Request for Clean Water Act
Section 401 Water Quality Certification
Washington State Department of Ecology
Phone: (360) 407-6076 or E-mail: ecyrefedpermits@ecy.wa.gov

AGENCY USE ONLY
Date Received: 9/12/2023
Aquatics ID No.: 142717
Team: SWRO
Valid Request: 9/19/2023

This Section 401 Water Quality Certification (WQC) Request form identifies information needed in order to review and process a Section 401 WQC Request. Please see Department of Ecology's (Ecology) webpage for more information about the Section 401 WQC Request process.

Submit this Section 401 WQC Request form along with a Joint Aquatic Resources Permit Application (JARPA) and supporting information[1] to ecyrefedpermits@ecy.wa.gov and copy the federal permitting agency.

A. Federal Permit or License Reference Number, if known: NWS-2023-458

Department of Ecology (Ecology) Aquatics ID Number, if known: 142717

Project Name: Cowlitz River Channel Migration Project **County**: Cowlitz

B. Project Proponent Name: Ed Gunderson / Cowlitz Conservation District (Darin Houpt) -Agent

C. Documentation showing that the Pre-Filing Meeting Request was submitted at least 30 days prior to submitting this Section 401 WQC Request. Attach either of the following:

- ■ E-mail acknowledgement of receipt from Ecology
- ■ Copy of previously submitted Pre-Filing Meeting Request Form

D. A completed, signed, and dated JARPA should be submitted with this form.

Did you attach a JARPA? ■ Yes ☐ No

E. The following is a list of documents needed for Ecology's WQC review, along with a brief explanation. Depending on the project, additional information may be requested.

Please let us know what information you are submitting with this WQC request form.

Required for all projects:

1. State Environmental Policy Act (SEPA) determination and/or checklist:
   - ☐ Final SEPA determination attached
   - ☐ SEPA determination pending
   - ■ Exempt from SEPA (see SEPA Guidance)
   - ☐ SEPA is not required (e.g., federal agency projects)

[1] To submit documents over 25MB, e-mail ecyrefedpermits@ecy.wa.gov to request a secure link.

To request an ADA accommodation, contact Ecology by phone at (360) 407-6076 or email at ecyrefedpermits@ecy.wa.gov, or visit https://ecology.wa.gov/accessibility.
For Relay Service or TTY call 711 or 877-833-6341.

Si necesita este formulario en español, por favor, llámenos a (360) 407-6076
o envíenos un correo electrónico a: ecyrefedpermits@ecy.wa.gov

2. Project drawings attached:
   - ☐ Vicinity map
   - ☒ Plan view
   - ☒ Cross-section(s)
   - ☒ Plan set
   - ☐ Other:_____

3. Best management practices and construction methodology, provided in the attached:
   - ☒ JARPA
   - ☐ Water Quality Monitoring and Protection Plan (WQMPP)
   - ☒ Project drawings, sheets:_____
   - ☐ Mitigation Plan pages:_____
   - ☐ Other document(s): _____

   Notes:
   - This is needed for in-water work (below ordinary high water mark), including wetlands.
   - Describe best management practices to be implemented to protect water quality.
   - Describe construction sequencing and methodology.

4. Water quality monitoring, provided in the attached:
   - ☐ Water Quality Monitoring Plan (WQMP).
   - ☐ Water Quality Monitoring and Protection Plan (WQMPP is similar to WQMP, but includes best management practices).
   - ☒ Other (please identify location, such as JARPA, Part 8): project avoids in water impacts

   Notes:
   - Include language in the plans that allows Ecology to review and approve all substantive changes to a plan prior to implementation.
   - A plan is needed when conducting work in a waterbody (e.g., creek, ditch, river, lake, pond, marine, estuarine).
   - Include water quality parameters such as turbidity, oil sheen, pH (e.g., poured in-place concrete, concrete demolition), etc.
   - See State Water Quality Standards for Surface Waters (Chapter 173-201A-200 or -210 WAC)
   - If needed, templates are available.

Required depending on the project type:

5. Erosion and sediment control for upland work (above ordinary high water mark) that addresses stormwater during construction and long-term:

   This information is included in the attached:
   - ☒ JARPA
   - ☒ Project drawings, sheets:_____
   - ☐ Stormwater Pollution Prevention Plan, pages:_____
   - ☐ Mitigation Plan, pages:_____
   - ☐ Other document(s): _____

6. Wetland report, including the attached:
   - ☐ Wetland delineation report
   - ☐ Delineation data sheets
   - ☐ Wetland rating forms

Notes:

- Needed when there is a discharge (dewatering, excavation or fill) to wetlands.
- Report needs to include both a wetland delineation and rating.
- Include delineation data sheets and rating forms.
- For more information see wetland delineation resources and hiring a qualified wetland professional.
- Include language in the plans that allows Ecology to review and approve all substantive changes to a plan prior to implementation.

7. Mitigation, avoidance and minimization
   - ☒ Wetland avoidance and minimization checklist
   - ☒ Other aquatic resource avoidance and minimization demonstration
   - ☐ Mitigation Plan
   - ☒ Other: Avoiding impacts to surface water per design/no wetlands

   Notes:
   - Wetland avoidance and minimization webpage.

8. Mitigation plan, provided in the attached:
   - ☐ Riparian Planting and Monitoring Plan (Needed when riparian vegetation is removed or modified)
   - ☐ Wetland or stream/other aquatic resource Mitigation Plan
   - ☐ Wetland Mitigation Bank Use Plan (use when proposing mitigation bank use)
   - ☐ In-Lieu Fee (ILF) Use Plan (use when proposing ILF mitigation)
   - ☒ Project drawings, sheets: Riparian being established
   - ☒ Other: No impacts to surface water

   Notes:
   - Needed to offset impacts to wetland, stream, marine, or other aquatic habitat.
   - Include language in the plans that allows Ecology to review and approve all substantive changes to a plan prior to implementation.
   - For more information, see wetland compensatory mitigation.

9. Dredging
   - ☐ Dredging Plan attached
   - ☐ Suitability Determination attached

   Notes:
   - Needed when sediments will be dredged for maintenance, navigation, or other purposes.
   - Covers in-water disposal and sediment anti-degradation.
   - Dredging Plan should include dredge footprint and depth, dredge type, best management. practices, disposal plan, off-loading plan for upland disposal, etc.
   - Include language in the plans that allows Ecology to review and approve all substantive changes to a plan prior to implementation.
   - For informationon suitability determinations, see Dredged Material Management Office.

10. Dewatering
    - ☐ Dewatering Plan attached

    Notes:
    - Needed for complex in-water work or management of excavated/dredged material.

- Include language in the plans that allows Ecology to review and approve all substantive changes to a plan prior to implementation.
- May also be required for some excavation projects.

F. Required Certification Statements:

The project proponent hereby certifies that all information contained herein is true, accurate, and complete, to the best of my knowledge and belief.

Initial dbh

The project proponent hereby requests that the certifying authority review and take action on this CWA 401 certification request within the applicable reasonable period of time.

Initial dbh

Signature: Darin B. Houpt Digitally signed by Darin B. Houpt DN: cn=Darin B. Houpt, o=Cowlitz Conservation District, ou, email=ccdmgr@ccdandwcd.com, c=US Date: 2023.08.14 15:34:21 -07'00' Date: 8/14/23

Print Name: Darin B. Houpt

WASHINGTON STATE
Joint Aquatic Resources Permit Application (JARPA) Form[1,2] [help]

US Army Corps of Engineers ®
Seattle District

USE BLACK OR BLUE INK TO ENTER ANSWERS IN THE WHITE SPACES BELOW.

AGENCY USE ONLY

Date received: 9/12/2023 edoc
Rec'd Section 401 Request Form

Agency reference #: _____

Tax Parcel #(s): _____

_____

Part 1–Project Identification

1. Project Name (A name for your project that you create. Examples: Smith's Dock or Seabrook Lane Development) [help]
Cowlitz River Channel Migration Project

Part 2–Applicant

The person and/or organization responsible for the project. [help]

2a. Name (Last, First, Middle)			
Gunderson Edward			
2b. Organization (If applicable)			
2c. Mailing Address (Street or PO Box)			
PO Box 1381			
2d. City, State, Zip			
Castle Rock, WA 98611			
2e. Phone (1)	**2f.** Phone (2)	**2g.** Fax	**2h.** E-mail
360-431-7687			kimmialexander@gmail.com

[1]Additional forms may be required for the following permits:
- If your project may qualify for Department of the Army authorization through a Regional General Permit (RGP), contact the U.S. Army Corps of Engineers for application information (206) 764-3495.
- Not all cities and counties accept the JARPA for their local Shoreline permits. If you need a Shoreline permit, contact the appropriate city or county government to make sure they accept the JARPA.

