2010
WASHINGTON STATE
Joint Aquatic Resources Permit Application (JARPA) Form[1]

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

US Army Corps of Engineers ®
Seattle District

AGENCY USE ONLY

Date received:

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][2]
South Seattle Delivery Lateral Expansion Project

Part 2–Applicant

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

2a. Name (Last, First, Middle) and Organization (if applicable)			
Miller, Randy – Northwest Pipeline GP			
2b. Mailing Address (Street or PO Box)			
295 Chipeta Way			
2c. City, State, Zip			
Salt Lake City, UT 84108			
2d. Phone (1)	**2e.** Phone (2)	**2f.** Fax	**2g.** E-mail
(801) 584-6702		(801) 584-6735	randy.miller@williams.com

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) and Organization (if applicable)
Last, Carolyn, Edge Environmental, Inc.
3b. Mailing Address (Street or PO Box)
405 Urban Street, Suite 310

[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.
- If your project might affect species listed under the Endangered Species Act, you will need to fill out a Specific Project Information Form (SPIF) or prepare a Biological Evaluation. Forms can be found at http://www.nws.usace.army.mil/PublicMenu/Menu.cfm?sitename=REG&pagename=mainpage_ESA
- If you are applying for an Aquatic Resources Use Authorization you will need to fill out and submit an Application for Authorization to Use State-Owned Aquatic Lands form to DNR, which can be found at http://www.dnr.wa.gov/Publications/aqr_use_auth_app.doc
- Not all cities and counties accept the JARPA for their local Shoreline permits. If you think you will need a Shoreline permit, contact the appropriate city or county government to make sure they will 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 of Regulatory Assistance at 1-800-917-0043 or help@ora.wa.gov.

3c. City, State, Zip			
Lakewood, CO 80228			
3d. Phone (1)	**3e.** Phone (2)	**3f.** Fax	**3g.** E-mail
(303) 988-8844	( )	(303) 988-8999	clast@edgeenvironmental.com

Part 4–Property Owner(s)

Contact information for people or organizations owning the property(ies) where the project will occur. [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 property owners. Complete the section below and fill out JARPA Attachment A for each additional property owner.

4a. Name (Last, First, Middle) and Organization (if applicable)			
See Table 1 in Appendix A for property owner information.			
4b. Mailing Address (Street or PO Box)			
4c. City, State, Zip			
4d. Phone (1)	**4e.** Phone (2)	**4f.** Fax	**4g.** 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]
☒ State Owned Aquatic Land (If yes or maybe, contact the Department of Natural Resources (DNR) at (360) 902-1100) ☒ Federal (Bonneville Power Administration) ☒ Other publicly owned (state, county, city, special districts like schools, ports, etc.) ☐ Tribal ☒ Private
5b. Street Address (Cannot be a PO Box. If there is no address, provide other location information in 5p.) [help]
The general location of the Project is shown on the General Wetlands Location figure behind the Figures Tab. The proposed Project starts immediately east of 230th Avenue SW in unincorporated King County and terminates west of Parkside Way SE, 1.5 miles east of the Renton city limits.
5c. City, State, Zip (If the project is not in a city or town, provide the name of the nearest city or town.) [help]
Renton, WA 98058
5d. County [help]
King County

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

¼ Section	Section	Township	Range
	27, 28, 29, 30 25	23N	5E and 6E

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

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

(beginning) MP 0.00 47.452844 N lat./-122.03392 W long
(ending) MP 4.00 47.45478 N lat./-122.118066 W long

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

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

The following parcels contain wetland/waterbodies affected by the South Seattle Delivery Lateral Expansion Project:

2123069016	2723069047	2723069096	2723069110
2723069163	2923069008	2923069021	2923069027
2923069058	2923069059	2923069076	2923069077
3023069062	3023069156	3023069176	3023069182
5103300280	5113000010		

See Table 1 in Appendix A for landowner information. See Environmental Alignment Sheets and figures showing wetland and parcel boundaries behind the Figures Tab.

