW	Stormwater Management Manual for Western Washington
TESC	Temporary Erosion and Sediment Control
SWRO	Southwest Regional Office of the Department of Ecology
TMDL	Total Maximum Daily Load
VFO	Vancouver Field Office of the Department of Ecology
WAC	Washington Administrative Code
WSDOT	Washington State Department of Transportation
WWHM	Western Washington Hydrology Model

1.0 PROJECT INFORMATION

Project/Site Name: Pend Oreille River Salmon Recovery Management Plan
Street/Location: 231 and 251 Sandy Shores Road and 72, 92, 112, 122, and 152 Sunnyside Drive.
City: Newport State: WA Zip code: 99156
Receiving waterbody: Pend Oreille River

1.1 Existing Conditions

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

Total acreage: 1.5 AC

Disturbed acreage: 1.08 AC

Existing structures:

The project is located along the Pend Oreille River with no permanent structures or utilities in the way of construction.

Landscape topography:

The project sites along Sunnyside and Sandy Shores Road have slopes less than 1:1 and a moderate to severe rate of bank erosion.

Drainage patterns:

Runoff generally drains toward the southwest and discharges to Pend Oreille River.

Existing Vegetation:

The area includes vegetation coverage on the banks is sparce in some areas. Notable vegetation includes grasses, shrubs, hawthorn, snowberry, red twig dogwood, willow, aspen evergreens, etc.

Critical Areas (wetlands, streams, high erosion risk, steep or difficult to stabilize slopes):

There is moderate to severe risk to erosion on the banks with sloughing as well as some undercutting along the toe, but no critical areas that the project work will be interfering with during construction.

List of known impairments for 303(d) listed or Total Maximum Daily Load (TMDL) for the receiving waterbody:

Pend Oreille River is a part of the Pend Oreille River TMDL for Total Dissolved Gas (TGD) and Temperature. It is 303(d) listed as a Category 4A waterbody for these parameters. Pend Oreille River is also a Category 4C for Non-Native Aquatic Plants and

a Category 5 for pH, Dissolved Oxygen (DO), Aldrin, polychlorinated biphenyls (PCBs), Lead and Methyl/Mercury.

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

Table 1 – Summary of Site Pollutant Constituents

Constituent (Pollutant)	Location	Depth	Concentration
Sediment	Along Bank	N/A	N/A
Fuel/Gas	Along Bank	N/A	N/A

1.2 Proposed Construction Activities

Description of site development (example: subdivision):
Storm Drainage Improvements

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

Construction activities include excavation, grading, bank stabilization/restoration. No critical areas will be impacted during construction.

The Sunnyside-Sandy Shores shoreline sites have a moderate to high rate of bank erosion. The slope is less than 1:1 with sparse vegetation in certain locations along the bank. Stabilization is needed to repair the bank toe, erosion scour, and upper bank failure with slope reduction and stabilization measures. The project consists of approximately 676 LF of bank stabilization and restoration including large woody material placement, bank slope regrade, repair with ribbon strip cobbles and riprap, and native plantings. Large woody material and riparian vegetation planting will also benefit riparian habitat. Plantings will include native riparian vegetation selected from the Pend Oreille County Shoreline Native Plants List. Plantings will be placed in a gridded pattern. Dense plantings along the regraded slope will contribute to bank stabilization and reduce property loss within the project limits.

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

Runoff generally drains toward the southwest and discharges to Pend Oreille River.

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

All area within the limits of disturbance will be replanted with native species. Slope stabilization will be provided through bank stabilization/restoration in vegetated areas. Restoration will take place on-site and planted vegetation monitoring will take place annually for 5 years to ensure performance. Coir matting will be installed on the bank slopes to ensure stability during revegetation but is expected to degrade within 5 years.

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

None

2.0 Construction Stormwater Best Management Practices (BMPs)

Construction stormwater BMPs were selected by referencing the Washington State Department of Ecology's Stormwater Management Manual for Eastern Washington (SWMMEW). The SWMMEW requires BMPs to be categorized under 13 elements. BMPs for this project are summarized under the 13 elements consistent with the SWMMEW starting in Section 2.1.

1. Preserve Vegetation / Mark Clearing Limits
   See 2.1.1 Element 1: Preserve Vegetation / Mark Clearing Limits
2. Establish Construction Access
   See 2.1.2 Element 2: Establish Construction Access
3. Control Flow Rates
   See 2.1.3 Element 3: Control Flow Rates
4. Install Sediment Controls
   See 2.1.4 Element 4: Install Sediment Controls
5. Stabilize Soils
   See 2.1.5 Element 5: Stabilize Soils
6. Protect Slopes
   See 2.1.6 Element 6: Protect Slopes
7. Protect Drain Inlets
   See 2.1.7 Element 7: Protect Drain Inlets
8. Stabilize Channels and Outlets
   See 2.1.8 Element 8: Stabilize Channels and Outlets
9. Control Pollutants
   See 2.1.9 Element 9: Control Pollutants
10. Control Dewatering
    See 2.1.10 Element 10: Control Dewatering
11. Maintain BMPs
    See 2.1.11 Element 11: Maintain BMPs
12. Manage the Project
    See 2.1.12 Element 12: Manage the Project
13. Protect Low Impact Development
    See 2.1.13 Element 13: Protect Low Impact Development (LID) BMPs

The suggested BMPs and BMPs shown on the plans are minimum requirements based on the known conditions. If the suggested BMPs are deemed ineffective or inappropriate during construction to satisfy the requirements set forth in the General NPDES Permit, the Certified Erosion and Sediment Control Lead (CESCL) will promptly initiate the implementation of one or more of the alternative BMPs after the first sign that existing BMPs are ineffective or failing.

The CSECP 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 CSECP 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

All areas that should not be disturbed will be clearly marked prior to land disturbing activities. Soils to remain within all project areas will be protected and left undisturbed unless required for project construction. All new, replaced, and disturbed topsoil in planting areas will be amended with organic matter and or replaced per the following requirements:

All trees within the project area shall be protected throughout construction per WSDOT Standard Plans and Specifications. Trees that have root zones and/or canopies crossing into the project area will require tree protection measures per detail in Appendix B. Some trees on private property may require selective removal. Prior to construction, the POCD outreach team will work with private property owners whose trees may need to be removed for construction access purposes. There will be no areas of existing landscape in the Environmentally Critical Area that will be disturbed during the installation. In compliance with the City's ECA regulations, the project will implement a revegetation plan to replant the disturbed area with native plants.

Applicable BMPs:

- BMP C101E: Preserving Natural Vegetation
- BMP C233E: Silt Fence

Installation Schedules: Start of project and replaced as needed throughout construction schedule.

Inspection and Maintenance plan: BMPs will be inspected, maintained, and repaired as needed to achieve their intended purpose. If the suggested BMPs are deemed ineffective or inappropriate during construction to satisfy the requirements set forth in the General NPDES Permit, the Certified ESC Lead will promptly initiate the implementation of one or more of the alternative BMPs after the first sign that existing BMPs are ineffective or failing.

Responsible Staff: TBD

2.1.2 Element 2: Establish Construction Access

Construction vehicle access and exit routes will be limited when possible. Access points will be stabilized to minimize tracking of sediment onto public roads. Sediment tracked off site will be cleaned through sweeping, shoveling, or removing and transporting to a controlled disposal area thoroughly at the end of each day or as frequently as necessary.

Applicable BMPs:

- BMP C105: Stabilized Construction Access
- BMP C107: Construction Road / Parking Area Stabilization

Installation Schedules: Start of project and replaced as needed throughout construction schedule.

Inspection and Maintenance plan: BMPs will be inspected, maintained, and repaired as needed to achieve their intended purpose. If the suggested BMPs are deemed ineffective or inappropriate during construction to satisfy the requirements set forth in the General NPDES Permit, the Certified ESC Lead will promptly initiate the implementation of one or more of the alternative BMPs after the first sign that existing BMPs are ineffective or failing.

Responsible Staff: TBD

2.1.3 Element 3: Control Flow Rates

Permanent flow rates are not anticipated to increase because of this project.

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

Applicable BMPs:

- N/A

Installation Schedules: N/A

Inspection and Maintenance plan: N/A

Responsible Staff: N/A

2.1.4 Element 4: Install Sediment Controls

Effective erosion and sediment controls will be installed prior to construction to minimize the discharge of pollutants and will be maintained as needed. Sediment control BMPs will be functional before land disturbing activities begin. Direct runoff from disturbed areas will be routed through appropriate sediment control BMPs before being discharged from the site. BMPs are expected to include a silt fence. Runoff from stabilized areas do not require sediment control.

Erosion and sediment controls will be monitored for effectiveness. If they are observed to be ineffective or turbid water is observed discharging from the site, the erosion and sediment control BMPs will be modified or additional BMPs will be implemented to control turbid water or sediment.

Applicable BMPs:

- BMP C233E: Silt Fence

Installation Schedules: Start of project and replaced as needed throughout construction schedule.

Inspection and Maintenance plan: BMPs will be inspected, maintained, and repaired as needed to achieve their intended purpose. If the suggested BMPs are deemed ineffective or inappropriate during construction to satisfy the requirements set forth in the General NPDES Permit, the Certified ESC Lead will promptly initiate the implementation of one or more of the alternative BMPs after the first sign that existing BMPs are ineffective or failing.

Responsible Staff: TBD

2.1.5 Element 5: Stabilize Soils

Exposed and unworked soils will be stabilized through the application of erosion prevention BMPs. Stormwater flow and site sediment will be controlled as described in Section 2.1.4 Element 4: Install Sediment Controls to minimize erosion at outlets and the downstream channel and bank of the Pend Oreille River. Additional BMPs like temporary and permanent seeding and high reinforcement mats (coconut coir matting) will be used to ensure bank stability.

East of the Cascade Mountains Crest, except the Central Basin*

Season	Dates	Number of Days Soils Can be Left Exposed
During the Dry Season	July 1 – September 30	10 days
During the Wet Season	October 1 – June 30	5 days

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

Soil stockpiles will be stabilized from erosion and protected with trapping measures. Gravel bases used for stabilization will be clean and free from fines and sediment.

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

Will you construct during the wet season?
Yes (No)

Applicable BMPs:

- BMP C120: Temporary and Permanent Seeding
- BMP C122: Nets and Blankets

Installation Schedules: Start of project and replaced as needed throughout construction schedule.

Inspection and Maintenance plan: BMPs will be inspected, maintained, and repaired as needed to achieve their intended purpose. If the suggested BMPs are deemed ineffective or inappropriate during construction to satisfy the requirements set forth in the General NPDES Permit, the Certified ESC Lead will promptly initiate the implementation of one or more of the alternative BMPs after the first sign that existing BMPs are ineffective or failing.

Responsible Staff: TBD

2.1.6 Element 6: Protect Slopes

The project does involve construction of slopes or cut and fill areas. There will be some steep slopes present during construction. Soils will be stabilized in accordance with Section 2.1.5 Element 5: Stabilize Soils.

Will steep slopes be present at the site during construction?

Yes No

Applicable BMPs:

- BMP C120: Temporary and Permanent Seeding
- BMP C122: Nets and Blankets

Installation Schedules: Start of project and replaced as needed throughout construction schedule.

Inspection and Maintenance plan: BMPs will be inspected, maintained, and repaired as needed to achieve their intended purpose. If the suggested BMPs are deemed ineffective or inappropriate during construction to satisfy the requirements set forth in the General NPDES Permit, the Certified ESC Lead will promptly initiate the implementation of one or more of the alternative BMPs after the first sign that existing BMPs are ineffective or failing.

Responsible Staff: TBD

2.1.7 Element 7: Protect Drain Inlets

There are no storm drain inlets that will be effected by the construction of this project.

Applicable BMPs:

- N/A

Installation Schedules: N/A

Inspection and Maintenance plan: N/A

Responsible Staff: N/A

2.1.8 Element 8: Stabilize Channels and Outlets

Any on-site conveyance channels to be used during construction must be monitored by the contractor to ensure they can handle the peak flow velocity from a 6-month, 3-hour storm for the developed condition. The contractor will be responsible for ensuring there is no increase in flows and that there is adequate protection for channels and outlets.

Channels and outlets will be protected using appropriate BMPs, such as nets and blankets, and rip rap.

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.

Applicable BMPs:

- BMP C202E: Riprap Channel Lining
- BMP C122: Nets and Blankets

Installation Schedules: Start of project and replaced as needed throughout construction schedule.

Inspection and Maintenance plan: BMPs will be inspected, maintained, and repaired as needed to achieve their intended purpose. If the suggested BMPs are deemed ineffective or inappropriate during construction to satisfy the requirements set forth in the General NPDES Permit, the Certified ESC Lead will promptly initiate the implementation of one or more of the alternative BMPs after the first sign that existing BMPs are ineffective or failing.

Responsible Staff: TBD

2.1.9 Element 9: Control Pollutants

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

Table 2 – Pollutants

Pollutant (and source, if applicable)
Sediment
Petroleum products including fuel, lubricants, hydraulic fluids, and form oils

A brief description on pollutant control measures that shall be adopted on the project site by the Contractor include, but are not limited to the following:

- All pollutants, including waste materials, demolition debris and contaminated material, that occur on-site shall be handled and disposed off in a manner that does not cause contamination of stormwater. Good housekeeping and preventative measures will be taken to ensure that the site will be kept clean, well-organized, and free of debris. Cover, containment, and protection from vandalism shall be provided for all chemicals, liquid products, petroleum products, and other materials that have the potential to pose a threat to human health or the environment. On-site fueling tanks shall include secondary containment.
- Application of fertilizers and pesticides on temporary and permanent seeding areas, including landscaped areas, as specified on the Landscaping Plans shall be conducted in a manner and at applicable rates that will not result in loss of chemical to stormwater runoff. Manufacturer's recommendations for application rates and procedures shall be followed as necessary.
- Use appropriate vehicles for transporting contaminated and uncontaminated materials. Lined vehicles may be used for transporting contaminated materials.

Per the NPDES Permit, all process water including water used for dust control will be conveyed to a separate on-site storage and treatment system for treatment and monitored to meet the surface water quality standards and discharged to a downstream discharge location. The process water can also be trucked off-site by a vactor truck to an approved disposal facility.

Applicable BMPs:

- BMP C153: Material Delivery, Storage, and Containment

Installation Schedules: Start of project and replaced as needed throughout construction schedule.

Inspection and Maintenance plan: BMPs will be inspected, maintained, and repaired as needed to achieve their intended purpose. If the suggested BMPs are deemed ineffective or inappropriate during construction to satisfy the requirements set forth in the General NPDES Permit, the Certified ESC Lead will promptly initiate the implementation of one or more of the alternative BMPs after the first sign that existing BMPs are ineffective or failing.

Responsible Staff: TBD

Will maintenance, fueling, and/or repair of heavy equipment and vehicles occur on-site?
Yes No

All vehicles, equipment, and petroleum product storage will be frequently examined for leaks and spills. On site storage of petroleum products shall be stored away from trafficked areas, waterways, and storm drains. Hazardous materials will be handled as infrequently as possible, and when handled, spill prevention measures, such as drip pans, will be used. If a spill should occur, the contaminated surface shall be cleaned immediately using an on-site spill kit.

Installation Schedules: Start of project and replaced as needed throughout construction schedule.

Inspection and Maintenance plan: BMPs will be inspected, maintained, and repaired as needed to achieve their intended purpose. If the suggested BMPs are deemed ineffective or inappropriate during construction to satisfy the requirements set forth in the General NPDES Permit, the Certified ESC Lead will promptly initiate the implementation of one or more of the alternative BMPs after the first sign that existing BMPs are ineffective or failing.

Responsible Staff: TBD

Will wheel wash or tire bath system BMPs be used during construction?
Yes No

Installation Schedules: N/A

Inspection and Maintenance plan: N/A

Responsible Staff: N/A

Will pH-modifying sources be present on-site?
Yes No

Table 3 – pH-Modifying Sources

x	None
	Bulk cement
	Cement kiln dust
	Fly ash
	Other cementitious materials
	New concrete washing or curing waters
	Waste streams generated from concrete grinding and sawing
	Exposed aggregate processes
	Dewatering concrete vaults
	Concrete pumping and mixer washout waters
	Recycled concrete

	Other (i.e. calcium lignosulfate) [please describe]

Applicable BMPs:

- N/A

Installation Schedules: N/A

Inspection and Maintenance plan: N/A.

Responsible Staff: N/A

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.

2.1.10 Element 10: Control Dewatering

Based on the available information, dewatering due to groundwater is not anticipated. If dewatering is required due to runoff entering excavations or encountering perched groundwater, then the following measures will be adopted.

- Prior to discharge from the site, turbid dewatering water will be conveyed or pumped to a temporary facility such as a portable tank or removed from the site with a vactor truck.
- Non-turbid clean dewatering water will be discharged into a controlled conveyance system BMP as noted in Section 2.1.4 Element 4: Install Sediment Controls. The discharge must be controlled to prevent erosion or flooding as specified in Section 2.1.8 Element 8: Stabilize Channels and Outlets. Turbidity monitoring will verify water released from the site meets surface water quality requirements per the NPDES permit (refer to Section 4.0).

Table 4 – Dewatering BMPs

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

Applicable BMPs:

- N/A

Installation Schedules: N/A

Inspection and Maintenance plan: N/A

Responsible Staff: N/A

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 *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.

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 considered.
- 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.
- Maintain an updated CSECP.
    - The CSECP will be updated, maintained, and implemented in accordance with Special Conditions S3, S4, and S9 of the CSWGP.

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

Table 5 – Management

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

Table 6 – BMP Implementation Schedule

Phase of Construction Project	Stormwater BMPs	Date	Wet/Dry Season
[Insert construction activity]	[Insert BMP]	[MM/DD/YYYY]	[Insert Season]

Phase of Construction Project	Stormwater BMPs	Date	Wet/Dry Season
[Insert construction activity]	[Insert BMP]	[MM/DD/YYYY]	[Insert Season]

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

There are no LID BMPs on this site.

Applicable BMPs:

- N/A

Installation Schedules: N/A

Inspection and Maintenance plan: N/A

Responsible Staff: N/A

3.0 POLLUTION PREVENTION TEAM

Table 7 – Team Information

Title	Name(s)	Phone Number
Resident Engineer	Osborn Consulting	509-867-3654
Emergency Ecology Contact	Eastern Region Office	509-329-3400
Emergency Permittee/ Owner Contact	POCD	509-447-1155
Non-Emergency Owner Contact	James Taylor Jeff Looney Jeff Nolting Rich Koker Darlene Donegan Karin O'Donnell Greg Nolting Steven Nolting James Kensok	Contact POCD for homeowner contact info
Monitoring Personnel	POCD	509-447-1155
Ecology Regional Office	Northwest Region	425-649-7000

4.0 Monitoring and Sampling Requirements

Monitoring includes visual inspection, sampling for water quality parameters of concern, and documentation of the inspection 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 CSECP and other permit requirements
- Site inspections

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.

Complete the following paragraph for sites that discharge to impaired waterbodies for fine sediment, turbidity, phosphorus, or pH.

The receiving waterbody, Pend Oreille River, is impaired for: pH. All stormwater and dewatering discharges from the site are subject to effluent limit of 8.5 su for pH.

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 points 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

Turbidity monitoring is not anticipated for this project.

4.2.2 pH Sampling

pH monitoring is not anticipated for this project as the project does not meet the threshold for "Significant concrete work" (i.e. greater than 1000 cubic yards poured concrete or recycled concrete over the life of the project).

5.0 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):

The receiving waterbody, Pend Oreille River, is impaired for: pH. All stormwater and dewatering discharges from the site are subject to effluent limit of 8.5 su for pH.

List and describe BMPs:

- BMP C233E: Silt Fence
- BMP C122: Nets and Blankets

Installation Schedules: Start of project and replaced as needed throughout construction schedule.

Inspection and Maintenance plan: Due to the lack of concrete work, there is no assumed impact on pH levels in the water; however, BMPs to trap sediment or other pH altering substances will be inspected, maintained, and repaired as needed to achieve their intended purpose. If the suggested BMPs are deemed ineffective or inappropriate during construction to satisfy the requirements set forth in the General NPDES Permit, the Certified ESC Lead will promptly initiate the implementation of one or more of the alternative BMPs after the first sign that existing BMPs are ineffective or failing.

Responsible Staff: TBD

5.2 TMDL Waterbodies

Waste Load Allocation for CWSGP discharges:

The receiving waterbody is listed as Category 4A for TGD and Temperature. However, construction activities are not anticipated to produce TGD or temperature changes.

List and describe BMPs: N/A

No BMPs are required as construction activities are not anticipated to produce TGD or temperature changes.

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

6.0 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 CSECP and other permit requirements
- Site inspections

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 CSECP

The CSECP 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.

https://www.ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Water-quality-permits-guidance/WQWebPortal-guidance

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.

- Northwest Region at (425) 649-7000 for Island, King, Kitsap, San Juan, Skagit, Snohomish, or Whatcom County

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_2 sparging is planned for adjustment of high pH water.

Appendix A: Site Maps

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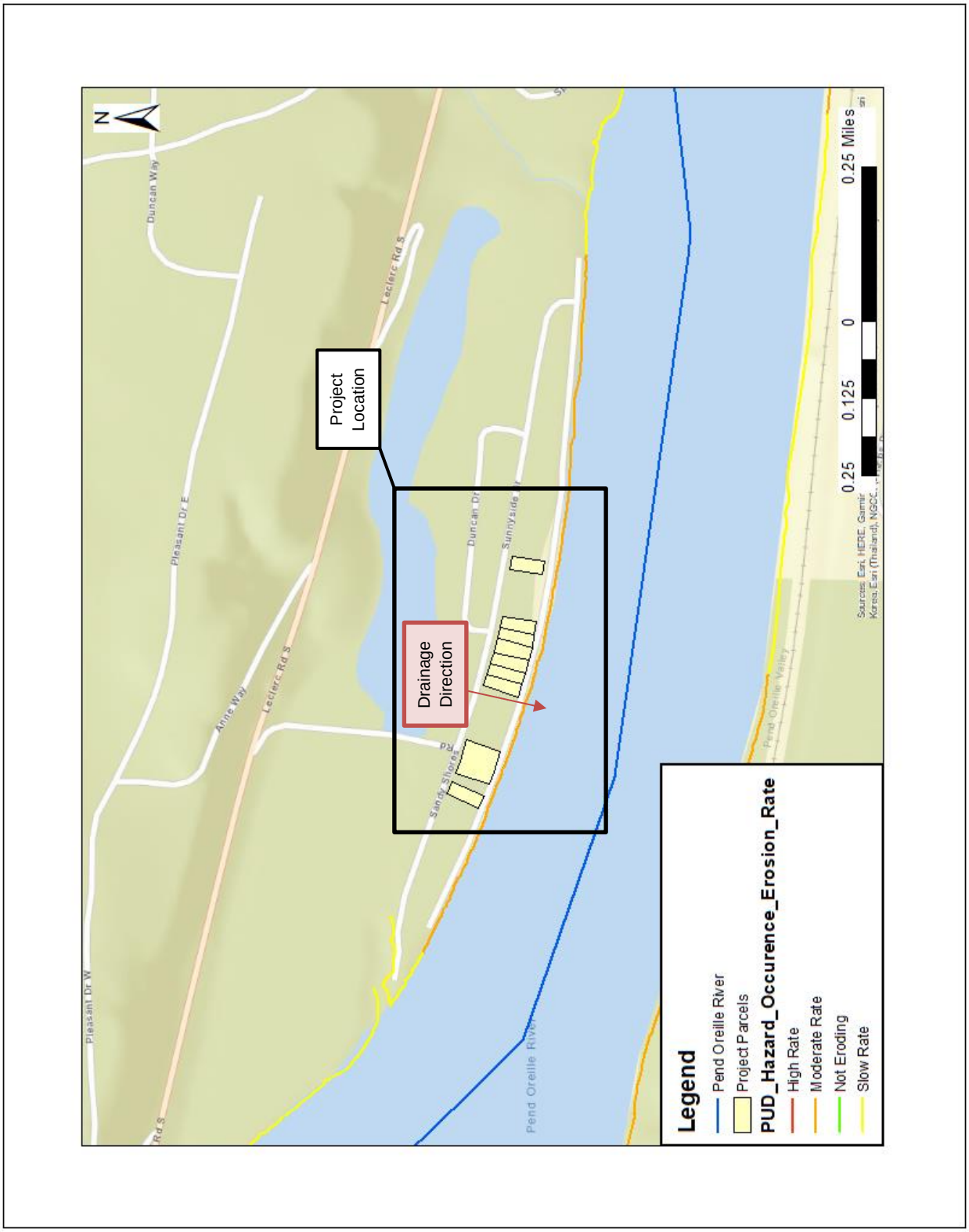

N
Project Location
Drainage Direction
Duncan Way
Pleasant Dr E
Leclerc Rd S
Anne Way
Duncan Dr
Sunnyside
Sandy Shores
Pend Oreille River
Pend Oreille Valley
Pleasant Dr W
0.25 0.125 0 0.25 Miles
Legend
Pend Oreille River
Project Parcels
PUD_Hazard_Occurence_Erosion_Rate
High Rate
Moderate Rate
Not Eroding
Slow Rate

Appendix B: BMP Detail

II-3.1 A Summary of Construction Stormwater BMPs

This chapter contains standards and specifications for temporary BMPs, used as appropriate during the construction phase of a project. Often using BMPs in combination is the best method to meet Construction Stormwater Pollution Prevention Plan (Construction SWPPP) requirements.

The standards and specifications in this chapter are not intended to limit innovative efforts to effectively control erosion and sedimentation. Construction SWPPPs can contain experimental BMPs or make minor modifications to standard BMPs. However, the permitting authority (state, local, or both) must approve such practices before use. Experimental and modified BMPs must achieve the same or better performance than the BMPs listed below.

None of the BMPs listed below will work successfully throughout the construction project without inspection and maintenance. Regular inspections to identify problems with the operation of each BMP, and the timely repair of any problems are essential to the continued operation of the BMPs. As site conditions change, BMPs must change to remain in compliance.

Construction stormwater BMPs are divided into two categories: Construction Source Control BMPs and Construction Runoff BMPs.

Table II-3.1: Construction Stormwater BMPs by SWPPP Element shows the relationship of the Construction Stormwater BMPs to the Construction SWPPP Elements described in I-3.4.2 MR2: Construction Stormwater Pollution Prevention Plan (SWPPP).

Table II-3.1: Construction Stormwater BMPs by SWPPP Element

Construction Stormwater BMP	Construction SWPPP Element #												
	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13
Construction Source Control BMPs													
BMP C101: Preserving Natural Vegetation	✓												
BMP C102: Buffer Zones	✓												✓
BMP C103: High-Visibility Fence	✓												✓
BMP C105: Stabilized Construction Access		✓											
BMP C106: Wheel Wash		✓											

Table II-3.1: Construction Stormwater BMPs by SWPPP Element (continued)

Construction Storm-water BMP	Construction SWPPP Element #												
	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13
BMP C107: Construction Road / Parking Area Stabilization		✓											
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 (PAM) for Soil Erosion Protection					✓								
BMP C130: Surface Roughening					✓	✓							
BMP C131: Gradient Terraces					✓	✓							
BMP C140: Dust Control					✓								
BMP C150: Materials on Hand											✓	✓	
BMP C151: Concrete Handling									✓				
BMP C152: Sawcutting and Surfacing Pollution Prevention									✓				
BMP C153: Material Delivery, Storage, and Containment									✓				

Table II-3.1: Construction Stormwater BMPs by SWPPP Element (continued)

Construction Storm-water BMP	Construction SWPPP Element #												
	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13
BMP C154: Concrete Washout Area									✓				
BMP C160: Certified Erosion and Sediment Control Lead											✓	✓	
BMP C162: Scheduling												✓	
Construction Runoff BMPs													
BMP C200: Interceptor Dike and Swale						✓							✓
BMP C201: Grass-Lined Channels						✓							✓
BMP C202: Riprap Channel Lining								✓					
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 (TSD)						✓							✓
BMP C209: Outlet Protection			✓					✓					
BMP C220: Inlet Protection							✓						
BMP C231: Brush Barrier				✓									✓
BMP C232: Gravel Filter Berm				✓									

Table II-3.1: Construction Stormwater BMPs by SWPPP Element (continued)

Construction Stormwater BMP	Construction SWPPP Element #												
	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13
BMP C233: Silt Fence				✓									✓
BMP C234: Vegetated Strip				✓									✓
BMP C235: Wattles			✓	✓									
BMP C236: Vegetative Filtration										✓			
BMP C240: Sediment Trap			✓	✓									
BMP C241: Sediment Pond (Temporary)			✓	✓									
BMP C250: Construction Stormwater Chemical Treatment				✓					✓				
BMP C251: Construction Stormwater Filtration				✓					✓				
BMP C252: Treating and Disposing of High pH Water									✓				

Construction SWPPP Elements:

Element 1: Preserve Vegetation / Mark Clearing Limits
Element 2: Establish Construction Access
Element 3: Control Flow Rates
Element 4: Install Sediment Controls
Element 5: Stabilize Soils
Element 6: Protect Slopes
Element 7: Protect Drain Inlets
Element 8: Stabilize Channels and Outlets
Element 9: Control Pollutants
Element 10: Control Dewatering
Element 11: Maintain BMPs
Element 12: Manage the Project
Element 13: Protect Low Impact Development BMPs

7.3.2 Source Control BMPs

BMP C101E: Preserving Natural Vegetation

Purpose

The purpose of preserving natural vegetation is to reduce erosion wherever practicable. Limiting site disturbance is the single most effective method for reducing erosion. For example, conifers can hold up to about 50% of all rain that falls during a storm. Up to 20% to 30% of this rain may never reach the ground but is taken up by the tree or evaporates. Another benefit is that the rain held in the tree can be released slowly to the ground after the storm.

Conditions of Use

Natural vegetation should be preserved on steep slopes, near perennial and intermittent receiving waters or swales, and on building sites in wooded areas.

- As required by the local jurisdiction.
- Phase construction to preserve natural vegetation on the project site for as long as possible during the construction period.

Design and Installation Specifications

Natural vegetation can be preserved in natural clumps or as individual trees, shrubs and vines.

The preservation of individual plants is more difficult because heavy equipment is generally used to remove unwanted vegetation. The points to remember when attempting to save individual plants are the following:

- Whether the plant is worth saving. Consider the location, species, size, age, vigor, and the work involved. Local jurisdictions may also have ordinances to save natural vegetation and trees.
- Fence or clearly mark areas around trees that are to be saved. It is preferable to keep ground disturbance away from the trees at least as far out as the dripline.

Plants need protection from three kinds of injuries:

- Construction equipment: This injury can be above or below the ground level. Damage results from scarring, cutting of roots, and compaction of the soil. Placing a fenced buffer zone around plants to be saved prior to construction can prevent construction equipment injuries.
- Grade changes: Changing the natural ground level will alter grades, which affects the plant's ability to obtain the necessary air, water, and minerals. Minor fills usually do not cause problems although sensitivity between species does vary and should be checked. Trees can tolerate fill of 6 inches or less. For shrubs and other plants, the fill should be less.

  When there are major changes in grade, it may become necessary to supply air to the roots of plants. This can be done by placing a layer of gravel and a tile system over the roots before the fill is made. The tile system should be laid out on the original grade leading from a drywell around the tree trunk. The system should then be covered with small rocks to allow air to circulate over the root area.
- Lowering the natural ground level can seriously damage trees and shrubs. The highest percentage of the plant roots are in the upper 12 inches of the soil and cuts of only 2 to 3 inches can cause serious injury. To protect the roots, it may be necessary to terrace the immediate area around the plants to be saved. If roots are exposed, construction of retaining walls may be needed to keep the soil in place. Plants can also be preserved by leaving them on an undisturbed, gently sloping mound. To increase the chances for survival, it is best to limit grade changes and other soil disturbances to areas outside the dripline of the plant.
- Excavations: Protect trees and other plants when excavating for drain fields and power, water, and sewer lines. Where possible, the trenches should be routed around trees and large

shrubs. When this is not possible, it is best to tunnel under them. This can be done with hand tools or with power augers. If it is not possible to route the trench around plants to be saved, the following guidelines should be followed:

- Cut as few roots as possible. When you have to cut, cut clean. Paint cut root ends with a wood dressing like asphalt base paint if roots will be exposed for more than 24 hours.
- Backfill the trench as soon as possible.
- Tunnel beneath root systems as close to the center of the main trunk to preserve most of the important feeder roots.

Some problems that can be encountered are the following:

- In general, most trees native to eastern Washington do not readily adjust to major changes in environment and special care should be taken to protect these trees.
- The danger of windthrow increases where dense stands of coniferous trees have been thinned. Other species (unless they are on shallow, wet soils less than 20 inches deep) have a low windthrow hazard.
- Cottonwoods, maples, and willows have water-seeking roots. These can cause trouble in sewer lines and infiltration fields. On the other hand, they thrive in high moisture conditions that other trees would not.
- Thinning operations in pure or mixed stands of grand fir, Pacific silver fir, noble fir, Sitka spruce, western redcedar, western hemlock, Pacific dogwood, and red alder can cause serious disease problems. Disease can become established through damaged limbs, trunks, roots, and freshly cut stumps. Diseased and weakened trees are also susceptible to insect attack.