[2]To access an online JARPA form with [help] screens, go to http://www.epermitting.wa.gov/site/alias__resourcecenter/jarpa_jarpa_form/9984/jarpa_form.aspx.

For other help, contact the Governor's Office for Regulatory Innovation and Assistance at (800) 917-0043 or help@oria.wa.gov.

Part 3–Authorized Agent or Contact

Person authorized to represent the applicant about the project. (Note: Authorized agent(s) must sign 11b of this application.) [help]

3a. Name (Last, First, Middle)			
Houpt, Darin			
3b. Organization (If applicable)			
Cowlitz Conservation District			
3c. Mailing Address (Street or PO Box)			
2125 8th Ave			
3d. City, State, Zip			
Longview, WA 98632			
3e. Phone (1)	**3f.** Phone (2)	**3g.** Fax	**3h.** E-mail
360-355-3514			ccdmgr@ccdandwcd.com

Part 4–Property Owner(s)

Contact information for people or organizations owning the property(ies) where the project will occur. Consider both **upland and aquatic** ownership because the upland owners may not own the adjacent aquatic land. [help]

☒ Same as applicant. (Skip to Part 5.)

☐ Repair or maintenance activities on existing rights-of-way or easements. (Skip to Part 5.)

☒ There are multiple upland property owners. Complete the section below and fill out JARPA Attachment A for each additional property owner.

☐ Your project is on Department of Natural Resources (DNR)-managed aquatic lands. If you don't know, contact the DNR at (360) 902-1100 to determine aquatic land ownership. If yes, complete JARPA Attachment E to apply for the Aquatic Use Authorization.

4a. Name (Last, First, Middle)			
4b. Organization (If applicable)			
4c. Mailing Address (Street or PO Box)			
4d. City, State, Zip			
4e. Phone (1)	**4f.** Phone (2)	**4g.** Fax	**4h.** E-mail

Part 5–Project Location(s)

Identifying information about the property or properties where the project will occur. [help]

☐ There are multiple project locations (e.g. linear projects). Complete the section below and use JARPA Attachment B for each additional project location.

5a. Indicate the type of ownership of the property. (Check all that apply.) [help]

☒ Private
☐ Federal
☐ Publicly owned (state, county, city, special districts like schools, ports, etc.)
☐ Tribal
☐ Department of Natural Resources (DNR) – managed aquatic lands (Complete JARPA Attachment E)

5b. Street Address (Cannot be a PO Box. If there is no address, provide other location information in 5p.) [help]

5394 Westside Hwy

5c. City, State, Zip (If the project is not in a city or town, provide the name of the nearest city or town.) [help]

Castle Rock, WA 98611

5d. County [help]

Cowlitz

5e. Provide the section, township, and range for the project location. [help]

¼ Section	Section	Township	Range
SE ¼	3	9 North	2 West

5f. Provide the latitude and longitude of the project location. [help]

- Example: 47.03922 N lat. / -122.89142 W long. (Use decimal degrees - NAD 83)

46.288855 N Lat / -122.915590 W Long

5g. List the tax parcel number(s) for the project location. [help]

- The local county assessor's office can provide this information.

62195, 62194, 6219601, 6219603, 6219604, 621960201, 621960202, 6219602, 621930100, 621930300

5h. Contact information for all adjoining property owners. (If you need more space, use JARPA Attachment C.) [help]

Name	Mailing Address	Tax Parcel # (if known)
Tim Karnoski	PO Box 805 Castle Rock, WA 98611	621960100
Todd and Shelly Riley	5340 Westside Hwy Castle Rock, WA 998611	62193
Robert and Judy Davis	PO Box 1887 Castle Rock, WA 98611	621930201
James Peter Mistic	5310 Westside Hwy Castle Rock, WA 98611	621930200

5i. List all wetlands on or adjacent to the project location. [help]

none

5j. List all waterbodies (other than wetlands) on or adjacent to the project location. [help]

Cowlitz River

5k. Is any part of the project area within a 100-year floodplain? [help]

☒ Yes ☐ No ☐ Don't know

5l. Briefly describe the vegetation and habitat conditions on the property. [help]

The project site is in the backyards of the landowners which is on top of dredge spoils from the 1980 Mt St Helens eruption. The main vegetation is grass and a few Cottonwood trees that haven't yet been recruited by the river. The Cowlitz River is migrating into the right riverbank due to the buildup of a mid channel bar within the Cowlitz River. Bar buildup is a result of the elevated sediment load entering the Cowlitz River from the Toutle River as a result of the eruption of Mt. St. Helens. Residences are the existing structures adjacent to the proposed bank stabilization. The homes are on average 150 feet away from the top of bank. There is no other existing bank stabilization work within the proposed project reach. The current conditions include a vertical, rapidly eroding riverbank devoid of any woody vegetation. The post project considition will include the presence of 10 piling diverter style structures, a 2:1 slope riverbank, and restored riparian function in the form of woody shrubs and trees.

5m. Describe how the property is currently used. [help]

The properties are currently used as primary residences by the landowners.

5n. Describe how the adjacent properties are currently used. [help]

The adjacent properties are used as primary residences by the landowners

5o. Describe the structures (above and below ground) on the property, including their purpose(s) and current condition. [help]

Since all of the properties are residences there are houses, garages, shops, sheds, water lines, electrical lines, and fences. All of this is limited in the actual work area.

5p. Provide driving directions from the closest highway to the project location, and attach a map. [help]

From I-5 take exit 48 and turn west on Huntington Ave. Continue on Huntington Ave for 1.6 miles. Turn west (left) on A St and continue across the bridge to the 4 way stop. At the stop sign turn north (right) onto Westside Hwy and continue for .9 miles. The project site is on the right.

Part 6–Project Description

6a. Briefly summarize the overall project. You can provide more detail in 6b. [help]

The project addresses channel migration (erosion) and addressing resource concerns along 1000 feet of riverbank along the Cowlitz River. Pile structures will be used to deflect the river energy off the streambank and out into the river channel. The riverbank will then be shaped and dredge spoils removed to expose the native soil. The bank will then be planted with native vegetation to get the root strength back into the riverbank.

6b. Describe the purpose of the project and why you want or need to perform it. [help]

The project addresses channel migration (erosion) concerns along 1000 feet of riverbank. The bank in this reach is about 20 feet high. The upper seven (7) feet is dredge spoils placed following dredging of the river associated with Mt St Helens. The lower 13 feet is native soil. Black cottonwood dominated the riverbank after the dredging activities. The riverbank remained relatively stable through early 2000's. Sediment deposition began forming a bar deposit increasing stress on the riverbank. In time (2010 on) most of the black cottonwood was recruited by the river leaving the riverbank exposed and with little root strength. Channel migration began to accelerate and continues to do so today. The landowners contacted the Conservation District in 2018 to discuss opportunities.

Resource concerns at the site include increased shear stress working on the riverbank due to bar aggradation and loss of root strength in the riverbank. Cowlitz Conservation District has pieced together funding that will allow us to address the resource concerns from the riverbank perspective. The district is working on a design that will allow us to shape the riverbank and remove dredge spoil overburden to allow establishment of root strength in the bank. In addition to bank shaping, the slope will be protected through placement of erosion control geotextiles to provide protection as both herbaceous and woody vegetation establishes. The project includes simple pile structures that will manage river energy (shear stress) on the riverbank. These structures are designed to further reduce shear stress on the riverbank and to provide short-term management of the river channel bar continued accumulation. The district has been attempting to engage the US Army Corps of Engineers in conversation regarding dredging this bar deposit along with two others causing similar resource damage at two downstream locations.