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)
See Table 2 in Appendix A		

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

Table 3 in Appendix A is a complete list of wetlands that will be crossed by or are immediate adjacent to the Project. The table provides the pipeline trench length in each wetland, excavated volume at each crossing, and the area of impact (acres) from the construction right-of-way, temporary extra work areas (TEWAs), and temporary access roads.

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

Table 4 in Appendix A is a complete list of waterbodies that will be crossed by the Project. The table provides the name of the stream, length of crossing, excavated volume at crossing, the milepost of the crossing and the waterbody type. The Washington Department of Natural Resources (WDNR) stream type and fishery resource value are also provided on the table.

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

☒ Yes ☐ No ☐ Don't know

The pipeline will pass through approximately 0.02 mile of the Cedar River 100-year floodplain between MPs 2.04 and 2.06 (see Floodplain figure behind the Figures Tab).

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

The Project is bisected by the Cedar River and primarily is located on flat plateaus that occur on either side of the prominent, steep river valley adjacent to the Cedar River. The Cedar River is a Major Type S (1) Stream with excellent river channel structure and good riparian habitat. Gently rolling headland plateaus occur to either side of the river valley along the pipeline alignment. Minimum/maximum elevations along the Project route within these two plateaus varies from approximately 480 feet to 520 feet east of the Cedar River and 400 feet to 600 feet west of the Cedar River.

The majority of the Project occurs within or adjacent to existing easements, which are utility corridors associated with the existing 10-inch South Seattle Delivery Lateral pipeline or the BPA transmission lines. The existing permanent pipeline easement varies in width from 40 to 75 feet. Therefore, much of the landscape within the Project area has been converted

to utility corridors and scattered, low-density residences in the Urban and Mixed Environs vegetation type, some of which support pastures for local grazing and recreational activities, and are dominated by non-native species. The Project route crosses through the southern edge of the Cedar Hills Regional Landfill operation managed by King County. Although a significant portion of this facility has landscape that has been altered by massive earthwork activities, the area encompassing the Project occurs outside the edge of major disturbance. The Project route crosses native topography except for stormwater drainage alterations.

Where the permanent easement passes through forested stands, the vegetation has been altered and, depending on extent and frequency of landowner maintenance, is generally dominated by herbaceous species and/or invasive species such as Himalayan blackberry, Scotch broom, reed canarygrass, and other introduced grasses. Upland forest habitat primarily occurs at three locations along this Project. The first is the landfill property that has undeveloped areas within its fenced perimeter. The second are the slopes between the Cedar River and its adjacent headland plateaus. The final occurrence is along the last mile of the proposed Project where a rather large tract of undisturbed forest still occurs between Maple Valley Heights and a newer, upscale housing development at the southern terminus of this Project. Westside Lowlands Conifer-Hardwood Forest in the Project area is dominated by the following species, in descending order of abundance: big leaf maple, Douglas-fir, red alder, balsam poplar, and western red cedar. Many of the forested wetlands support a dense understory of Himalayan blackberry. Other trees present within the Cedar River valley include black cottonwood, Pacific willow and Oregon white ash.

Except for the Cedar River, all wetlands and streams within the Project area are minor, mostly seasonal, headwater habitats. Palustrine emergent wetlands in the Project area support a variety of native and introduced species including reed canarygrass, creeping buttercup, slough sedge, common rush, panicled bulrush, common velvetgrass, Japanese knotweed, American speedwell, yellow flag iris, and cattail.

A small, rural residential development called Maple Valley Heights occurs on the headland plateau west of the Cedar River. This is an older development dating from probably the 1960s with mostly one-story houses on small lots in a square grid pattern. Nearly all stormwater runoff is directed in open, usually grass-lined swales that parallel the roads.

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

Northwest currently maintains a 40- to 75-foot permanent easement for the existing South Seattle Delivery Lateral 2454 10-inch mainline and loop pipelines.