Maintenance Standards

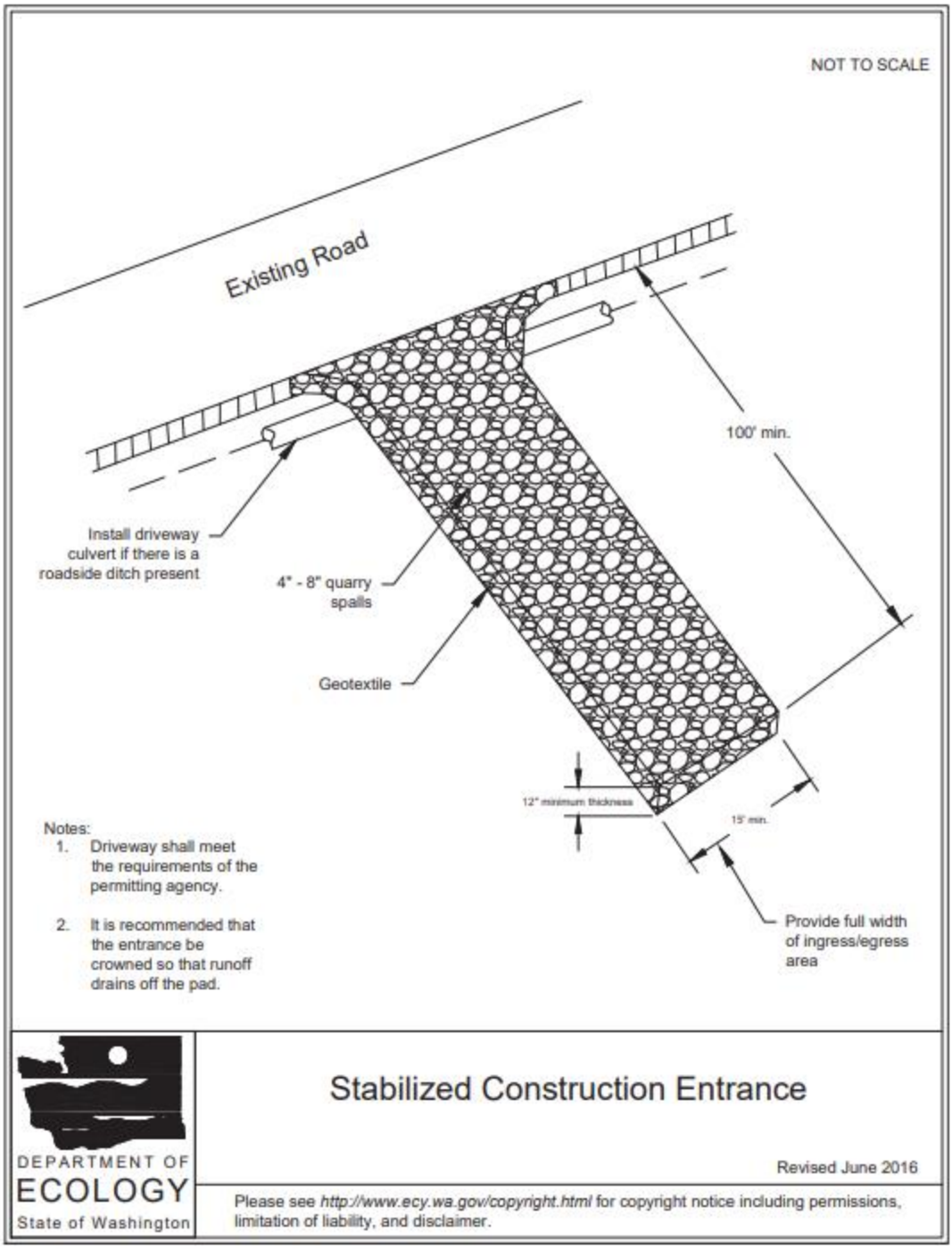
- Inspect flagged and/or fenced areas regularly to make sure flagging or fencing has not been removed or damaged. If the flagging or fencing has been damaged or visibility reduced, it shall be repaired or replaced immediately and visibility restored.
- If tree roots have been exposed or injured, "prune" cleanly with an appropriate pruning saw or loppers directly above the damaged roots and recover with native soils. Treatment of sap flowing trees (e.g., fir, hemlock, pine, soft maples) is not advised as sap forms a natural healing barrier.

BMP C105E: Stabilized Construction Access

Stabilized construction entrances are established to reduce the amount of sediment transported onto paved roads by vehicles or equipment. This is done by constructing a stabilized pad of quarry spalls at entrances and exits for construction sites.

- Construction entrances shall be stabilized wherever traffic will be entering or leaving a construction site if paved roads or other paved areas are within 1,000 feet of the site.
- For residential subdivision construction sites, provide stabilized construction entrances for each residence, rather than only at the main subdivision entrance. Stabilized surfaces shall be of sufficient length/width to provide vehicle access/parking, based on lot size and configuration.
- On large commercial, highway, and road projects, the designer should include enough extra materials in the contract to allow for additional stabilized entrances not shown in the initial Construction Stormwater Pollution Prevention Plan (SWPPP). It is difficult to determine exactly where access to these projects will take place; additional materials will enable the contractor to install them where needed.

Figure 7.3: Stabilized Construction Entrance



For cost estimate purposes, the project will be referring to WSDOT Miscellaneous Erosion Control Details Standard Plan I-80.10-02.

Table 7.1: Stabilized Construction Entrance Geotextile Standards

Geotextile Property	Required Value
Grab Tensile Strength (ASTM D4751)	200 pounds per square inch (psi) minimum
Grab Tensile Elongation (ASTM D4632)	30% maximum
Mullen Burst Strength (ASTM D3786-80a)	400 psi minimum
Apparent Opening Size (ASTM D4751)	No. 20 to No. 45 (U.S. standard sieve size)

- Consider early installation of the first lift of asphalt in areas that will be paved; this can be used as a stabilized entrance. Also consider the installation of excess concrete as a stabilized entrance. During large concrete pours, excess concrete is often available for this purpose.
- Fencing (see BMP C103E: High-Visibility Fence) shall be installed as necessary to restrict traffic to the construction entrance.
- Whenever possible, the entrance shall be constructed on a firm, compacted subgrade. This can substantially increase the effectiveness of the pad and reduce the need for maintenance.
- Construction entrances should avoid crossing existing sidewalks and back of walk drains if at all possible. If a construction entrance must cross a sidewalk or back of walk drain, the full length of the sidewalk and back of walk drain must be covered and protected from sediment leaving the site.
- Alternative material specification:
    - The Washington State Department of Transportation (WSDOT) has raised safety concerns about the quarry spall rock specified in the second bullet in the Design and Installation subsection. WSDOT has noticed that rocks measuring 4 to 8 inches can become trapped between dually truck tires and subsequently released off-site at highway speeds. WSDOT has chosen to use a modified specification for the rock while continuously verifying that the stabilized construction entrance remains effective. To remain effective, the BMP must prevent sediment from migrating off-site. To date, there has been no performance testing to verify operation of this new specification. Local jurisdictions may use the alternative specification, but must perform increased off-site inspections
    - Stabilized construction entrances may use material that meets the requirements of the latest version of WSDOT's *Standard Specifications for Road, Bridge, and Municipal Construction* for ballast unless the alternative grading and quality requirements listed in Table 7.2: Stabilized Construction Entrance Alternative Material Requirements are used.

Table 7.2: Stabilized Construction Entrance Alternative Material Requirements

Sieve Size	Percentage Passing
2.5 inches	99 to 100
2 inch	65 to 100
3/4 inch	40 to 80
No. 4	5 maximum
No. 100	0 to 2
% Fracture	75 minimum
Notes: All percentages are by weight. The sand equivalent value and dust ratio requirements do not apply. The fracture requirement shall be at least one fractured face and will apply the combined aggregate retained on the No. 4 sieve in accordance with FOP for AASHTO T 335.	

Maintenance Standards

Quarry spalls shall be added if the pad is no longer in accordance with the specifications.

- If the entrance is not preventing sediment from being tracked onto pavement, then alternative measures to keep the streets free of sediment shall be used. This may include replacement/cleaning of the existing quarry spalls, street sweeping, an increase in the dimensions of the entrance, or the installation of BMP C106E: Wheel Wash.
- Any sediment that is tracked onto pavement shall be removed by shoveling or street sweeping. The sediment collected by sweeping shall be removed or stabilized on-site. The pavement shall not be cleaned by washing down the street, except when sweeping is ineffective and there is a threat to public safety. If it is necessary to wash the streets, the construction of a small sump to contain the washwater shall be considered. The sediment would then be washed into the sump where it can be controlled.
- Perform street sweeping by hand or with a high-efficiency sweeper. Do not use a non-high-efficiency mechanical sweeper because this creates dust and throws soils into storm systems or conveyance ditches.
- Any quarry spalls that are loosened from the pad, which end up on the roadway shall be removed immediately.
- If vehicles are entering or exiting the site at points other than the construction entrance(s) BMP C103E: High-Visibility Fence shall be installed to control traffic.
- Upon project completion and site stabilization, all construction accesses intended as permanent access for maintenance shall be permanently stabilized.

Approved as Functionally Equivalent

The Washington State Department of Ecology (Ecology) has approved products as able to meet the requirements of this BMP. The products did not pass through the Technology Assessment Protocol–Ecology (TAPE) process. Local jurisdictions may choose not to accept these products or may require additional testing prior to consideration for local use. Products that Ecology has approved as functionally equivalent are available for review on Ecology's Emerging Stormwater Treatment Technologies (TAPE) web page at the following address:

https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Stormwater-permittee-guidance-resources/Emerging-stormwater-treatment-technologies

Design and Installation

- See Figure 7.3: Stabilized Construction Entrance for details.

  Note: The 100-foot minimum length of the entrance shall be reduced to the maximum practicable size when the size or configuration of the site does not allow the full length (100 feet).

- Construct stabilized construction entrances with a 12-inch thick pad of 4- to 8-inch quarry spalls, a 4-inch course of asphalt treated base (ATB), or use existing pavement. Do not use crushed concrete, cement, or calcium chloride for construction entrance stabilization because these products increase pH levels in stormwater, and concrete discharge to surface waters of the state is prohibited.

- A separation geotextile shall be placed under the spalls to prevent fine sediment from pumping up into the rock pad. The geotextile shall meet the following standards listed in Table 7.1: Stabilized Construction Entrance Geotextile Standards.

BMP C107E: Construction Road/Parking Area Stabilization

Purpose

Stabilizing roads, parking areas, and other on-site vehicle transportation routes immediately after grading reduces erosion caused by construction traffic or stormwater runoff.

Conditions of Use

- Roads and parking areas shall be stabilized wherever they are constructed, whether permanent or temporary, for use by construction traffic.
- BMP C103E: High-Visibility Fence shall be installed, if necessary, to limit the access of vehicles to only those roads and parking areas that are stabilized.

Design and Installation Specifications

- On areas that will receive asphalt as part of the project, install the first lift as soon as possible.
- A 6-inch depth of 2- to 4-inch crushed rock, gravel base, or crushed surfacing base course shall be applied immediately after grading or utility installation. A 4-inch course of asphalt treated base (ATB) may also be used, or the road/parking area may be paved. It may also be possible to use cement or calcium chloride for soil stabilization. If cement or cement kiln dust is used for road base stabilization, pH monitoring and implementation of BMP C252E: Treating and Disposing of High pH Water is necessary to evaluate and minimize the effects on stormwater. If the area will not be used for permanent roads, parking areas, or structures, a 6-inch depth of hog fuel may also be used, but this is likely to require more maintenance. Whenever possible, construction roads and parking areas shall be placed on a firm, compacted subgrade.
- Temporary road gradients shall be < 15%. Roadways shall be carefully graded to drain. Drainage ditches shall be provided on each side of the roadway in the case of a crowned section, or on one side in the case of a superelevated section. Drainage ditches shall be directed to a sediment control BMP.
- Rather than relying on ditches, it may also be possible to grade the road so that runoff sheet-flows into a heavily vegetated area with a well-developed topsoil. Landscaped areas are not adequate. If this area has ≥ 50 feet of vegetation, then it is generally preferable to use the vegetation to treat runoff, rather than a sediment pond or trap. The 50 feet shall not include wetlands. If runoff is allowed to sheet flow through adjacent vegetated areas, it is vital to design the roadways and parking areas so that no concentrated runoff is created.
- Storm drain inlets shall be protected to prevent sediment-laden water from entering the drainage system (see BMP C220E: Inlet Protection).

Maintenance Standards

- Inspect stabilized areas regularly, especially after large storm events.
- Crushed rock, gravel base, etc., shall be added as required to maintain a stable driving surface and to stabilize any areas that have eroded.

- Following construction, these areas shall be restored to preconstruction condition or better to prevent future erosion.
- Perform street cleaning at the end of each day or more often if necessary.

- Following construction, these areas shall be restored to preconstruction condition or better to prevent future erosion.
- Perform street cleaning at the end of each day or more often if necessary.

BMP C120E: Temporary and Permanent Seeding

Purpose

Seeding reduces erosion by stabilizing exposed soils. A well-established vegetative cover is one of the most effective methods of reducing erosion.

Conditions of Use

- Use seeding throughout the project on disturbed areas that have reached final grade or that will remain unworked for > 30 days. See Element #5: Stabilize Soils for specific timelines for stabilizing exposed soils.
- The optimum permanent seeding window for eastern Washington is October 1 through November 15.
- The acceptable permanent seeding window for eastern Washington is September 1 through April 30.
- Seeding permanent species is not recommended for eastern Washington from May 1 through August 31, unless irrigation is conducted.
- Review all disturbed areas in late August to early September and complete all seeing by the end of April. Otherwise, vegetation will not establish itself well enough to provide more than average protection.
- Mulch is required at all times for seeding because it protects seeds from heat, moisture loss, and transport due to runoff. Mulch can be applied on top of the seed or simultaneously by hydroseeding. See BMP C121E: Mulching for specifications.
- Seed and mulch all disturbed areas not otherwise vegetated at final site stabilization. Final stabilization means the completion of all soil disturbing activities at the site and the establishment of a permanent vegetative cover, or equivalent permanent stabilization measures (such as pavement, riprap, gabions or geotextiles) which will prevent erosion. See BMP F6.61: Amending Construction Site Soils.

Design and Installation Specifications

General

- Install channels intended for vegetation before starting major earthwork and hydroseed with a bonded fiber matrix (BFM). For vegetated channels that will have high flows, install erosion control blankets over hydroseed. Before allowing water to flow in vegetated channels, establish a 50% vegetation cover of all seeded areas after 3 months of active growth following germination during the growing season. If vegetated channels cannot be established by seed before water flow, install sod or prevegetated mats in the channel bottom over hydromulch

and blankets.

- Confirm the installation of all required stormwater control measures to prevent seed from washing away.
- Hydroseed applications shall include a minimum of 1,500 pounds per acre (lb/acre) of mulch with 3% tackifier.
- Mulch is always required for seeding. Apply mulch on top of the seed or simultaneously by hydroseeding. See BMP C121E: Mulching for specifications.
- Areas that will have seeding only and not landscaping may need compost or meal-based mulch included in the hydroseed in order to establish vegetation. Reinstall native topsoil on the disturbed soil surface before application. See BMP F6.61: Amending Construction Site Soils in Chapter 6 - Flow Control BMP Design.
- When installing seed via hydroseeding operations, only about one-third of the seed actually ends up in contact with the soil surface. This reduces the ability to establish a good stand of grass quickly. One way to overcome this is to increase seed quantities by up to 50%.
- Vegetation establishment can be enhanced by one of the following two approaches:
    - Approach 1: Enhance vegetation establishment by dividing the hydromulch operation into two phases:
        - Phase 1 – Install all seed and fertilizer with 25% to 30% mulch and tackifier onto the soil in the first lift.
        - Phase 2 – Install the remaining mulch and tackifier over the first lift.
    - Approach 2: Vegetation can also be enhanced by:
        - Installing the mulch, seed, fertilizer, and tackifier in one lift;
        - Spreading or blowing straw over the top of the hydromulch at a rate of about 800 to 1,000 lb/acre; or
        - Holding straw in place with a standard tackifier.
    - Both of these approaches (Approach 1 and Approach 2) will increase cost moderately but will greatly improve and enhance vegetative establishment. The increased cost may be offset by the reduced need for:
        - Irrigation,
        - Reapplication of mulch, and
        - Repair of failed slope surfaces.

      Either of these approaches can use standard hydromulch (1,500 lb/acre minimum) and BFM/mechanically bonded fiber matrix (MBFM) (3,000 lb/acre minimum).
- Seed may be installed by hand if it is:

- Temporary and covered by straw, mulch, or topsoil; or
- Permanent in small areas (usually < 1 acre) and covered with mulch, topsoil, or erosion blankets.

- The seed mixes listed in Table 7.3: Temporary Seeding through Table 7.12: Permanent Seed Mixes: Stabilization of Ski Slopes and Subalpine Areas include recommended mixes for both temporary and permanent seeding. Alternative seed mixes approved by the local jurisdiction may be used.
- Because it is difficult to generalize soil and climate conditions in eastern Washington, the project proponent is directed to check with the local suppliers or the local conservation district for appropriate seed mixes and application rates for their site based on a variety of factors, including location, exposure, soil type, slope, and expected foot traffic.
- In addition to meeting erosion control functions and not hindering maintenance operations, selection of long-lived, successional growth native vegetation that can compete against or exclude weeds and grow with minimal maintenance after plant establishment is preferred. Provide diversity to the greatest extent possible and plan for a succession of flowering times to improve pollinator habitat.

Table 7.3: Temporary Seeding shows seeding rates for four different seed mixes (A, B, C, and D) for the temporary stabilization of disturbed areas until permanent vegetation or other long-term erosion control measures can be established. These annual plants will generally not survive more than one growing season.

Table 7.3: Temporary Seeding

Common Name	Seeding Rate for Four Seed Mixes (lb/acre)			
	A	B	C	D
Winter or spring wheat (I)	80			
Spring barley (I)		80		
Regreen (I)[a] or triticale (I)			50	
Annual ryegrass (I)				15

[a]Sterile wheat x wheatgrass hybrid

I = introduced, nonnative plant species

Table 7.4: Permanent Seed Mixes: Upland Areas with Less than 12 Inches Precipitation shows three different erosion control seed mixes (A, B, and C) for upland areas that receive less than 12 inches effective precipitation. For each, drilled seeding rates are given (in lb/acre); double seed rates if broadcast or hydroseeded. Consideration should be given to the traffic hazard for wildlife when selecting food species for roadside stabilization.

Table 7.4: Permanent Seed Mixes: Upland Areas with Less than 12 Inches Precipitation

Common Name	Seeding Rate for Three Seed Mixes (lb/acre)[a]		
	A	B	C
Crested or Siberian wheatgrass* (droughty, coarse soils) (I)	7		
Bluebunch wheatgrass (N)		7	
Indian ricegrass (sandy soil)(N)	2		
Thickspike wheatgrass (N)			8
Sheep fescue (I)		1	1
Big bluegrass (N) or needle and thread grass (N)	1	1	
TOTAL	10	9	9
Seeds/sq ft/mixture	63	56	64

[a]Expressed as pure live seed

I = introduced, nonnative plant species

N = native plant species

sf = square feet

Table 7.5: Permanent Seed Mixes: Upland Areas That Receive 12 to 15 Inches Precipitation shows three different erosion control seed mixes (A, B, and C) for upland areas that receive 12 to 15 inches effective precipitation. For each, drilled seeding rates are given (in lb/acre); double seed rates if broadcast or hydroseeded. Consideration should be given to the traffic hazard for wildlife when selecting food species for roadside stabilization.

Table 7.5: Permanent Seed Mixes: Upland Areas That Receive 12 to 15 Inches Precipitation

Common Name	Seeding Rate for Three Seed Mixes (lb/acre)[a]		
	A	B	C
Bluebunch or beardless wheatgrass (N)		8	
Pubescent wheatgrass (I)			7
Indian ricegrass (sandy or sandy loam soils) (N)	2		
Thickspike wheatgrass (N)	7		2
Sheep fescue (I)		1	2
Basin wildrye (N)		1	
TOTAL	9	10	11
Seeds/sf/mixture	53	63	49

[a]Expressed as pure live seed

I = introduced, nonnative plant species

N = native plant species

sf = square feet

Table 7.6: Permanent Seed Mixes: Upland Areas With 15 to 18 Inches Precipitation shows two different erosion control seed mixes (A and B) for upland areas that receive 15 to 18 inches effective precipitation. For each, drilled seeding rates are given (in lb/acre); double seed rates if broadcast or hydroseeded. Consideration should be given to the traffic hazard for wildlife when selecting food species for roadside stabilization.

Table 7.6: Permanent Seed Mixes: Upland Areas With 15 to 18 Inches Precipitation

Common Name	Seeding Rate for Two Seed Mixes (lb/acre)[a]	
	A	B
Bluebunch wheatgrass (N) or beardless wheatgrass (N)	8	
Pubescent wheatgrass (I) or intermediate wheatgrass (I) or thickspike wheatgrass (N)		8
Hard fescue (I) or sheep fescue (I)	2	2
Big bluegrass (N)	1	1
Native legume (N)	2	2
TOTAL	9	10
Seeds/sf/mixture	70	72
[a]Expressed as pure live seed I = introduced, nonnative plant species N = native plant species sf = square feet		

Table 7.7: Permanent Seed Mixes: Upland Areas With 18 to 24 Inches Precipitation shows three different erosion control seed mixes (A, B, and C) for upland areas that receive 18 to 24 inches effective precipitation. For each, drilled seeding rates are given (in lb/acre); double seed rates if broadcast or hydroseeded. Consideration should be given to the traffic hazard for wildlife when selecting food species for roadside stabilization.

Table 7.7: Permanent Seed Mixes: Upland Areas With 18 to 24 Inches Precipitation

Common Name	Seeding Rate for Three Seed Mixes (lb/acre)[a]		
	A	B	C
Slender wheatgrass (N) or sodar streambank wheatgrass	7		
Blue wildrye (N)		8	
Mountain brome (N)	1		8
Hard fescue (I)	2	2	2
White clover (I) or red clover (I)			2

Table 7.7: Permanent Seed Mixes: Upland Areas With 18 to 24 Inches Precipitation (continued)

Common Name	Seeding Rate for Three Seed Mixes (lb/acre)[a]		
	A	B	C
Native lupine (N) or northern sweetvetch (N)		2	
Native clover spp. (N) or milkvetch spp. (N)	2		
TOTAL	12	12	12
Seeds/sf/mixture	64	62	76

[a]Expressed as pure live seed

I = introduced, nonnative plant species

N = native plant species

sf = square feet

Table 7.8: Permanent Seed Mixes: Upland Areas With More Than 24 Inches Precipitation shows two different erosion control seed mixes (A and B) for upland areas that receive > 24 inches effective precipitation. For each, drilled seeding rates are given (in lb/acre); double seed rates if broadcast or hydroseeded. Consideration should be given to the traffic hazard for wildlife when selecting food species for roadside stabilization.

Table 7.8: Permanent Seed Mixes: Upland Areas With More Than 24 Inches Precipitation

Common Name	Seeding Rate for Two Seed Mixes (lb/acre)[a]	
	A	B
Hard fescue (I)		2
Blue wildrye (N)	6	
Red fescue (I)	1	
Mountain brome (N)	2	4
Slender wheatgrass (N)		4
White clover (I)	2	
Native legume (N)		2
TOTAL	11	12

Table 7.8: Permanent Seed Mixes: Upland Areas With More Than 24 Inches Precipitation (continued)

Common Name	Seeding Rate for Two Seed Mixes (lb/acre)[a]	
	A	B
Seeds/sf/mixture	72	61

[a]Expressed as pure live seed

I = introduced, nonnative plant species

N = native plant species

sf = square feet

Table 7.9: Permanent Seed Mixes: Grassed Waterways With Fewer Than 15 Inches Precipitation shows three different erosion control seed mixes (A, B, and C) for stabilizing grassed waterways in areas that receive fewer than 15 inches effective precipitation. For each, drilled seeding rates are given (in lb/acre); double seed rates if broadcast or hydroseeded. Consideration should be given to the traffic hazard for wildlife when selecting food species for roadside stabilization.

Table 7.9: Permanent Seed Mixes: Grassed Waterways With Fewer Than 15 Inches Precipitation

Common Name	Seeding Rate for Three Seed Mixes (lb/acre)[a]		
	A	B	C
Pubescent wheatgrass (I)		10	
Streambank wheatgrass (N)			7
Thickspike wheatgrass (N)	7		
Sheep fescue (I)		2	2
Big bluegrass (N)	2		
TOTAL	9	12	9
Seeds/sf/mixture	66	48	56

[a]Expressed as pure live seed

I = introduced, nonnative plant species

N = native plant species

sf = square feet

Table 7.10: Permanent Seed Mixes: Grassed Waterways With 15 to 18 Inches Precipitation shows three different erosion control seed mixes (A, B, and C) for stabilizing grassed waterways in areas that receive 15 to 18 inches effective precipitation. For each, drilled seeding rates are given (in lb/acre); double seed rates if broadcast or hydroseeded. Consideration should be given to the traffic hazard for wildlife when selecting food species for roadside stabilization.

Table 7.10: Permanent Seed Mixes: Grassed Waterways With 15 to 18 Inches Precipitation

Common Name	Seeding Rate for Three Seed Mixes (lb/acre)[a]		
	A	B	C
Tall wheatgrass (I)	10		
Pubescent wheatgrass (I), streambank wheatgrass (N), or intermediate wheatgrass (I)		10	
Hard fescue (I) or sheep fescue (I)	2	2	2
Thickspike wheatgrass (N)			8
TOTAL	12	12	10
Seeds/sf/mixture	46	48	57
[a]Expressed as pure live seed I = introduced, nonnative plant species N = native plant species sf = square feet			

Table 7.11: Permanent Seed Mixes: Grassed Waterways With More Than 18 Inches Precipitation shows three different erosion control seed mixes (A, B, and C) for stabilizing grassed waterways in areas that receive more than 18 inches effective precipitation. For each, drilled seeding rates are given (in lb/acre); double seed rates if broadcast or hydroseeded. Consideration should be given to the traffic hazard for wildlife when selecting food species for roadside stabilization.

Table 7.11: Permanent Seed Mixes: Grassed Waterways With More Than 18 Inches Precipitation

Common Name	Seeding Rate for Three Seed Mixes (lb/acre)[a]		
	A	B	C
Intermediate wheatgrass (I)	10		
Mountain brome (N) or meadow brome		10	
Annual ryegrass (I) or perennial ryegrass (I)	4		
Hard fescue (I)		2	
Tall wheatgrass (I)			10
TOTAL	14	12	10
Seeds/sf/mixture	40	46	38
[a]Expressed as pure live seed I = introduced, nonnative plant species N = native plant species sf = square feet			

Table 7.12: Permanent Seed Mixes: Stabilization of Ski Slopes and Subalpine Areas shows two different erosion control seed mixes (A and B) for stabilizing ski slopes and subalpine areas in eastern Washington. For each, drilled seeding rates are given (in lb/acre); double seed rates if broadcast or hydroseeded. Consideration should be given to the traffic hazard for wildlife when selecting food species for roadside stabilization.

Table 7.12: Permanent Seed Mixes: Stabilization of Ski Slopes and Subalpine Areas

Common Name	Seeding Rate for Three Seed Mixes (lb/acre)[a]	
	A	B
Blue wildrye (N) or Idaho fescue (N)	10	
Pubescent wheatgrass (I) or red fescue (I)		8
Hard fescue (I)		5
Sheep fescue (I)	2	2
White clover (I) or bentgrasses (I)		2
Lupine (N)	2	

Table 7.12: Permanent Seed Mixes: Stabilization of Ski Slopes and Subalpine Areas (continued)

Common Name	Seeding Rate for Three Seed Mixes (lb/acre)[a]	
	A	B
TOTAL	14	17
[a]Expressed as pure live seed I = introduced, nonnative plant species N = native plant species		

Roughening and Rototilling

- The seedbed should be firm and rough. Roughen all soil no matter what the slope. Track walk slopes before seeding if engineering purposes require compaction. Back-blading or smoothing of slopes > 4H:1V is not allowed if they are to be seeded.
- Restoration-based landscape practices require deeper incorporation than that provided by a simple single-pass rototilling treatment. Wherever practical, initially rip the subgrade to improve long-term permeability, infiltration, and water inflow qualities. At a minimum, permanent areas shall receive soil amendments to achieve organic matter and permeability performance defined in amended soil/landscape systems. For systems that are deeper than 8 inches, complete the rototilling process in multiple lifts, or prepare the soil amendments to achieve the specified depth.

Fertilizers

- Conducting soil tests to determine the exact type and quantity of fertilizer needed is recommended. This will prevent the overapplication of fertilizer.
- Organic matter is the most appropriate form of fertilizer because it provides nutrients (including nitrogen, phosphorus, and potassium) in the least water-soluble form. A natural system typically releases 20% to 10% of its nutrients annually. Chemical fertilizers have been formulated to simulate what organic matter does naturally.
- Always use slow-release fertilizers because they are more efficient and have fewer environmental impacts. Do not add fertilizer to the hydromulch machine, or agitate, more than 20 minutes before use. Too much agitation destroys the slow release coating.

There are numerous products available to take the place of chemical fertilizers, including several with seaweed extracts that are beneficial to soil microbes and organisms. If 100% cottonseed meal is used as the mulch in hydroseed, chemical fertilizer may not be necessary. Cottonseed meal provides a good source of long-term, slow-release, available nitrogen.

Bonded Fiber Matrix and Mechanically Bonded Fiber Matrix

- On steep slopes, use BFM or MBFM products. Apply BFM/MBFM products at a minimum rate of 3,000 lb per acre of mulch with approximately 10% tackifier. Achieve a minimum of 95% soil coverage during application. Numerous products are available commercially. Install products per manufacturer's instructions. Most products require 24 to 36 hours to cure before a rainfall and cannot be installed on wet or saturated soils. Generally, products come in 40- to 50-pound bags and include all necessary ingredients except for seed and fertilizer.
- BFMs and MBFMs provide good alternatives to blankets in most areas requiring vegetation establishment. Advantages over blankets include the following:
    - BFM and MBFMs do not require surface preparation.
    - Helicopters can assist in installing BFM and MBFMs in remote areas.
    - On slopes steeper than 2.5H:1V, blanket installers may require ropes and harnesses for safety.
    - Installing BFM and MBFMs can save at least $1,000 per acre compared to blankets.
- In most cases, the shear strength of blankets is not a factor when used on slopes, only when used in channels.
    - Areas to be permanently landscaped shall provide a healthy topsoil or amend the existing soil to reduce the need for fertilizers, improve overall topsoil quality, provide for better plant health and vitality, improve hydrologic characteristics, and reduce the need for irrigation.
    - Areas that already have good topsoil, such as undisturbed areas, do not require soil amendments.

Maintenance Standards

- Reseed any seeded areas that fail to establish ≥ 50% cover (100% cover for areas that receive sheet or concentrated flows) of all seeded areas after 3 months of active growth following germination during the growing season. If reseeding is ineffective, use an alternative method, such as sodding, mulching, or nets/blankets. If winter weather prevents adequate grass growth, this time limit may be relaxed at the discretion of the local authority when sensitive areas would otherwise be protected.
- Reseed and protect by mulch any areas that experience erosion after achieving adequate cover. If the erosion problem is drainage related, the problem shall be fixed and the eroded area reseeded and protected by mulch.
- Seeded areas shall be supplied with adequate moisture, but not watered to the extent that causes runoff.

Approved as Equivalent

The Washington State Department of Ecology (Ecology) has approved products as able to meet the requirements of BMP C120E: Temporary and Permanent Seeding. The products did not pass through the Technology Assessment Protocol–Ecology (TAPE) process. Local jurisdictions may choose not to accept this product approved as equivalent or may require additional testing prior to

consideration for local use. The products are available for review on Ecology's Emerging Stormwater Treatment Technologies (TAPE) web page at the following address:

https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Stormwater-permittee-guidance-resources/Emerging-stormwater-treatment-technologies

BMP C122E: Nets and Blankets

Purpose

Erosion control nets and blankets are intended to prevent erosion and hold seed and mulch in place on steep slopes and in channels so that vegetation can become well established. In addition, some nets and blankets can be used to permanently reinforce turf to protect drainage systems during high flows.

Nets (commonly called matting) are strands of material woven into an open but high-tensile strength net (for example, coconut fiber matting and turf reinforcement mats [TRM]). Blankets are strands of material that are not tightly woven but instead form a layer of interlocking fibers, typically held together by a biodegradable or photodegradable netting (for example, excelsior or straw blankets). They generally have lower tensile strength than nets but cover the ground more completely. Coir (coconut fiber) fabric comes as both nets and blankets.

Conditions of Use

Erosion control nets and blankets should be used for the following purposes:

- To aid permanent vegetated stabilization of slopes 2H:1V or greater and with more than 10 feet of vertical relief.
- For drainage ditches and swales (highly recommended). The application of appropriate netting or blanket to drainage ditches and swales can protect bare soil from channelized runoff while vegetation is established. Nets and blankets also can capture a great deal of sediment due to their open, porous structure. Synthetic nets and blankets can be used to permanently stabilize channels and may provide a cost-effective, environmentally preferable alternative to riprap. 100% synthetic blankets manufactured for use in ditches may be easily reused as temporary ditch liners.

Disadvantages of nets and blankets include the following:

- Surface preparation is required.
- On slopes steeper than 2.5H:1V, net and blanket installers may need to be roped and harnessed for safety.
- They cost at least $4,000 to $6,000 per acre installed.

Advantages of nets and blankets include the following:

- They can be installed without mobilizing special equipment.
- They can be installed by anyone with minimal training.
- They can be installed in stages or phases as the project progresses.
- Seed and fertilizer can be hand-placed by the installers as they progress down the slope.
- They can be installed in any weather.
- Numerous types of nets and blankets can be designed with various parameters in mind: fiber blend, mesh strength, longevity, biodegradability, cost, and availability.

An alternative to nets and blankets is BMP C202E (Riprap Channel Lining).