The Cowlitz River is migrating into the right riverbank due to the buildup of a mid-channel bar within the Cowlitz River. Bar buildup is a result of the elevated sediment load entering the Cowlitz River from the Toutle River as a result of the eruption of Mt. St. Helens. Residences are the existing structures adjacent to the proposed bank stabilization. The homes are on average 150 feet away from the top of bank. There is no other existing bank stabilization work within the proposed project reach. The current conditions include a vertical, rapidly eroding riverbank devoid of any woody vegetation. The post project consideration will include the presence of 10 piling diverter style structures, a 2:1 slope riverbank, and restored riparian function in the form of woody shrubs and trees.

6c. Indicate the project category. (Check all that apply) [help]

☐ Commercial ☐ Residential ☐ Institutional ☐ Transportation ☐ Recreational

☐ Maintenance ☒ Environmental Enhancement

6d. Indicate the major elements of your project. (Check all that apply) [help]

☐ Aquaculture ☒ Bank Stabilization ☐ Boat House ☐ Boat Launch ☐ Boat Lift ☐ Bridge ☐ Bulkhead ☐ Buoy ☐ Channel Modification	☐ Culvert ☐ Dam / Weir ☐ Dike / Levee / Jetty ☐ Ditch ☐ Dock / Pier ☐ Dredging ☐ Fence ☐ Ferry Terminal ☐ Fishway	☐ Float ☐ Floating Home ☐ Geotechnical Survey ☐ Land Clearing ☐ Marina / Moorage ☐ Mining ☐ Outfall Structure ☒ Piling/Dolphin ☐ Raft	☐ Retaining Wall (upland) ☐ Road ☐ Scientific Measurement Device ☐ Stairs ☐ Stormwater facility ☐ Swimming Pool ☐ Utility Line
☒ Other: Salmon Recovery and Restoration of Riparian Function			

6e. Describe how you plan to construct each project element checked in 6d. Include specific construction methods and equipment to be used. [help]

- Identify where each element will occur in relation to the nearest waterbody.
- Indicate which activities are within the 100-year floodplain.

The project proposes to use pile structures along the riverbank to deflect river energy toward the river channel. Structures would be placed about 100 feet apart and consist of about 25 pile per structure. Pile structure will be oriented at an approximate angle ranging from 35 degrees to 45 degrees off the riverbank. To install the pile access alleys will be constructed. This consists of a 12-foot wide "road" cut into the riverbank on the desired angle and cut to a minimum 2:1 slope beginning at the lower hinge of the riverbank. The alley will be over excavated about one- and one-half feet below grade to allow for backfilling with 6-inch minus angular rock to create a stable operating platform. An excavator (> 300 cat or equivalent) with a vibratory pile driving head (Movak / Gilbert or equivalent) will be used to install pile. Pile will be about 12-inch diameter and a minimum of 30-feet long. Excavator will track down access alley. A second excavator will be used to feed piling to the pile driving head. Pile will be driven into riverbed beginning as far out as can be reached. Pile will be driven into the centerline of the access alley along the correct orientation. Pile will be driven into the river to a minimum 20 foot embedded in the channel bottom. Pile will be driven on 3-foot centers (2 pile diameters between piling). When driving pile on the shaped portion of the construction alley. Pile will be driven into the centerline of the rocked access way. Pile will be driven leaving pile about 7 feet above sloped bank. A brow or vane log may be used to help turn water and to increase the strength of the structure by having individual pile work as a unit rather than individually. "Brow" logs will be anchored to pile using 1-inch all-thread anchor bolts.

Once pile structures are installed, the riverbank will be treated between structures. The dredge spoils will be excavated from the riverbank (upper 7 feet) and hauled to a predetermined disposal site. The lower 13 feet of riverbank will then be sloped to a 2:1 slope beginning at the lower hinge. The lower 13 feet of sloped bank will basically be native bank. The upper seven feet will be fill, but fill will consist of native soil. The sloped bank will be seeded with an erosion control seed mix with minimum of annual ryegrass, perennial ryegrass, creeping red fescue, and clover (white or red).

The seeded bank will be covered with a straw mulch fabric woven with cotton thread. The mulch fabric will be held in place using a coir geo-grid (minimum 700 grams per sq. meter). The geo-grid will be fastened to the slope through use of 1.5-foot dead stakes (2x4 inch Douglas fir cut on a diagonal). Dead stakes will be installed on 3-foot centers. The sloped bank will then be planted with live stakes to further anchor the fabric and to begin establishing root strength in the riverbank. Willow cutting <1 inch diameter and 3 foot long will be planted on 2-foot center on the lower 6 feet of riverbank (3 rows of willow, 2-feet apart). The next 12 feet of riverbank will be planted with red osier dogwood on 3-foot centers (4 rows, 3-feet apart). The upper portion of the riverbank and a minimum of 20 feet back on the floodplain will be planted with a variety of rooted seedlings during winter months including red alder, black cottonwood, Douglas-fir, and western red cedar.

The proposed project incorporates elements avoiding and minimizing adverse environmental effect to the aquatic environment by:

Utilizing a vibratory pile driving head to install pile.

Avoiding any excavation within the wetted perimeter of the Cowlitz River.

Installing geotextile fabrics to eliminate continued erosion of the riverbank.

Restoring riparian function to the riverbank soils

6f. What are the anticipated start and end dates for project construction? (Month/Year) [help]

- If the project will be constructed in phases or stages, use JARPA Attachment D to list the start and end dates of each phase or stage.

Start Date: July 2023 End Date: September 2023 ☐ See JARPA Attachment D

6g. Fair market value of the project, including materials, labor, machine rentals, etc. [help]

6h. Will any portion of the project receive federal funding? [help]

- **If yes**, list each agency providing funds.

☐ Yes ☐ No ☐ Don't know

Part 7–Wetlands: Impacts and Mitigation

☐ Check here if there are wetlands or wetland buffers on or adjacent to the project area.
(If there are none, skip to Part 8.) [help]

7a. Describe how the project has been designed to avoid and minimize adverse impacts to wetlands. [help]

☐ Not applicable

7b. Will the project impact wetlands? [help]

☐ Yes ☐ No ☐ Don't know

7c. Will the project impact wetland buffers? [help]

☐ Yes ☐ No ☐ Don't know

7d. Has a wetland delineation report been prepared? [help]

- **If Yes**, submit the report, including data sheets, with the JARPA package.

☐ Yes ☐ No

7e. Have the wetlands been rated using the Western Washington or Eastern Washington Wetland Rating System? [help]

- **If Yes**, submit the wetland rating forms and figures with the JARPA package.

☐ Yes ☐ No ☐ Don't know

7f. Have you prepared a mitigation plan to compensate for any adverse impacts to wetlands? [help]

- **If Yes**, submit the plan with the JARPA package and answer 7g.
- **If No, or Not applicable**, explain below why a mitigation plan should not be required.

☐ Yes ☐ No ☐ Don't know

7g. Summarize what the mitigation plan is meant to accomplish, and describe how a watershed approach was used to design the plan. [help]

7h. Use the table below to list the type and rating of each wetland impacted, the extent and duration of the impact, and the type and amount of mitigation proposed. Or if you are submitting a mitigation plan with a similar table, you can state (below) where we can find this information in the plan. [help]

Activity (fill, drain, excavate, flood, etc.)	Wetland Name[1]	Wetland type and rating category[2]	Impact area (sq. ft. or Acres)	Duration of impact[3]	Proposed mitigation type[4]	Wetland mitigation area (sq. ft. or acres)

[1] If no official name for the wetland exists, create a unique name (such as "Wetland 1"). The name should be consistent with other project documents, such as a wetland delineation report.
[2] Ecology wetland category based on current Western Washington or Eastern Washington Wetland Rating System. Provide the wetland rating forms with the JARPA package.
[3] Indicate the days, months or years the wetland will be measurably impacted by the activity. Enter "permanent" if applicable.
[4] Creation (C), Re-establishment/Rehabilitation (R), Enhancement (E), Preservation (P), Mitigation Bank/In-lieu fee (B)

Page number(s) for similar information in the mitigation plan, if available: _____

7i. For all filling activities identified in 7h, describe the source and nature of the fill material, the amount in cubic yards that will be used, and how and where it will be placed into the wetland. [help]

7j. For all excavating activities identified in 7h, describe the excavation method, type and amount of material in cubic yards you will remove, and where the material will be disposed. [help]

Part 8–Waterbodies (other than wetlands): Impacts and Mitigation

In Part 8, "waterbodies" refers to non-wetland waterbodies. (See Part 7 for information related to wetlands.) [help]

☒ Check here if there are waterbodies on or adjacent to the project area. (If there are none, skip to Part 9.)