Land use varies along the Project: rural residential developments, pasture, mixed forestland, industrial/commercial, and utility/transportation corridor. Livestock occurrence is limited to only a few pasture areas. The Project route crosses through the southern edge of the Cedar Hills Regional Landfill operation managed by King County.

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

Adjacent land use is the same as within the Project corridor: rural residential lands, pasture, mixed forestland, industrial/commercial, utility/transportation corridor.

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

As described in the Project Description (see Appendix C), Northwest's existing South Seattle Delivery Lateral system (mainline and loop pipeline) are existing, buried pipelines. The existing buried pipelines have a typical depth of cover of approximately 3 feet, with deeper burial depths (5 feet) occurring at road crossings, foreign line crossings, and waterbody crossings, and at other site-specific areas.

Three existing aboveground facilities located along the Project will be modified.

1. At MP 0.00 the Take-off Facility will be modified by installing a new 10-inch tie-over and a new 16-inch pig launcher.
2. At MP 0.24 the Cedar Hills Meter Station will be modified by replacing the existing 10-inch tap with a new 16-inch tap and the chromatograph will be replaced.
3. At MP 2.57 the Maple Heights Meter Station will be modified to tie in the proposed 16-inch loop pipeline to the existing graded, graveled and fenced facility.

Additionally, the existing 10-inch pig launcher located at MP 2.31 on the 10-inch loop pipeline will be removed and the easement will be relinquished to the landowner. At the end of the Project at MP 3.99, a new aboveground facility will be installed for a 10-inch pig launcher, 16-inch pig receiver, and a tieover between the 10-inch mainline and proposed 16-inch pipeline.

The General Location (2454.31-Y-0001) figure behind the Figures Tab shows the location of the Project alignment and the location of the aboveground facilities along the alignment.

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

Access to the beginning of the Project from Renton is south on State Highway 169 (Maple Valley Highway) to Cedar Grove Road SE. From Cedar Grove Road proceed east to 230th Ave. SE. Continue North on 230 Ave. SE approximately 0.3 mile to the intersection of the South Seattle Delivery Lateral and Northwest's South Seattle Meter Station. The Project alignment proceeds west crossing 227the Ave SE (MP 0.23), 228the Ave SE (MP 0.27), State Highway 169 (MP 2.09) and 196th Ave SE (MP 2.30). Between MPs 2.30 and 3.15 the alignment passes through the Maple Heights Subdivision along SE 164 Street. The end of the Project is located just east of Parkside Way SE (MP 3.91).

The General Wetlands Location figure (behind the Figures Tab) provides a general location map of the Project.

Part 6–Project Description

6a. Summarize the overall project. You can provide more detail in 6d. [help]

A detailed Project Description is provided in Appendix C. In summary, the South Seattle Delivery Lateral Expansion Project (Project) will increase delivery capacity by removing and replacing 3.85 miles of 10-inch diameter loop pipeline with a 16-inch diameter pipeline in the same trench. The Project will be completed primarily using Northwest's existing permanent easement, which varies between 40 and 75 feet in width, which was established for the South Seattle Delivery Lateral's 10-inch mainline and loop pipelines. The temporary construction right-way, which incorporates the existing permanent easement, will typically be 100 feet wide. Northwest has narrowed the construction right-of-way where feasible at wetland and waterbody crossings to 75 feet wide. Conducting the pipeline removal and replacement activities in the same trench within Northwest's existing, maintained easement, minimizes impacts to wetlands. Temporary extra work areas (TEWAs) will also be required at various locations along the Project to facilitate road and waterbody crossings, provide ingress/egress, stage construction activities, among uses. The Project includes in-place abandonment of 0.15 mile of 10-inch pipeline between MPs 2.01 and 2.16 where the proposed 16-inch loop pipeline deviates from Northwest's existing easement for the South Seattle Delivery Lateral to facilitate the crossing (wet open cut) of the Cedar River and the bored crossing of State Highway 169. In this area Northwest will acquire 0.15 mile of new permanent easement to protect the offset alignment for the proposed 16-inch loop pipeline. Abandoning the pipeline in-place will avoid additional in-water work, streambed disturbance, and subsequent increases in turbidity associated with excavating the pipeline, pulling the pipeline from the riverbed, and backfilling the trench. Additionally, in-place abandonment will avoid disruption to State Highway 169, as well as the steep slopes in the deviation area. The Project also requires appurtenant facility (i.e., launcher/receivers) installations, modifications, and system tie-overs, as noted in 5o above.