Design and Installation Specifications

- See Figure 7.5: Channel Installation and Figure 7.6: Slope Installation for typical orientation and installation of nets and blankets used in channels and as slope protection. Note: these are typical only; all nets and blankets must be installed per manufacturer's installation instructions.
- Installation is critical to the effectiveness of these products. If good ground contact is not achieved, runoff can concentrate under the product, resulting in significant erosion.
- Nets and blankets are installed on slopes according to the following procedure:
    1. Complete final grade and track walk up and down the slope. Soils should be raked and uniform prior to installing nets or blankets. To be effective, nets and blankets must have good adhesion to the soil.
    2. Install hydromulch with seed and fertilizer.
    3. Dig a small trench, approximately 12 inches wide by 6 inches deep along the top of the slope.
    4. Install the leading edge of the net/blanket into the small trench and staple approximately every 18 inches. Note: Staples are metal, U-shaped, and a minimum of 6 inches long. Longer staples are used in sandy soils. Biodegradable stakes are also available.
    5. Roll the net/blanket slowly down the slope as you walk backward. Note: The net/blanket rests against the installer's legs. Staples are installed as the net/blanket is unrolled. It is critical that the proper staple pattern is used for the net/blanket being installed. The net/blanket is not to be allowed to roll down the slope on its own as this stretches the net/blanket, making it impossible to maintain soil contact. In addition, no one is allowed to walk on the net/blanket after it is in place.
    6. If the net/blanket is not long enough to cover the entire slope length, allow the trailing edge of the upper net/blanket to overlap the leading edge of the lower net/blanket and staple it. On steeper slopes, this overlap should be installed in a small trench, stapled, and covered with soil.

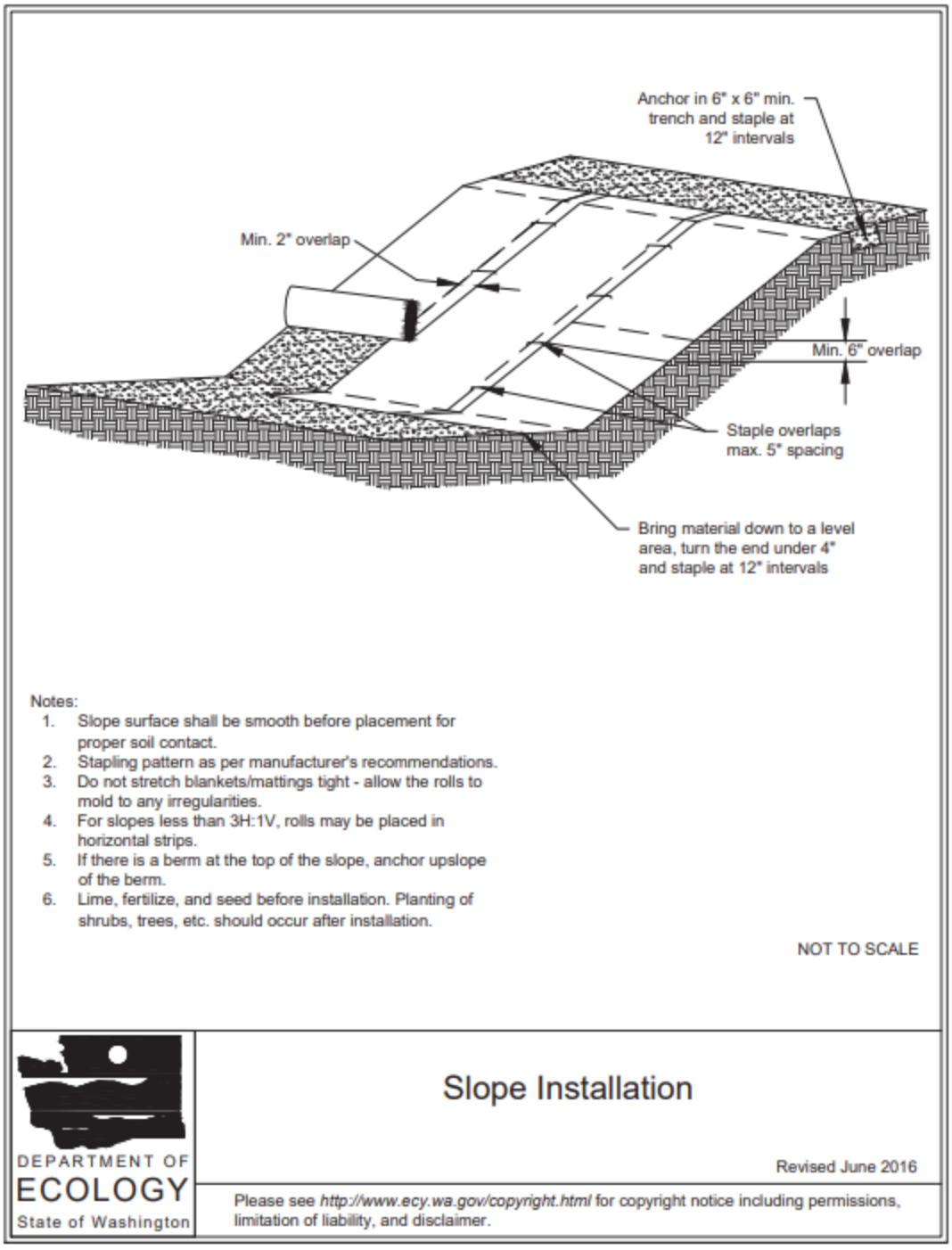
With the variety of products available, it is impossible to cover all the details of appropriate use and installation. Therefore, it is critical that the designer review the manufacturer's information and that a site visit take place in order to ensure that the specified product is appropriate. Information is also available in the latest version of the Washington State Department of Transportation *Standard Specifications for Road, Bridge, and Municipal Construction*.

- Jute matting must be used in conjunction with mulch (BMP C121E: Mulching). Excelsior, woven straw blankets, and coir (coconut fiber) blankets may be installed without mulch. There are many other types of erosion control nets and blankets on the market that may be appropriate in certain circumstances.
- In general, most nets (e.g., jute matting) require mulch in order to prevent erosion because they have a fairly open structure. Blankets typically do not require mulch because they usually provide complete protection of the surface.
- Extremely steep, unstable, wet, or rocky slopes are often appropriate candidates for use of synthetic blankets, as are riverbanks, beaches, and other high-energy environments. If synthetic blankets are used, the soil should be hydromulched first.
- For use in sensitive areas, 100% biodegradable blankets are available. These organic blankets are usually held together with a paper or fiber mesh and stitching, which may last up to a year.
- Most netting used with blankets is photodegradable, meaning it breaks down under sunlight (not ultraviolet [UV] stabilized). However, this process can take months or years even under bright sun. Once vegetation is established, sunlight does not reach the mesh. It is not uncommon to find nondegraded netting still in place several years after installation. This can be a problem if maintenance requires the use of mowers or ditch cleaning equipment. In addition, birds and small animals can become trapped in the netting.

Maintenance Standards

- Maintain good contact with the ground. Erosion must not occur beneath the net or blanket.
- Repair and staple any areas of the net or blanket that are damaged or not in close contact with the ground.
- Fix and protect eroded areas if erosion occurs due to poorly controlled drainage.

Figure 7.6: Slope Installation



For cost estimate purposes, this project will refer to the WSDOT Biodegradable Erosion Control Blanket Placement for Slopes Standard Plan I-60.10-01.

BMP C153E: Material Delivery, Storage, and Containment

Purpose

Prevent, reduce, or eliminate the discharge of pollutants to the drainage system or receiving waters from material delivery and storage. Minimize the storage of hazardous materials on-site, store materials in a designated area, and install secondary containment.

Conditions of Use

These procedures are suitable for use at all construction sites with delivery and storage of the following materials:

- Petroleum products such as fuel, oil and grease
- Soil stabilizers and binders (e.g., polyacrylamide)
- Fertilizers, pesticides, and herbicides
- Detergents
- Asphalt and concrete compounds
- Hazardous chemicals such as acids, lime, adhesives, paints, solvents, and curing compounds
- Any other material that may be detrimental if released to the environment

Design and Installation Specifications

The following steps should be taken to minimize risk:

- Temporary storage area should be located away from vehicle traffic, near the construction entrance(s), and away from receiving waters or storm drains.
- Safety Data Sheets should be supplied for all stored materials stored. Chemicals should be kept in their original labeled containers.
- Hazardous material storage on-site should be minimized.
- Hazardous materials should be handled as infrequently as possible.
- During the wet weather season (October 1 through June 30), consider storing materials in a covered area.
- Materials should be stored in secondary containments, such as earthen dike, horse trough, or even a children's wading pool for nonreactive materials such as detergents, oil, grease, and paints. Small amounts of material may be secondarily contained in "bus boy" trays or concrete mixing trays.
- Do not store chemicals, drums, or bagged materials directly on the ground. Place these items on a pallet and within secondary containment.
- If drums must be kept uncovered, store them at a slight angle to reduce ponding of rainwater on the lids to reduce corrosion. Domed plastic covers are inexpensive and snap to the top of drums, preventing water from collecting.

Material Storage Areas and Secondary Containment Practices

- Liquids, petroleum products, and substances listed in 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302 shall be stored in approved containers and drums and shall not be overfilled. Containers and drums shall be stored in temporary secondary containment facilities.
- Temporary secondary containment facilities shall provide for a spill containment volume able to contain 10% of the total enclosed container volume of all containers, or 110% of the capacity of the largest container within its boundary, whichever is greater.
- Secondary containment facilities shall be impervious to the materials stored therein for a minimum contact time of 72 hours.
- Secondary containment facilities shall be maintained free of accumulated rainwater and spills. In the event of spills or leaks, accumulated rainwater and spills shall be collected and placed into drums. These liquids shall be handled as hazardous waste unless testing determines them to be nonhazardous.
- Sufficient separation should be provided between stored containers to allow spill cleanup and emergency response access.
- During the wet weather season (October 1 through June 30), each secondary containment facility shall be covered during nonworking days.
- At all times, each secondary containment facility shall be covered prior to and during rain events.
- Keep material storage areas clean, organized, and equipped with an ample supply of

appropriate spill cleanup material (spill kit).

- The spill kit should include, at a minimum, the following items:
    - One water-resistant nylon bag
    - Three oil-absorbent socks (3 inches by 4 feet)
    - Two oil-absorbent socks (3 inches by 10 feet)
    - Twelve oil-absorbent pads (17 by 19 inches)
    - One pair of splash-resistant goggles
    - Three pairs of nitrile gloves
    - Ten disposable bags with ties
    - Instructions

BMP C160E: Certified Erosion and Sediment Control Lead

Purpose

The project proponent designates at least one person as the responsible representative in charge of erosion and sediment control (ESC) and water quality protection. The designated employee or contact shall be the Certified Erosion and Sediment Control Lead (CESCL) who is responsible for ensuring compliance with all local, state, and federal ESC and water quality requirements.

Conditions of Use

A CESCL should be made available on projects ≥ 1 acre that discharge stormwater to surface waters of the state. Sites < 1 acre do not require a CESCL certification for conducting inspections; sampling is not required on sites that disturb < 1 acre. The CESCL shall meet one of the following requirements:

- Have a current certificate proving attendance in an ESC training course that meets the minimum ESC training and certification requirements established by Ecology. The minimum requirements for CESCL course training, as well as a list of ESC training and certification providers, are available on the Washington State Department of Ecology's Certified Erosion & Sediment Control Lead web page at the following address:

  https://ecology.wa.gov/Regulations-Permits/Permits-certifications/Certified-erosion-sediment-control

- Be a Certified Professional in Erosion and Sediment Control (CPESC). For additional information, see the Envirocert CPESC website at the following address:

  http://www.envirocertintl.org/cpesc/

Specifications

- CESCL certification shall remain valid for 3 years.
- The CESCL shall have authority to act on behalf of the contractor or developer and shall be available, on call, 24 hours per day throughout the period of construction.
- The Construction Stormwater Pollution Prevention Plan (SWPPP) shall include the name, telephone number, fax number, and address of the designated CESCL. See Chapter 3 - Preparation of Stormwater Site Plans and 7.2 Planning.
- A CESCL may provide inspection and compliance services for multiple construction projects in the same geographic region.
- Duties and responsibilities of the CESCL shall include, but are not limited to, the following:
  - Maintaining a permit file on-site at all times, which includes the SWPPP and any associated permits and plans
  - Directing BMP installation, inspection, maintenance, modification, and removal
  - Updating all project drawings and the Construction SWPPP with changes made

- Completing any sampling requirements including reporting results using electronic Discharge Monitoring Reports (WebDMR)
- Facilitating, participating in, and taking corrective actions resulting from inspections performed by outside agencies or the owner
- Keeping daily logs, and inspection reports. Inspection reports should include the following:
    - Inspection date/time
    - Weather information; general conditions during inspection and approximate amount of precipitation since the last inspection
    - Visual monitoring results, including a description of discharged stormwater and a notation of the presence of suspended sediment, turbid water, discoloration, and oil sheen, as applicable
    - Any water quality monitoring performed during inspection
    - General comments and notes, including a brief description of any BMP repairs, maintenance, or installations made as a result of the inspection
    - A summary or list of all BMPs implemented, including observations of all ESC structures or practices and the following:
        1. Locations of BMPs inspected
        2. Locations of BMPs that need maintenance
        3. Locations of BMPs that failed to operate as designed or intended
        4. Locations where additional or different BMPs are required

BMP C162E: Scheduling

Purpose

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

Conditions for Use

The construction sequence schedule is an orderly listing of all major land-disturbing activities together with the necessary erosion and sediment control (ESC) BMPs planned for the project. This type of schedule guides the contractor on work to be done before other work is started so that serious erosion and sedimentation problems can be avoided.

Following a specified work schedule that coordinates the timing of land-disturbing activities and the installation of control measures is perhaps the most cost-effective way of controlling erosion during construction. The removal of ground cover leaves a site vulnerable to erosion. Construction

sequencing that limits land clearing, provides timely installation of ESC BMPs, and restores protective cover quickly can significantly reduce the erosion potential of a site.

Design Considerations

- Minimize construction during rainy periods.
- Schedule projects to disturb only small portions of the site at any one time. Complete grading as soon as possible. Immediately stabilize the disturbed portion before grading the next portion. Practice staged seeding in order to revegetate cut-and-fill slopes as the work progresses.

BMP C202E: Riprap Channel Lining

Purpose

To protect erodible channels by providing a channel liner using riprap.

Conditions of Use

- Use this BMP when natural soils or vegetated stabilized soils in a channel are not adequate to prevent channel erosion.
- Use this BMP when a permanent ditch or pipe system is to be installed and a temporary measure is needed.
- An alternative to riprap channel lining is BMP C122E: Nets and Blankets.
- The Federal Highway Administration recommends not using geotextile liners whenever the slope exceeds 10% or the shear stress exceeds 8 pounds per square foot.
- Since riprap is typically used where erosion potential is high, construction must be sequenced so that the riprap is put in place with the minimum possible delay.
- Disturb areas awaiting riprap only when final preparation and placement of the riprap can follow immediately behind the initial disturbance. Where riprap is used for outlet protection, the riprap should be placed before or in conjunction with the construction of the pipe or channel so that it is in place when the pipe or channel begins to operate.
- The designer, after determining the riprap size that will be stable under the flow conditions, shall consider that size to be a minimum size and then, based on riprap gradations actually available in the area, select the size or sizes that equal or exceed the minimum size. The possibility of drainage structure damage by others shall be considered in selecting a riprap size, especially if there is nearby water or a gully in which to toss the rocks.
- Rock for riprap shall consist of field stone or quarry rock that is approximately rectangular. The rock shall be hard and angular and of such quality that it will not disintegrate on exposure to water or weathering and it shall be suitable in all respects for the purpose intended. See the latest version of the Washington State Department of Transportation *Standard Specifications for Road, Bridge, and Municipal Construction*.
- A lining of engineering geotextile shall be placed between the riprap and the underlying soil surface to prevent soil movement into or through the riprap. The geotextile should be keyed in at the top of the bank.
- Geotextile shall not be used on slopes > 1.5:1 as slippage may occur. It should be used in conjunction with a layer of coarse aggregate (granular filter blanket) when the riprap to be placed is 12 inches and larger.

Maintenance Standards

Replace riprap as needed.

BMP C233E: Silt Fence

Purpose

Silt fence reduces the transport of coarse sediment from a construction site by providing a temporary physical barrier to sediment and reducing the runoff velocities of overland flow.

Conditions of Use

- Silt fence may be used downslope of all disturbed areas.
- Silt fence shall prevent sediment carried by runoff from going beneath, through, or over the top of the silt fence but shall allow the water to pass through the fence.
- Silt fence is not intended to treat concentrated flows, nor is it intended to treat substantial amounts of overland flow. Convey any concentrated flows through the drainage system to a sediment-trapping BMP.
- Do not construct silt fences in streams or use in V-shaped ditches. Silt fences do not provide an adequate method of silt control for anything deeper than sheet or overland flow.

Design and Installation Specifications

- Contributing area of ≤ 1 acre or in combination with sediment basin in a larger site.
- Use in combination with other construction stormwater BMPs.
- Maximum slope steepness (perpendicular to the silt fence line) of 1H:1V.
- Maximum sheet or overland flow path length to the silt fence of 100 feet.
- Do not allow flows > 0.5 cubic feet per second.
- Use geotextile fabric that meets the standards indicated in Table 7.19: Geotextile Fabric Standards for Silt Fence. All of the listed geotextile properties are minimum average roll values (i.e., the test result for any sampled roll in a lot shall meet or exceed the values shown in Table Table 7.19: Geotextile Fabric Standards for Silt Fence).

Table 7.19: Geotextile Fabric Standards for Silt Fence

Geotextile Property	Minimum Average Roll Value
Polymeric Mesh Apparent Opening Size (ASTM D4751)	0.60 mm maximum for slit film wovens (No. 30 sieve) 0.30 mm maximum for all other geotextile types (No. 50 sieve) 0.15 mm minimum for all fabric types (No. 100 sieve)
Water Permittivity (ASTM D4491)	0.02 sec-1 minimum
Grab Tensile Strength (ASTM D4632)	180 lb minimum for extra strength fabric 100 lb minimum for standard strength fabric
Grab Tensile Strength (ASTM D4632)	30% maximum
Ultraviolet Resistance (ASTM D4355)	70% minimum

- Support standard strength geotextiles shall be supported with wire mesh, chicken wire, 2- by 2-inch wire, safety fence, or jute mesh to increase the strength of the geotextile Silt fence materials are available that have synthetic mesh backing attached.
- Silt fence material shall contain ultraviolet ray inhibitors and stabilizers to provide a minimum of 6 months of expected usable construction life at a temperature range of 0°F to 120°F.
- 100% biodegradable silt fence is available that is strong, long lasting, and can be left in place after the project is completed, if permitted by the local jurisdiction.
- See Figure 7.24: Silt Fence. Include the following standard notes for silt fence on construction plans and specifications:

    1. The contractor shall install and maintain temporary silt fences at the locations shown in the plans.
    2. Construct silt fences in the areas of clearing, grading, or drainage prior to starting those activities.
    3. The silt fence shall have a 2-foot minimum and a 2.5-foot maximum height above the original ground surface.
    4. The geotextile fabric shall be sewn together at the point of manufacture to form fabric lengths as required. Locate all sewn seams at support posts. Alternatively, two sections of silt fence can be overlapped, provided the contractor can demonstrate, to the satisfaction of the licensed professional, that the overlap is long enough and that the adjacent silt fence sections are close enough together to prevent silt laden water from escaping through the fence at the overlap.
    5. Attach the geotextile fabric on the upslope side of the posts and secure with staples, wire, or in accordance with the manufacturer's recommendations. Attach the geotextile fabric to the posts in a manner that reduces the potential for tearing.
    6. Support the geotextile fabric with wire or plastic mesh, dependent on the properties of

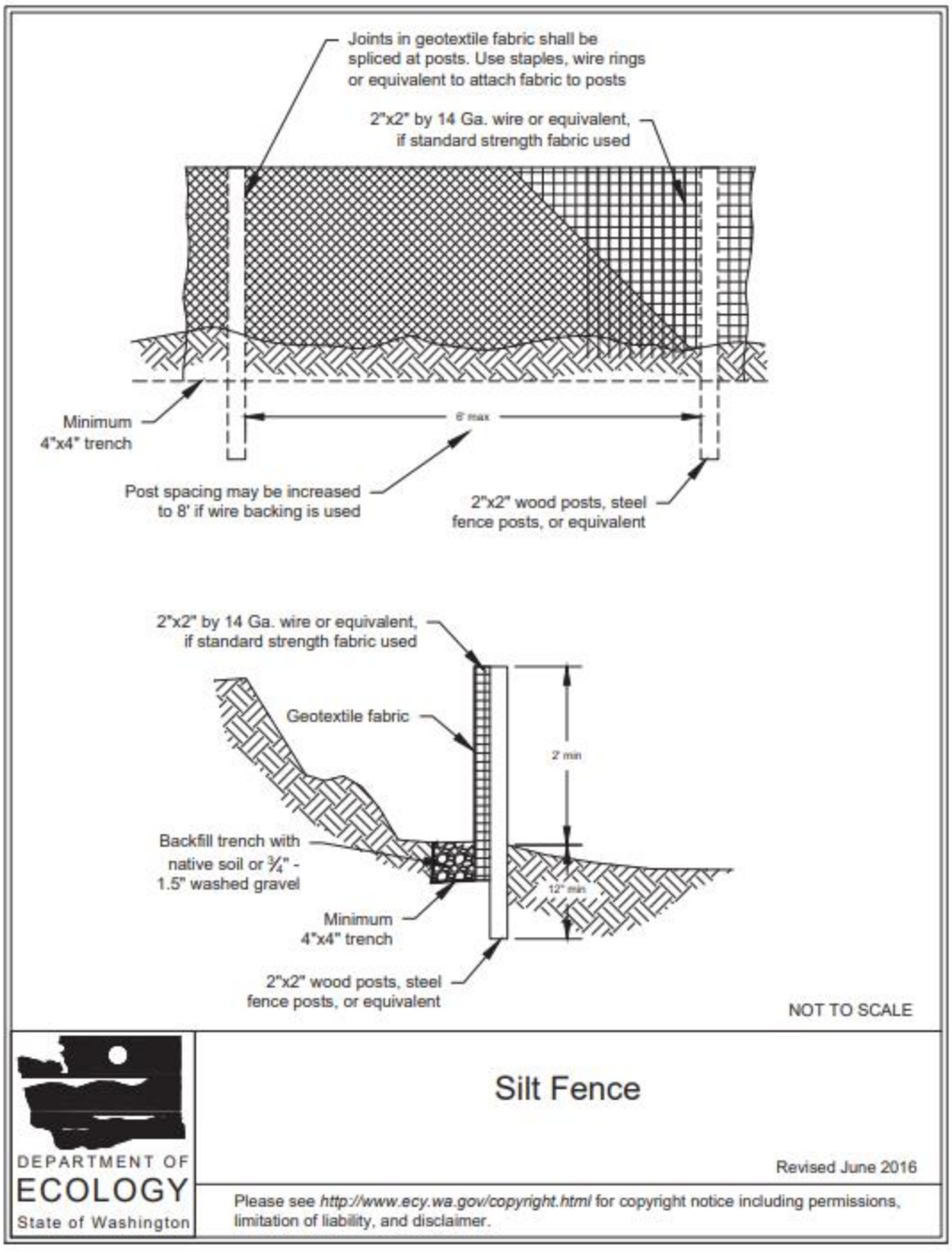
the geotextile selected for use. If wire or plastic mesh is used, fasten the mesh securely to the upslope of the posts with the geotextile fabric upslope of the mesh.

7. Mesh support, if used, shall consist of steel wire with a maximum mesh spacing of 2 inches, or a prefabricated polymeric mesh. The strength of the wire or polymeric mesh shall be ≥ 180 pounds grab tensile strength. The polymeric mesh must be as resistant to the same level of ultraviolet radiation as the geotextile fabric it supports.
8. Bury the bottom of the geotextile fabric 4 inches minimum below the ground surface. Backfill and tamp soil in place over the buried portion of the geotextile fabric, so that no flow can pass beneath the silt fence and scouring cannot occur. When wire or polymeric support mesh is used, the wire or polymeric mesh shall extend into the ground 3 inches minimum.
9. Drive or place the silt fence posts into the ground 18 inch minimum. A 12-inch minimum depth is allowed if topsoil or other soft subgrade soil is not present and 18 inches cannot be reached. Increase fence post minimum depths by 6 inches if the fence is located on slopes of ≥ 3H:1V and the slope is perpendicular to the fence. If required post depths cannot be obtained, the posts shall be adequately secured by bracing or guying to prevent overturning of the fence due to sediment loading.
10. Use wood, steel or equivalent posts. The spacing of the support posts shall be a maximum of 6 feet. Posts shall consist of one of the following:
    - Wood with minimum dimensions of 2 inches by 2 inches by 3 feet. Wood shall be free of defects such as knots, splits, or gouges.
    - No. 6 steel rebar or larger.
    - ASTM A120 steel pipe with a minimum diameter of 1 inch.
    - U-, T-, L-, or C-shaped steel posts with a minimum weight of 1.35 pounds per foot.
    - Other steel posts having strength and bending resistance equivalent to the post sizes listed above.
11. Locate silt fences on contour as much as possible, except at the ends of the fence, where the fence shall be turned uphill such that the silt fence captures the runoff water and prevents water from flowing around the end of the fence.
12. If the fence must cross contours, with the exception of the ends of the fence, place check dams perpendicular to the back of the fence to minimize concentrated flow and erosion. The slope of the fence line where contours must be crossed shall be ≤ 3H:1V.
    - Check dams shall be approximately 1 foot deep at the back of the fence and shall be continued perpendicular to the fence at the same elevation until the top of the check dam intercepts the ground surface behind the fence.
    - Check dams shall consist of crushed surfacing base course, gravel backfill for walls, or shoulder ballast and shall be located every 10 feet along the fence where the fence must cross contours.

- See Figure 7.25: Silt Fence Installation by Slicing Method for slicing method details. The following are specifications for silt fence installation using the slicing method:

    1. The base of both end posts must be ≥ 2 to 4 inches above the top of the geotextile fabric on the middle posts for ditch checks to drain properly. Use a hand level or string level, if necessary, to mark base points before installation.
    2. Install posts 3 to 4 feet apart in critical retention areas and 6 to 7 feet apart in standard applications.
    3. Install posts 24 inches deep on the downstream side of the silt fence, and as close as possible to the geotextile fabric, enabling posts to support the geotextile fabric from upstream water pressure.
    4. Install posts with the nipples facing away from the geotextile fabric.
    5. Attach the geotextile fabric to each post with three ties, all spaced within the top 8 inches of the fabric. Attach each tie diagonally 45 degrees through the fabric, with each puncture ≥ 1 inch vertically apart. Each tie should be positioned to hang on a post nipple when tightening to prevent sagging.
    6. Wrap approximately 6 inches of the geotextile fabric around the end posts and secure with three ties.
    7. No more than 24 inches of a 36-inch geotextile fabric is allowed above ground level.
    8. Compact the soil immediately next to the geotextile fabric with the front wheel of the tractor, skid steer, or roller exerting ≥ 60 pounds per square inch. Compact the upstream side first and then each side twice for a total of four trips. Check and correct the installation for any deviation before compaction. Use a flat-bladed shovel to tuck fabric deeper into the ground if necessary.

Figure 7.24: Silt Fence



For cost estimate purposes, this project will refer to the WSDOT Silt Fence Standard Plan I-30.15-02.

Maintenance Standards

- Repair any damage immediately.
- If concentrated flows are evident uphill of the fence, they must be intercepted and conveyed to a sediment-trapping BMP.
- It is important to check the uphill side of the silt fence for signs of the fence clogging and acting as a barrier to flow and then causing channelization of flows parallel to the fence. If this occurs, replace the fence and remove the trapped sediment.
- Remove sediments deposits when the deposit reaches approximately one-third the height of the silt fence, or install a second silt fence.
- Replace geotextile fabric that has deteriorated due to ultraviolet breakdown.

Appendix C: Correspondence

(Appendix not used – to be updated by contractor as needed)

Appendix D: Site Inspection Form

Construction Stormwater 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	☐	Clearing/Demo/Grading	☐	Infrastructure/storm/roads	☐
Concrete pours	☐	Vertical Construction/buildings	☐	Utilities	☐
Offsite improvements	☐	Site temporary stabilized	☐	Final stabilization	☐

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.

_____

_____

_____

_____

*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: _____

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

Construction Stormwater Site Inspection Form

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?						

Construction Stormwater Site Inspection Form

Element #	Inspection	BMPs Inspected			BMP needs maintenance	BMP failed	Action required (describe in section F)
		yes	no	n/a			
5 Stabilize Soils Cont.	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?						

Construction Stormwater Site Inspection Form

Element #	Inspection	BMPs Inspected			BMP needs maintenance	BMP failed	Action required (describe in section F)
		yes	no	n/a			
9 Cont.	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: (print) _____ (Signature) _____ Date: _____

Title/Qualification of Inspector: _____

Appendix E: Construction Stormwater General Permit (CSWGP)

Issuance Date: November 18, 2020
Effective Date: January 1, 2021
Expiration Date: December 31, 2025

CONSTRUCTION STORMWATER GENERAL PERMIT

National Pollutant Discharge Elimination System (NPDES) and State Waste Discharge General Permit for Stormwater Discharges Associated with Construction Activity

State of Washington
Department of Ecology
Olympia, Washington 98504

In compliance with the provisions of
Chapter 90.48 Revised Code of Washington
(State of Washington Water Pollution Control Act)
and
Title 33 United States Code, Section 1251 et seq.
The Federal Water Pollution Control Act (The Clean Water Act)

Until this permit expires, is modified, or revoked, Permittees that have properly obtained coverage under this general permit are authorized to discharge in accordance with the special and general conditions that follow.

Vincent McGowan, P.E.
Water Quality Program Manager
Washington State Department of Ecology

TABLE OF CONTENTS

LIST OF TABLES

SUMMARY OF PERMIT REPORT SUBMITTALS

Refer to the Special and General Conditions within this permit for additional submittal requirements. Appendix A provides a list of definitions. Appendix B provides a list of acronyms.

Table 1 Summary of Required Submittals

Permit Section	Submittal	Frequency	First Submittal Date
S5.A and S8	High Turbidity/Transparency Phone Reporting	As Necessary	Within 24 hours
S5.B	Discharge Monitoring Report	Monthly*	Within 15 days following the end of each month
S5.F and S8	Noncompliance Notification – Telephone Notification	As necessary	Within 24 hours
S5.F	Noncompliance Notification – Written Report	As necessary	Within 5 Days of non-compliance
S9.D	Request for Chemical Treatment Form	As necessary	Written approval from Ecology is required prior to using chemical treatment (with the exception of dry ice, CO_2 or food grade vinegar to adjust pH)
G2	Notice of Change in Authorization	As necessary	
G6	Permit Application for Substantive Changes to the Discharge	As necessary	
G8	Application for Permit Renewal	1/permit cycle	No later than 180 days before expiration
S2.A	Notice of Permit Transfer	As necessary	
G19	Notice of Planned Changes	As necessary	
G21	Reporting Anticipated Non-compliance	As necessary	

NOTE: *Permittees must submit electronic Discharge Monitoring Reports (DMRs) to the Washington State Department of Ecology monthly, regardless of site discharge, for the full duration of permit coverage. Refer to Section S5.B of this General Permit for more specific information regarding DMRs.

Table 2 Summary of Required On-site Documentation

Document Title	Permit Conditions
Permit Coverage Letter	See Conditions S2, S5
Construction Stormwater General Permit (CSWGP)	See Conditions S2, S5
Site Log Book	See Conditions S4, S5
Stormwater Pollution Prevention Plan (SWPPP)	See Conditions S5, S9
Site Map	See Conditions S5, S9

SPECIAL CONDITIONS

S1. PERMIT COVERAGE

A. Permit Area

This Construction Stormwater General Permit (CSWGP) covers all areas of Washington State, except for federal operators and Indian Country as specified in Special Condition S1.E.3 and 4.

B. Operators Required to Seek Coverage Under this General Permit

1. Operators of the following construction activities are required to seek coverage under this CSWGP:

    a. Clearing, grading and/or excavation that results in the disturbance of one or more acres (including off-site disturbance acreage related to construction-support activity as authorized in S1.C.2) and discharges stormwater to surface waters of the State; and clearing, grading and/or excavation on sites smaller than one acre that are part of a larger common plan of development or sale, if the common plan of development or sale will ultimately disturb one acre or more and discharge stormwater to surface waters of the State.

        i. This category includes forest practices (including, but not limited to, class IV conversions) that are part of a construction activity that will result in the disturbance of one or more acres, and discharge to surface waters of the State (that is, forest practices that prepare a site for construction activities); and

    b. Any size construction activity discharging stormwater to waters of the State that the Washington State Department of Ecology (Ecology):

        i. Determines to be a significant contributor of pollutants to waters of the State of Washington.

        ii. Reasonably expects to cause a violation of any water quality standard.

2. Operators of the following activities are not required to seek coverage under this CSWGP (unless specifically required under Special Condition S1.B.1.b, above):

    a. Construction activities that discharge all stormwater and non-stormwater to groundwater, sanitary sewer, or combined sewer, and have no point source discharge to either surface water or a storm sewer system that drains to surface waters of the State.

    b. Construction activities covered under an Erosivity Waiver (Special Condition S1.F).

    c. Routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility.

C. Authorized Discharges

1. ***Stormwater Associated with Construction Activity.*** Subject to compliance with the terms and conditions of this permit, Permittees are authorized to discharge stormwater associated with construction activity to surface waters of the State or to a storm sewer system that drains to surface waters of the State. (Note that "surface waters of the

State" may exist on a construction site as well as off site; for example, a creek running through a site.)

2. ***Stormwater Associated with Construction Support Activity.*** This permit also authorizes stormwater discharge from support activities related to the permitted construction site (for example, an on-site portable rock crusher, off-site equipment staging yards, material storage areas, borrow areas, etc.) provided:

    a. The support activity relates directly to the permitted construction site that is required to have an NPDES permit; and

    b. The support activity is not a commercial operation serving multiple unrelated construction projects, and does not operate beyond the completion of the construction activity; and

    c. Appropriate controls and measures are identified in the Stormwater Pollution Prevention Plan (SWPPP) for the discharges from the support activity areas.