8a. Describe how the project is designed to avoid and minimize adverse impacts to the aquatic environment. [help]

☐ Not applicable

The project will adhere to all provision of the State HPA and the Federal NW ACOE permit. The project itself includes installation of low impact pile structures installed with a vibratory pile driving head. The riverbank will be shaped to a 2:1 slope. The slope will begin at the lower hinge which during typical summer low flow is about 2 feet above water surface and about 2 feet below ordinary high water mark. The only work planned to occur below ordinary high water mark is:

installation of about 6 pile per piling structure (60 pile total);

bank shaping will commence about 2 feet below ordinary high water mark and will extend to top of bank at 2:1 slope

About 2 feet of each proposed pile alley will be constructed below ordinary high water. Rock used for the alley construction will be removed up to ordinary high water mark.

8b. Will your project impact a waterbody or the area around a waterbody? [help]

☒ Yes ☐ No

8c. Have you prepared a mitigation plan to compensate for the project's adverse impacts to non-wetland waterbodies? [help]

- **If Yes**, submit the plan with the JARPA package and answer 8d.
- **If No, or Not applicable,** explain below why a mitigation plan should not be required.

☐ Yes ☒ No ☐ Don't know

The project is a restoration project that addresses concerns for water quality (fine sediment delivery) and fisheries habitat (primarily adult upstream migration and juvenile rearing).

8d. Summarize what the mitigation plan is meant to accomplish. Describe how a watershed approach was used to design the plan.

- If you already completed 7g you do not need to restate your answer here. [help]

8e. Summarize impact(s) to each waterbody in the table below. [help]

Activity (clear, dredge, fill, pile drive, etc.)	Waterbody name[1]	Impact location[2]	Duration of impact[3]	Amount of material (cubic yards) to be placed in or removed from waterbody	Area (sq. ft. or linear ft.) of waterbody directly affected
Piling	Cowlitz River	Channel Margin	½ day	About 50 pile will be installed within the wetted channe	0.5 sq feet per pile
Bank Shaping	Cowlitz River	Riverbank outside of wetted channel	3 days	None from waterbody	1000 feet

[1] If no official name for the waterbody exists, create a unique name (such as "Stream 1") The name should be consistent with other documents provided.
[2] Indicate whether the impact will occur in or adjacent to the waterbody. If adjacent, provide the distance between the impact and the waterbody and indicate whether the impact will occur within the 100-year flood plain.
[3] Indicate the days, months or years the waterbody will be measurably impacted by the work. Enter "permanent" if applicable.

8f. For all activities identified in 8e, describe the source and nature of the fill material, amount (in cubic yards) you will use, and how and where it will be placed into the waterbody. [help]

Piling will be the only material placed into the waterbody. About 6 pile per structure and 10 structure (60 pile). A vibratory pile driving head mounted on an excavator will be used to driver pile. Pile will consist of clear douglas fir poles that will be 10-inch diameter on the small end and 30 feet in length. Pile will be driven to about 20 feet in depth.

8g. For all excavating or dredging activities identified in 8e, describe the method for excavating or dredging, type and amount of material you will remove, and where the material will be disposed. [help]

The riverbank will be excavated to shape the bank to a 2:1 slope. All excavation will be outside the wetted perimeter of the Cowlitz River. The upper 7 feet of the riverbank is dredge spoil deposits from the Cowlitz River. This cap will be excavated and hauled from the site. Two locations are proposed for disposal. One is on neighboring ownership logging roads. The second is on City of Castle Rock dredge spoil site near Delameter Road. Once the dredge spoil cap is removed, the native soil be shaped to a 2:1 slope providing the best possible planting medium for erosion control planting a shrub species.

Part 9–Additional Information

Any additional information you can provide helps the reviewer(s) understand your project. Complete as much of this section as you can. It is ok if you cannot answer a question.

9a. If you have already worked with any government agencies on this project, list them below. [help]

Agency Name	Contact Name	Phone	Most Recent Date of Contact
WDFW	George Fornes	360-906-6731	April 2023
ACOE	Evan Carnes	360-533-6978	April 2023

9b. Are any of the wetlands or waterbodies identified in Part 7 or Part 8 of this JARPA on the Washington Department of Ecology's 303(d) List? [help]

- **If Yes,** list the parameter(s) below.
- If you don't know, use Washington Department of Ecology's Water Quality Assessment tools at: https://ecology.wa.gov/Water-Shorelines/Water-quality/Water-improvement/Assessment-of-state-waters-303d.

☒ Yes ☐ No

Polychlorinated Biphenyls
Methyl Mercury

9c. What U.S. Geological Survey Hydrological Unit Code (HUC) is the project in? [help]

- Go to http://cfpub.epa.gov/surf/locate/index.cfm to help identify the HUC.

1708000509

9d. What Water Resource Inventory Area Number (WRIA #) is the project in? [help]

- Go to https://ecology.wa.gov/Water-Shorelines/Water-supply/Water-availability/Watershed-look-up to find the WRIA #.

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9e. Will the in-water construction work comply with the State of Washington water quality standards for turbidity? [help]

- Go to https://ecology.wa.gov/Water-Shorelines/Water-quality/Freshwater/Surface-water-quality-standards/Criteria for the standards.

☒ Yes ☐ No ☐ Not applicable

9f. If the project is within the jurisdiction of the Shoreline Management Act, what is the local shoreline environment designation? [help]

- If you don't know, contact the local planning department.
- For more information, go to: https://ecology.wa.gov/Water-Shorelines/Shoreline-coastal-management/Shoreline-coastal-planning/Shoreline-laws-rules-and-cases.

☐ Urban ☐ Natural ☐ Aquatic ☐ Conservancy ☐ Other: Rural

9g. What is the Washington Department of Natural Resources Water Type? [help]

- Go to http://www.dnr.wa.gov/forest-practices-water-typing for the Forest Practices Water Typing System.

☒ Shoreline ☐ Fish ☐ Non-Fish Perennial ☐ Non-Fish Seasonal

9h. Will this project be designed to meet the Washington Department of Ecology's most current stormwater manual? [help]

- **If No**, provide the name of the manual your project is designed to meet.

☒ Yes ☐ No

Name of manual: _____

9i. Does the project site have known contaminated sediment? [help]

- **If Yes**, please describe below.

☐ Yes ☒ No

9j. If you know what the property was used for in the past, describe below. [help]

Agriculture

9k. Has a cultural resource (archaeological) survey been performed on the project area? [help]

- **If Yes**, attach it to your JARPA package.

☒ Yes ☐ No Report is in progress

9l. Name each species listed under the federal Endangered Species Act that occurs in the vicinity of the project area or might be affected by the proposed work. [help]
Chinook Salmon, Chum Salmon, Coho Salmon, Steelhead
9m. Name each species or habitat on the Washington Department of Fish and Wildlife's Priority Habitats and Species List that might be affected by the proposed work. [help]
Chinook Salmon, Chum Salmon, Coho Salmon, Steelhead

Part 10–SEPA Compliance and Permits

Use the resources and checklist below to identify the permits you are applying for.

- Online Project Questionnaire at http://apps.oria.wa.gov/opas/.
- Governor's Office for Regulatory Innovation and Assistance at (800) 917-0043 or help@oria.wa.gov.
- For a list of addresses to send your JARPA to, click on agency addresses for completed JARPA.

10a. Compliance with the State Environmental Policy Act (SEPA). (Check all that apply.) [help]

- For more information about SEPA, go to https://ecology.wa.gov/regulations-permits/SEPA-environmental-review.

☐ A copy of the SEPA determination or letter of exemption is included with this application.

☐ A SEPA determination is pending with _____ (lead agency). The expected decision date is _____.

☒ I am applying for a Fish Habitat Enhancement Exemption. (Check the box below in 10b.) [help]

☐ This project is exempt (choose type of exemption below).

☐ Categorical Exemption. Under what section of the SEPA administrative code (WAC) is it exempt?