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

☐ Commercial ☐ Residential ☐ Institutional ☐ Transportation ☐ Recreational
☐ Maintenance ☐ Environmental Enhancement ☒ Utility

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

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

☐ Other:

6d. Describe how you plan to construct each project element checked in 6c. 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 flood plain.

To install the 16-inch diameter replacement pipeline, the construction sequence is as follows:

- Pre-Construction Survey;
- Clearing and Grading;
- Installation of Erosion Control BMPs;
- Topsoil Segregation;
- Trenching and 10-inch removal and 16-inch Installation;
- Hydrostatic Testing; and
- Restoration.

Each part of the sequence is summarized in detailed in the Erosion Control and Revegetation Plan (ECRP) provided in Appendix B (see Section 2.3). Further, Section 1.6 of the detailed Project Description provided in Appendix C includes full description of the construction procedure elements and provides a typical construction sequence schematic, showing the general type of equipment that will be used.

Of the 15 wetland and waterbody systems delineated in the Project Area, the Project will affect 1.66 acres in 12 of these systems. The Project's pipeline centerline will cross 8 waterbody and jurisdictional wetland systems for a total of 633.61 feet. Of the 5 waterbodies crossed, only the Cedar River is perennial, the other 4 are minor, primarily seasonal intermittent streams that are expected to be dry during the time of construction. If water is flowing at the time of construction, pipeline installation through the 4 intermittent waterbodies will be crossed using a dry open-cut crossing method – either fluming (see Appendix D) or dam and pump (see Appendix E).

The Cedar River will be crossed using a wet open cut method (see Appendix F). At the crossing location, the replacement pipeline has been offset approximately 75 to 100 feet south of Northwest's existing South Seattle Delivery Lateral to ensure the safety and integrity of the existing 10-inch pipeline that will remain in service during installation of the proposed 16-inch loop pipeline. The pipeline offset also facilitates the bored crossing of State Highway 169 which is immediately adjacent to the river crossing. In the area of the 16-inch pipeline deviation, (MPs 2.01 to 2.16) the 10-inch pipeline will be abandoned in-place after construction for the reasons noted in 6a. To install the new crossing, Northwest will require temporary workspace in the river and on both sides of the river.

As described in detail in the Cedar River Crossing Methodology Plan (Appendix F), the installation method chosen for the Cedar River crossing is a wet open cut method. Several alternatives were considered; however, due to the width of the river, the volume of flowing water, and other significant physical factors, Northwest determined that the wet open cut method is the only crossing method that could be successfully implemented at this particular location. A site-specific plan describing the open cut crossing is included as Attachment 2 to the Cedar River Crossing Methodology Plan in Appendix F. The intent of this site-specific crossing plan is to ensure that the crossing can be successfully and safely completed in the least amount of time to minimize the duration of in-stream construction activities, turbidity increases, and water quality effects.

Crossing methods for both wetlands and waterbodies are detailed in the respective sections (Section 7 and Section 8) that follow in this application form. The construction procedures that will be used to cross the wetlands and waterbodies are described in appendices B, C, D, E and F. These construction procedures incorporate FERC's Wetland and Waterbody Construction and Mitigation Procedures (FERC's Wetland and Waterbody Procedures), included as Attachment C to Appendix B, and the requirements of FERC's Upland Erosion Control, Revegetation and Maintenance Plan (FERC's Upland Plan), which is provided as Attachment B to Appendix B. The intent of FERC's Upland Plan and Wetland and Waterbody Procedures is to minimize the extent and duration of project-related disturbance to wetlands and waterbodies.