3. ***Non-Stormwater Discharges.*** The categories and sources of non-stormwater discharges identified below are authorized conditionally, provided the discharge is consistent with the terms and conditions of this permit:

    a. Discharges from fire-fighting activities.

    b. Fire hydrant system flushing.

    c. Potable water, including uncontaminated water line flushing.

    d. Hydrostatic test water.

    e. Uncontaminated air conditioning or compressor condensate.

    f. Uncontaminated groundwater or spring water.

    g. Uncontaminated excavation dewatering water (in accordance with S9.D.10).

    h. Uncontaminated discharges from foundation or footing drains.

    i. Uncontaminated or potable water used to control dust. Permittees must minimize the amount of dust control water used.

    j. Routine external building wash down that does not use detergents.

    k. Landscape irrigation water.

The SWPPP must adequately address all authorized non-stormwater discharges, except for discharges from fire-fighting activities, and must comply with Special Condition S3. At a minimum, discharges from potable water (including water line flushing), fire hydrant system flushing, and pipeline hydrostatic test water must undergo the following: dechlorination to a concentration of 0.1 parts per million (ppm) or less, and pH adjustment to within 6.5 – 8.5 standard units (su), if necessary.

D. Prohibited Discharges

The following discharges to waters of the State, including groundwater, are prohibited:

1. Concrete wastewater

2. Wastewater from washout and clean-up of stucco, paint, form release oils, curing compounds and other construction materials.

3. Process wastewater as defined by 40 Code of Federal Regulations (CFR) 122.2 (See Appendix A of this permit).

4. Slurry materials and waste from shaft drilling, including process wastewater from shaft drilling for construction of building, road, and bridge foundations unless managed according to Special Condition S9.D.9.j.

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

6. Soaps or solvents used in vehicle and equipment washing.

7. Wheel wash wastewater, unless managed according to Special Condition S9.D.9.

8. Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, unless managed according to Special Condition S9.D.10.

E. Limits on Coverage

Ecology may require any discharger to apply for and obtain coverage under an individual permit or another more specific general permit. Such alternative coverage will be required when Ecology determines that this CSWGP does not provide adequate assurance that water quality will be protected, or there is a reasonable potential for the project to cause or contribute to a violation of water quality standards.

The following stormwater discharges are not covered by this permit:

1. Post-construction stormwater discharges that originate from the site after completion of construction activities and the site has undergone final stabilization.

2. Non-point source silvicultural activities such as nursery operations, site preparation, reforestation and subsequent cultural treatment, thinning, prescribed burning, pest and fire control, harvesting operations, surface drainage, or road construction and maintenance, from which there is natural runoff as excluded in 40 CFR Subpart 122.

3. Stormwater from any federal operator.

4. Stormwater from facilities located on ***Indian Country*** as defined in 18 U.S.C.§1151, except portions of the Puyallup Reservation as noted below.

   Indian Country includes:

   a. All land within any Indian Reservation notwithstanding the issuance of any patent, and, including rights-of-way running through the reservation. This includes all federal, tribal, and Indian and non-Indian privately owned land within the reservation.

   b. All off-reservation Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same.

   c. All off-reservation federal trust lands held for Native American Tribes.

Puyallup Exception: Following the *Puyallup Tribes of Indians Land Settlement Act of 1989*, 25 U.S.C. §1773; the permit does apply to land within the Puyallup Reservation except for discharges to surface water on land held in trust by the federal government.

5. Stormwater from any site covered under an existing NPDES individual permit in which stormwater management and/or treatment requirements are included for all stormwater discharges associated with construction activity.

6. Stormwater from a site where an applicable Total Maximum Daily Load (TMDL) requirement specifically precludes or prohibits discharges from construction activity.

F. Erosivity Waiver

Construction site operators may qualify for an Erosivity Waiver from the CSWGP if the following conditions are met:

1. The site will result in the disturbance of fewer than five (5) acres and the site is not a portion of a common plan of development or sale that will disturb five (5) acres or greater.

2. Calculation of Erosivity "R" Factor and Regional Timeframe:

    a. The project's calculated rainfall erosivity factor ("R" Factor) must be less than five (5) during the period of construction activity, (See the CSWGP homepage http://www.ecy.wa.gov/programs/wq/stormwater/construction/index.html for a link to the EPA's calculator and step by step instructions on computing the "R" Factor in the *EPA Erosivity Waiver Fact Sheet*). The period of construction activity starts when the land is first disturbed and ends with final stabilization. In addition:

    b. The entire period of construction activity must fall within the following timeframes:

        i. For sites west of the Cascades Crest: June 15 – September 15.

        ii. For sites east of the Cascades Crest, excluding the Central Basin: June 15 – October 15.

        iii. For sites east of the Cascades Crest, within the Central Basin: no timeframe restrictions apply. The Central Basin is defined as the portions of Eastern Washington with mean annual precipitation of less than 12 inches. For a map of the Central Basin (Average Annual Precipitation Region 2), refer to: http://www.ecy.wa.gov/programs/wq/stormwater/construction/resourcesguidance.html.

3. Construction site operators must submit a complete Erosivity Waiver certification form at least one week before disturbing the land. Certification must include statements that the operator will:

    a. Comply with applicable local stormwater requirements; and

    b. Implement appropriate erosion and sediment control BMPs to prevent violations of water quality standards.

4. This waiver is not available for facilities declared significant contributors of pollutants as defined in Special Condition S1.B.1.b or for any size construction activity that could

reasonably expect to cause a violation of any water quality standard as defined in Special Condition S1.B.1.b.ii.

5. This waiver does not apply to construction activities which include non-stormwater discharges listed in Special Condition S1.C.3.

6. If construction activity extends beyond the certified waiver period for any reason, the operator must either:

   a. Recalculate the rainfall erosivity "R" factor using the original start date and a new projected ending date and, if the "R" factor is still under 5 *and* the entire project falls within the applicable regional timeframe in Special Condition S1.F.2.b, complete and submit an amended waiver certification form before the original waiver expires; *or*

   b. Submit a complete permit application to Ecology in accordance with Special Condition S2.A and B before the end of the certified waiver period.

S2. APPLICATION REQUIREMENTS

A. Permit Application Forms

1. *Notice of Intent Form*

a. Operators of new or previously unpermitted construction activities must submit a complete and accurate permit application (Notice of Intent, or NOI) to Ecology.

b. Operators must apply using the electronic application form (NOI) available on Ecology's website (http://ecy.wa.gov/programs/wq/stormwater/construction/index.html). Permittees unable to submit electronically (for example, those who do not have an internet connection) must contact Ecology to request a waiver and obtain instructions on how to obtain a paper NOI.

Department of Ecology
Water Quality Program - Construction Stormwater
PO Box 47696
Olympia, Washington 98504-7696

c. The operator must submit the NOI at least 60 days before discharging stormwater from construction activities and must submit it prior to the date of the first public notice (See Special Condition S2.B, below, for details). The 30-day public comment period begins on the publication date of the second public notice. Unless Ecology responds to the complete application in writing, coverage under the general permit will automatically commence on the 31st day following receipt by Ecology of a *completed* NOI, or the issuance date of this permit, whichever is later; unless Ecology specifies a later date in writing as required by WAC173-226-200(2). See S8.B for Limits on Coverage for New Discharges to TMDL or 303(d)-Listed Waters.

d. If an applicant intends to use a Best Management Practice (BMP) selected on the basis of Special Condition S9.C.4 ("demonstrably equivalent" BMPs), the applicant must notify Ecology of its selection as part of the NOI. In the event the applicant selects BMPs after submission of the NOI, the applicant must provide notice of the

selection of an equivalent BMP to Ecology at least 60 days before intended use of the equivalent BMP.

e. Applicants must notify Ecology if they are aware of contaminated soils and/or groundwater associated with the construction activity. Provide detailed information with the NOI (as known and readily available) on the nature and extent of the contamination (concentrations, locations, and depth), as well as pollution prevention and/or treatment BMPs proposed to control the discharge of soil and/or groundwater contaminants in stormwater. Examples of such detail may include, but are not limited to:

   i. List or table of all known contaminants with laboratory test results showing concentration and depth,

   ii. Map with sample locations,

   iii. Related portions of the Stormwater Pollution Prevention Plan (SWPPP) that address the management of contaminated and potentially contaminated construction stormwater and dewatering water,

   iv. Dewatering plan and/or dewatering contingency plan.

2. ***Transfer of Coverage Form***

The Permittee can transfer current coverage under this permit to one or more new operators, including operators of sites within a Common Plan of Development, provided:

   i. The Permittee submits a complete Transfer of Coverage Form to Ecology, signed by the current and new discharger and containing a specific date for transfer of permit responsibility, coverage and liability (including any Administrative Orders associated with the permit); and

   ii. Ecology does not notify the current discharger and new discharger of intent to revoke coverage under the general permit. If this notice is not given, the transfer is effective on the date specified in the written agreement.

When a current discharger (Permittee) transfers a portion of a permitted site, the current discharger must also indicate the remaining permitted acreage after the transfer. Transfers do not require public notice.

3. ***Modification of Coverage Form***

Permittees must notify Ecology regarding any changes to the information provided on the NOI by submitting an Update/Modification of Permit Coverage form in accordance with General Conditions G6 and G19. Examples of such changes include, but are not limited to:

   i. Changes to the Permittee's mailing address,

   ii. Changes to the on-site contact person information, and

   iii. Changes to the area/acreage affected by construction activity.

B. Public Notice

For new or previously unpermitted construction activities, the applicant must publish a public notice at least one time each week for two consecutive weeks, at least 7 days apart, in a newspaper with general circulation in the county where the construction is to take place. The notice must be run after the NOI has been submitted and must contain:

1. A statement that "*The applicant is seeking coverage under the Washington State Department of Ecology's Construction Stormwater NPDES and State Waste Discharge General Permit*."
2. The name, address, and location of the construction site.
3. The name and address of the applicant.
4. The type of construction activity that will result in a discharge (for example, residential construction, commercial construction, etc.), and the total number of acres to be disturbed over the lifetime of the project.
5. The name of the receiving water(s) (that is, the surface water(s) to which the site will discharge), or, if the discharge is through a storm sewer system, the name of the operator of the system and the receiving water(s) the system discharges to.
6. The statement: *Any persons desiring to present their views to the Washington State Department of Ecology regarding this application, or interested in Ecology's action on this application, may notify Ecology in writing no later than 30 days of the last date of publication of this notice. Ecology reviews public comments and considers whether discharges from this project would cause a measurable change in receiving water quality, and, if so, whether the project is necessary and in the overriding public interest according to Tier II antidegradation requirements under WAC 173-201A-320. Comments can be submitted to: Department of Ecology, PO Box 47696, Olympia, Washington 98504-7696 Attn: Water Quality Program, Construction Stormwater*.

S3. COMPLIANCE WITH STANDARDS

A. Discharges must not cause or contribute to a violation of surface water quality standards (Chapter 173-201A WAC), groundwater quality standards (Chapter 173-200 WAC), sediment management standards (Chapter 173-204 WAC), and human health-based criteria in the Federal water quality criteria applicable to Washington. (40 CFR Part 131.45) Discharges that are not in compliance with these standards are prohibited.

B. Prior to the discharge of stormwater and non-stormwater to waters of the State, the Permittee must apply All Known, Available, and Reasonable methods of prevention, control, and Treatment (AKART). This includes the preparation and implementation of an adequate SWPPP, with all appropriate BMPs installed and maintained in accordance with the SWPPP and the terms and conditions of this permit.

C. Ecology presumes that a Permittee complies with water quality standards unless discharge monitoring data or other site-specific information demonstrates that a discharge causes or contributes to a violation of water quality standards, when the Permittee complies with the following conditions. The Permittee must fully:

1. Comply with all permit conditions, including; planning, sampling, monitoring, reporting, and recordkeeping conditions.

2. Implement stormwater BMPs contained in stormwater management manuals published or approved by Ecology, or BMPs that are demonstrably equivalent to BMPs contained in stormwater management manuals published or approved by Ecology, including the proper selection, implementation, and maintenance of all applicable and appropriate BMPs for on-site pollution control. (For purposes of this section, the stormwater manuals listed in Appendix 10 of the *Phase I Municipal Stormwater Permit* are approved by Ecology.)

D. Where construction sites also discharge to groundwater, the groundwater discharges must also meet the terms and conditions of this CSWGP. Permittees who discharge to groundwater through an injection well must also comply with any applicable requirements of the Underground Injection Control (UIC) regulations, Chapter 173-218 WAC.

S4. MONITORING REQUIREMENTS, BENCHMARKS, AND REPORTING TRIGGERS

A. Site Log Book

The Permittee must maintain a site log book that contains a record of the implementation of the SWPPP and other permit requirements, including the installation and maintenance of BMPs, site inspections, and stormwater monitoring.

B. Site Inspections

Construction sites one (1) acre or larger that discharge stormwater to surface waters of the State must have site inspections conducted by a Certified Erosion and Sediment Control Lead (CESCL). Sites less than one (1) acre may have a person without CESCL certification conduct inspections. (See Special Conditions S4.B.3 and B.4, below, for detailed requirements of the Permittee's CESCL.)

Site inspections must include all areas disturbed by construction activities, all BMPs, and all stormwater discharge points under the Permittee's operational control.

1. The Permittee must have staff knowledgeable in the principles and practices of erosion and sediment control. The CESCL (sites one acre or more) or inspector (sites less than one acre) must have the skills to assess the:

    a. Site conditions and construction activities that could impact the quality of stormwater; and

    b. Effectiveness of erosion and sediment control measures used to control the quality of stormwater discharges. The SWPPP must identify the CESCL or inspector, who must be present on site or on-call at all times. The CESCL (sites one (1) acre or more) must obtain this certification through an approved erosion and sediment control training program that meets the minimum training standards established by Ecology. (See BMP C160 in the manual, referred to in Special Condition S9.C.1 and 2.)

2. The CESCL or inspector must examine stormwater visually for the presence of suspended sediment, turbidity, discoloration, and oil sheen. BMP effectiveness must be evaluated to

determine if it is necessary to install, maintain, or repair BMPs to improve the quality of stormwater discharges.

Based on the results of the inspection, the Permittee must correct the problems identified, by:

a. Reviewing the SWPPP for compliance with Special Condition S9 and making appropriate revisions within 7 days of the inspection.

b. Immediately beginning the process of fully implementing and maintaining appropriate source control and/or treatment BMPs, within 10 days of the inspection. If installation of necessary treatment BMPs is not feasible within 10 days, Ecology may approve additional time when an extension is requested by a Permittee within the initial 10-day response period.

c. Documenting BMP implementation and maintenance in the site log book.

3. The CESCL or inspector must inspect all areas disturbed by construction activities, all BMPs, and all stormwater discharge points at least once every calendar week and within 24 hours of any discharge from the site. (For purposes of this condition, individual discharge events that last more than one (1) day do not require daily inspections. For example, if a stormwater pond discharges continuously over the course of a week, only one (1) inspection is required that week.) Inspection frequency may be reduced to once every calendar month for inactive sites that are temporarily stabilized.

4. The Permittee must summarize the results of each inspection in an inspection report or checklist and enter the report/checklist into, or attach it to, the site log book. At a minimum, each inspection report or checklist must include:

   a. Inspection date and time.

   b. Weather information.

   c. The general conditions during inspection.

   d. The approximate amount of precipitation since the last inspection.

   e. The approximate amount of precipitation within the last 24 hours.

   f. A summary or list of all implemented BMPs, including observations of all erosion/sediment control structures or practices.

   g. A description of:

      i. BMPs inspected (including location).

      ii. BMPs that need maintenance and why.

      iii. BMPs that failed to operate as designed or intended, and

      iv. Where additional or different BMPs are needed, and why.

   h. A description of stormwater discharged from the site. The Permittee must note the presence of suspended sediment, turbidity, discoloration, and oil sheen, as applicable.

i. Any water quality monitoring performed during inspection.

j. General comments and notes, including a brief description of any BMP repairs, maintenance, or installations made following the inspection.

k. An implementation schedule for the remedial actions that the Permittee plans to take if the site inspection indicates that the site is out of compliance. The remedial actions taken must meet the requirements of the SWPPP and the permit.

l. A summary report of the inspection.

m. The name, title, and signature of the person conducting the site inspection, a phone number or other reliable method to reach this person, and the following statement: *I certify that this report is true, accurate, and complete to the best of my knowledge and belief.*

Table 3 Summary of Primary Monitoring Requirements

Size of Soil Disturbance[1]	Weekly Site Inspections	Weekly Sampling w/ Turbidity Meter	Weekly Sampling w/ Transparency Tube	Weekly pH Sampling[2]	CESCL Required for Inspections?
Sites that disturb less than 1 acre, but are part of a larger Common Plan of Development	Required	Not Required	Not Required	Not Required	No
Sites that disturb 1 acre or more, but fewer than 5 acres	Required	Sampling Required – either method[3]		Required	Yes
Sites that disturb 5 acres or more	Required	Required	Not Required[4]	Required	Yes

[1] Soil disturbance is calculated by adding together all areas that will be affected by construction activity. Construction activity means clearing, grading, excavation, and any other activity that disturbs the surface of the land, including ingress/egress from the site.

[2] If construction activity results in the disturbance of 1 acre or more, and involves significant concrete work (1,000 cubic yards of concrete or recycled concrete placed or poured over the life of a project) or the use of engineered soils (soil amendments including but not limited to Portland cement-treated base [CTB], cement kiln dust [CKD], or fly ash), and stormwater from the affected area drains to surface waters of the State or to a storm sewer stormwater collection system that drains to other surface waters of the State, the Permittee must conduct pH sampling in accordance with Special Condition S4.D.

[3] Sites with one or more acres, but fewer than 5 acres of soil disturbance, must conduct turbidity or transparency sampling in accordance with Special Condition S4.C.4.a or b.

[4] Sites equal to or greater than 5 acres of soil disturbance must conduct turbidity sampling using a turbidity meter in accordance with Special Condition S4.C.4.a.

C. Turbidity/Transparency Sampling Requirements

1. Sampling Methods

    a. If construction activity involves the disturbance of five (5) acres or more, the Permittee must conduct turbidity sampling per Special Condition S4.C.4.a, below.

    b. If construction activity involves one (1) acre or more but fewer than five (5) acres of soil disturbance, the Permittee must conduct either transparency sampling *or* turbidity sampling per Special Condition S4.C.4.a or b, below.

2. Sampling Frequency

    a. The Permittee must sample all discharge points at least once every calendar week when stormwater (or authorized non-stormwater) discharges from the site or enters any on-site surface waters of the state (for example, a creek running through a site); sampling is not required on sites that disturb less than an acre.

    b. Samples must be representative of the flow and characteristics of the discharge.

    c. Sampling is not required when there is no discharge during a calendar week.

    d. Sampling is not required outside of normal working hours or during unsafe conditions.

    e. If the Permittee is unable to sample during a monitoring period, the Permittee must include a brief explanation in the monthly Discharge Monitoring Report (DMR).

    f. Sampling is not required before construction activity begins.

    g. The Permittee may reduce the sampling frequency for temporarily stabilized, inactive sites to once every calendar month.

3. Sampling Locations

    a. Sampling is required at all points where stormwater associated with construction activity (or authorized non-stormwater) is discharged off site, including where it enters any on-site surface waters of the state (for example, a creek running through a site).

    b. The Permittee may discontinue sampling at discharge points that drain areas of the project that are fully stabilized to prevent erosion.

    c. The Permittee must identify all sampling point(s) in the SWPPP and on the site map and clearly mark these points in the field with a flag, tape, stake or other visible marker.

    d. Sampling is not required for discharge that is sent directly to sanitary or combined sewer systems.

    e. The Permittee may discontinue sampling at discharge points in areas of the project where the Permittee no longer has operational control of the construction activity.

4. Sampling and Analysis Methods

   a. The Permittee performs turbidity analysis with a calibrated turbidity meter (turbidimeter) either on site or at an accredited lab. The Permittee must record the results in the site log book in nephelometric turbidity units (NTUs).

   b. The Permittee performs transparency analysis on site with a 1¾ inch diameter, 60 centimeter (cm)-long transparency tube. The Permittee will record the results in the site log book in centimeters (cm).

Table 4 Monitoring and Reporting Requirements

Parameter	Unit	Analytical Method	Sampling Frequency	Benchmark Value
Turbidity	NTU	SM2130	Weekly, if discharging	25 NTUs
Transparency	Cm	Manufacturer instructions, or Ecology guidance	Weekly, if discharging	33 cm

5. Turbidity/Transparency Benchmark Values and Reporting Triggers

   The benchmark value for turbidity is 25 NTUs. The benchmark value for transparency is 33 centimeters (cm). Note: Benchmark values do not apply to discharges to segments of water bodies on Washington State's 303(d) list (Category 5) for turbidity, fine sediment, or phosphorus; these discharges are subject to a numeric effluent limit for turbidity. Refer to Special Condition S8 for more information and follow S5.F – Noncompliance Notification for reporting requirements applicable to discharges which exceed the numeric effluent limit for turbidity.

   a. Turbidity 26 – 249 NTUs, or Transparency 32 – 7 cm:

      If the discharge turbidity is 26 to 249 NTUs; or if discharge transparency is 32 to 7 cm, the Permittee must:

      i. Immediately begin the process to fully implement and maintain appropriate source control and/or treatment BMPs, and no later than 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.

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

      iii. Document BMP implementation and maintenance in the site log book.

   b. Turbidity 250 NTUs or greater, or Transparency 6 cm or less:

      If a discharge point's turbidity is 250 NTUs or greater, or if discharge transparency is less than or equal to 6 cm, the Permittee must complete the reporting and adaptive

management process described below. For discharges which are subject to a numeric effluent limit for turbidity, see S5.F – Noncompliance Notification.

i. Within 24 hours, telephone or submit an electronic report to the applicable Ecology Region's Environmental Report Tracking System (ERTS) number (or through Ecology's Water Quality Permitting Portal [WQWebPortal] – Permit Submittals when the form is available), in accordance with Special Condition S5.A.

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

These numbers and a link to the ERTS reporting page are also listed at the following website: http://www.ecy.wa.gov/programs/wq/stormwater/construction/index.html.

ii. Immediately begin the process to fully implement and maintain appropriate source control and/or treatment BMPs as soon as possible, addressing 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.

iii. Sample discharges daily until:

a) Turbidity is 25 NTUs (or lower); or

b) Transparency is 33 cm (or greater); or

c) The Permittee has demonstrated compliance with the water quality standard for turbidity:

1) No more than 5 NTUs over background turbidity, if background is less than 50 NTUs, or

2) No more than 10% over background turbidity, if background is 50 NTUs or greater; or

*Note: background turbidity in the receiving water must be measured immediately upstream (upgradient) or outside of the area of influence of the discharge.

d) The discharge stops or is eliminated.

iv. Review the SWPPP for compliance with Special Condition S9 and make appropriate revisions within seven (7) days of the date the discharge exceeded the benchmark.

v. Document BMP implementation and maintenance in the site log book.

Compliance with these requirements does not relieve the Permittee from responsibility to maintain continuous compliance with permit benchmarks.

D. pH Sampling Requirements – Significant Concrete Work or Engineered Soils

If construction activity results in the disturbance of 1 acre or more, *and* involves significant concrete work (significant concrete work means greater than 1000 cubic yards placed or poured concrete or recycled concrete used over the life of a project) or the use of engineered soils (soil amendments including but not limited to Portland cement-treated base [CTB], cement kiln dust [CKD], or fly ash), and stormwater from the affected area drains to surface waters of the State or to a storm sewer system that drains to surface waters of the State, the Permittee must conduct pH sampling as set forth below. Note: In addition, discharges to segments of water bodies on Washington State's 303(d) list (Category 5) for high pH are subject to a numeric effluent limit for pH; refer to Special Condition S8.

1. The Permittee must perform pH analysis on site with a calibrated pH meter, pH test kit, or wide range pH indicator paper. The Permittee must record pH sampling results in the site log book.

2. During the applicable pH monitoring period defined below, the Permittee must obtain a representative sample of stormwater and conduct pH analysis at least once per week.

    a. For sites with significant concrete work, the Permittee must begin the pH sampling period when the concrete is first placed or poured and exposed to precipitation, and continue weekly throughout and after the concrete placement, pour and curing period, until stormwater pH is in the range of 6.5 to 8.5 (su).

    b. For sites with recycled concrete where monitoring is required, the Permittee must begin the weekly pH sampling period when the recycled concrete is first exposed to precipitation and must continue until the recycled concrete is fully stabilized with the stormwater pH in the range of 6.5 to 8.5 (su).

    c. For sites with engineered soils, the Permittee must begin the pH sampling period when the soil amendments are first exposed to precipitation and must continue until the area of engineered soils is fully stabilized.

3. The Permittee must sample pH in the sediment trap/pond(s) or other locations that receive stormwater runoff from the area of significant concrete work or engineered soils before the stormwater discharges to surface waters.

4. The benchmark value for pH is 8.5 standard units. Anytime sampling indicates that pH is 8.5 or greater, the Permittee must either:

    a. Prevent the high pH water (8.5 or above) from entering storm sewer systems or surface waters of the state; *or*

    b. If necessary, adjust or neutralize the high pH water until it is in the range of pH 6.5 to 8.5 (su) using an appropriate treatment BMP such as carbon dioxide (CO_2) sparging, dry ice or food grade vinegar. The Permittee must obtain written approval from Ecology before using any form of chemical treatment other than CO_2 sparging, dry ice or food grade vinegar.

S5. REPORTING AND RECORDKEEPING REQUIREMENTS

A. High Turbidity Reporting

Anytime sampling performed in accordance with Special Condition S4.C indicates turbidity has reached the 250 NTUs or more (or transparency less than or equal to 6 cm), high turbidity reporting level, the Permittee must notify Ecology within 24 hours of analysis either by calling the applicable Ecology Region's Environmental Report Tracking System (ERTS) number by phone or by submitting an electronic ERTS report (through Ecology's Water Quality Permitting Portal (WQWebPortal) – Permit Submittals when the form is available). See the CSWGP website for links to ERTS and the WQWebPortal. (http://www.ecy.wa.gov/programs/wq/stormwater/construction/index.html) Also, see phone numbers in Special Condition S4.C.5.b.i.

B. Discharge Monitoring Reports (DMRs)

Permittees required to conduct water quality sampling in accordance with Special Conditions S4.C (Turbidity/Transparency), S4.D (pH), S8 (303[d]/TMDL sampling), and/or G12 (Additional Sampling) must submit the results to Ecology.

Permittees must submit monitoring data using Ecology's WQWebDMR web application accessed through Ecology's Water Quality Permitting Portal.

Permittees unable to submit electronically (for example, those who do not have an internet connection) must contact Ecology to request a waiver and obtain instructions on how to obtain a paper copy DMR at:

Department of Ecology
Water Quality Program - Construction Stormwater
PO Box 47696
Olympia, WA 98504-7696

Permittees who obtain a waiver not to use WQWebDMR must use the forms provided to them by Ecology; submittals must be mailed to the address above. Permittees must submit DMR forms to be received by Ecology within 15 days following the end of each month.

If there was no discharge during a given monitoring period, all Permittees must submit a DMR as required with "no discharge" entered in place of the monitoring results. DMRs are required for the full duration of permit coverage (from the first full month following the effective date of permit coverage up until Ecology has approved termination of the coverage). For more information, contact Ecology staff using information provided at the following website: www.ecy.wa.gov/programs/wq/permits/paris/contacts.html.

C. Records Retention

The Permittee must retain records of all monitoring information (site log book, sampling results, inspection reports/checklists, etc.), Stormwater Pollution Prevention Plan, copy of the permit coverage letter (including Transfer of Coverage documentation) and any other documentation of compliance with permit requirements for the entire life of the construction project and for a minimum of five (5) years following the termination of permit coverage. Such information must include all calibration and maintenance records, and records of all data used to complete the application for this permit. This period of retention must be extended during

the course of any unresolved litigation regarding the discharge of pollutants by the Permittee or when requested by Ecology.

D. Recording Results

For each measurement or sample taken, the Permittee must record the following information:

1. Date, place, method, and time of sampling or measurement.
2. The first and last name of the individual who performed the sampling or measurement.
3. The date(s) the analyses were performed.
4. The first and last name of the individual who performed the analyses.
5. The analytical techniques or methods used.
6. The results of all analyses.

E. Additional Monitoring by the Permittee

If the Permittee samples or monitors any pollutant more frequently than required by this permit using test procedures specified by Special Condition S4 of this permit, the sampling results for this monitoring must be included in the calculation and reporting of the data submitted in the Permittee's DMR.

F. Noncompliance Notification

In the event the Permittee is unable to comply with any part of the terms and conditions of this permit, and the resulting noncompliance may cause a threat to human health or the environment (such as but not limited to spills or fuels or other materials, catastrophic pond or slope failure, and discharges that violate water quality standards), or exceed numeric effluent limitations (see S8 – Discharges to 303(d) or TMDL Waterbodies), the Permittee must, upon becoming aware of the circumstance:

1. Notify Ecology within 24 hours of the failure to comply by calling the applicable Regional office ERTS phone number (refer to Special Condition S4.C.5.b.i, or go to https://ecology.wa.gov/About-us/Get-involved/Report-an-environmental-issue to find contact information for the regional offices.)
2. Immediately take action to prevent the discharge/pollution, or otherwise stop or correct the noncompliance, and, if applicable, repeat sampling and analysis of any noncompliance immediately and submit the results to Ecology within five (5) days of becoming aware of the violation (See S5.F.3, below, for details on submitting results in a report).
3. Submit a detailed written report to Ecology within five (5) days of the time the Permittee becomes aware of the circumstances, unless requested earlier by Ecology. The report must be submitted using Ecology's Water Quality Permitting Portal (WQWebPortal) – Permit Submittals, unless a waiver from electronic reporting has been granted according to S5.B. The report must contain a description of the noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

The Permittee must report any unanticipated bypass and/or upset that exceeds any effluent limit in the permit in accordance with the 24-hour reporting requirement contained in 40 C.F.R. 122.41(l)(6).

Compliance with these requirements does not relieve the Permittee from responsibility to maintain continuous compliance with the terms and conditions of this permit or the resulting liability for failure to comply. Upon request of the Permittee, Ecology may waive the requirement for a written report on a case-by-case basis, if the immediate notification is received by Ecology within 24 hours.

G. Access to Plans and Records

1. The Permittee must retain the following permit documentation (plans and records) on site, or within reasonable access to the site, for use by the operator or for on-site review by Ecology or the local jurisdiction:

    a. General Permit

    b. Permit Coverage Letter

    c. Stormwater Pollution Prevention Plan (SWPPP)

    d. Site Log Book

    e. Erosivity Waiver (if applicable)

2. The Permittee must address written requests for plans and records listed above (Special Condition S5.G.1) as follows:

    a. The Permittee must provide a copy of plans and records to Ecology within 14 days of receipt of a written request from Ecology.

    b. The Permittee must provide a copy of plans and records to the public when requested in writing. Upon receiving a written request from the public for the Permittee's plans and records, the Permittee must either:

        i. Provide a copy of the plans and records to the requester within 14 days of a receipt of the written request; *or*

        ii. Notify the requester within 10 days of receipt of the written request of the location and times within normal business hours when the plans and records may be viewed; and provide access to the plans and records within 14 days of receipt of the written request; *or*

            Within 14 days of receipt of the written request, the Permittee may submit a copy of the plans and records to Ecology for viewing and/or copying by the requester at an Ecology office, or a mutually agreed location. If plans and records are viewed and/or copied at a location other than at an Ecology office, the Permittee will provide reasonable access to copying services for which a reasonable fee may be charged. The Permittee must notify the requester within 10 days of receipt of the request where the plans and records may be viewed and/or copied.

S6. PERMIT FEES

The Permittee must pay permit fees assessed by Ecology. Fees for stormwater discharges covered under this permit are established by Chapter 173-224 WAC. Ecology continues to assess permit fees until the permit is terminated in accordance with Special Condition S10 or revoked in accordance with General Condition G5.

S7. SOLID AND LIQUID WASTE DISPOSAL

The Permittee must handle and dispose of solid and liquid wastes generated by construction activity, such as demolition debris, construction materials, contaminated materials, and waste materials from maintenance activities, including liquids and solids from cleaning catch basins and other stormwater facilities, in accordance with:

A. Special Condition S3, Compliance with Standards.

B. WAC 173-216-110.

C. Other applicable regulations.

S8. DISCHARGES TO 303(d) OR TMDL WATERBODIES

A. Sampling and Numeric Effluent Limits For Certain Discharges to 303(d)-Listed Water Bodies

1. Permittees who discharge to segments of water bodies listed as impaired by the State of Washington under Section 303(d) of the Clean Water Act for turbidity, fine sediment, high pH, or phosphorus, must conduct water quality sampling according to the requirements of this section, and Special Conditions S4.C.2.b-f and S4.C.3.b-d, and must comply with the applicable numeric effluent limitations in S8.C and S8.D.

2. All references and requirements associated with Section 303(d) of the Clean Water Act mean the most current listing by Ecology of impaired waters (Category 5) that exists on January 1, 2021, or the date when the operator's complete permit application is received by Ecology, whichever is later.

B. Limits on Coverage for New Discharges to TMDL or 303(d)-Listed Waters

Construction sites that discharge to a TMDL or 303(d)-listed waterbody are not eligible for coverage under this permit *unless* the operator:

1. Prevents exposing stormwater to pollutants for which the waterbody is impaired, and retains documentation in the SWPPP that details procedures taken to prevent exposure on site; *or*

2. Documents that the pollutants for which the waterbody is impaired are not present at the site, and retains documentation of this finding within the SWPPP; *or*

3. Provides Ecology with data indicating the discharge is not expected to cause or contribute to an exceedance of a water quality standard, and retains such data on site with the SWPPP. The operator must provide data and other technical information to Ecology that sufficiently demonstrate:

    a. For discharges to waters without an EPA-approved or -established TMDL, that the discharge of the pollutant for which the water is impaired will meet in-stream water quality criteria at the point of discharge to the waterbody; *or*

    b. For discharges to waters with an EPA-approved or -established TMDL, that there is sufficient remaining wasteload allocation in the TMDL to allow construction stormwater discharge and that existing dischargers to the waterbody are subject to compliance schedules designed to bring the waterbody into attainment with water quality standards.