_____

☐ Other: _____

☐ SEPA is pre-empted by federal law.

10b. Indicate the permits you are applying for. (Check all that apply.) [help]

LOCAL GOVERNMENT

Local Government Shoreline permits:

☐ Substantial Development ☐ Conditional Use ☐ Variance

☒ Shoreline Exemption Type (explain): Fish Habitat Enhancement

Other City/County permits:

☐ Floodplain Development Permit ☐ Critical Areas Ordinance

STATE GOVERNMENT

Washington Department of Fish and Wildlife:

☒ Hydraulic Project Approval (HPA) ☒ Fish Habitat Enhancement Exemption – Attach Exemption Form

Washington Department of Natural Resources:

☒ Aquatic Use Authorization

Complete JARPA Attachment E and submit a check for $25 payable to the Washington Department of Natural Resources. **Do not send cash.**

Washington Department of Ecology:

☐ Section 401 Water Quality Certification

☐ Authorization to impact waters of the state, including wetlands (Check this box if the proposed impacts are to waters not subject to the federal Clean Water Act)

FEDERAL AND TRIBAL GOVERNMENT

United States Department of the Army (U.S. Army Corps of Engineers):

☐ Section 404 (discharges into waters of the U.S.) ☐ Section 10 (work in navigable waters)

United States Coast Guard:

For projects or bridges over waters of the United States, contact the U.S. Coast Guard at:

☐ Bridge Permit: D13-SMB-D13-BRIDGES@uscg.mil

☐ Private Aids to Navigation (or other non-bridge permits): D13-SMB-D13-PATON@uscg.mil

United States Environmental Protection Agency:

☐ Section 401 Water Quality Certification (discharges into waters of the U.S.) on tribal lands where tribes do not have treatment as a state (TAS)

Tribal Permits: (Check with the tribe to see if there are other tribal permits, e.g., Tribal Environmental Protection Act, Shoreline Permits, Hydraulic Project Permits**,** or other in addition to CWA Section 401 WQC)

☐ Section 401 Water Quality Certification (discharges into waters of the U.S.) where the tribe has treatment as a state (TAS).

Part 11–Authorizing Signatures

Signatures are required before submitting the JARPA package. The JARPA package includes the JARPA form, project plans, photos, etc. [help]

11a. Applicant Signature (required) [help]

I certify that to the best of my knowledge and belief, the information provided in this application is true, complete, and accurate. I also certify that I have the authority to carry out the proposed activities, and I agree to start work only after I have received all necessary permits.

I hereby authorize the agent named in Part 3 of this application to act on my behalf in matters related to this application. _____ (initial)

By initialing here, I state that I have the authority to grant access to the property. I also give my consent to the permitting agencies entering the property where the project is located to inspect the project site or any work related to the project. _____ (initial)

Edward Gunderson | | 5-17-23

Applicant Printed Name | Applicant Signature | Date

11b. Authorized Agent Signature [help]

I certify that to the best of my knowledge and belief, the information provided in this application is true, complete, and accurate. I also certify that I have the authority to carry out the proposed activities and I agree to start work only after all necessary permits have been issued.

Darin Hoyt | | 5/18/23

Authorized Agent Printed Name | Authorized Agent Signature | Date

Conservation District

11c. Property Owner Signature (if not applicant) [help]

Not required if project is on existing rights-of-way or easements (provide copy of easement with JARPA).

I consent to the permitting agencies entering the property where the project is located to inspect the project site or any work. These inspections shall occur at reasonable times and, if practical, with prior notice to the landowner.

Property Owner Printed Name | Property Owner Signature | Date

18 U.S.C §1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly falsifies, conceals, or covers up by any trick, scheme, or device a material fact or makes any false, fictitious, or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious, or fraudulent statement or entry, shall be fined not more than $10,000 or imprisoned not more than 5 years or both.

If you require this document in another format, contact the Governor's Office for Regulatory Innovation and Assistance (ORIA) at (800) 917-0043. People with hearing loss can call 711 for Washington Relay Service. People with a speech disability can call (877) 833-6341. ORIA publication number: ORIA-16-011 rev. 09/2018

COWLITZ RIVER CHANNEL MIGRATION PROJECT

Purpose: Project on the Cowlitz River to address multiple landowners concerns regarding channel migration associated with sediment deposition within the Cowlitz River.

Objectives:
Install pile type structures to manage hydraulic energy on river bank.
Shape river bank to an approximate 2:1 slope to facilitate installation of erosion control fabric(s) and establishment of native riparian woody vegetation
Establish native woody riparian vegetation.
Long term objective to manage bar deposit in Cowlitz River (dredge).

Funding:
Cowlitz County Board of County Commissioners
Washington State Conservation Commission Salmon Riparian Project
Landowner In-Kind contribution

Landowners:
Right Bank Cowlitz River
1) Manuel Silveira, parcel 62195, 5408 Westside Hwy
2) Billy Bryant, parcel 62194, 5402 Westside Hwy
3) Ed Gunderson, parcel 6219601, 5394 Westside Hwy
4) Donna Smith, parcel 6219603, 5386 Westside Hwy
5) Steven Williams, parcel 6219604, 5380 Westside Hwy
6) Gerald Covington, parcel 621960202, 5374 Westside Hwy
7) Alan Hansen, parcel 6219602, 5368 Westside Hwy
8) Gannin Thomas, parcel 6219602, 5330 Westside Hwy
9) Arlene Shepard, parcel 621930300, 5320 Westside Hwy
10) James Mistic Trust, parcel 621930200, 5310 Westside Hwy

Left Bank Cowlitz River
1) La Pianta LTD Partnership, parcel WJ0301010, Absentee
2) Howard Arntzen, parcel WJ0301011, Absentee
3) John Molden, parcel 62189, 707 7th St; Vader, WA 98593

Location:
Township 9 North, Range 2 West, Section 3
Township 9 North, Range 2 West, Section 10

Cowlitz Conservation District
2125 8th Avenue
Longview, WA 98632
(360) 425-1880 x5

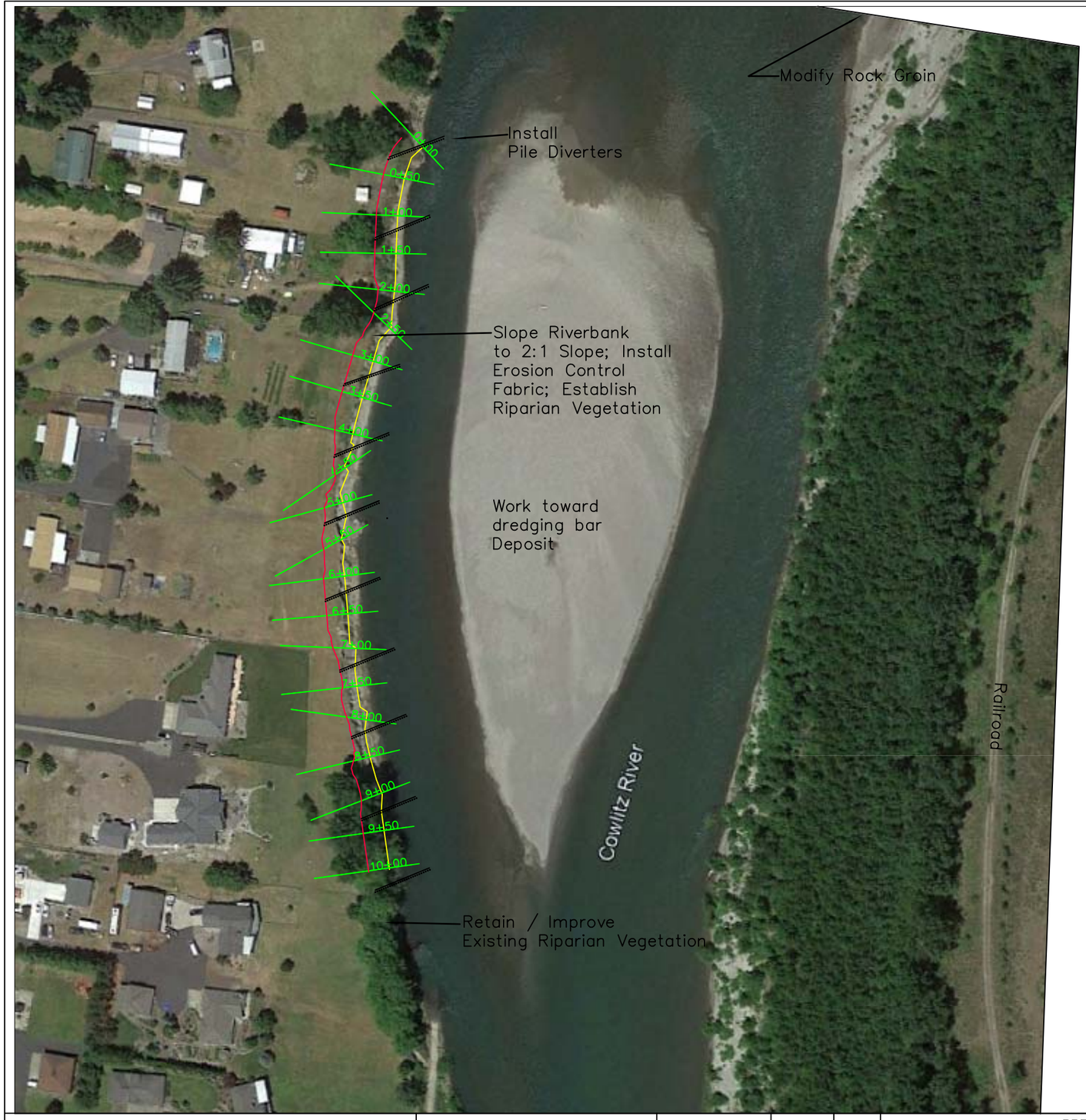
DATE : 1/25/23
SCALE : per scale bar
CHECKED BY:
DRAFTED BY: dbh