Appendix B provides Northwest's ECRP that will be utilized to control surface runoff and minimize erosion and potential sedimentation effects. The ECRP incorporates the procedures outlined in FERC's Upland Plan as well as the recommendation of the Natural Resource Conservation Service to enhance revegetation success. The ECRP will serve as a template for the Stormwater Pollution Prevention Plan that Northwest will submit to WDOE for stormwater control requirements under Section 402 of the Clean Water Act and Washington's Water Pollution Control Act.

To minimize the extent of Project-related disturbance, Northwest will verify and clearly mark (with flagging) the construction limits and boundaries of all sensitive areas (including waterbodies and wetlands) prior to clearing for construction. Flagged boundaries will be maintained during construction. Northwest will ensure that all construction activities are confined to the certificated work limits authorized for construction.

TEWAs have been located a minimum of 50 feet from the edge of wetlands and waterbodies, where possible, to minimize impacts to wetland buffers and riparian zones as required by FERC's Wetland and Waterbody Procedures. There are a few

situations where Northwest has requested variances from FERC's Wetland and Waterbody Procedures (see Table 5 in Appendix A) based on topographic or other site-specific construction feasibility issues which prevent locating a TEWA 50 feet from the wetland or waterbody boundary.

During construction, Northwest will have an Environmental Inspector (EI) present during all phases of construction within wetlands and waterbodies to ensure compliance with FERC's Upland Plan and Wetland and Waterbody Procedures as well as other Project permit stipulations/requirements. Section II A. and B. of FERC's Upland Plan (see Attachment B to Appendix B) outlines the responsibility of the EI.

To minimize potential for spills and any impact from such spills, a Spill Plan has been developed and will be implemented during construction (see Appendix G). Fueling and storage of hazardous materials will be conducted in accordance with Northwest's Spill Plan and FERC's Wetland and Waterbody Procedures.

6e. What are the 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: Summer 2013 End date: November 2013 ☐ See JARPA Attachment D

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

The Project will meet Puget Sound Energy's request for increased delivery capability on the South Seattle Delivery Lateral. Puget Sound Energy is the primary user of the lateral, contracting for over 90 percent of the delivery capacity.

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

$13 million

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

Tables 3 and 6 in Appendix A list the wetlands and the wetland buffers that will be affected by the Project. These tables provide the pipeline length across each wetland (see Table 3) and wetland buffer (see Table 6) and the area of impact (acres) from the construction right-of-way and TEWAs. Wetland crossing drawings, which are site plans for each wetland that will be affected, are provided behind the Figures Tab and also in the Wetland/Stream Inventory Report in Appendix H. Each of the wetland delineation drawings shows the proposed construction right-of-way configuration through affected areas on a scale of either 1-inch to 100-feet or 1-inch to 200 feet; a corresponding drawing with a color aerial photo background is also included.

The primary impact to wetlands as a result of pipeline construction and operation will be temporal disturbance. In herbaceous wetlands (palustrine emergent systems) impacts will be temporary and short-term because herbaceous vegetation regenerates quickly (one growing season), and the hydrology of the wetland will not be altered. Scrub-shrub wetlands typically require approximately two to five years to recover to pre-construction cover and density. The Project's effects to scrub-shrub systems (0.26 acre) are expected to be temporary and short-term because these systems are primarily associated with species (i.e., spirea) that will readily reestablish within three years. The Project's 0.33-acre

disturbance to forested wetlands is considered a long-term effect because of the recovery period required to restore these systems.