    Operators of construction sites are eligible for coverage under this permit only after Ecology makes an affirmative determination that the *discharge will not cause or contribute to the existing impairment or exceed the TMDL.*

C. Sampling and Numeric Effluent Limits for Discharges to Water Bodies on the 303(d) List for Turbidity, Fine Sediment, or Phosphorus

1. Permittees who discharge to segments of water bodies on the 303(d) list (Category 5) for turbidity, fine sediment, or phosphorus must conduct turbidity sampling in accordance with Special Condition S4.C.2 and comply with either of the numeric effluent limits noted in Table 5 below.

2. As an alternative to the 25 NTUs effluent limit noted in Table 5 below (applied at the point where stormwater [or authorized non-stormwater] is discharged off-site), Permittees may choose to comply with the surface water quality standard for turbidity. The standard is: no more than 5 NTUs over background turbidity when the background turbidity is 50 NTUs or less, or no more than a 10% increase in turbidity when the background turbidity is more than 50 NTUs. In order to use the water quality standard requirement, the sampling must take place at the following locations:

    a. Background turbidity in the 303(d)-listed receiving water immediately upstream (upgradient) or outside the area of influence of the discharge.

    b. Turbidity at the point of discharge into the 303(d)-listed receiving water, inside the area of influence of the discharge**.**

3. Discharges that exceed the numeric effluent limit for turbidity constitute a violation of this permit.

4. Permittees whose discharges exceed the numeric effluent limit must sample discharges daily until the violation is corrected and comply with the non-compliance notification requirements in Special Condition S5.F.

Table 5 Turbidity, Fine Sediment & Phosphorus Sampling and Limits for 303(d)-Listed Waters

Parameter identified in 303(d) listing	Parameter Sampled	Unit	Analytical Method	Sampling Frequency	Numeric Effluent Limit[1]
• Turbidity • Fine Sediment • Phosphorus	Turbidity	NTU	SM2130	Weekly, if discharging	25 NTUs, at the point where stormwater is discharged from the site; ***OR*** In compliance with the surface water quality standard for turbidity (S8.C.2.a)

[1] Permittees subject to a numeric effluent limit for turbidity may, at their discretion, choose either numeric effluent limitation based on site-specific considerations including, but not limited to, safety, access and convenience.

D. Discharges to Water Bodies on the 303(d) List for High pH

1. Permittees who discharge to segments of water bodies on the 303(d) list (Category 5) for high pH must conduct pH sampling in accordance with the table below, and comply with the numeric effluent limit of pH 6.5 to 8.5 su (Table 6).

Table 6 pH Sampling and Limits for 303(d)-Listed Waters

Parameter identified in 303(d) listing	Parameter Sampled/Units	Analytical Method	Sampling Frequency	Numeric Effluent Limit
High pH	pH /Standard Units	pH meter	Weekly, if discharging	In the range of 6.5 – 8.5 su

2. At the Permittee's discretion, compliance with the limit shall be assessed at one of the following locations:

   a. Directly in the 303(d)-listed waterbody segment, inside the immediate area of influence of the discharge; *or*

   b. Alternatively, the Permittee may measure pH at the point where the discharge leaves the construction site, rather than in the receiving water.

3. Discharges that exceed the numeric effluent limit for pH (outside the range of 6.5 – 8.5 su) constitute a violation of this permit.

4. Permittees whose discharges exceed the numeric effluent limit must sample discharges daily until the violation is corrected and comply with the non-compliance notification requirements in Special Condition S5.F.

E. Sampling and Limits for Sites Discharging to Waters Covered by a TMDL or another Pollution Control Plan

1. Discharges to a waterbody that is subject to a Total Maximum Daily Load (TMDL) for turbidity, fine sediment, high pH, or phosphorus must be consistent with the TMDL. Refer to http://www.ecy.wa.gov/programs/wq/tmdl/TMDLsbyWria/TMDLbyWria.html for more information on TMDLs.

    a. Where an applicable TMDL sets specific waste load allocations or requirements for discharges covered by this permit, discharges must be consistent with any specific waste load allocations or requirements established by the applicable TMDL.

        i. The Permittee must sample discharges weekly, unless otherwise specified by the TMDL, to evaluate compliance with the specific waste load allocations or requirements.

        ii. Analytical methods used to meet the monitoring requirements must conform to the latest revision of the *Guidelines Establishing Test Procedures for the Analysis of Pollutants* contained in 40 CFR Part 136.

        iii. Turbidity and pH methods need not be accredited or registered unless conducted at a laboratory which must otherwise be accredited or registered.

    b. Where an applicable TMDL has established a general waste load allocation for construction stormwater discharges, but has not identified specific requirements, compliance with Special Conditions S4 (Monitoring) and S9 (SWPPPs) will constitute compliance with the approved TMDL.

    c. Where an applicable TMDL has not specified a waste load allocation for construction stormwater discharges, but has not excluded these discharges, compliance with Special Conditions S4 (Monitoring) and S9 (SWPPPs) will constitute compliance with the approved TMDL.

    d. Where an applicable TMDL specifically precludes or prohibits discharges from construction activity, the operator is not eligible for coverage under this permit.

S9. STORMWATER POLLUTION PREVENTION PLAN

The Permittee must prepare and properly implement an adequate Stormwater Pollution Prevention Plan (SWPPP) for construction activity in accordance with the requirements of this permit beginning with initial soil disturbance and until final stabilization.

A. The Permittee's SWPPP must meet the following objectives:

1. To identify best management practices (BMPs) which prevent erosion and sedimentation, and to reduce, eliminate or prevent stormwater contamination and water pollution from construction activity.

2. To prevent violations of surface water quality, groundwater quality, or sediment management standards.

3. To control peak volumetric flow rates and velocities of stormwater discharges.

B. General Requirements

1. The SWPPP must include a narrative and drawings. All BMPs must be clearly referenced in the narrative and marked on the drawings. The SWPPP narrative must include documentation to explain and justify the pollution prevention decisions made for the project. Documentation must include:

    a. Information about existing site conditions (topography, drainage, soils, vegetation, etc.).

    b. Potential erosion problem areas.

    c. The 13 elements of a SWPPP in Special Condition S9.D.1-13, including BMPs used to address each element.

    d. Construction phasing/sequence and general BMP implementation schedule.

    e. The actions to be taken if BMP performance goals are not achieved—for example, a contingency plan for additional treatment and/or storage of stormwater that would violate the water quality standards if discharged.

    f. Engineering calculations for ponds, treatment systems, and any other designed structures. When a treatment system requires engineering calculations, these calculations must be included in the SWPPP. Engineering calculations do not need to be included in the SWPPP for treatment systems that do not require such calculations.

2. The Permittee must modify the SWPPP if, during inspections or investigations conducted by the owner/operator, or the applicable local or state regulatory authority, it is determined that the SWPPP is, or would be, ineffective in eliminating or significantly minimizing pollutants in stormwater discharges from the site. The Permittee must then:

    a. Review the SWPPP for compliance with Special Condition S9 and make appropriate revisions within 7 days of the inspection or investigation.

    b. Immediately begin the process to fully implement and maintain appropriate source control and/or treatment BMPs as soon as possible, addressing the problems no later than 10 days from the inspection or investigation. If installation of necessary treatment BMPs is not feasible within 10 days, Ecology may approve additional time when an extension is requested by a Permittee within the initial 10-day response period.

    c. Document BMP implementation and maintenance in the site log book.

    The Permittee must modify the SWPPP whenever 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.

C. Stormwater Best Management Practices (BMPs)

BMPs must be consistent with:

1. *Stormwater Management Manual for Western Washington* (most current approved edition at the time this permit was issued), for sites west of the crest of the Cascade Mountains; *or*

2. *Stormwater Management Manual for Eastern Washington* (most current approved edition at the time this permit was issued), for sites east of the crest of the Cascade Mountains; *or*

3. Revisions to the manuals listed in Special Condition S9.C.1 & 2, or other stormwater management guidance documents or manuals which provide an equivalent level of pollution prevention, that are approved by Ecology and incorporated into this permit in accordance with the permit modification requirements of WAC 173-226-230; *or*

4. Documentation in the SWPPP that the BMPs selected provide an equivalent level of pollution prevention, compared to the applicable stormwater management manuals, including:

    a. The technical basis for the selection of all stormwater BMPs (scientific, technical studies, and/or modeling) that support the performance claims for the BMPs being selected.

    b. An assessment of how the selected BMP will satisfy AKART requirements and the applicable federal technology-based treatment requirements under 40 CFR part 125.3.

D. SWPPP – Narrative Contents and Requirements

The Permittee must include each of the 13 elements below in Special Condition S9.D.1-13 in the narrative of the SWPPP and implement them unless site conditions render the element unnecessary and the exemption from that element is clearly justified in the SWPPP.

1. Preserve Vegetation/Mark Clearing Limits

    a. Before beginning land-disturbing activities, including clearing and grading, clearly mark all clearing limits, sensitive areas and their buffers, and trees that are to be preserved within the construction area.

    b. Retain the duff layer, native topsoil, and natural vegetation in an undisturbed state to the maximum degree practicable.

2. Establish Construction Access

    a. Limit construction vehicle access and exit to one route, if possible.

    b. Stabilize access points with a pad of quarry spalls, crushed rock, or other equivalent BMPs, to minimize tracking sediment onto roads.

    c. Locate wheel wash or tire baths on site, if the stabilized construction entrance is not effective in preventing tracking sediment onto roads.

    d. If sediment is tracked off site, clean the affected roadway thoroughly at the end of each day, or more frequently as necessary (for example, during wet weather). Remove sediment from roads by shoveling, sweeping, or pickup and transport of the sediment to a controlled sediment disposal area.

    e. Conduct street washing only after sediment removal in accordance with Special Condition S9.D.2.d.

    f. Control street wash wastewater by pumping back on site or otherwise preventing it from discharging into systems tributary to waters of the State.

3. Control Flow Rates

    a. Protect properties and waterways downstream of construction sites from erosion and the associated discharge of turbid waters due to increases in the velocity and peak volumetric flow rate of stormwater runoff from the project site, as required by local plan approval authority.

    b. Where necessary to comply with Special Condition S9.D.3.a, construct stormwater infiltration or detention BMPs as one of the first steps in grading. Assure that detention BMPs function properly before constructing site improvements (for example, impervious surfaces).

    c. If permanent infiltration ponds are used for flow control during construction, protect these facilities from sedimentation during the construction phase.

4. Install Sediment Controls

    The Permittee must design, install and maintain effective erosion controls and sediment controls to minimize the discharge of pollutants. At a minimum, the Permittee must:

    a. Construct sediment control BMPs (sediment ponds, traps, filters, infiltration facilities, etc.) as one of the first steps in grading. These BMPs must be functional before other land disturbing activities take place.

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

    c. Direct stormwater runoff from disturbed areas through a sediment pond or other appropriate sediment removal BMP, before the runoff leaves a construction site or before discharge to an infiltration facility. Runoff from fully stabilized areas may be discharged without a sediment removal BMP, but must meet the flow control performance standard of Special Condition S9.D.3.a.

    d. Locate BMPs intended to trap sediment on site in a manner to avoid interference with the movement of juvenile salmonids attempting to enter off-channel areas or drainages.

    e. Provide and maintain natural buffers around surface waters, direct stormwater to vegetated areas to increase sediment removal and maximize stormwater infiltration, unless infeasible.

    f. Where feasible, design outlet structures that withdraw impounded stormwater from the surface to avoid discharging sediment that is still suspended lower in the water column.

5. Stabilize Soils

    a. The Permittee must stabilize exposed and unworked soils by application of effective BMPs that prevent erosion. Applicable BMPs include, but are not limited to: temporary and permanent seeding, sodding, mulching, plastic covering, erosion

control fabrics and matting, soil application of polyacrylamide (PAM), the early application of gravel base on areas to be paved, and dust control.

b. The Permittee must control stormwater volume and velocity within the site to minimize soil erosion.

c. The Permittee must control stormwater discharges, including both peak flow rates and total stormwater volume, to minimize erosion at outlets and to minimize downstream channel and stream bank erosion.

d. Depending on the geographic location of the project, the Permittee must not allow soils to remain exposed and unworked for more than the time periods set forth below to prevent erosion.

West of the Cascade Mountains Crest
During the dry season (May 1 - September 30): 7 days
During the wet season (October 1 - April 30): 2 days

East of the Cascade Mountains Crest, except for Central Basin*
During the dry season (July 1 - September 30): 10 days
During the wet season (October 1 - June 30): 5 days

The Central Basin*, East of the Cascade Mountains Crest
During the dry Season (July 1 - September 30): 30 days
During the wet season (October 1 - June 30): 15 days

***Note: The Central Basin** is defined as the portions of Eastern Washington with mean annual precipitation of less than 12 inches.

e. The Permittee must stabilize soils at the end of the shift before a holiday or weekend if needed based on the weather forecast.

f. The Permittee must stabilize soil stockpiles from erosion, protected with sediment trapping measures, and where possible, be located away from storm drain inlets, waterways, and drainage channels.

g. The Permittee must minimize the amount of soil exposed during construction activity.

h. The Permittee must minimize the disturbance of steep slopes.

i. The Permittee must minimize soil compaction and, unless infeasible, preserve topsoil.

6. Protect Slopes

a. The Permittee must design and construct cut-and-fill slopes in a manner to minimize erosion. Applicable practices include, but are not limited to, reducing continuous length of slope with terracing and diversions, reducing slope steepness, and roughening slope surfaces (for example, track walking).

b. The Permittee must divert off-site stormwater (run-on) or groundwater away from slopes and disturbed areas with interceptor dikes, pipes, and/or swales. Off-site stormwater should be managed separately from stormwater generated on the site.

c. At the top of slopes, collect drainage in pipe slope drains or protected channels to prevent erosion.

i. West of the Cascade Mountains Crest: Temporary pipe slope drains must handle the peak 10-minute flow rate from a Type 1A, 10-year, 24-hour frequency storm for the developed condition. Alternatively, the 10-year, 1-hour flow rate predicted by an approved continuous runoff model, increased by a factor of 1.6, may be used. The hydrologic analysis must use the existing land cover condition for predicting flow rates from tributary areas outside the project limits. For tributary areas on the project site, the analysis must use the temporary or permanent project land cover condition, whichever will produce the highest flow rates. If using the Western Washington Hydrology Model (WWHM) to predict flows, bare soil areas should be modeled as "landscaped area."

ii. East of the Cascade Mountains Crest: Temporary pipe slope drains must handle the expected peak flow rate from a 6-month, 3-hour storm for the developed condition, referred to as the short duration storm.

d. Place excavated material on the uphill side of trenches, consistent with safety and space considerations.

e. Place check dams at regular intervals within constructed channels that are cut down a slope.

7. Protect Drain Inlets

a. Protect all storm drain inlets made operable during construction so that stormwater runoff does not enter the conveyance system without first being filtered or treated to remove sediment.

b. Clean or remove and replace inlet protection devices when sediment has filled one-third of the available storage (unless a different standard is specified by the product manufacturer).

8. Stabilize Channels and Outlets

a. Design, construct and stabilize all on-site conveyance channels to prevent erosion from the following expected peak flows:

i. West of the Cascade Mountains Crest: Channels must handle the peak 10-minute flow rate from a Type 1A, 10-year, 24-hour frequency storm for the developed condition. Alternatively, the 10-year, 1-hour flow rate indicated by an approved continuous runoff model, increased by a factor of 1.6, may be used. The hydrologic analysis must use the existing land cover condition for predicting flow rates from tributary areas outside the project limits. For tributary areas on the project site, the analysis must use the temporary or permanent project land cover condition, whichever will produce the highest flow rates. If using the WWHM to predict flows, bare soil areas should be modeled as "landscaped area."

ii. East of the Cascade Mountains Crest: Channels must handle the expected peak flow rate from a 6-month, 3-hour storm for the developed condition, referred to as the short duration storm.

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

9. Control Pollutants

Design, install, implement and maintain effective pollution prevention measures to minimize the discharge of pollutants. The Permittee must:

a. Handle and dispose of all pollutants, including waste materials and demolition debris that occur on site in a manner that does not cause contamination of stormwater.

b. Provide cover, containment, and protection from vandalism for all chemicals, liquid products, petroleum products, and other materials that have the potential to pose a threat to human health or the environment. Minimize storage of hazardous materials on-site. Safety Data Sheets (SDS) should be supplied for all materials stored. Chemicals should be kept in their original labeled containers. On-site fueling tanks must include secondary containment. Secondary containment means placing tanks or containers within an impervious structure capable of containing 110% of the volume of the largest tank within the containment structure. Double-walled tanks do not require additional secondary containment.

c. Conduct maintenance, fueling, and repair of heavy equipment and vehicles using spill prevention and control measures. Clean contaminated surfaces immediately following any spill incident.

d. Discharge wheel wash or tire bath wastewater to a separate on-site treatment system that prevents discharge to surface water, such as closed-loop recirculation or upland land application, or to the sanitary sewer with local sewer district approval.

e. Apply fertilizers and pesticides in a manner and at application rates that will not result in loss of chemical to stormwater runoff. Follow manufacturers' label requirements for application rates and procedures.

f. Use BMPs to prevent contamination of stormwater runoff by pH-modifying sources. The sources for this contamination include, but are not limited to: bulk cement, cement kiln dust, fly ash, new concrete washing and curing waters, recycled concrete stockpiles, waste streams generated from concrete grinding and sawing, exposed aggregate processes, dewatering concrete vaults, concrete pumping and mixer washout waters. (Also refer to the definition for "concrete wastewater" in Appendix A – Definitions.)

g. Adjust the pH of stormwater or authorized non-stormwater if necessary to prevent an exceedance of groundwater and/or surface water quality standards.

h. Assure that washout of concrete trucks is performed off-site or in designated concrete washout areas only. Do not wash out concrete truck drums onto the ground, or into storm drains, open ditches, streets, or streams. Washout of small concrete handling equipment may be disposed of in a formed area awaiting concrete where it will not contaminate surface or groundwater. Do not dump excess concrete on site, except in designated concrete washout areas. Concrete spillage or concrete discharge directly to groundwater or surface waters of the State is

prohibited. At no time shall concrete be washed off into the footprint of an area where an infiltration BMP will be installed.

i. Obtain written approval from Ecology before using any chemical treatment, with the exception of CO_2, dry ice or food grade vinegar, to adjust pH.

j. Uncontaminated water from water-only based shaft drilling for construction of building, road, and bridge foundations may be infiltrated provided the wastewater is managed in a way that prohibits discharge to surface waters. Prior to infiltration, water from water-only based shaft drilling that comes into contact with curing concrete must be neutralized until pH is in the range of 6.5 to 8.5 (su).

10. Control Dewatering

a. Permittees must discharge foundation, vault, and trench dewatering water, which have characteristics similar to stormwater runoff at the site, in conjunction with BMPs to reduce sedimentation before discharge to a sediment trap or sediment pond.

b. Permittees may discharge clean, non-turbid dewatering water, such as well-point groundwater, to systems tributary to, or directly into surface waters of the State, as specified in Special Condition S9.D.8, provided the dewatering flow does not cause erosion or flooding of receiving waters. Do not route clean dewatering water through stormwater sediment ponds. Note that "surface waters of the State" may exist on a construction site as well as off site; for example, a creek running through a site.

c. Other dewatering treatment or disposal options may include:

i. Infiltration

ii. Transport off site in a vehicle, such as a vacuum flush truck, for legal disposal in a manner that does not pollute state waters.

iii. Ecology-approved on-site chemical treatment or other suitable treatment technologies (See S9.D.9.i, regarding chemical treatment written approval).

iv. Sanitary or combined sewer discharge with local sewer district approval, if there is no other option.

v. Use of a sedimentation bag with discharge to a ditch or swale for small volumes of localized dewatering.

d. Permittees must handle highly turbid or contaminated dewatering water separately from stormwater.

11. Maintain BMPs

a. Permittees must maintain and repair all temporary and permanent erosion and sediment control BMPs as needed to assure continued performance of their intended function in accordance with BMP specifications.

b. Permittees must remove all temporary erosion and sediment control BMPs within 30 days after achieving final site stabilization or after the temporary BMPs are no longer needed.

12. Manage the Project

    a. Phase development projects to the maximum degree practicable and take into account seasonal work limitations.

    b. Inspect, maintain and repair all BMPs as needed to assure continued performance of their intended function. Conduct site inspections and monitoring in accordance with Special Condition S4.

    c. Maintain, update, and implement the SWPPP in accordance with Special Conditions S3, S4, and S9.

13. Protect Low Impact Development (LID) BMPs

    The primary purpose of on-site LID Stormwater Management is to reduce the disruption of the natural site hydrology through infiltration. LID BMPs are permanent facilities.

    a. Permittees must protect all LID BMPs (including, but not limited to, Bioretention and Rain Garden facilities) from sedimentation through installation and maintenance of erosion and sediment control BMPs on portions of the site that drain into the Bioretention and/or Rain Garden facilities. Restore the BMPs to their fully functioning condition if they accumulate sediment during construction. Restoring the facility must include removal of sediment and any sediment-laden bioretention/ rain garden soils, and replacing the removed soils with soils meeting the design specification.

    b. Permittees must maintain the infiltration capabilities of LID BMPs by protecting against compaction by construction equipment and foot traffic. Protect completed lawn and landscaped areas from compaction due to construction equipment.

    c. Permittees must control erosion and avoid introducing sediment from surrounding land uses onto permeable pavements. Do not allow muddy construction equipment on the base material or pavement. Do not allow sediment-laden runoff onto permeable pavements or base materials.

    d. Permittees must clean permeable pavements fouled with sediments or no longer passing an initial infiltration test using local stormwater manual methodology or the manufacturer's procedures.

    e. Permittees must keep all heavy equipment off existing soils under LID BMPs that have been excavated to final grade to retain the infiltration rate of the soils.

E. SWPPP – Map Contents and Requirements

The Permittee's SWPPP must also include a vicinity map or general location map (for example, a USGS quadrangle map, a portion of a county or city map, or other appropriate map) with enough detail to identify the location of the construction site and receiving waters within one mile of the site.

The SWPPP must also include a legible site map (or maps) showing the entire construction site. The following features must be identified, unless not applicable due to site conditions.

1. The direction of north, property lines, and existing structures and roads.

2. Cut and fill slopes indicating the top and bottom of slope catch lines.

3. Approximate slopes, contours, and direction of stormwater flow before and after major grading activities.

4. Areas of soil disturbance and areas that will not be disturbed.

5. Locations of structural and nonstructural controls (BMPs) identified in the SWPPP.

6. Locations of off-site material, stockpiles, waste storage, borrow areas, and vehicle/equipment storage areas.

7. Locations of all surface water bodies, including wetlands.

8. Locations where stormwater or non-stormwater discharges off-site and/or to a surface waterbody, including wetlands.

9. Location of water quality sampling station(s), if sampling is required by state or local permitting authority.

10. Areas where final stabilization has been accomplished and no further construction-phase permit requirements apply.

11. Location or proposed location of LID facilities.

S10. NOTICE OF TERMINATION

Partial terminations of permit coverage are not authorized.

A. The site is eligible for termination of coverage when it has met any of the following conditions:

1. The site has undergone final stabilization, the Permittee has removed all temporary BMPs (except biodegradable BMPs clearly manufactured with the intention for the material to be left in place and not interfere with maintenance or land use), and all stormwater discharges associated with construction activity have been eliminated; *or*

2. All portions of the site that have not undergone final stabilization per Special Condition S10.A.1 have been sold and/or transferred (per Special Condition S2.A), and the Permittee no longer has operational control of the construction activity; *or*

3. For residential construction only, the Permittee has completed temporary stabilization and the homeowners have taken possession of the residences.

B. When the site is eligible for termination, the Permittee must submit a complete and accurate Notice of Termination (NOT) form, signed in accordance with General Condition G2, to:

Department of Ecology
Water Quality Program - Construction Stormwater
PO Box 47696
Olympia, WA 98504-7696

When an electronic termination form is available, the Permittee may choose to submit a complete and accurate Notice of Termination (NOT) form through the Water Quality Permitting Portal rather than mailing a hardcopy as noted above.

The termination is effective on the 31st calendar day following the date Ecology receives a complete NOT form, unless Ecology notifies the Permittee that termination request is denied because the Permittee has not met the eligibility requirements in Special Condition S10.A.

Permittees are required to comply with all conditions and effluent limitations in the permit until the permit has been terminated.

Permittees transferring the property to a new property owner or operator/Permittee are required to complete and submit the Notice of Transfer form to Ecology, but are not required to submit a Notice of Termination form for this type of transaction.

GENERAL CONDITIONS

G1. DISCHARGE VIOLATIONS

All discharges and activities authorized by this general permit must be consistent with the terms and conditions of this general permit. Any discharge of any pollutant more frequent than or at a level in excess of that identified and authorized by the general permit must constitute a violation of the terms and conditions of this permit.

G2. SIGNATORY REQUIREMENTS

A. All permit applications must bear a certification of correctness to be signed:

1. In the case of corporations, by a responsible corporate officer.
2. In the case of a partnership, by a general partner of a partnership.
3. In the case of sole proprietorship, by the proprietor.
4. In the case of a municipal, state, or other public facility, by either a principal executive officer or ranking elected official.

B. All reports required by this permit and other information requested by Ecology (including NOIs, NOTs, and Transfer of Coverage forms) must be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

1. The authorization is made in writing by a person described above and submitted to Ecology.
2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters.

C. Changes to authorization. If an authorization under paragraph G2.B.2 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph G2.B.2 above must be submitted to Ecology prior to or together with any reports, information, or applications to be signed by an authorized representative.

D. Certification. Any person signing a document under this section must make the following certification:

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering 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.

G3. RIGHT OF INSPECTION AND ENTRY

The Permittee must allow an authorized representative of Ecology, upon the presentation of credentials and such other documents as may be required by law:

A. To enter upon the premises where a discharge is located or where any records are kept under the terms and conditions of this permit.

B. To have access to and copy, at reasonable times and at reasonable cost, any records required to be kept under the terms and conditions of this permit.

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

D. To sample or monitor, at reasonable times, any substances or parameters at any location for purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act.

G4. GENERAL PERMIT MODIFICATION AND REVOCATION

This permit may be modified, revoked and reissued, or terminated in accordance with the provisions of Chapter 173-226 WAC. Grounds for modification, revocation and reissuance, or termination include, but are not limited to, the following:

A. When a change occurs in the technology or practices for control or abatement of pollutants applicable to the category of dischargers covered under this permit.

B. When effluent limitation guidelines or standards are promulgated pursuant to the CWA or Chapter 90.48 RCW, for the category of dischargers covered under this permit.

C. When a water quality management plan containing requirements applicable to the category of dischargers covered under this permit is approved, or

D. When information is obtained that indicates cumulative effects on the environment from dischargers covered under this permit are unacceptable.

G5. REVOCATION OF COVERAGE UNDER THE PERMIT

Pursuant to Chapter 43.21B RCW and Chapter 173-226 WAC, the Director may terminate coverage for any discharger under this permit for cause. Cases where coverage may be terminated include, but are not limited to, the following:

A. Violation of any term or condition of this permit.

B. Obtaining coverage under this permit by misrepresentation or failure to disclose fully all relevant facts.

C. A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge.

D. Failure or refusal of the Permittee to allow entry as required in RCW 90.48.090.

E. A determination that the permitted activity endangers human health or the environment, or contributes to water quality standards violations.

F. Nonpayment of permit fees or penalties assessed pursuant to RCW 90.48.465 and Chapter 173-224 WAC.

G. Failure of the Permittee to satisfy the public notice requirements of WAC 173-226-130(5), when applicable.

The Director may require any discharger under this permit to apply for and obtain coverage under an individual permit or another more specific general permit. Permittees who have their coverage revoked for cause according to WAC 173-226-240 may request temporary coverage under this permit during the time an individual permit is being developed, provided the request is made within ninety (90) days from the time of revocation and is submitted along with a complete individual permit application form.

G6. REPORTING A CAUSE FOR MODIFICATION

The Permittee must submit a new application, or a supplement to the previous application, whenever a material change to the construction activity or in the quantity or type of discharge is anticipated which is not specifically authorized by this permit. This application must be submitted at least sixty (60) days prior to any proposed changes. Filing a request for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not relieve the Permittee of the duty to comply with the existing permit until it is modified or reissued.

G7. COMPLIANCE WITH OTHER LAWS AND STATUTES

Nothing in this permit will be construed as excusing the Permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations.

G8. DUTY TO REAPPLY

The Permittee must apply for permit renewal at least 180 days prior to the specified expiration date of this permit. The Permittee must reapply using the electronic application form (NOI) available on Ecology's website. Permittees unable to submit electronically (for example, those who do not have an internet connection) must contact Ecology to request a waiver and obtain instructions on how to obtain a paper NOI.

Department of Ecology
Water Quality Program - Construction Stormwater
PO Box 47696
Olympia, WA 98504-7696

G9. REMOVED SUBSTANCE

The Permittee must not re-suspend or reintroduce collected screenings, grit, solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of stormwater to the final effluent stream for discharge to state waters.

G10. DUTY TO PROVIDE INFORMATION

The Permittee must submit to Ecology, within a reasonable time, all information that Ecology may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Permittee must also submit to Ecology, upon request, copies of records required to be kept by this permit [40 CFR 122.41(h)].

G11. OTHER REQUIREMENTS OF 40 CFR

All other requirements of 40 CFR 122.41 and 122.42 are incorporated in this permit by reference.

G12. ADDITIONAL MONITORING

Ecology may establish specific monitoring requirements in addition to those contained in this permit by administrative order or permit modification.

G13. PENALTIES FOR VIOLATING PERMIT CONDITIONS

Any person who is found guilty of willfully violating the terms and conditions of this permit shall be deemed guilty of a crime, and upon conviction thereof shall be punished by a fine of up to ten thousand dollars ($10,000) and costs of prosecution, or by imprisonment at the discretion of the court. Each day upon which a willful violation occurs may be deemed a separate and additional violation.

Any person who violates the terms and conditions of a waste discharge permit shall incur, in addition to any other penalty as provided by law, a civil penalty in the amount of up to ten thousand dollars ($10,000) for every such violation. Each and every such violation shall be a separate and distinct offense, and in case of a continuing violation, every day's continuance shall be deemed to be a separate and distinct violation.

G14. UPSET

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

An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of the following paragraph are met.

A Permittee who wishes to establish the affirmative defense of upset must demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that: 1) an upset occurred and that the Permittee can identify the cause(s) of the upset; 2) the permitted facility was being properly operated at the time of the upset; 3) the Permittee submitted notice of the upset as required in Special Condition S5.F, and; 4) the Permittee complied with any remedial measures required under this permit.

In any enforcement proceeding, the Permittee seeking to establish the occurrence of an upset has the burden of proof.

G15. PROPERTY RIGHTS

This permit does not convey any property rights of any sort, or any exclusive privilege.

G16. DUTY TO COMPLY

The Permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

G17. TOXIC POLLUTANTS

The Permittee must comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if this permit has not yet been modified to incorporate the requirement.

G18. PENALTIES FOR TAMPERING

The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than two years per violation, or by both. If a conviction of a person is for a violation committed after a first conviction of such person under this condition, punishment shall be a fine of not more than $20,000 per day of violation, or imprisonment of not more than four (4) years, or both.

G19. REPORTING PLANNED CHANGES

The Permittee must, as soon as possible, give notice to Ecology of planned physical alterations, modifications or additions to the permitted construction activity. The Permittee should be aware that, depending on the nature and size of the changes to the original permit, a new public notice and other permit process requirements may be required. Changes in activities that require reporting to Ecology include those that will result in:

A. The permitted facility being determined to be a new source pursuant to 40 CFR 122.29(b).

B. A significant change in the nature or an increase in quantity of pollutants discharged, including but not limited to: a 20% or greater increase in acreage disturbed by construction activity.

C. A change in or addition of surface water(s) receiving stormwater or non-stormwater from the construction activity.

D. A change in the construction plans and/or activity that affects the Permittee's monitoring requirements in Special Condition S4.

Following such notice, permit coverage may be modified, or revoked and reissued pursuant to 40 CFR 122.62(a) to specify and limit any pollutants not previously limited. Until such modification is effective, any new or increased discharge in excess of permit limits or not specifically authorized by this permit constitutes a violation.

G20. REPORTING OTHER INFORMATION

Where the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to Ecology, it must promptly submit such facts or information.

G21. REPORTING ANTICIPATED NON-COMPLIANCE

The Permittee must give advance notice to Ecology by submission of a new application or supplement thereto at least forty-five (45) days prior to commencement of such discharges, of any facility expansions, production increases, or other planned changes, such as process modifications, in the permitted facility or activity which may result in noncompliance with permit limits or conditions. Any maintenance of facilities, which might necessitate unavoidable interruption of

operation and degradation of effluent quality, must be scheduled during non-critical water quality periods and carried out in a manner approved by Ecology.

G22. REQUESTS TO BE EXCLUDED FROM COVERAGE UNDER THE PERMIT

Any discharger authorized by this permit may request to be excluded from coverage under the general permit by applying for an individual permit. The discharger must submit to the Director an application as described in WAC 173-220-040 or WAC 173-216-070, whichever is applicable, with reasons supporting the request. These reasons will fully document how an individual permit will apply to the applicant in a way that the general permit cannot. Ecology may make specific requests for information to support the request. The Director will either issue an individual permit or deny the request with a statement explaining the reason for the denial. When an individual permit is issued to a discharger otherwise subject to the construction stormwater general permit, the applicability of the construction stormwater general permit to that Permittee is automatically terminated on the effective date of the individual permit.

G23. APPEALS

A. The terms and conditions of this general permit, as they apply to the appropriate class of dischargers, are subject to appeal by any person within 30 days of issuance of this general permit, in accordance with Chapter 43.21B RCW, and Chapter 173-226 WAC.