REVISIONS	DATE	BY

PREPARED FOR:
COWLITZ RIVER CHANNEL MIGRATION PROJECT
NWS-2023-458

EXISTING CONDITIONS

SHEET 1 OF 5



COWLITZ RIVER CHANNEL MIGRATION PROJECT

Project Plan Approach

1) Modify existing rock groin structure at upstream end of project reach on the left bank. Property owned by La Pianta LTD Partnership. Plan is to modify the rock groin by shortening it "push" on the river and/or thinning the rock exacting "push" on the river.
2) Install 11 pile diverter structures along the right bank (detail sheet 3). Approach is to construct an access alley to the river and begin installing pile with an excavator mounted vibratory pile driving attachment.
3) Shape riverbank to an approximate 2:1 slope between pile diverter structures. Bank shaping will remove dredge spoil deposits in effect benching down about 7 feet. Native soil below the dredge spoil material will be sloped to an approximate 2:1 slope providing native soils into which woody riparian vegetation will be planted.
4) Sow erosion control seed mix onto sloped riverbank at a rate of 30 pounds per acre
5) Install erosion control fabrics including mulch mat and coir geogrid. Forty–five foot slope length over 1000 feet of riverbank.
6) Establish woody riparian vegetation on shaped slope with willow spp (1000 pcs.); Red Osier Dogwood (1000 pcs); Red Alder (300 pcs); Black Cottonwood (800 pcs); Douglas–Fir (300 pcs)

CONSTRUCTION NOTES

1) All activities will be constructed in accordance with all local, state, and federal permit requirements. Permits will be on site with contractor and construction supervisor at all times.
2) Cowlitz Conservation District will provide construction oversight at all times to ensure adherence to plans and design specifications and to provide guidance in any as–built modifications.
3) Cowlitz Conservation District will provide all construction materials (anchor hardware, erosion control fabrics, plant materials necessary for the project. Contractor will provide tools and labor necessary to construct the project.
4) Spill kits will be reviewed and remain on site during all construction activities. Emergency spill plan will be prepared and agreed upon prior to commencing construction.
5) All equipment and tools will be in good working order and free from leaks. Designated maintenance areas will be agreed upon to confine any occurrence of spills.
6) Equipment will arrive at the project site free of vegetative material and soil.

Cowlitz Conservation District
2125 8th Avenue
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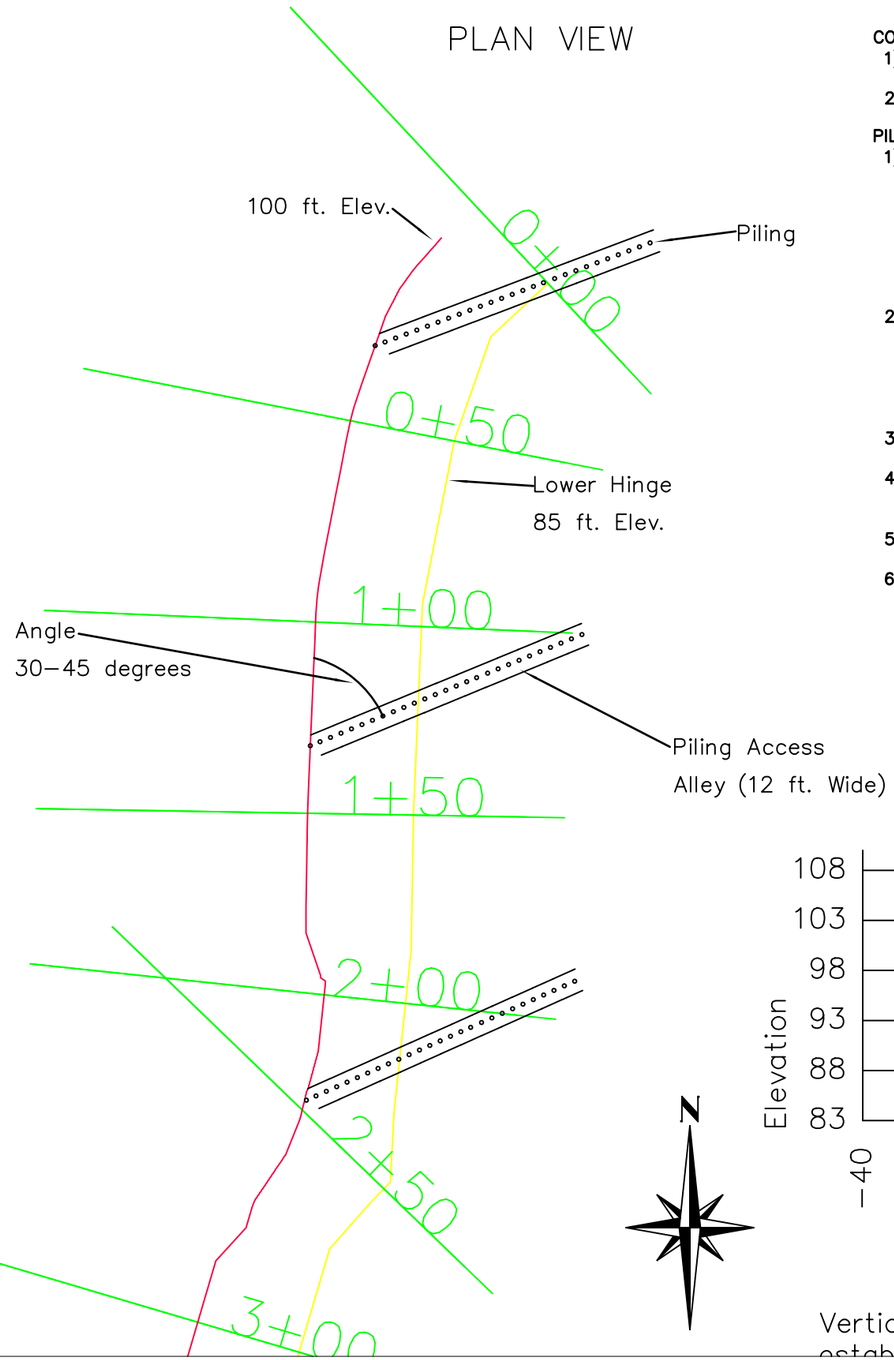
NWS–2023–458