B. The terms and conditions of this general permit, as they apply to an individual discharger, are appealable in accordance with Chapter 43.21B RCW within 30 days of the effective date of coverage of that discharger. Consideration of an appeal of general permit coverage of an individual discharger is limited to the general permit's applicability or nonapplicability to that individual discharger.

C. The appeal of general permit coverage of an individual discharger does not affect any other dischargers covered under this general permit. If the terms and conditions of this general permit are found to be inapplicable to any individual discharger(s), the matter shall be remanded to Ecology for consideration of issuance of an individual permit or permits.

G24. SEVERABILITY

The provisions of this permit are severable, and if any provision of this permit, or application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

G25. BYPASS PROHIBITED

A. Bypass Procedures

Bypass, which is the intentional diversion of waste streams from any portion of a treatment facility, is prohibited for stormwater events below the design criteria for stormwater management. Ecology may take enforcement action against a Permittee for bypass unless one of the following circumstances (1, 2, 3 or 4) is applicable.

1. Bypass of stormwater is consistent with the design criteria and part of an approved management practice in the applicable stormwater management manual.

2. Bypass for essential maintenance without the potential to cause violation of permit limits or conditions.

Bypass is authorized if it is for essential maintenance and does not have the potential to cause violations of limitations or other conditions of this permit, or adversely impact public health.

3. Bypass of stormwater is unavoidable, unanticipated, and results in noncompliance of this permit.

   This bypass is permitted only if:

   a. Bypass is unavoidable to prevent loss of life, personal injury, or severe property damage. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass.

   b. There are no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, maintenance during normal periods of equipment downtime (but not if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance), or transport of untreated wastes to another treatment facility.

   c. Ecology is properly notified of the bypass as required in Special Condition S5.F of this permit.

4. A planned action that would cause bypass of stormwater and has the potential to result in noncompliance of this permit during a storm event.

   The Permittee must notify Ecology at least thirty (30) days before the planned date of bypass. The notice must contain:

   a. A description of the bypass and its cause

   b. An analysis of all known alternatives which would eliminate, reduce, or mitigate the need for bypassing.

   c. A cost-effectiveness analysis of alternatives including comparative resource damage assessment.

   d. The minimum and maximum duration of bypass under each alternative.

   e. A recommendation as to the preferred alternative for conducting the bypass.

   f. The projected date of bypass initiation.

   g. A statement of compliance with SEPA.

   h. A request for modification of water quality standards as provided for in WAC 173-201A-110, if an exceedance of any water quality standard is anticipated.

   i. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the bypass.

5. For probable construction bypasses, the need to bypass is to be identified as early in the planning process as possible. The analysis required above must be considered during

preparation of the Stormwater Pollution Prevention Plan (SWPPP) and must be included to the extent practical. In cases where the probable need to bypass is determined early, continued analysis is necessary up to and including the construction period in an effort to minimize or eliminate the bypass.

Ecology will consider the following before issuing an administrative order for this type bypass:

a. If the bypass is necessary to perform construction or maintenance-related activities essential to meet the requirements of this permit.

b. If there are feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, stopping production, maintenance during normal periods of equipment down time, or transport of untreated wastes to another treatment facility.

c. If the bypass is planned and scheduled to minimize adverse effects on the public and the environment.

After consideration of the above and the adverse effects of the proposed bypass and any other relevant factors, Ecology will approve, conditionally approve, or deny the request. The public must be notified and given an opportunity to comment on bypass incidents of significant duration, to the extent feasible. Approval of a request to bypass will be by administrative order issued by Ecology under RCW 90.48.120.

B. Duty to Mitigate

The Permittee is required to take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

APPENDIX A – DEFINITIONS

AKART is an acronym for "**A**ll **K**nown, **A**vailable, and **R**easonable methods of prevention, control, and **T**reatment." AKART represents the most current methodology that can be reasonably required for preventing, controlling, or abating the pollutants and controlling pollution associated with a discharge.

Applicable TMDL means a TMDL for turbidity, fine sediment, high pH, or phosphorus, which was completed and approved by EPA before January 1, 2021, or before the date the operator's complete permit application is received by Ecology, whichever is later. TMDLs completed after a complete permit application is received by Ecology become applicable to the Permittee only if they are imposed through an administrative order by Ecology, or through a modification of permit coverage.

Applicant means an *operator* seeking coverage under this permit.

Benchmark means a pollutant concentration used as a permit threshold, below which a pollutant is considered unlikely to cause a water quality violation, and above which it may. When pollutant concentrations exceed benchmarks, corrective action requirements take effect. Benchmark values are not water quality standards and are not numeric effluent limitations; they are indicator values.

Best Management Practices (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the State. BMPs include treatment systems, operating procedures, and practices to control stormwater associated with construction activity, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Buffer means an area designated by a local jurisdiction that is contiguous to and intended to protect a sensitive area.

Bypass means the intentional diversion of waste streams from any portion of a treatment facility.

Calendar Day A period of 24 consecutive hours starting at 12:00 midnight and ending the following 12:00 midnight.

Calendar Week (same as **Week**) means a period of seven consecutive days starting at 12:01 a.m. (0:01 hours) on Sunday.

Certified Erosion and Sediment Control Lead (CESCL) means a person who has current certification through an approved erosion and sediment control training program that meets the minimum training standards established by Ecology (See BMP C160 in the SWMM).

Chemical Treatment means the addition of chemicals to stormwater and/or authorized non-stormwater prior to filtration and discharge to surface waters.

Clean Water Act (CWA) means 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.

Combined Sewer means a sewer which has been designed to serve as a sanitary sewer and a storm sewer, and into which inflow is allowed by local ordinance.

Common Plan of Development or Sale means a site where multiple separate and distinct construction activities may be taking place at different times on different schedules and/or by different contractors, but still under a single plan. Examples include: 1) phased projects and projects with multiple filings or lots, even if the separate phases or filings/lots will be constructed under separate contract or by separate owners (e.g., a development where lots are sold to separate builders); 2) a development plan that may be phased over multiple years, but is still under a consistent plan for long-term development; 3) projects in a contiguous area that may be unrelated but still under the same contract, such as construction of a building extension and a new parking lot at the same facility; and 4) linear projects such as roads, pipelines, or utilities. If the project is part of a common plan of development or sale, the disturbed area of the entire plan must be used in determining permit requirements.

Composite Sample means a mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be "time-composite" (collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increases while maintaining a constant time interval between the aliquots.

Concrete Wastewater means any water used in the production, pouring and/or clean-up of concrete or concrete products, and any water used to cut, grind, wash, or otherwise modify concrete or concrete products. Examples include water used for or resulting from concrete truck/mixer/pumper/tool/chute rinsing or washing, concrete saw cutting and surfacing (sawing, coring, grinding, roughening, hydro-demolition, bridge and road surfacing). When stormwater comingles with concrete wastewater, the resulting water is considered concrete wastewater and must be managed to prevent discharge to waters of the State, including groundwater.

Construction Activity means land disturbing operations including clearing, grading or excavation which disturbs the surface of the land (including off-site disturbance acreage related to construction-support activity). Such activities may include road construction, construction of residential houses, office buildings, or industrial buildings, site preparation, soil compaction, movement and stockpiling of topsoils, and demolition activity.

Construction Support Activity means off-site acreage that will be disturbed as a direct result of the construction project and will discharge stormwater. For example, off-site equipment staging yards, material storage areas, borrow areas, and parking areas.

Contaminant means any hazardous substance that does not occur naturally or occurs at greater than natural background levels. See definition of “hazardous substance” and WAC 173-340-200.

Contaminated soil means soil which contains contaminants, pollutants, or hazardous substances that do not occur naturally or occur at levels greater than natural background.

Contaminated groundwater means groundwater which contains contaminants, pollutants, or hazardous substances that do not occur naturally or occur at levels greater than natural background.

Demonstrably Equivalent means that the technical basis for the selection of all stormwater BMPs is documented within a SWPPP, including:

1. The method and reasons for choosing the stormwater BMPs selected.
2. The pollutant removal performance expected from the BMPs selected.

3. The technical basis supporting the performance claims for the BMPs selected, including any available data concerning field performance of the BMPs selected.
4. An assessment of how the selected BMPs will comply with state water quality standards.
5. An assessment of how the selected BMPs will satisfy both applicable federal technology-based treatment requirements and state requirements to use all known, available, and reasonable methods of prevention, control, and treatment (AKART).

Department means the Washington State Department of Ecology.

Detention means the temporary storage of stormwater to improve quality and/or to reduce the mass flow rate of discharge.

Dewatering means the act of pumping groundwater or stormwater away from an active construction site.

Director means the Director of the Washington State Department of Ecology or his/her authorized representative.

Discharger means an owner or operator of any facility or activity subject to regulation under Chapter 90.48 RCW or the Federal Clean Water Act.

Domestic Wastewater means water carrying human wastes, including kitchen, bath, and laundry wastes from residences, buildings, industrial establishments, or other places, together with such groundwater infiltration or surface waters as may be present.

Ecology means the Washington State Department of Ecology.

Engineered Soils means the use of soil amendments including, but not limited, to Portland cement treated base (CTB), cement kiln dust (CKD), or fly ash to achieve certain desirable soil characteristics.

Equivalent BMPs means operational, source control, treatment, or innovative BMPs which result in equal or better quality of stormwater discharge to surface water or to groundwater than BMPs selected from the SWMM.

Erosion means the wearing away of the land surface by running water, wind, ice, or other geological agents, including such processes as gravitational creep.

Erosion and Sediment Control BMPs means BMPs intended to prevent erosion and sedimentation, such as preserving natural vegetation, seeding, mulching and matting, plastic covering, filter fences, sediment traps, and ponds. Erosion and sediment control BMPs are synonymous with stabilization and structural BMPs.

Federal Operator is an entity that meets the definition of "Operator" in this permit and is either any department, agency or instrumentality of the executive, legislative, and judicial branches of the Federal government of the United States, or another entity, such as a private contractor, performing construction activity for any such department, agency, or instrumentality.

Final Stabilization (same as **fully stabilized** or **full stabilization**) means the completion of all soil disturbing activities at the site and the establishment of permanent vegetative cover, or equivalent permanent stabilization measures (such as pavement, riprap, gabions, or geotextiles) which will prevent erosion. See the applicable Stormwater Management Manual for more information on vegetative cover expectations and equivalent permanent stabilization measures.

Groundwater means water in a saturated zone or stratum beneath the land surface or a surface waterbody.

Hazardous Substance means any dangerous or extremely hazardous waste as defined in RCW 70.105.010 (5) and (6), or any dangerous or extremely dangerous waste as designated by rule under chapter 70.105 RCW; any hazardous sub-stance as defined in RCW 70.105.010(14) or any hazardous substance as defined by rule under chapter 70.105 RCW; any substance that, on the effective date of this section, is a hazardous substance under section 101(14) of the federal cleanup law, 42U.S.C., Sec. 9601(14); petroleum or petroleum products; and any substance or category of substances, including solid waste decomposition products, determined by the director by rule to present a threat to human health or the environment if released into the environment. The term hazardous substance does not include any of the following when contained in an underground storage tank from which there is not a release: crude oil or any fraction thereof or petroleum, if the tank is in compliance with all applicable federal, state, and local law.

Injection Well means a well that is used for the subsurface emplacement of fluids. (See **Well**.)

Jurisdiction means a political unit such as a city, town or county; incorporated for local self-government.

National Pollutant Discharge Elimination System (NPDES) means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring, and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318, and 405 of the Federal Clean Water Act, for the discharge of pollutants to surface waters of the State from point sources. These permits are referred to as NPDES permits and, in Washington State, are administered by the Washington State Department of Ecology.

Notice of Intent (NOI) means the application for, or a request for coverage under this general permit pursuant to WAC 173-226-200.

Notice of Termination (NOT) means a request for termination of coverage under this general permit as specified by Special Condition S10 of this permit.

Operator means any party associated with a construction project that meets either of the following two criteria:

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

Permittee means individual or entity that receives notice of coverage under this general permit.

pH means a liquid's measure of acidity or alkalinity. A pH of 7 is defined as neutral. Large variations above or below this value are considered harmful to most aquatic life.

pH Monitoring Period means the time period in which the pH of stormwater runoff from a site must be tested a minimum of once every seven days to determine if stormwater pH is between 6.5 and 8.5.

Point Source means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, and container from which pollutants are or may be discharged to surface waters of the State. This term does not include return flows from irrigated agriculture. (See the Fact Sheet for further explanation)

Pollutant means 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, cellar dirt, and industrial, municipal, and agricultural waste. This term does not include sewage from vessels within the meaning of section 312 of the CWA, nor does it include dredged or fill material discharged in accordance with a permit issued under section 404 of the CWA.

Pollution means contamination or other alteration of the physical, chemical, or biological properties of waters of the State; including change in temperature, taste, color, turbidity, or odor of the waters; or such discharge of any liquid, gaseous, solid, radioactive or other substance into any waters of the State as will or is likely to create a nuisance or render such waters harmful, detrimental or injurious to the public health, safety or welfare; or to domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses; or to livestock, wild animals, birds, fish or other aquatic life.

Process Wastewater means any non-stormwater which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product. If stormwater commingles with process wastewater, the commingled water is considered process wastewater.

Receiving Water means the waterbody at the point of discharge. If the discharge is to a storm sewer system, either surface or subsurface, the receiving water is the waterbody to which the storm system discharges. Systems designed primarily for other purposes such as for groundwater drainage, redirecting stream natural flows, or for conveyance of irrigation water/return flows that coincidentally convey stormwater are considered the receiving water.

Representative means a stormwater or wastewater sample which represents the flow and characteristics of the discharge. Representative samples may be a grab sample, a time-proportionate *composite sample*, or a flow proportionate sample. Ecology's Construction Stormwater Monitoring Manual provides guidance on representative sampling.

Responsible Corporate Officer for the purpose of signatory authority means: (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures (40 CFR 122.22).

Sanitary Sewer means a sewer which is designed to convey domestic wastewater.

Sediment means the fragmented material that originates from the weathering and erosion of rocks or unconsolidated deposits, and is transported by, suspended in, or deposited by water.

Sedimentation means the depositing or formation of sediment.

Sensitive Area means a waterbody, wetland, stream, aquifer recharge area, or channel migration zone.

SEPA (State Environmental Policy Act) means the Washington State Law, RCW 43.21C.020, intended to prevent or eliminate damage to the environment.

Significant Amount means an amount of a pollutant in a discharge that is amenable to available and reasonable methods of prevention or treatment; or an amount of a pollutant that has a reasonable potential to cause a violation of surface or groundwater quality or sediment management standards.

Significant Concrete Work means greater than 1000 cubic yards placed or poured concrete or recycled concrete used over the life of a project.

Significant Contributor of Pollutants means a facility determined by Ecology to be a contributor of a significant amount(s) of a pollutant(s) to waters of the State of Washington.

Site means the land or water area where any "facility or activity" is physically located or conducted.

Source Control BMPs means physical, structural or mechanical devices or facilities that are intended to prevent pollutants from entering stormwater. A few examples of source control BMPs are erosion control practices, maintenance of stormwater facilities, constructing roofs over storage and working areas, and directing wash water and similar discharges to the sanitary sewer or a dead end sump.

Stabilization means the application of appropriate BMPs to prevent the erosion of soils, such as, temporary and permanent seeding, vegetative covers, mulching and matting, plastic covering and sodding. See also the definition of Erosion and Sediment Control BMPs.

Storm Drain means any drain which drains directly into a *storm sewer system*, usually found along roadways or in parking lots.

Storm Sewer System means a means a conveyance, or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains designed or used for collecting or conveying stormwater. This does not include systems which are part of *a combined sewer* or Publicly Owned Treatment Works (POTW), as defined at 40 CFR 122.2.

Stormwater means that portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a stormwater drainage system into a defined surface waterbody, or a constructed infiltration facility.

Stormwater Management Manual (SWMM) or **Manual** means the technical Manual published by Ecology for use by local governments that contain descriptions of and design criteria for BMPs to prevent, control, or treat pollutants in stormwater.

Stormwater Pollution Prevention Plan (SWPPP) means a documented plan to implement measures to identify, prevent, and control the contamination of point source discharges of stormwater.

Surface Waters of the State includes lakes, rivers, ponds, streams, inland waters, salt waters, and all other surface waters and water courses within the jurisdiction of the state of Washington.

Temporary Stabilization means the exposed ground surface has been covered with appropriate materials to provide temporary stabilization of the surface from water or wind erosion. Materials include, but are not limited to, mulch, riprap, erosion control mats or blankets and temporary cover crops. Seeding alone is not considered stabilization. Temporary stabilization is not a substitute for the more permanent “final stabilization.”

Total Maximum Daily Load (TMDL) means a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet state water quality standards. Percentages of the total maximum daily load are allocated to the various pollutant sources. A TMDL is the sum of the allowable loads of a single pollutant from all contributing point and nonpoint sources. The TMDL calculations must include a "margin of safety" to ensure that the waterbody can be protected in case there are unforeseen events or unknown sources of the pollutant. The calculation must also account for seasonable variation in water quality.

Transfer of Coverage (TOC) means a request for transfer of coverage under this general permit as specified by Special Condition S2.A of this permit.

Treatment BMPs means BMPs that are intended to remove pollutants from stormwater. A few examples of treatment BMPs are detention ponds, oil/water separators, biofiltration, and constructed wetlands.

Transparency means a measurement of water clarity in centimeters (cm), using a 60 cm transparency tube. The transparency tube is used to estimate the relative clarity or transparency of water by noting the depth at which a black and white Secchi disc becomes visible when water is released from a value in the bottom of the tube. A transparency tube is sometimes referred to as a “turbidity tube.”

Turbidity means the clarity of water expressed as nephelometric turbidity units (NTUs) and measured with a calibrated turbidimeter.

Uncontaminated means free from any contaminant. See definition of “contaminant” and WAC 173-340-200.

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

Waste Load Allocation (WLA) means the portion of a receiving water’s loading capacity that is allocated to one of its existing or future point sources of pollution. WLAs constitute a type of water quality based effluent limitation (40 CFR 130.2[h]).

Water-Only Based Shaft Drilling is a shaft drilling process that uses water only and no additives are involved in the drilling of shafts for construction of building, road, or bridge foundations.

Water Quality means the chemical, physical, and biological characteristics of water, usually with respect to its suitability for a particular purpose.

Waters of the State includes those waters as defined as "waters of the United States" in 40 CFR Subpart 122.2 within the geographic boundaries of Washington State and "waters of the State" as defined in Chapter 90.48 RCW, which include lakes, rivers, ponds, streams, inland waters, underground waters, salt

waters, and all other surface waters and water courses within the jurisdiction of the state of Washington.

Well means a bored, drilled or driven shaft, or dug hole whose depth is greater than the largest surface dimension. (See **Injection Well**.)

Wheel Wash Wastewater means any water used in, or resulting from the operation of, a tire bath or wheel wash (BMP C106: Wheel Wash), or other structure or practice that uses water to physically remove mud and debris from vehicles leaving a construction site and prevent track-out onto roads. When stormwater comingles with wheel wash wastewater, the resulting water is considered wheel wash wastewater and must be managed according to Special Condition S9.D.9.

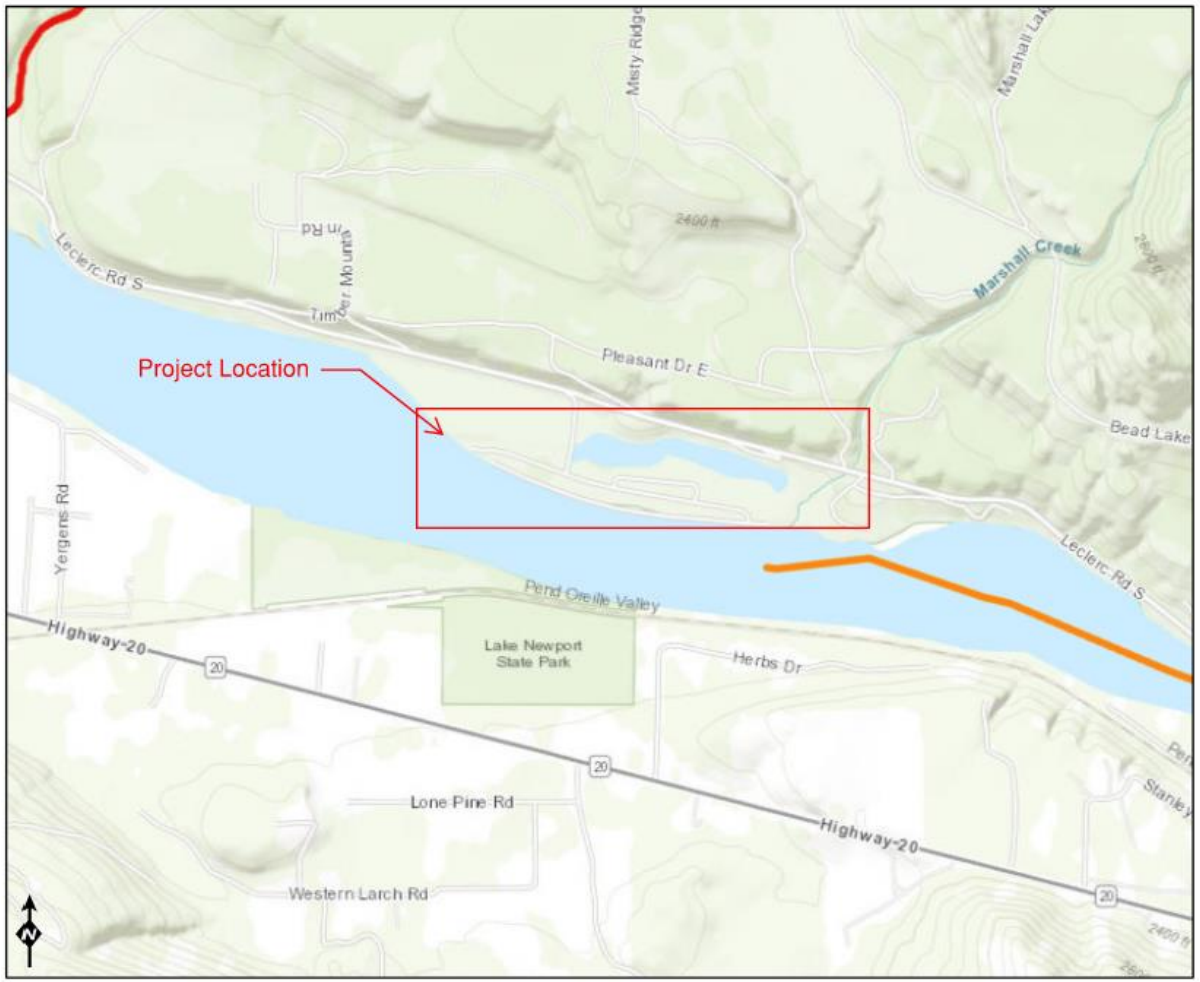
APPENDIX B – ACRONYMS

AKART	All Known, Available, and Reasonable Methods of Prevention, Control, and Treatment
BMP	Best Management Practice
CESCL	Certified Erosion and Sediment Control Lead
CFR	Code of Federal Regulations
CKD	Cement Kiln Dust
cm	Centimeters
CPD	Common Plan of Development
CTB	Cement-Treated Base
CWA	Clean Water Act
DMR	Discharge Monitoring Report
EPA	Environmental Protection Agency
ERTS	Environmental Report Tracking System
ESC	Erosion and Sediment Control
FR	Federal Register
LID	Low Impact Development
NOI	Notice of Intent
NOT	Notice of Termination
NPDES	National Pollutant Discharge Elimination System
NTU	Nephelometric Turbidity Unit
RCW	Revised Code of Washington
SEPA	State Environmental Policy Act
SWMM	Stormwater Management Manual
SWPPP	Stormwater Pollution Prevention Plan
TMDL	Total Maximum Daily Load
UIC	Underground Injection Control
USC	United States Code
USEPA	United States Environmental Protection Agency
WAC	Washington Administrative Code
WQ	Water Quality
WWHM	Western Washington Hydrology Model

Appendix F: 303(d) List Waterbodies / TMDL Waterbodies Information

May 31, 2023

Sunnyside



Assessed Water/Sediment

Water
- Category 5 - 303d
- Category 4C
- Category 4B
- Category 4A
- Category 2
- Category 1

Sediment
- Category 5 - 303d
- Category 4C
- Category 4B
- Category 4A
- Category 2
- Category 1

Esri, NASA, NGA, USGS, FEMA
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri

Miles
0 0.23 0.45 0.9

DEPARTMENT OF ECOLOGY
State of Washington

Listing ID: 11450

Main Listing Information

Listing ID: 11450
Waterbody Name: PEND OREILLE RIVER
Medium: Water
Parameter: Dissolved Oxygen
WQI Project: None
Designated Use: Aquatic Life - Salmonid Spawning, Rearing, and Migration

Current Category: 5

View Category History

Assessment Unit

Assessment Unit ID: 17010216000053_001_001
Size: 1.764 Kilometers
Associated Components(s): Reach: 17010216000053 0% - 100%, Type: Rivers/Streams
County: Pend Oreille
WRIA: Pend Oreille

Basis Table

Assessment Year

2018

Sampling Year	Excursion Count	Sample Count	Criterion/Threshold	Aggregate	Calculated Value
2017	16	95	8.0 mg/L	Daily Minimum	6.9

Basis Statement

HISTORICAL INFORMATION

Location ID: [62A090] -- In 2005, 0 of 12 sample values (0%) showed an excursion of the criterion (8 mg/L) for this waterbody;

Location ID [62A090] -- In 2004, 12 samples showed no excursions of the criterion for this waterbody, (criterion = 8.0 mg/L).

Hallock (2001) Dept. of Ecology Ambient Monitoring Station 62A090 (PEND OREILLE AT METALINE FLLS) shows 0 excursions beyond the criterion out of 34 samples collected between 1993 - 200 1.

Remarks

Assessment Cycle 2018 - During calendar year 2017, the hypergeometric test failed using time series data indicating that the standard was not met.

Combined Listing: Listing ID 47080 was rolled into this listing

Fewer than three excursions exist from all data considered.

Historic Remarks: Single sample event data does not fully represent critical period information necessary to determine this waterbody meets water quality standards. Historic Remarks: Critical temporal period not adequately captured to conclude non-impairment based on WQP Policy 1-11 (Sept 2006). -mh

Data Sources

Study Id	Location Id	Source Database
AMS001	62A090	EIM
AMS001E	62A090	EIM
SCL_BWQS	SCL_BWQS-V11	EIM
SCL_BWQS	SCL_BWQS-V11_B	EIM
SCL_BWQS	SCL_BWQS-V2	EIM
SCL_BWQS	SCL_BWQS-V9	EIM

Map Link

Map Link

Listing ID: 11451

Main Listing Information

Listing ID: 11451
Waterbody Name: PEND OREILLE RIVER
Medium: Water
Parameter: pH
WQI Project: None
Designated Use: Aquatic Life - Salmonid Spawning, Rearing, and Migration

Current Category: 5

View Category History

Assessment Unit

Assessment Unit ID: 17010216000053_001_001
Size: 1.764 Kilometers
Associated Components(s): Reach: 17010216000053 0% - 100%, Type: Rivers/Streams

County: Pend Oreille
WRIA: Pend Oreille

Basis Table

Assessment Year

2018

Sampling Year	Excursion Count	Sample Count	Criterion/Threshold	Aggregate	Calculated Value
2006	4	11	6.5 - 8.5 pH	Daily Extreme	9
2007	4	10	6.5 - 8.5 pH	Daily Extreme	8.8

Basis Statement

HISTORICAL INFORMATION

Location ID [62A090] -- In 2005, 2 of 12 samples (16.7%) showed an excursion of the criteria for this waterbody: 2 high pH excursions.

Location ID [62A090] -- In 2004, 1 of 12 samples (8.3%) showed an excursion of the criteria for this waterbody: 1 high pH excursion.

Hallock (2004), Dept. of Ecology ambient station 62A090 shows that 4 of 31 samples exceed the criterion.

Hallock (2001) Dept. of Ecology Ambient Monitoring Station 62A090 (PEND OREILLE AT METALINE FLLS) shows 3 excursions beyond the criterion out of 34 samples collected between 1993 - 2001.

Remarks

Assessment Cycle 2018 - During two calendar years (2006 and 2007), the hypergeometric test failed using discrete data indicating that the standard was not met.

Combined Listing: Listing ID 50385 was rolled into this listing

High pH Excursions

At least 10 percent of samples were excursion of the criteria in at least one year and at least 3 excursions exist from all data considered.

Data Sources

Study Id	Location Id	Source Database
AMS001	62A090	EIM
AMS001-2	62A090	EIM
AMS001E	62A090	EIM

Map Link

Map Link

Listing ID: 43357

Main Listing Information

Listing ID: 43357
Waterbody Name: PEND OREILLE RIVER
Medium: Tissue
Parameter: Aldrin
WQI Project: None
Designated Use: Multiple - Harvesting & Domestic Water

Current Category: 5

View Category History

Assessment Unit

Assessment Unit ID: 17010216000133_001_001
Size: 6.909 Kilometers
Associated Components(s): Reach: 17010216000133 0% - 100%, Type: Rivers/Streams

County: Pend Oreille
WRIA: Pend Oreille

Basis Table

See Basis Statement field.

Basis Statement

HISTORICAL INFORMATION

USEPA National Lake Fish Tissue Study shows an excursion beyond the National Toxics Rule criterion in Brown Trout composite samples collected on 07/23/2002 at location (Near East Bank).

Remarks

Assessment Cycle 2018 - A historical Category 5 determination was carried forward from a previous assessment or administrative decision. See Historical Basis Statement for previous assessment information.

Data Sources

No Source Records

Map Link

Map Link

Listing ID: 43383

Main Listing Information

Listing ID: 43383
Waterbody Name: PEND OREILLE RIVER
Medium: Tissue
Parameter: Polychlorinated Biphenyls (PCBs)
WQI Project: None
Designated Use: Multiple - Harvesting & Domestic Water

Current Category: 5

View Category History

Assessment Unit

Assessment Unit ID: 17010216000222_001_001
Size: 4.375 Kilometers
Associated Components(s): Reach: 17010216000222 0% - 100%, Type: Rivers/Streams
County: Pend Oreille
WRIA: Pend Oreille

Basis Table

See Basis Statement field.

Basis Statement

HISTORICAL INFORMATION

In 2002,

> Location ID(s) [PEN-F] -- 1 of 2 composite sample(s) of brown trout (Salmo trutta) Fillet, skin on tissue exceeded Washington's FTEC.

Remarks

Assessment Cycle 2018 - A historical Category 5 determination was carried forward from a previous assessment or administrative decision. See Historical Basis Statement for previous assessment information.

Sample results exceeded the FTEC; therefore the Assessment Unit meets the requirements for a Category 5 determination.

The FTEC (fish tissue equivalent concentration) is the concentration of a contaminant in fish tissue that Washington equates to the National Toxics Rule water quality criterion for the protection of human health.

Data Sources

Study Id	Location Id	Source Database
EPALAKES	PEN-F	EIM

Map Link

Map Link

Listing ID: 76399

Main Listing Information

Listing ID: 76399
Waterbody Name: PEND OREILLE RIVER
Medium: Water
Parameter: Lead
WQI Project: None
Designated Use: Aquatic Life - Toxics

Current Category: 5

View Category History

Assessment Unit

Assessment Unit ID: 17010216000164_001_001
Size: 3.642 Kilometers
Associated Components(s): Reach: 17010216000164 0% - 100%, Type: Rivers/Streams

County: Pend Oreille
WRIA: Pend Oreille

Basis Table

Assessment Year

2018

Sampling Year	Excursion Count	Sample Count	Criterion/Threshold	Aggregate	Calculated Value
2013	2	4	Calculated	Toxic aquatic 4-day mean exceedence factor	

Basis Statement

Remarks

Assessment Cycle 2018 - During 2013, two or more sample values collected in a three-year period exceeded the aquatic life criterion.

Data Sources

Study Id	Location Id	Source Database
KNRD Inorganics and Metals	KNRD_WQX-POWW	Water Quality Portal
KTWQ	KNRD-POWW	EIM

Map Link

Map Link

Listing ID: 79844

Main Listing Information

Listing ID: 79844
Waterbody Name: PEND OREILLE RIVER
Medium: Water
Parameter: Mercury
WQI Project: None
Designated Use: Aquatic Life - Toxics

Current Category: 5

View Category History

Assessment Unit

Assessment Unit ID: 17010216000164_001_001
Size: 3.642 Kilometers
Associated Components(s): Reach: 17010216000164 0% - 100%, Type: Rivers/Streams

County: Pend Oreille
WRIA: Pend Oreille

Basis Table

Assessment Year

2018

Sampling Year	Excursion Count	Sample Count	Criterion/Threshold	Aggregate	Calculated Value
2013	2	4	0.012 ug/L	Toxic aquatic 4-day average	

Basis Statement

Remarks

Assessment Cycle 2018 - During 2013, two or more sample values collected in a three-year period exceeded the aquatic life criterion.

Data Sources

Study Id	Location Id	Source Database
KNRD Inorganics and Metals	KNRD_WQX-POWW	Water Quality Portal
KTWQ	KNRD-POWW	EIM

Map Link

Map Link

Listing ID: 82060

Main Listing Information

Listing ID: 82060
Waterbody Name: PEND OREILLE RIVER
Medium: Water
Parameter: Dissolved Oxygen
WQI Project: None
Designated Use: Aquatic Life - Salmonid Spawning, Rearing, and Migration

Current Category: 5

View Category History

Assessment Unit

Assessment Unit ID: 17010216000046_001_001
Size: 3.003 Kilometers
Associated Components(s): Reach: 17010216000046 0% - 100%, Type: Rivers/Streams

County: Pend Oreille
WRIA: Pend Oreille

Basis Table

Assessment Year

2018

Sampling Year	Excursion Count	Sample Count	Criterion/Threshold	Aggregate	Calculated Value
2017	22	82	8.0 mg/L	Daily Minimum	7.3

Basis Statement

Remarks

Assessment Cycle 2018 - During calendar year 2017, the hypergeometric test failed using time series data indicating that the standard was not met.

Data Sources

Study Id	Location Id	Source Database
SCL_BWQS	SCL_BWQS-V8	EIM

Map Link

Map Link

Listing ID: 88486

Main Listing Information

Listing ID: 88486
Waterbody Name: PEND OREILLE RIVER
Medium: Tissue
Parameter: Methyl mercury
WQI Project: None
Designated Use: Miscellaneous - Harvesting

Current Category: 5

View Category History

Assessment Unit

Assessment Unit ID: 17010216000162_001_001
Size: 0.96 Kilometers
Associated Components(s): Reach: 17010216000162 0% - 100%, Type: Rivers/Streams

County: Pend Oreille
WRIA: Pend Oreille

Basis Table

Assessment Year

2018

Sampling Year	Excursion Count	Sample Count	Species	Criterion/Threshold	Aggregate	Calculated Value	Median Is Non-Detect	Median exceed criterion
2006-2017	1	1	Esox lucius	0.03 mg/Kg	Toxics tissue median	0.219	N	Y
2006-2017	1	1	Micropterus salmoides	0.03 mg/Kg	Toxics tissue median	0.182	N	Y
2006-2017	1	1	Perca flavescens	0.03 mg/Kg	Toxics tissue median	0.15	N	Y
2006-2017	3	3	Salmo trutta	0.03 mg/Kg	Toxics tissue median	0.141	N	Y

Basis Statement

Remarks

In previous assessment cycles, the mercury parameter was assessed. See Listing ID 52622 (inactive) for previous information.

Assessment Cycle 2018 - During 2012, the median composite value(s) from one or more species exceeded the criterion and there were a combined minimum of 3 composite samples for those species.

Data Sources

Study Id	Location Id	Source Database
WSTMP12	S_PEND_FISH04	EIM

Map Link

Map Link

Listing ID: 4898

Main Listing Information

Listing ID: 4898
Waterbody Name: PEND OREILLE RIVER
Medium: Habitat
Parameter: Non-Native Aquatic Plants
WQI Project: None
Designated Use: Aquatic Life - General

Current Category: 4C

View Category History

Assessment Unit

Assessment Unit ID: 17010216000064_001_001
Size: 1.496 Kilometers
Associated Components(s): Reach: 17010216000064 0% - 100%, Type: Rivers/Streams

County: Pend Oreille
WRIA: Pend Oreille

Basis Table

See Basis Statement field.

Basis Statement

Ecology survey (Parsons and O'Neal, 2000) found Eurasian water-milfoil (Myriophyllum spicatum)

Remarks

Assessment Cycle 2018 - Category 4C determination carried forward. This listing was reviewed by Department of Ecology staff which found no new information to suggest eradication of non-native aquatic plants.

Data Sources

No Source Records

Map Link

Map Link

Listing ID: 6287

Main Listing Information

Listing ID: 6287
Waterbody Name: PEND OREILLE RIVER
Medium: Water
Parameter: Total Dissolved Gas
WQI Project: Pend Oreille River TDG TMDL
Designated Use: Aquatic Life - Salmonid Spawning, Rearing, and Migration

Current Category: 4A

View Category History

Assessment Unit

Assessment Unit ID: 17010216000061_001_002
Size: 0.951 Kilometers
Associated Components(s): Reach: 17010216000061 0% - 47.4%, Type: Rivers/Streams

County: Pend Oreille
WRIA: Pend Oreille

Basis Table

See Basis Statement field.

Basis Statement

In 2003,
Pend Oreille PUD, 2003., data from station (Box Canyon Dam tailrace) show between 3/20/2003 and 7/7/2003 this waterbody exceeded the criterion 66 of 102 days.
Pend Oreille PUD, 2003., data from station (Box Canyon Dam forebay) show between 3/20/2003 and 7/7/2003 this waterbody exceeded the criterion 16 of 96 days.

In 2002,
Pend Oreille PUD, 2002., data from station (Box Canyon Dam tailrace) show between 3/28/2002 and 8/5/2002 this waterbody exceeded the criterion 89 of 125 days.
Pend Oreille PUD, 2002., data from station (Box Canyon Dam forebay) show between 4/8/2002 and 8/5/2002 this waterbody exceeded

Remarks

Combined Listing: Listing ID 42517 was rolled into this listing

Part of the Pend Oreille River Total Dissolved gas TMDL, and issueance of Total Dissolved Gas TMDLs for Kalispel Tribal Waters of the Pend Oreille River. Approved by EPA 3/26/08. -kk

Data Sources

No Source Records

Map Link

Map Link

Listing ID: 8610

Main Listing Information

Listing ID: 8610
Waterbody Name: PEND OREILLE RIVER
Medium: Water
Parameter: Temperature
WQI Project: Pend Oreille River Temperature TMDL
Designated Use: Aquatic Life - Salmonid Spawning, Rearing, and Migration

Current Category: 4A

View Category History

Assessment Unit

Assessment Unit ID: 17010216000076_001_001
Size: 0.52 Kilometers
Associated Components(s): Reach: 17010216000076 0% - 100%, Type: Rivers/Streams

County: Pend Oreille
WRIA: Pend Oreille

Basis Table

See Basis Statement field.

Basis Statement

HISTORICAL INFORMATION

Location ID [1190] -- between 6/26/2004 and 10/18/2004, 61 of 115 sample values (53%) showed an excursion of the criteria (20°C) for this waterbody;

Pelletier and Coots, 1990. Multiple excursions beyond the criterion at RM 39 in 1988.Review of the report shows 4 excursions in 7 sampling days between 7/1988 and 11/1988.

Remarks

Assessment Cycle 2018 - A historic Category 5 determination was carried forward from a previous assessment or administrative decision. See Historic Basis Statement for previous assessment information.

Impairment addressed by Pend Oreille River Temperature TMDL, EPA approved 12/31/2020.

Special Condition: Temperature shall not exceed a 1-day maximum (1-DMax) of 20.0 deg C due to human activities.

Combined Listing: Listing ID 48344 was rolled into this listing

Data Sources

Study Id	Location Id	Source Database
PPIC0006	1190	EIM

Map Link

Map Link

Appendix G: Contaminated Site Information

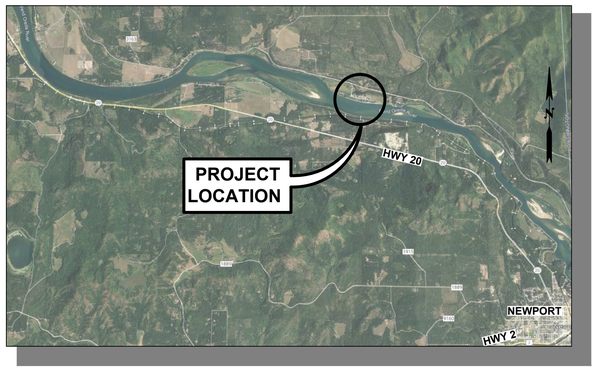
(Appendix not used – to be updated by contractor as needed)

Appendix H: Engineering Calculations

(Appendix not used – to be updated by contractor as needed)

SEC. 34, T.32, R.45, PEND OREILLE COUNTY, WASHINGTON

SUNNYSIDE & SANDY SHORES - PEND OREILLE STREAMBANK STABILIZATION PROJECT OVERVIEW



VICINITY MAP

N.T.S.

GENERAL NOTES

1. THIS PROJECT MUST BE CONSTRUCTED BASED ON THE DETAILS AND SITE PLAN PROVIDED IN THIS PLAN SET. ANY PROJECT COMPONENT NOT SPECIFIED WITHIN THIS PLAN SHALL BE INSTALLED ACCORDING TO THE NRCS STREAM RESTORATION DESIGN STANDARDS (NATIONAL ENGINEERING HANDBOOK PART 654).

2. THE PROJECT LIMITS MUST BE CLEARLY MARKED PRIOR TO ANY CONSTRUCTION ACTIVITIES. PROJECT LIMITS MUST BE APPROVED BY POCD OR THE ENGINEER PRIOR TO CONSTRUCTION.

3. TEMPORARY EROSION AND SEDIMENT CONTROL (TESC) BMPS MUST BE INSTALLED PRIOR TO EARTH DISTURBING ACTIVITIES IN A WORK AREA. ALL BMPS MUST BE INSTALLED AS SHOWN IN THE SITE PLAN AND TESC DETAILS. ALL BANK STABILIZATION WORK MUST BE CONDUCTED DURING LOW FLOW. TESC BMPS MUST BE APPROVED BY POCD OR THE ENGINEER PRIOR TO ANY EARTH DISTURBING ACTIVITIES.

4. NO CONSTRUCTION RELATED ACTIVITY SHALL CONTRIBUTE TO THE DEGRADATION OF THE ENVIRONMENT, ALLOW MATERIAL TO ENTER SURFACE OR GROUNDWATER, OR ALLOW PARTICULATE EMISSIONS TO ENTER THE ATMOSPHERE, WHICH EXCEED STATE OR FEDERAL STANDARDS. ANY ACTIONS THAT POTENTIALLY ALLOW A DISCHARGE TO STATE WATERS MUST HAVE PRIOR APPROVAL FROM THE WASHINGTON STATE DEPARTMENT OF ECOLOGY, AND APPROVAL FROM POCD OR THE ENGINEER.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT, FLAGGERS, AND ANY OTHER NEEDED ACTIONS TO PROTECT THE LIFE, HEALTH, AND SAFETY OF THE PUBLIC, AND TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED BY THE CONTRACTOR. ANY ACTIVITY THAT MAY INTERRUPT NORMAL TRAFFIC FLOW SHALL REQUIRE AT LEAST ONE FLAGGER FOR EACH LANE OF AFFECTED TRAFFIC. MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) SHALL APPLY.

6. ANY CHANGES TO THE DESIGN OR SPECIFICATIONS MUST BE APPROVED BY THE ENGINEER AND A POCD REPRESENTATIVE.

7. ALL DAMAGES INCURRED TO PUBLIC AND/OR PRIVATE PROPERTY BY THE CONTRACTOR DURING THE COURSE OF CONSTRUCTION SHALL BE PROMPTLY REPAIRED TO THE SATISFACTION OF THE POCD REPRESENTATIVE BEFORE PROJECT APPROVAL AND/OR THE RELEASE OF THE PROJECTS PERFORMANCE BOND.

UTILITIES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTHS OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION, WHETHER OR NOT THESE UTILITIES ARE SHOWN ON THE PLANS. THE CONTRACTOR SHALL EXERCISE ALL CARE TO AVOID DAMAGE TO ANY UTILITY. IF CONFLICTS WITH EXISTING UTILITIES ARISE DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND THE POCD REPRESENTATIVE. ANY CHANGES REQUIRED SHALL BE APPROVED BY THE ENGINEER AND A POCD REPRESENTATIVE PRIOR TO COMMENCEMENT OF RELATED CONSTRUCTION ON THE PROJECT.

2. PER RCW SECTION 19.122, CALL 811 BETWEEN TEN (10) AND TWO (2) BUSINESS DAYS BEFORE BEGINNING EXCAVATION WHERE ANY UNDERGROUND UTILITIES MAY BE LOCATED. FAILURE TO DO SO COULD MEAN BEARING SUBSTANTIAL REPAIR COSTS.

PROJECT LOCATION

ABBREVIATIONS

A	ANGLE
APPROX	APPROXIMATELY
BMP(S)	BEST MANAGEMENT PRACTICES
CRZ	CRITICAL ROOT ZONE
CY	CUBIC YARD
D	DEPTH
DEG	DEGREE
DIA	DIAMETER
EA	EACH
EG	EXISTING GRADE
ESC	ECOLOGICAL SITE CLASSIFICATION
ESMT	EASEMENT
FG	FINISHED GRADE
FT	FOOT, FEET
GIS	GEOGRAPHIC INFORMATION SYSTEM
H	HORIZONTAL
ID	IDENTIFICATION
IN	INCH
IN-SITU	INTEGRATED DURING MATERIAL SYNTHESIS
L	LENGTH
LF	LINEAR FOOT
LIN	LINEAR
LT	LEFT
LWM	LARGE WOODY MATERIAL
MUTCH	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
N.T.S.	NOT TO SCALE
N/A	NOT APPLICABLE
NAD	NORTH AMERICAN DATUM
NAVD	NORTH AMERICAN VERTICAL DATUM
OHWM	ORDINARY HIGH WATER MARK
POCD	PEND OREILLE CONSERVATION DISTRICT
QTY	QUANTITY
RTP	ROCK TOE PROTECTION
RWC	REVISED CODE OF WASHINGTON
SF	SQUARE FOOT
SPEC	SPECIFICATION
ST	STREET
TESC	TEMPORARY EROSION AND SEDIMENT CONTROL
TOES	TOE OF BANK
TOPS	TOP OF BANK
TYP	TYPICAL
V	VERTICAL
W	WIDTH
W/	WITH
W/O	WITHOUT
WA	WASHINGTON
WSDOT	WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
WSE, WSEL	WATER SURFACE ELEVATION

PROPERTY OWNER	PROPERTY ADDRESS	PEND OREILLE COUNTY PARCEL NO.
JAMES KENSOK	251 SANDY SHORES RD NEWPORT, WA 99156	453233539012
JAMES TAYLOR	231 SANDY SHORES RD NEWPORT, WA 99156	453233539013
STEVEN NOLTING	72 SUNNYSIDE DRIVE NEWPORT, WA 99156	453233539021
GREG NOLTING	92 SUNNYSIDE DRIVE NEWPORT, WA 99156	453233539022
JOHNSON LIVING TRUST	112 SUNNYSIDE DRIVE NEWPORT, WA 99156	453233539023
DARLENE DONEGAN	122 SUNNYSIDE DRIVE NEWPORT, WA 99156	453233539024
COLNAL BLANCHARD	152 SUNNYSIDE DRIVE NEWPORT, WA 99156	453233567003

SHEET INDEX

100% BID SET

811 Know what's below. Call before you dig.

KAYLA H. KASSA — STATE OF WASHINGTON — 22022037 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED BY M. ZARECOR
DRAWN BY M. MECHAM
CHECKED BY E. ESTELLE

Osborn Consulting

101 S STEVENS ST STE 103, SPOKANE, WA 99201

www.osbornconsulting.com

NO.	DATE	REVISION	BY

POCD 2

121 N WASHINGTON AVE, NEWPORT, WA 99156

SUNNYSIDE & SANDY SHORES STREAMBANK STABILIZATION

COVER SHEET

JOB# / DWG: 30-230002

DATE: 06/04/2024

SCALE: H: N/A V: N/A

SHEET: 1 of 9

FILE NAME: C:\PW_OSBORN_WORKING\DMS31993\30-230002_P_POCD_SUNNYSIDE.DWG
PLOT TIME: 6/5/2024 12:17 PM
USER NAME:KAYLA KASSA

SEC. 34, T.32, R.45, PEND OREILLE COUNTY, WASHINGTON

PROPERTY POINTS		
POINT #	NORTHING	EASTING
2000	471427.74	2546758.36
2001	471421.29	2546811.76
2002	471434.49	2546813.65
2003	471444.11	2546838.76
2004	471522.24	2546850.80
2005	471556.03	2546830.97
2006	471635.31	2546844.76
2007	471638.39	2546827.03
2008	471608.86	2546821.89
2009	471610.90	2546805.35
2010	471576.24	2546797.51
2011	471575.19	2546802.94
2012	471540.53	2546796.73
2013	471541.38	2546789.60
2014	471494.08	2546778.83
2015	471494.59	2546802.89
2016	471526.41	2546806.87
2017	471524.92	2546828.36
2018	471518.65	2546832.03
2019	471457.40	2546822.60
2020	471444.97	2546788.23
2021	471421.29	2546811.76
2022	471419.99	2546820.23
2023	471408.95	2546869.26
2024	471403.33	2546902.69

PROPERTY POINTS		
POINT #	NORTHING	EASTING
2025	471402.24	2546910.58
2026	471385.46	2547009.54
2027	471353.98	2547006.87
2028	471340.59	2547105.71
2029	471368.18	2547108.07
2030	471357.61	2547183.10
2031	471353.91	2547257.69
2032	471296.03	2547252.66
2033	471300.82	2547176.94
2034	471312.57	2547100.43
2035	471322.57	2547104.02
2036	471336.10	2547004.85
2037	471340.74	2546970.86
2038	471342.95	2546905.63
2039	471356.50	2546831.10
2040	471373.09	2546740.55
2041	471423.10	2546510.31
2042	471434.28	2546466.17
2043	471455.65	2546438.73
2044	471475.83	2546339.21
2045	471500.09	2546259.26
2046	471546.90	2546096.19
2047	471592.40	2545964.43
2048	471574.98	2545959.46
2049	471592.78	2545898.70

PROPERTY POINTS		
POINT #	NORTHING	EASTING
2050	471611.52	2545838.12
2051	471626.39	2545842.43
2052	471634.87	2545816.97
2053	471677.44	2545833.60
2054	471653.03	2545904.58
2055	471634.70	2545976.52
2056	471621.62	2545972.78
2057	471609.69	2545969.36
2058	471564.06	2546101.64
2059	471493.32	2546343.53
2060	471473.29	2546442.31
2061	471464.17	2546474.12
2062	471485.88	2546479.86
2063	471474.64	2546529.57
2064	471467.68	2546558.85
2065	471461.55	2546586.25
2066	471456.03	2546605.61
2067	471450.32	2546628.94
2068	471435.71	2546690.27
2069	471428.93	2546739.02
2070	471427.74	2546758.36

PROPERTY OWNER	PROPERTY ADDRESS	PEND OREILLE COUNTY PARCEL NO.	TOTAL AREA (SF)	RIPARIAN ENHANCMENT AREA (SF)	TEMPORARY CONSTRUCTION AREA (SF)
JAMES KENSOK	251 SANDY SHORES RD NEWPORT, WA 99156	453233539012	15,032	4,113	-
JAMES TAYLOR	231 SANDY SHORES RD NEWPORT, WA 99156	453233539013	13,098	4,674	-
STEVEN NOLTING	72 SUNNYSIDE DRIVE NEWPORT, WA 99156	453233539021	15,104	4,079	-
GREG NOLTING	92 SUNNYSIDE DRIVE NEWPORT, WA 99156	453233539022	12,982	3,487	-
JOHNSON LIVING TRUST	112 SUNNYSIDE DRIVE NEWPORT, WA 99156	453233539023	14,535	3,888	-
DARLENE DONEGAN	122 SUNNYSIDE DRIVE NEWPORT, WA 99156	453233539024	15,805	3,976	-
COLNAL BLANCHARD	152 SUNNYSIDE DRIVE NEWPORT, WA 99156	453233567003	19,290	5,341	-
RICHARD KOKER	124 SUNNYSIDE DRIVE NEWPORT, WA 99156	453233569001	13,526	4,500	7,152
JEFFERY NOLTING	142 SUNNYSIDE DRIVE NEWPORT, WA 99156	453233569002	13,393	4,523	-
JEFFERY LOONEY	192 SUNNYSIDE DRIVE NEWPORT, WA 99156	453234569005	14,061	4,252	-
JUDI LEEPER	202 SUNNYSIDE DRIVE NEWPORT, WA 99156	453234569006	13,898	4,336	-

PROPERTY EXHIBIT NOTES:

1. ALL PARCEL BOUNDARIES ARE DERIVED FROM PUBLICLY AVAILABLE PEND OREILLE COUNTY GIS DATA. THE PARCEL BOUNDARIES HAVE NOT BEEN SURVEYED OR OTHERWISE VERIFIED AGAINST PROPERTY LEGAL DESCRIPTIONS.
2. FOR THE PURPOSES OF THIS EXHIBIT, RIPARIAN ENHANCEMENT AREAS WERE ASSIGNED TO A PROPERTY OWNER BY EXTENDING THE PARCEL LINES THAT DIVIDE EACH ADJACENT PROPERTY TOWARDS THE PEND OREILLE RIVER.
3. THE TEMPORARY CONSTRUCTION AREA SHOWN ON PARCELS 453233569004, 453233539019, 453233539018, 453233539017, 453233539015 WILL BE BELOW THE ORDINARY HIGH WATER MARK. DUE TO THIS AN ACCESS AGREEMENT WILL NOT BE REQUIRED FOR THESE PARCELS, AND THE AREAS ARE NOT INCLUDED IN THE TABLE.

811 Know what's below. Call before you dig.

100% BID SET

KAYLA H. KASSA — STATE OF WASHINGTON — 22022037 — REGISTERED PROFESSIONAL ENGINEER

FILE NAME: C:\PW_OSBORN_WORKING\DMS31993\30-230002_P_POCD_SUNNYSIDE.DWG
PLOT TIME: 6/5/2024 12:17 PM
USER NAME:KAYLA KASSA

DESIGNED BY M. ZARECOR	Osborn Consulting	101 S STEVENS ST STE 103, SPOKANE, WA 99201			
DRAWN BY M. MECHAM		www.osbornconsulting.com			
CHECKED BY E. ESTELLE			NO.	DATE	REVISION / BY

POCD 2 — 121 N WASHINGTON AVE, NEWPORT, WA 99156

SUNNYSIDE & SANDY SHORES STREAMBANK STABILIZATION

PROPERTY EXHIBIT

JOB# / DWG	30-230002
DATE	06/04/2024
SCALE	H: 1" = 40' V: N/A
SHEET	2 of 9

SEC. 34, T.32, R.45, PEND OREILLE COUNTY, WASHINGTON

QUANTITY TABLE 1[1]		
ITEM DESCRIPTION	ITEM UNIT	ITEM QTY.
PROJECT AREA	ACRE	0.43
BANK STABILIZATION LENGTH	FT	152
CUT VOLUME	CY	0
FILL VOLUME	CY	98
ROCK TOE PROTECTION	CY	11.2
LOG W/ ROOTWAD	EACH	4
LOG W/O ROOTWAD	EACH	2
COIR LOGS	EACH	8

[1] QUANTITIES SHOWN IN TABLE APPLY TO THIS SHEET ONLY

LEGEND

- SILT FENCE
- PROPOSED TOE OF SLOPE
- PROJECT LIMITS
- OHWM — ORDINARY HIGH WATER MARK
- TOES — EXISTING TOE OF SLOPE
- TOPS — EXISTING TOP OF SLOPE
- EXISTING PARCEL LINE
- ROCK TOE PROTECTION
- GROUP 1 PLANTING AREA
- GROUP 2 PLANTING AREA
- COIR LOG
- LOG WITH ROOTWAD
- LOG WITHOUT ROOTWAD
- TEMPORARY ACCESS PATH
- STAGING AREA
- TEMPORARY ACCESS PATH WITH DECK MATS
- STABILIZED CONSTRUCTION ENTRANCE
- EXISTING TREE
- CRITICAL ROOT ZONE

N

SCALE: 1" = 20'

0 20 40 60

GENERAL NOTES:

1. CONTRACTOR MAY NOT ENTER AREAS OUTSIDE OF THE PROJECT LIMITS WITHOUT WRITTEN PERMISSION FROM THE LANDOWNER AND POCD.
2. SEE SHEET 7 FOR LWM DETAILS, LAYOUT POINT TABLE, AND DIMENSIONS.
3. ALL EXISTING TREES ARE TO REMAIN AND BE PROTECTED IN PLACE UNLESS OTHERWISE MARKED.
4. ALL AREAS OUTSIDE OF THE PLANTING LIMITS MUST BE RESTORED TO PRE-PROJECT CONDITION

100% BID SET

811 Know what's below. Call before you dig.

KAYLA H. KASSA — STATE OF WASHINGTON — 22022037 — REGISTERED PROFESSIONAL ENGINEER

FILE NAME: C:\PW_OSBORN_WORKING\DMS31993\30-230002_P_POCD_SUNNYSIDE.DWG
PLOT TIME: 6/5/2024 12:17 PM
USER NAME:KAYLA KASSA

DESIGNED BY M. ZARECOR DRAWN BY M. MECHAM CHECKED BY E. ESTELLE	Osborn Consulting	101 S STEVENS ST STE 103, SPOKANE, WA 99201 www.osbornconsulting.com	NO.	DATE	REVISION	BY	POCD 2 — 121 N WASHINGTON AVE, NEWPORT, WA 99156

SUNNYSIDE & SANDY SHORES STREAMBANK STABILIZATION

SITE PLAN

JOB# / DWG	DATE
30-230002	06/04/2024
SCALE H: 1" = 20' V: N/A	SHEET 3 of 9

SEC. 34, T.32, R.45, PEND OREILLE COUNTY, WASHINGTON

QUANTITY TABLE 2[1]		
ITEM DESCRIPTION	ITEM UNIT	ITEM QTY.
PROJECT AREA	ACRE	0.72
BANK STABILIZATION LENGTH	FT	542
CUT VOLUME	CY	0
FILL VOLUME	CY	365
ROCK TOE PROTECTION	CY	40.0
LOG W/ ROOTWAD	EACH	15
LOG W/O ROOTWAD	EACH	5
COIR LOGS	EACH	34

[1] QUANTITIES SHOWN IN TABLE APPLY TO THIS SHEET ONLY

LEGEND

- SILT FENCE
- PROPOSED TOE OF SLOPE
- PROJECT LIMITS
- OHWM — ORDINARY HIGH WATER MARK
- TOES — EXISTING TOE OF SLOPE
- TOPS — EXISTING TOP OF SLOPE
- EXISTING PARCEL LINE
- ROCK TOE PROTECTION
- GROUP 1 PLANTING AREA
- GROUP 2 PLANTING AREA
- COIR LOG
- LOG WITH ROOTWAD
- LOG WITHOUT ROOTWAD
- TEMPORARY ACCESS PATH
- STAGING AREA
- TEMPORARY ACCESS PATH WITH DECK MATS
- STABILIZED CONSTRUCTION ENTRANCE
- EXISTING TREE
- CRITICAL ROOT ZONE

N

SCALE: 1" = 20'
0 20 40 60

GENERAL NOTES:

1. CONTRACTOR MAY NOT ENTER AREAS OUTSIDE OF THE PROJECT LIMITS WITHOUT WRITTEN PERMISSION FROM THE LANDOWNER AND POCD.
2. SEE SHEET 7 FOR LWM DETAILS, LAYOUT POINT TABLE, AND DIMENSIONS.
3. ALL EXISTING TREES ARE TO REMAIN AND BE PROTECTED IN PLACE UNLESS OTHERWISE MARKED.
4. ALL AREAS OUTSIDE OF THE PLANTING LIMITS MUST BE RESTORED TO PRE-PROJECT CONDITION

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FILE NAME: C:\PW_OSBORN_WORKING\DMS31993\30-230002_P_POCD_SUNNYSIDE.DWG
PLOT TIME: 6/5/2024 12:16 PM
USER NAME:KAYLA KASSA

DESIGNED BY	M. ZARECOR
DRAWN BY	M. MECHAM
CHECKED BY	E. ESTELLE

Osborn Consulting
101 S STEVENS ST STE 103, SPOKANE, WA 99201
www.osbornconsulting.com

NO.	DATE	REVISION	BY

POCD 2
121 N WASHINGTON AVE, NEWPORT, WA 99156

SUNNYSIDE & SANDY SHORES STREAMBANK STABILIZATION
SITE PLAN

JOB# / DWG	DATE
30-230002	06/04/2024
SCALE H: 1" = 20' V: N/A	SHEET 4 of 9

SEC. 34, T.32, R.45, PEND OREILLE COUNTY, WASHINGTON

QUANTITY TABLE 3[1]		
ITEM DESCRIPTION	ITEM UNIT	ITEM QTY.
PROJECT AREA	ACRE	0.40
BANK STABILIZATION LENGTH	FT	155
CUT VOLUME	CY	0
FILL VOLUME	CY	98
ROCK TOE PROTECTION	CY	7.0
LOG W/ ROOTWAD	EACH	6
LOG W/O ROOTWAD	EACH	2
COIR LOGS	EACH	6

[1] QUANTITIES SHOWN IN TABLE APPLY TO THIS SHEET ONLY

LEGEND

- SILT FENCE
- PROPOSED TOE OF SLOPE
- PROJECT LIMITS
- OHWM — ORDINARY HIGH WATER MARK
- TOES — EXISTING TOE OF SLOPE
- TOPS — EXISTING TOP OF SLOPE
- EXISTING PARCEL LINE
- ROCK TOE PROTECTION
- GROUP 1 PLANTING AREA
- GROUP 2 PLANTING AREA
- COIR LOG
- LOG WITH ROOTWAD
- LOG WITHOUT ROOTWAD
- TEMPORARY ACCESS PATH
- STAGING AREA
- TEMPORARY ACCESS PATH WITH DECK MATS
- STABILIZED CONSTRUCTION ENTRANCE
- EXISTING TREE
- CRITICAL ROOT ZONE

N

SCALE: 1" = 20'

0 20 40 60

GENERAL NOTES:

1. CONTRACTOR MAY NOT ENTER AREAS OUTSIDE OF THE PROJECT LIMITS WITHOUT WRITTEN PERMISSION FROM THE LANDOWNER AND POCD.
2. SEE SHEET 7 FOR LWM DETAILS, LAYOUT POINT TABLE, AND DIMENSIONS.
3. ALL EXISTING TREES ARE TO REMAIN AND BE PROTECTED IN PLACE UNLESS OTHERWISE MARKED.
4. ALL AREAS OUTSIDE OF THE PLANTING LIMITS MUST BE RESTORED TO PRE-PROJECT CONDITION

100% BID SET

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KAYLA H KASSA — STATE OF WASHINGTON — 22022037 — REGISTERED PROFESSIONAL ENGINEER

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DRAWN BY	M. MECHAM		www.osbornconsulting.com
CHECKED BY	E. ESTELLE		

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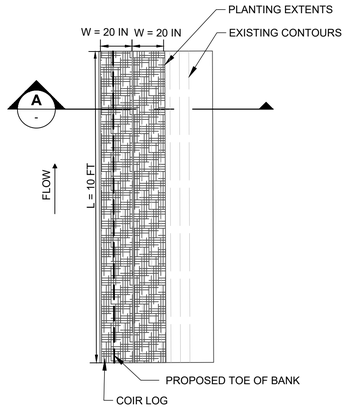
POCD 2 — 121 N WASHINGTON AVE, NEWPORT, WA 99156

SUNNYSIDE & SANDY SHORES STREAMBANK STABILIZATION

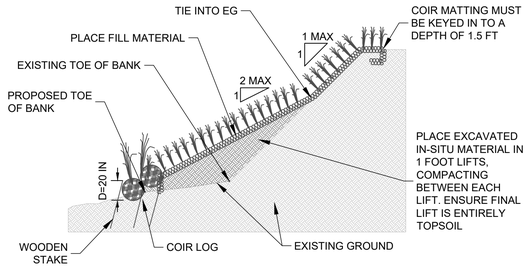
SITE PLAN

JOB# / DWG	DATE
30-230002	06/04/2024
SCALE: H: 1" = 20' V: N/A	SHEET: 5 of 9

FILE NAME: C:\PW_OSBORN_WORKING\DMS31993\30-230002_P_POCD_SUNNYSIDE.DWG
PLOT TIME: 6/5/2024 12:18 PM
USER NAME:KAYLA KASSA



PLAN VIEW

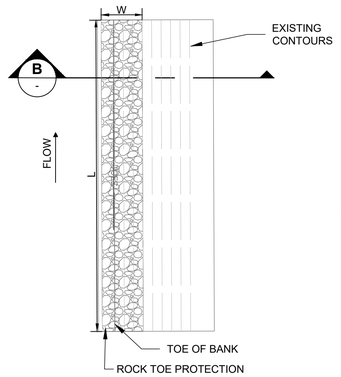


SECTION VIEW A

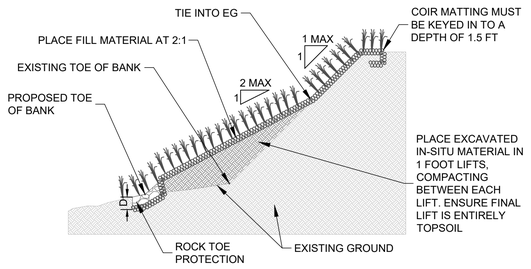
CONSTRUCTION NOTES

1. STRIP AND STOCKPILE TOP SOIL TO A DEPTH OF AT LEAST 1 FOOT FOR THE ENTIRE COIR LOG TOE PROTECTION FOOTPRINT.
2. DIG A TRENCH FOR THE COIR LOGS ALONG THE EXISTING TOE OF THE BANK. THE TRENCH SHOULD BE AT A DEPTH OF HALF THE COIR LOG DIAMETER. PLACE COIR MATTING PER MANUFACTURER INSTRUCTIONS BELOW COIR LOG TOE PROTECTION.
3. INSTALL COIR LOGS AT THE TOE OF THE SLOPE TO A DEPTH OF 10 IN (1/2 HEIGHT OF LOG).
4. COIR LOGS SHALL BE PLACED IN STACKS OF TWO STAKED IN WITH WOODEN STAKES AT A MINIMUM DEPTH OF 36 IN. TIE THE STAKE TO THE COIR LOG WITH COIR TWINE, BY WEAVING THE TWINE THROUGH THE NETTING ON THE COIR LOG. STAKES SHOULD BE INSTALLED STAGGERING AT 24 IN (OR 12 IN ON ALTERNATING SIDES). STAKES SHOULD BE DRIVEN FLUSH WITH THE TOP OF THE COIR LOG.
5. TIE THE END OF THE COIR LOGS WITH COIR TWINE TO PROVIDE A CONTINUOUS LINEAR SYSTEM.
6. PLACE FILL MATERIAL AT A MAXIMUM OF 2:1 SLOPE FOLLOWING SPECIFICATION SECTIONS 2-03 AND 8-02.
7. THE COIR MATTING USED FOR THIS INSTALLATION MUST BE COIR MAT 70, OR AN APPROVED ALTERNATIVE. COIR MATTING MUST BE STAKED ACCORDING TO THE MANUFACTURER SPECIFICATIONS. SEE TESC DETAIL ON SHEET 8 FOR INSTALLATION SPECIFICS. INSTALL PLANTS ACCORDING TO SPECIFICATIONS SECTION 8-01.3.(3) AND 8-02. PLANT BANKS AS SPECIFIED ON SHEET 9.