PLANNED PROJECT SHEET

PLAN VIEW



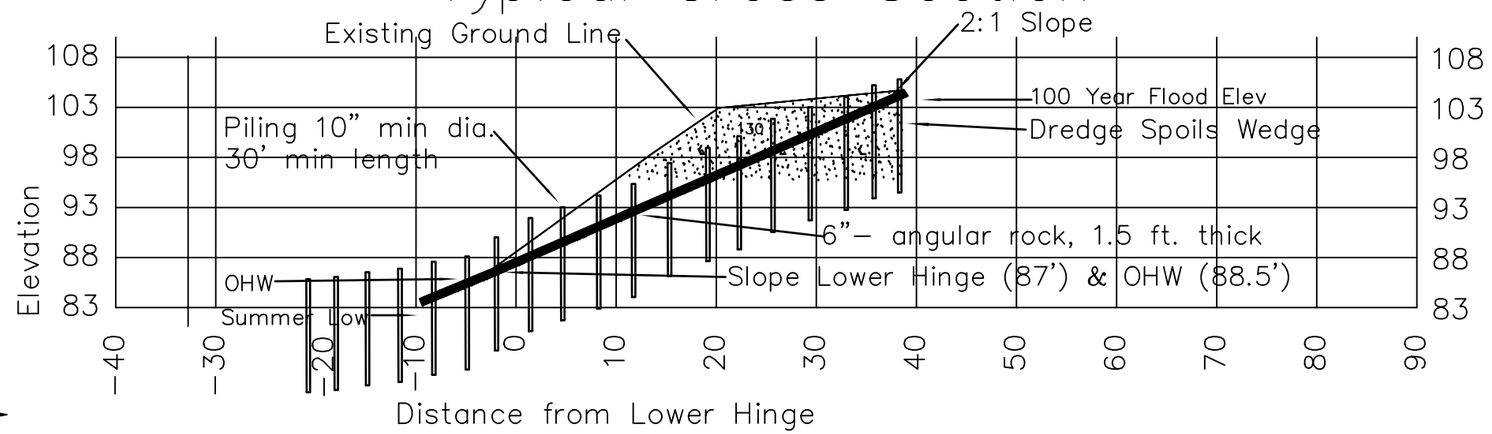
CONSTRUCTION NOTES

1) All work to be constructed in accordance with all applicable local, state, and federal laws. All applicable permits will be on site in the possession of both the contractor and construction oversight.
2) All work shall be conducted with on site overview by Cowlitz Conservation District staff.

PILE STRUCTURE NOTES

1) Access alleys will be excavated to provide equipment access to the river for the installation of piling rows. Alleys will be marked in the field on an approximate 100 foot spacing. Alleys will be oriented from 30–45 degrees with the riverbank as staked in the field. Dredge spoils will be stripped from the riverbank (basically from ground surface down about seven (7 feet). Once native soil is contacted alleys will be excavated from the lower hinge (elev. 87ft) up at a 2:1 slope. Native soil spoils will be retained to fill the wedge between elevation 100 and elevation 108. The alley will be 12 feet wide and will be over excavated by 1.5 feet for backfilling with 6–inch minus angular rock. Equipment with pile driving head will access the river along the alleys to install pile.
2) Pile will be driven into the riverbed starting about 24 feet out into the river. Pile will be clear Douglas–fir, 10" minimum diameter on the small end and minimum 30 feet long. Pile will be driven with 20 foot embedded leaving about 10 feet above river bottom. Once the slope is encountered pile will be driven so that about 5 feet is above ground (25 ft embedded). Pile will be driven in the center of the rocked alley. Pile will be driven about 2 pile diameters apart (about 3 foot centers) and will proceed up the slope to elevation 100 ft.
3) A larger diameter log may be used as a "barb" or "brow" log to tie pile together encouraging them to work as a unit rather than individually.
4) After pile is installed, the dredge spoil wedge will be excavated between pile alleys from station 0+00 to 10+00 (6,418 yards in place). Dredge spoils will be hauled from the project site by transporting to one of two disposal sites.
5) The remainder of the slope from lower hinge to approximate elevation 100 will be sloped at 2:1. This native soil material will be used as fill in the area where dredge spoils have been excavated again at a 2:1 slope.
6) The shaped slope will be protected from erosion according to erosion control detail sheet 4.

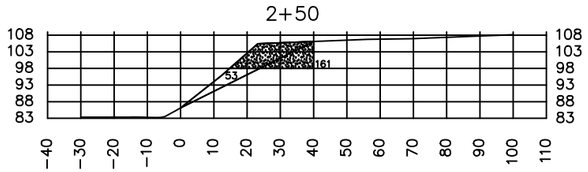
Typical Cross Section

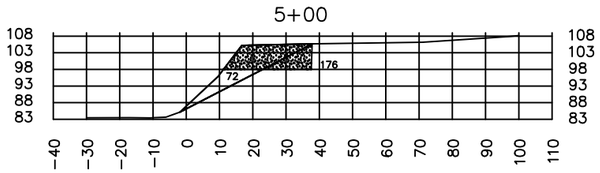


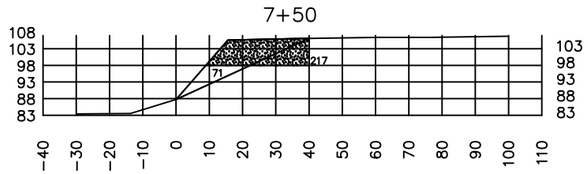
Scale (feet)
–25 0 50 100

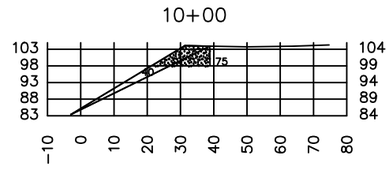
Vertical Datum = local, assumed elevation established during surveying (100 feet)

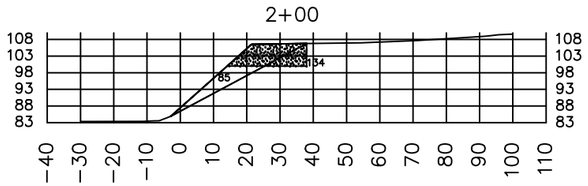
Cowlitz Conservation District 2125 8th Avenue Longview, WA 98632 (360) 425-1880	DATE : 1/27/23 SCALE : Per Drawing CHECKED BY: DRAFTED BY: dbh	REVISIONS	DATE	BY	PREPARED FOR: Cowlitz River Channel Migration Project NWS–2023–438	Pile Structure Detail	SHEET 3 OF 5