1 COIR LOG TOE PROTECTION
2,3,4 N.T.S.



PLAN VIEW



SECTION VIEW B: ROCK TOE PROTECTION PLACEMENT

ROCK TOE PROTECTION LAYOUT TABLE

RTP ID	DEPTH	LENGTH	WIDTH	VOLUME	Class
	D - FT	L - FT	W - FT	CY	N/A
RTP1	1	23	8	6.8	Class A
RTP2	1	14	8	4.1	Class A
RTP3	1	20	8	5.9	Class A
RTP4	1	30	8	8.9	Class A
RTP5	1	33	8	9.8	Class A
RTP6	1	18	8	5.3	Class A
RTP7	1	19	8	5.6	Class A
RTP8	1	12	8	3.6	Class A
RTP9	1	8	8	2.4	Class A
RTP10	1	15	8	4.4	Class A

CONSTRUCTION NOTES

1. STRIP AND STOCKPILE TOP SOIL TO A DEPTH OF AT LEAST 1 FOOT FOR THE ENTIRE ROCK TOE PROTECTION FOOTPRINT.
2. EXCAVATE TRENCH IF NEEDED AND PLACE COIR MATTING BELOW ROCK TOE PROTECTION PER MANUFACTURER SPECIFICATIONS.
3. INSTALL ROCK TOE PROTECTION. FILL VOIDS WITH STOCKPILED TOP SOIL. REFER TO "ROCK TOE PROTECTION LAYOUT TABLE" FOR ROCK TOE PROTECTION SIZING AND INSTALLATION DIMENSIONS.
4. THE COIR MATTING USED FOR THIS INSTALLATION MUST BE COIR MAT 70, OR AN APPROVED ALTERNATIVE. COIR MATTING MUST BE STAKED ACCORDING TO THE MANUFACTURER SPECIFICATIONS. SEE TESC DETAIL ON SHEET 8 FOR INSTALLATION SPECIFICS.
5. PLACE FILL MATERIAL AT A MAXIMUM OF 2:1 SLOPE FOLLOWING SPECIFICATION SECTIONS 2-03 AND 8-02.
6. PLANT BANKS AS SPECIFIED IN THE PLANTING DETAILS AND VEGETATION SCHEDULE.

2 ROCK TOE PROTECTION
2,3,4 N.T.S.

811 Know what's below. Call before you dig.

100% BID SET

KAYLA H KASSA, STATE OF WASHINGTON, 22022037, REGISTERED PROFESSIONAL ENGINEER

DESIGNED BY M. ZARECOR	Osborn Consulting	101 S STEVENS ST STE 103, SPOKANE, WA 99201	
DRAWN BY M. MECHAM		www.osbornconsulting.com	
CHECKED BY E. ESTELLE			

NO.	DATE	REVISION	BY

POCD 2 — 121 N WASHINGTON AVE, NEWPORT, WA 99156

SUNNYSIDE & SANDY SHORES STREAMBANK STABILIZATION

CONSTRUCTION DETAILS

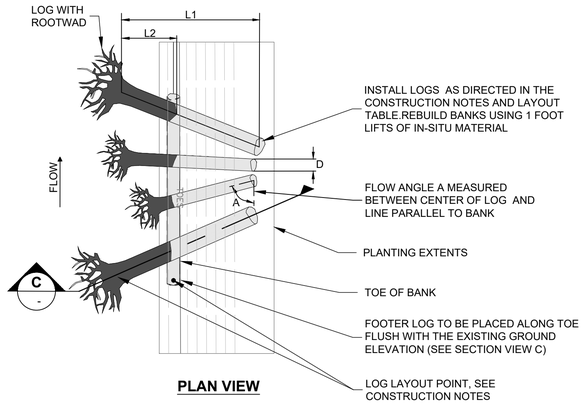
JOB# / DWG	30-230002
DATE	06/04/2024
SCALE	H: N/A V: N/A
SHEET	6 of 9

FILE NAME: C:\PW_OSBORN_WORKING\DMS31993\30-230002_P_POCD_SUNNYSIDE.DWG
PLOT TIME: 6/5/2024 12:18 PM
USER NAME:KAYLA KASSA

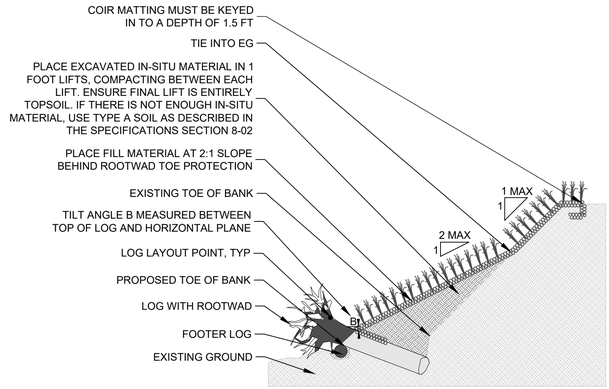
ROOTWAD TOE PROTECTION LAYOUT TABLE

LOG ID	LOG WITH ROOTWAD	ANCHOR TYPE	LOG LAYOUT POINT NORTHING	LOG LAYOUT POINT EASTING	DIAMETER[2]	TOTAL LENGTH[1, 2]	EXPOSED LENGTH[1, 2]	FLOW ANGLE[2]	TILT ANGLE[2]
	N/A	N/A	FT	FT	D- FT	L1-FT	L2-FT	A - DEG	B-DEG
LWM 1	NO	DB-88	471321.5	2547158.0	1.5	15	0.0	0	0
LWM 2	YES	DB-88	471321.9	2547165.9	2.0	10	0.7	70	3
LWM 3	NO	DB-88	471324.5	2547140.4	1.5	25	0.0	0	0
LWM 4	YES	DB-88	471324.0	2547134.3	2.00	10	1.2	69	3
LWM 5	YES	DB-88	471321.3	2547125.8	1.50	15	5.2	92	0
LWM 6	YES	DB-88	471326.0	2547120.4	1.50	12	1.5	91	2
LWM 7	NO	DB-88	471358.1	2546957.2	1.5	25	0.0	0	0
LWM 8	YES	DB-88	471357.6	2546953.5	2.00	10	1.2	70	3
LWM 9	YES	DB-88	471354.8	2546945.0	1.50	15	5.2	93	0
LWM 10	YES	DB-88	471359.6	2546939.6	1.50	12	1.2	92	2
LWM 11	NO	DB-88	471376.2	2546858.2	1.5	25	0.0	0	0
LWM 12	YES	DB-88	471376.0	2546851.5	2.00	10	1.2	70	3
LWM 13	YES	DB-88	471373.2	2546843.0	1.50	15	5.2	93	0
LWM 14	YES	DB-88	471376.8	2546836.9	1.50	12	2.6	92	2
LWM 15	NO	DB-88	471401.8	2546690.2	1.5	25	0.0	0	0
LWM 16	YES	DB-88	471399.1	2546682.7	2.00	10	1.7	79	3
LWM 17	YES	DB-88	471395.9	2546674.1	1.50	15	5.2	103	0
LWM 18	YES	DB-88	471398.4	2546667.9	1.50	12	2.6	102	2
LWM 19	NO	DB-88	471418.4	2546602.4	1.5	20	0.0	0	0
LWM 20	YES	DB-88	471418.1	2546597.0	2.00	10	1.2	63	3
LWM 21	YES	DB-88	471415.4	2546590.4	1.50	15	5.2	87	0
LWM 22	YES	DB-88	471420.1	2546585.0	1.50	12	2.5	86	2
LWM 23	NO	DB-88	471446.6	2546505.2	1.5	25	0.0	0	0
LWM 24	YES	DB-88	471447.5	2546497.2	2.00	10	1.2	63	3
LWM 25	YES	DB-88	471444.7	2546488.7	1.50	15	5.2	86	0
LWM 26	YES	DB-88	471449.5	2546483.3	1.50	12	2.6	85	2
LWM 27	NO	DB-88	471611.2	2545915.9	1.5	25	0.0	0	0
LWM 28	YES	DB-88	471611.1	2545912.3	2.00	10	1.2	70	3
LWM 29	YES	DB-88	471609.5	2545901.6	1.50	15	5.2	93	0
LWM 30	YES	DB-88	471613.8	2545896.5	1.50	12	2.6	92	2
LWM 31	NO	DB-88	471619.3	2545891.0	1.5	25	0.0	0	0
LWM 32	YES	DB-88	471619.4	2545883.8	2.00	10	1.2	70	3
LWM 33	YES	DB-88	471618.5	2545875.4	1.50	15	5.2	93	0
LWM 34	YES	DB-88	471622.3	2545870.2	1.50	12	2.6	92	2

[1] LENGTH MEASUREMENTS DO NOT INCLUDE THE ROOTWAD, AND BEGIN AT THE LAYOUT POINT.
[2] SEE DETAIL PLAN VIEW AND SECTION VIEW FOR DIMENSION LOCATIONS



PLAN VIEW



SECTION VIEW C: ROOTWAD TOE PROTECTION PLACEMENT

CONSTRUCTION NOTES:

1. STRIP AND STOCKPILE TOP SOIL TO A DEPTH OF AT LEAST 1 FOOT FOR THE ENTIRE ROOTWAD TOE PROTECTION FOOTPRINT.
2. DIG A TRENCH FOR THE HORIZONTAL FOOTER LOG ALONG THE EXISTING TOE OF THE BANK. THE TRENCH SHOULD BE DEEP ENOUGH FOR THE FOOTER LOG TO BE FLUSH WITH THE EXISTING GROUND ON THE STREAM BED SIDE OF THE LOG. PLACE FOOTER LOG IN TRENCH.
3. DIG A TRENCH FOR THE UPSTREAM-MOST ROOTWAD THAT IS WIDER THAN THE LOG DIAMETER (D), LONGER THAN THE BURIED LENGTH (L1-L2), AND AT THE CORRECT FLOW ANGLE (A) . THE TRENCH SHOULD BE SLOPED AT THE TILT ANGLE (B), STARTING AT THE TOP OF THE FOOTER LOG.
4. PLACE ROOTWAD IN THE TRENCH SO THAT IT RESTS ON TOP OF THE FOOTER LOG PER THE EXPOSED LENGTH AND TILT ANGLES SPECIFIED IN THE ROOTWAD TOE PROTECTION LAYOUT TABLE.
5. MEASURE ALL DIMENSIONS LISTED IN THE LOG DETAIL TABLE TO CONFIRM CORRECT LOG PLACEMENT PRIOR TO BACKFILLING AND RE-GRADING THE BANK.
6. REPEAT STEPS 2 THROUGH 5 FOR EACH ADDITIONAL ROOTWAD.
7. ONCE ALL ROOTWADS HAVE BEEN PLACED, INSTALL DUCKBILL ANCHOR TO EACH LOG PER MANUFACTURER SPECIFICATION, SEE SPECIFICATION SECTION 8-34.3(4). REBUILD THE BANKS USING THE IN-SITU MATERIAL AND MATCHING THE EXISTING CONDITIONS. IF EXISTING BANK SLOPE EXCEEDS 2H:1V, REGRADE BANKS AT A 2:1 SLOPE FOLLOWING SPECIFICATION SECTIONS 2-03 AND 8.02. PLACE THE FILL MATERIAL IN 1 FOOT LIFTS, COMPACTING BETWEEN THE PLACEMENT OF EACH LAYER. EXCESS WOODY MATERIAL MAY BE PLACED IN THE BACKFILL AREA IF PRESENT. ENSURE PREVIOUSLY STOCKPILED TOP SOIL IS PLACED AT THE BANK SURFACE.
8. THE COIR MATTING USED FOR THIS INSTALLATION MUST BE COIR MAT 70, OR AN APPROVED ALTERNATIVE. COIR MATTING MUST BE STAKED ACCORDING TO THE MANUFACTURER SPECIFICATIONS. SEE EROSION AND SEDIMENT CONTROL DETAIL ON SHEET 8 FOR INSTALLATION SPECIFICS.
9. PLANT BANKS AS SPECIFIED IN THE PLANTING DETAILS AND VEGETATION SCHEDULE.
10. REFER TO ROOTWAD TOE PROTECTION LAYOUT TABLE FOR LOG SIZING AND INSTALLATION DIMENSIONS.
11. THE LOG LAYOUT POINT IS LOCATED AT THE CROWN OF THE ROOTWAD.

3 / 2,3,4 ROOTWAD TOE PROTECTION
N.T.S.

Know what's below. Call before you dig.

100% BID SET

KYLA H. KASSA
STATE OF WASHINGTON
22022037
REGISTERED PROFESSIONAL ENGINEER

DESIGNED BY	DRAWN BY	CHECKED BY
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SUNNYSIDE & SANDY SHORES STREAMBANK STABILIZATION
CONSTRUCTION DETAILS

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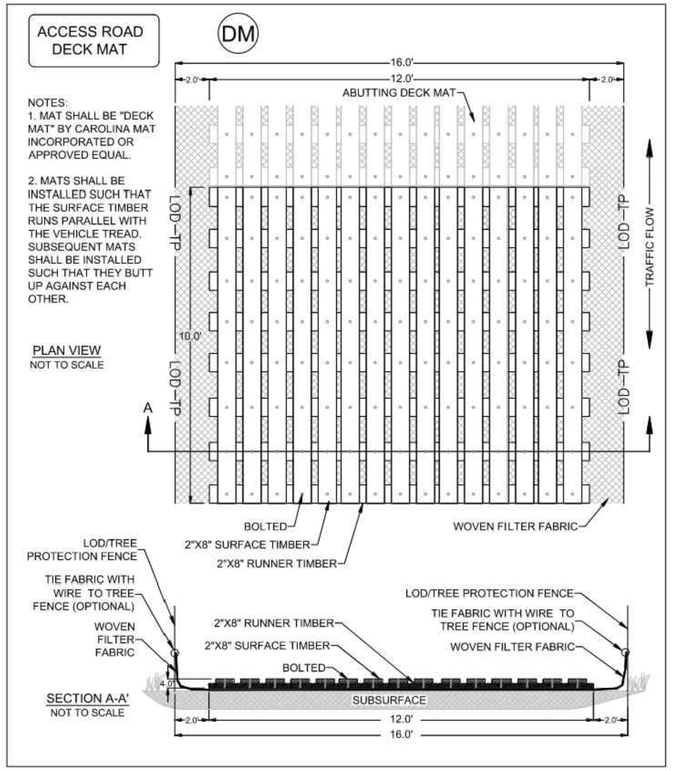
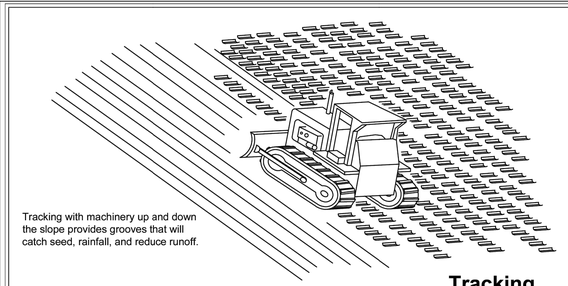
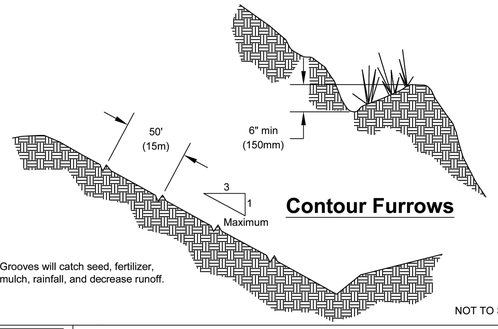




Tracking



Contour Furrows

NOT TO SCALE

DEPARTMENT OF ECOLOGY
State of Washington

Surface Roughening by Tracking and Contour Furrows

Revised June 2016

TREE PROTECTION NOTES

1. DO NOT USE THE AREA BEYOND THE PROJECT LIMITS FOR ANY REASON UNLESS APPROVED IN WRITING BY THE OWNER.
2. FOR TREES OUTSIDE THE PROJECT AREA, PREVENT FLOODING OF THE SOIL AND PROTECT ROOT AREAS FROM RUNOFF OF OIL OR OTHER CONTAINMENTS.
3. THE FOLLOWING STEPS SHALL BE IMPLEMENTED FOR REMOVAL OF TREES WITHIN THE CRITICAL ROOT ZONE OF A TREE TO REMAIN:
   - 3.1. REMOVE TREE BRANCHES OF TREES TO BE REMOVED TO AVOID DAMAGE TO THE CANOPY OF TREES TO REMAIN.
   - 3.2. NO HEAVY MACHINERY SHALL BE USED FOR THE TREE REMOVAL, ONLY HAND TOOLS MY BE UTILIZED.
   - 3.3. GRIND STUMPS TO 6 INCHES BELOW FINISHED GRADE. DO NOT EXCAVATE.
4. CUT OFF ROOTS CLEANLY WITH APPROPRIATE TOOL WHEN ROOTS ARE EXPOSED DUE TO APPROVED GRADING ACTIVITIES. AVOID ALL TEARS AND BREAKS IN ROOT SURFACES. DURING THE TIME OF EXPOSURE KEEP ROOTS MOIST WITH WET MULCH, COMPOST, OR TOPSOIL. HAND DIG TRENCHES IN AREAS WITH EXTENSIVE ROOTS. LEAVE INTACT AND UNDAMAGED ROOTS LARGER THAN TWO INCHES IN DIAMETER.
5. CONTRACTOR SHALL NOTIFY POCD IF ANY TREES TO REMAIN ARE IMPACTED DURING CONSTRUCTION.
6. AREAS OUTSIDE OF THE PROJECT LIMITS MUST REMAIN FREE OF WEEDS AND TRASH THROUGHOUT CONSTRUCTION.
7. DO NOT ALTER GRADES OUTSIDE OF THE PROJECT LIMITS.
8. IN AREAS WHERE THE TEMPORARY ACCESS ROAD IS WITHIN THE CRZ OF TREES TO REMAIN, AND AS SHOWN ON THE SITE PLANS:
   - 8.1. A 1 FOOT THICK LAYER OF MULCH OR HOG FUEL MUST BE PLACED ON THE ACCESS ROAD.
   - 8.2. DECK MATS MEETING THE SPECIFICATIONS OF THE ACCESS ROAD DECK MAT DETAIL ON THIS SHEET, OR AN ALTERNATIVE APPROVED BY THE ENGINEER, MUST BE PLACED ON TOP OF THE MULCH OR HOG FUEL LAYER.

1 - TREE PROTECTION
N.T.S.

TEMPORARY EROSION AND SEDIMENT CONTROL NOTES

1. IN ADDITION TO THE BMP DETAILS SHOWN ON THIS SHEET AND THE ENCLOSED WSDOT TESC DETAIL SHEETS, THE FOLLOWING BMPS MUST BE IMPLEMENTED AS DESCRIBED IN THE 2019 STORMWATER MANAGEMENT MANUAL FOR EASTERN WASHINGTON (2019 SWMMEW):
   - 1.1. BMP C101E: PRESERVING NATURAL VEGETATION
   - 1.2. BMP C120E: TEMPORARY AND PERMANENT SEEDING
   - 1.3. BMP C150E: MATERIALS ON HAND
2. APPROVAL OF THIS ESC PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G., SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.).
3. THE IMPLEMENTATION OF THIS ESC PLAN AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC BMPS IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED AND VEGETATION/LANDSCAPING IS ESTABLISHED.
4. CLEARLY FLAG THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE APPLICANT FOR THE DURATION OF CONSTRUCTION.
5. CONSTRUCT THE ESC BMPS SHOWN ON THIS PLAN IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM, ROADWAYS, OR VIOLATE APPLICABLE WATER STANDARDS.
6. THE ESC BMPS SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, UPGRADE THESE ESC BMPS AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT-LADEN WATER DO NOT LEAVE THE SITE.
7. THE APPLICANT SHALL INSPECT THE ESC BMPS DAILY AND MAINTAIN THEM AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONALITY.
8. INSPECT AND MAINTAIN THE ESC BMPS ON INACTIVE SITES A MINIMUM OF ONCE A MONTH OR WITHIN THE 48 HOURS FOLLOWING A MAJOR STORM EVENT (24-HOUR STORM EVENT WITH A 10 YEAR OR GREATER RECURRENCE INTERVAL).
9. INSTALL STABILIZED CONSTRUCTION ENTRANCES AT THE BEGINNING OF CONSTRUCTION AND MAINTAIN FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.

2 - TEMPORARY EROSION AND SEDIMENT CONTROL
N.T.S.

100% BID SET

811 Know what's below. Call before you dig.

KAYLA H. KASSA — STATE OF WASHINGTON — 23022037 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED BY M. ZARECOR	Osborn Consulting	101 S STEVENS ST STE 103, SPOKANE, WA 99201	
DRAWN BY M. MECHAM		www.osbornconsulting.com	
CHECKED BY E. ESTELLE			

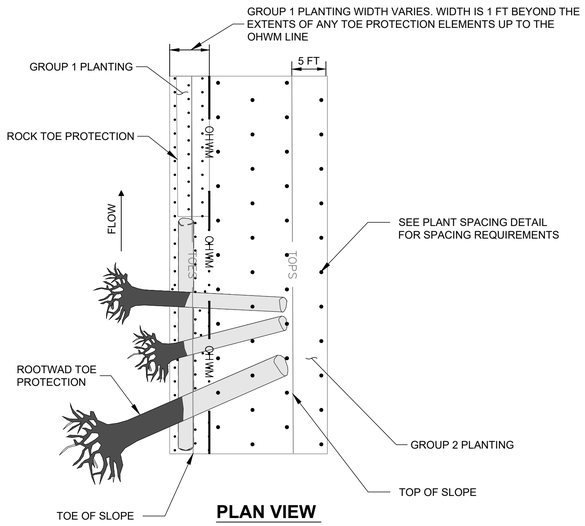
NO.	DATE	REVISION	BY

POCD 2 — 121 N WASHINGTON AVE, NEWPORT, WA 99156

SUNNYSIDE & SANDY SHORES STREAMBANK STABILIZATION
CONSTRUCTION DETAILS

JOB# / DWG: 30-230002
DATE: 06/04/2024
SCALE: H: N/A V: N/A
SHEET: 8 of 9

FILE NAME: C:\PW_OSBORN_WORKING\DMS31993\30-230002_P_POCD_SUNNYSIDE.DWG
PLOT TIME: 6/5/2024 12:18 PM
USER NAME:KAYLA KASSA

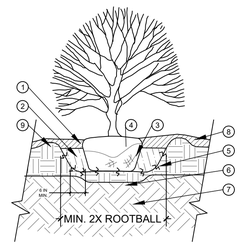


PLAN VIEW

PLANTING NOTES:

1. PLANTING MUST BE DONE WHEN STOCK IS DORMANT BETWEEN OCTOBER 1 AND MARCH 31.
2. PLANTING ROWS SHOULD BE OFFSET AS SHOWN IN THE PLAN VIEW DETAIL.
3. IF AN AREA CAN NOT BE PLANTED DUE TO EXISTING VEGETATION OR PHYSICAL BARRIERS (E.G. LOGS), THE EXCESS PLANTS SHOULD BE PLANTED IN THE NEAREST AVAILABLE LOCATION. THESE UN-PLANTABLE AREAS DO NOT REDUCE THE QUANTITY OF PLANTS SPECIFIED FOR THE SITE IN THE VEGETATION SCHEDULE.
4. ANY INVASIVE PLANTS WITHIN THE PLANTING AREA SHALL BE REMOVED BY HAND PRIOR TO PLANTING.
5. REFER TO THE PLANTING SCHEDULE FOR SPECIES AND QUANTITIES AND SPACING IN EACH PLANTING GROUP. REFER TO THE PLANT SPACING DETAIL FOR PLANT PLACEMENT.
6. CONTAINER PLANTS MUST BE PLANTED ACCORDING TO SECTION 8-02.
7. LIVESTAKES MUST BE PLANTED ACCORDING TO THE LIVESTAKE PLANTING DETAIL.

1 NATIVE PLANTING GROUPS
N.T.S.



KEYNOTES:

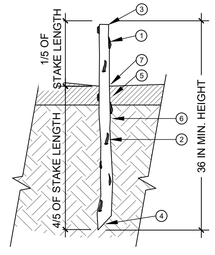
1. 3 IN MIN. TOP MULCH - FEATHER BACK FROM STEM.
2. PREPARED PLANTING SOIL.
3. REMOVE BURLAP.
4. SET SO FIRST ROOT EMERGING FROM MAIN STEM IS 1 IN ABOVE FINISHED GRADE.
5. ROUGHEN SIDES AND BOTTOM OF HOLE.
6. COMPACT SOIL FOR FIRM BASE.
7. PREPARED SUBGRADE AND PLANTING SOIL.
8. WHEN PLANTING SHRUBS WITHIN PLANTING BED, EXTEND TOP MULCH TO EDGE OF BED.
9. 6 IN BERM AROUND PLANTING PIT.

GENERAL NOTES:

A. DO NOT PLANT IN WET CONDITIONS, PROVIDE DRAINAGE FROM EACH PLANTING PIT IF NECESSARY.

B. SPACING TO BE TRIANGULAR UNLESS SHOWN OTHERWISE.

2 1-GALLON PLANTING
N.T.S.



KEYNOTES:

1. MINIMUM 2 NODES ABOVE GROUND.
2. MINIMUM 2 NODES UNDERGROUND.
3. SQUARE CUT ON TOP.
4. ANGLE CUT 30° ON BOTTOM.
5. TAMP SOIL AND COMPOST MULCH AROUND CUTTING FOR FULL CONTACT AT NODES
6. PRE-DIG HOLES WITH POLE IF EXISTING SOIL IS TOO HARD FOR EASY INSERTION.
7. CUTTINGS TO BE PLANTED PERPENDICULAR TO GROUND SURFACE.

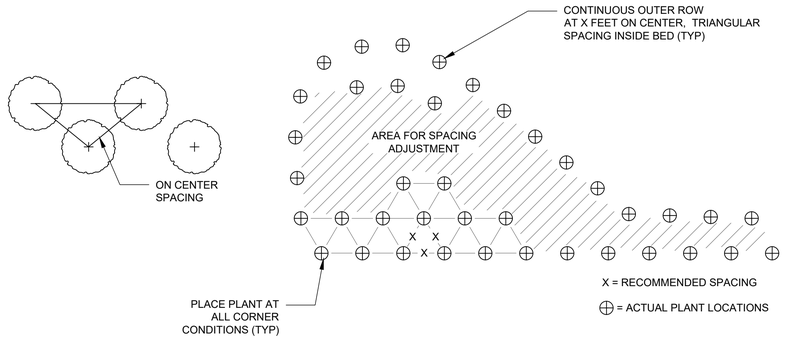
GENERAL NOTES:

A. CUTTINGS TO BE BETWEEN 3/4 IN AND 1-1/2 IN IN DIAMETER.

B. CUTTINGS SHALL CONFORM TO REQUIREMENTS ESTABLISHED IN WSDOT SPEC SECTION 8-02.3(8)A AND SHALL BE PLANTED ONLY DURING THERIN SPECIFIED PLANTING WINDOW OF OCTOBER 1 THROUGH MARCH 1.

C. LIVE STAKES TO BE PLACED IN COIR LOGS AT PROVIDED PLANT SPACING.

3 LIVESTAKE PLANTING
N.T.S.



4 PLANT SPACING
N.T.S.

Planting Group	Common Name	Scientific Name	Planting Type	Spacing Length (ft)	Spacing Width (ft)	Area Per Plant (ft)	Planting Area (ft)	Number of Plants Ea.
Group 1	redosier dogwood	Cornus stolonifera	Livestake	4	4	16	15134	946
	peach leaf wilow	Salix amygdaloides	Livestake					
	coyote willoa	Salix exigua	Livestake					
	mackenzie's willow	Salix sitchensis	Livestake					
	pacific willow	Salix uciandra	Livestake					
Group 2	vine maple	Acer circanatum	1 - Gallon	5	5	25	16011	641
	hawthorn	crataegus dougasii	1 - Gallon					
	hybrid poplar	populas Hybrid	1 - Gallon					
	service berry	almenchair anlifolia	1 - Gallon					
	thinleaf alder	alnus incana	1 - Gallon					
	black cottonwood	populus trichocarpa	1 - Gallon					
	western larch	larix occidentalis	1 - Gallon					
	quaking aspen	populs tremuloides	1 - Gallon					
	water birch	betula occidentalis	1 - Gallon					
	western white pine	pinus monticola	1 - Gallon					
	elderberry	sambucus cerulea	1 - Gallon					
	ponderosa pine	pinus ponderosa	1 - Gallon					
	tall oregon grape	mahonia aquifolia	1 - Gallon					
	nine bark	physocarpus capitatus	1 - Gallon					
	cedar	thuja plicata	1 - Gallon					
	woods rose	rosa woodsii	1 - Gallon					
	common snowberry	symphoricarpos albus	1 - Gallon					
	douglas spirea	spirea douglasii	1 - Gallon					

[1] A MINIMUM OF 3 SPECIES FROM GROUP 1 MUST BE PLANTED IN THE GROUP 1 PLANTING AREA. NO SINGLE SPECIES SHALL MAKE UP MORE THAN 1/3 OF GROUP 1 PLANTINGS.
[2] A MINIMUM OF 5 SPECIES FROM GROUP 2 MUST BE PLANTED IN THE GROUP 2 PLANTING AREA. NO SINGLE SPECIES SHALL MAKE UP MORE THAN 1/5 OF GROUP 2 PLANTINGS.
[3] 1-GALLON SIZE PLANTS MAY BE SUBSTITUTED FOR BARE ROOTS WITH APPROVAL FROM POCD STAFF OR THE ENGINEER. BARE ROOT PLANTING DENSITY MUST BE DOUBLE THE SPECIFIED 1-GALLON DENSITY.

Know what's below. Call before you dig.

100% BID SET

KAYLA H. KASSA — STATE OF WASHINGTON — 22022037 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED BY M. ZARECOR DRAWN BY M. MECHAM CHECKED BY E. ESTELLE	Osborn Consulting	101 S STEVENS ST STE 103, SPOKANE, WA 99201 www.osbornconsulting.com	NO.	DATE	REVISION	BY	POCD 2 — 121 N WASHINGTON AVE, NEWPORT, WA 99156

SUNNYSIDE & SANDY SHORES STREAMBANK STABILIZATION
PLANTING DETAILS

JOB# / DWG: 30-230002 | DATE: 06/04/2024
SCALE: H: N/A V: N/A | SHEET: 9 of 9

FILE NAME: C:\PW_OSBORN_WORKING\DMS31993\30-230002_P_POCD_SUNNYSIDE.DWG
PLOT TIME: 6/5/2024 12:18 PM
USER NAME:KAYLA KASSA

Osborn Consulting

101 S Stevens St, Suite 103, Spokane, WA 99201

SCHEDULE OF QUANTITIES

		Project No. 30-230002	**Date** June 06, 2024
Project Name	**Sunnyside Sandy Shores Bank Stabilization Project**	Pend Oreille Conservation District Salmon Recovery Planning	
Location	**Sunnyside Sandy Shores**		
Owner	POCD		
Estimated By:	**MZ**	**Checked By:** **KK**	**Approved By:** EE
Date:	**12/18/2024**	**Date:** **6/5/2024**	**Date:** 6/5/2024

ITEM NO.	SPEC SECTION	DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL COST
		DIVISION 1 - GENERAL REQUIREMENTS				
1	1-09	Mobilization	1	LS	$34,000.00	$34,000.00
		DIVISION 2 - EARTHWORK				
2	2-01	Clearing and Grubbing	0.8	AC	$28,237.00	$22,589.60
3	2-01	Tree Removal	2	EA	$1,650.00	$3,300.00
4	2-02	Dock Removal/Replacement	3	EA	$2,500.00	$7,500.00
5	2-03	Common Borrow, Incl. Haul	666	CY	$20.00	$13,320.00
6	2-05	Fine Grading	24	HR	$360.00	$8,640.00
		DIVISON 8 - MISCELLANEOUS CONSTRUCTION				
7	8-01	TESC	1	LS	$97,470.00	$97,470.00
8	8-01	SWPPP	1	LS	$4,000.00	$4,000.00
9	8-01	Hydroseed	3,461	SY	$5.50	$19,035.50
10	8-02	Topsoil Type A	1,124	SY	$30.00	$33,732.00
11	8-02	Planting, Group A	1	LS	$5,203.00	$5,203.00
12	8-02	Planting, Group B	1	LS	$5,290.00	$5,290.00
13	8-02	Plant Establishment	1	LS	$20,000.00	$20,000.00
14	8-33	Rocks for Erosion and Scour Protection, Subangular, Class A	58	CY	$176.00	$10,240.21
15	8-34	Log with Root Wad, Type D	17	EA	$2,500.00	$42,500.00
16	8-34	Log with Root Wad, Type E	8	EA	$2,500.00	$20,000.00
17	8-34	Log with no Root Wad, Type F	7	EA	$2,550.00	$17,850.00
18	8-34	Log with no Root Wad, Type G	1	EA	$2,500.00	$2,500.00
19	8-34	Log with no Root Wad, Type H	1	EA	$2,450.00	$2,450.00
20	8-34	Duckbill Anchor (3,000 lb cap.)	34	EA	$25.00	$850.00
				Construction Bid Amount		**$370,470.31**
				Tax	**7.9%**	**$29,267.15**
				Construction Contract Amount		**$ 399,737.46**
				TOTAL PROJECT COST		**$ 399,737.46**
				TOTAL PROJECT COST (ROUNDED)		**$400,000.00**