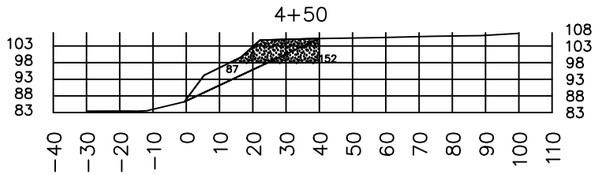


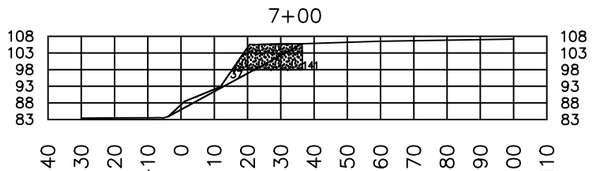


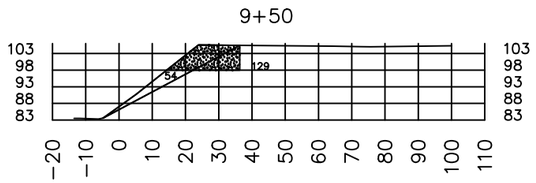


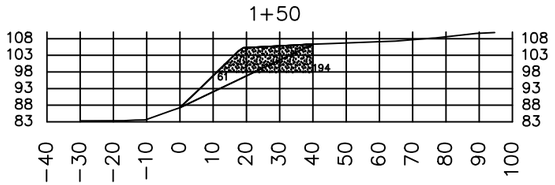


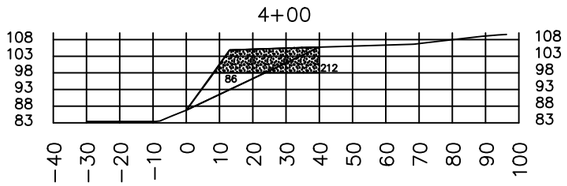


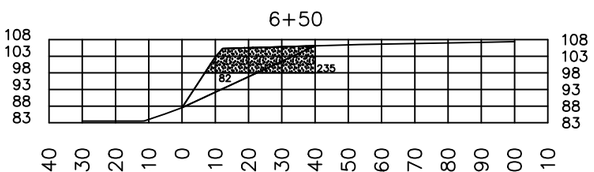


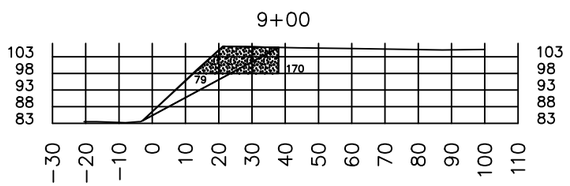


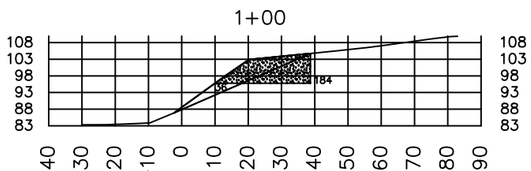


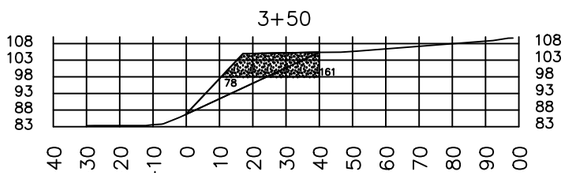


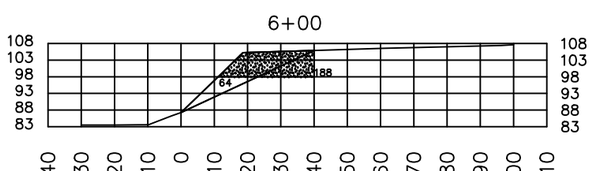


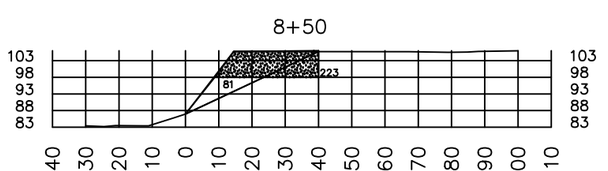


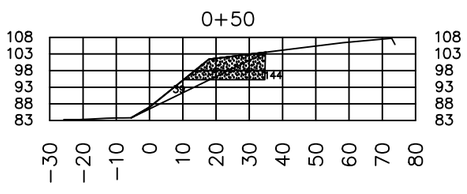


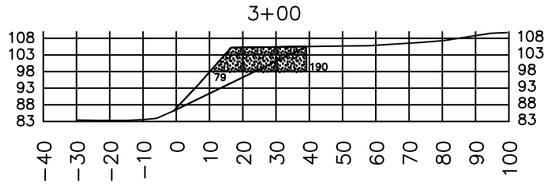


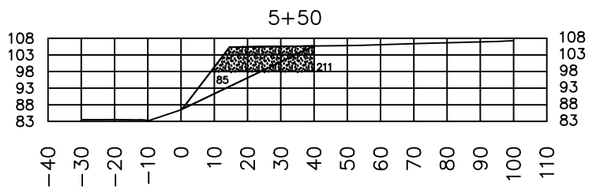


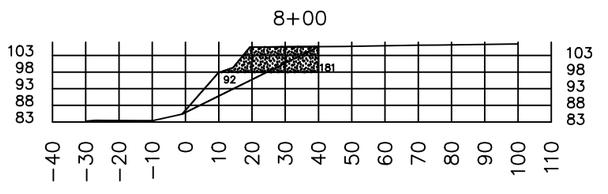












END AREAS FOR BANK SHAPING

1) Cross hatch area represents the dredge spoil material to be stripped and hauled off site (6418 yds in place). Includes the yards removed to excavate pile access alleys.
2) Existing groundline depicts bank at time of survey
3) 2:1 slope line is the desired final shape of the riverbank. Volume to be excavated after dredge spoils removed is 2483 yds in place that will be used as fill to create 2:1 slope between 98 foot and 105 foot elevation.
4) Numeric values are the cubic foot volumes within the dredge spoil block and within the 2:1 slope cut.

Cowlitz Conservsation District
2125 8th Avenue
Longview, WA 98632
(360) 425-1880 x5

DATE : 1/25/23
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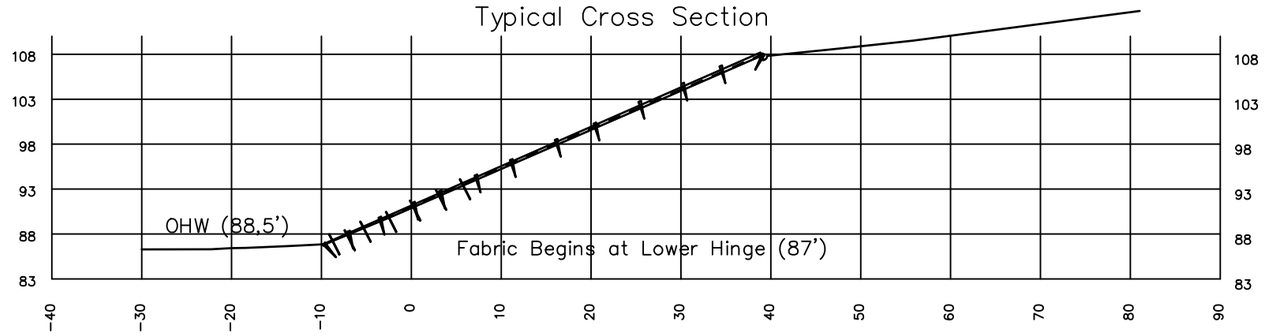
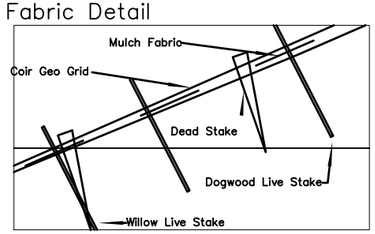
NWS-2023-458

BANK SHAPING END AREA VOLUME ESTIMATE



Fabric Detail



EROSION CONTROL TREATMENT NOTES

1) Slope bank to a 2:1 slope from station 0+00 to 10+00.
2) Create a cup trench at the top and bottom of the slope to anchor fabric.
3) 2 erosion control fabrics will be installed including a mulch fabric and a coir geo–grid. Fabric will be installed up and down the slope and will be shingled from downstream to upstream.
4) Seed the slope bank with a minimum of 30lbs per acre of erosion control seed mix. Seed mix shall contain at minimum annual rye grass, perennial rye grass, creeping red fescue, and white clover.
5) Cut mulch fabric to fit slope length allowing ends to drape into cup trenches at top and bottom of slope. Fabric can be tacked to slope with use of manufacture supplied 6 inch staples.
6) Cut Coir Geo–grid to fit slope allowing ends to drape into cup trenches. Anchor Geo–grid into bottom cup trench using dead stakes (see detail block) on an approximate 3 foot spacing.
7) Use dead stakes to leveraage fabric tight in the upper cup trench. Then drive dead stakes into the cup trench to anchor fabric.
8) Install dead stakes on face of fabric on an approximate 3–foot spacing.
9) Backfill cup trenches after fabric has been installed
10) Bank will be summer planted with cuttings (live stakes). Live stakes will be approximately ¾–inch diameter by 3–feet long. Live stakes will be planted so that the majority of the cutting is below ground (1–2 viable buds above ground. Stakes will be angled both up and downstream to further assist in anchoring fabric to the slope.
11) Summer plant willow cuttings at along the bottom of the slope on an approximate 2–foot spacing. Three rows of willow will be planted along the bottom of the slope (4 f. of slope).
12) Summer plant red osier dogwood cuttings on an approximate 3–foot spacing starting above the willow cuttings. Four rows will be planted (12 feet of slope).
13) The upper slope will be winter planted with black cottonwood, red alder, and Douglas–fir on an approximate 8–foot spacing.

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DATE : 1/25/23
SCALE : per drawing
CHECKED BY:
DRAFTED BY: dbh

REVISIONS	DATE	BY

PREPARED FOR:

COWLITZ RIVER CHANNEL MIGRATION PROJECT
NWS–2023–458

RIVERBANK EROSION CONTROL TREATMENT