Northwest's Wetland, Waterbody, and Critical Area Buffer Mitigation Plan provided in Appendix I describes the measures that have been incorporated into the Project design to avoid and minimize adverse impacts to wetlands and how Project impacts to wetlands will be rectified and unavoidable impacts will be compensated. Section 1.6.4 of the Project Description (see Appendix C) and the ECRP (see Appendix B) also describe the measures that have been incorporated in the Project design to minimize and avoid impacts to wetlands. FERC's Wetland and Waterbody Procedures (see Attachment C to Appendix B) were developed specifically for pipeline Projects with the intent to minimize the extent and duration of project effects to wetlands and waterbody crossings. FERC's Wetland and Waterbody Procedures were incorporated into the Project design where feasible; however because of site-specific topographic and engineering constraints, there are a number of areas where Northwest requested variances from FERC's Wetland and Waterbody Procedures (see Table 5 in Appendix A). The design measures to avoid and minimize wetland impacts are summarized in this section.

Northwest's design to increase the delivery capacity by removing and replacing the existing 10-inch loop line with a larger 16-inch pipeline in the same trench within the existing maintained easement minimizes impacts to wetlands considerably. As shown in Table 3 (see Appendix A), the Project will not permanently fill wetlands or create wetland vegetation type conversion impacts because the Project will be located within wetlands in areas that have been previously disturbed, and no expansion of the permanent easement is necessary within wetlands.

To minimize impacts to wetlands, Northwest has reduced (or "necked-down") the width of the construction right-of-way through wetlands from 100 feet to 75 feet where feasible. Neck-downs through wetlands are consistent with FERC's Wetland and Waterbody Procedures. A typical construction right-of-way configuration through wetlands is shown on Drawing 2428.34-X-0005 (see Attachment A to Appendix B). Figure 1.5-1 at the end of the Project Description (see Appendix C) also depicts the typical right-of-way configuration, in comparison to various upland right-of-way configurations. Northwest has designed each crossing such that TEWAs are not closer than 50 feet from wetland boundaries, consistent with FERC's Wetland and Waterbody Procedures (VI. B. 1. a. & b.). In some areas, Northwest has requested a variance from FERC's Wetland and Waterbody Procedures because of site-specific conditions (see Table 5 in Appendix A).

Vegetation through wetlands will be cut to ground level in the construction right-of-way. Grading and stump removal will be performed only over the trench line, except where otherwise required for safety, as determined by the EI and the Chief Inspector. Silt fences and/or straw bales (weed free) will be installed at the edges of the construction right-of-way in wetlands where there is a possibility for excavated trench spoil to flow into undisturbed areas of the wetland.

Topsoil will be segregated in wetlands that are unsaturated at the time of construction. Topsoil segregation will occur over the trench line and will be replaced to the original horizon and elevation. This will allow the hydrology (i.e., direction, volumes, and rates of water flow) to be restored to preconstruction conditions and will promote reestablishment of hydrophytic wetland vegetation.

In wetlands, where standing water or saturated soils are present, or if construction equipment would cause ruts or mixing of the topsoil and subsoil in wetlands, Northwest will use low-ground-weight construction equipment or will operate normal equipment on timber riprap or standard prefabricated equipment mats. Equipment mats are comprised of wood and serve to distribute the weight of equipment. Rocks, soil imported from outside the wetland, tree stumps, or brush riprap will not be used to support equipment on the construction right-of-way. If trees are utilized as timber riprap or equipment mats to support equipment in saturated areas, they will be obtained from clearing operations and will not be cut outside of the approved construction work areas. Where timber riprap is used, Northwest will attempt to use no more than two layers of riprap to support equipment on the construction right-of-way. All materials utilized to support equipment on the construction right-of-way will be removed after construction.

Northwest will follow section IV. 1. of FERC's Wetland and Waterbody Procedures which limits concrete-coating activities within 100 feet of a wetland or waterbody boundary.

Trench breakers will be installed where the trench enters and exits the wetland to prevent wetland draining and to maintain the hydrologic integrity of the wetland. A diagram of a trench breaker is provided in the ECRP (see Drawing 2454-34-0011 in Attachment A to Appendix B). Where the pipeline trench can potentially drain a wetland, the trench bottom will be sealed as necessary to maintain wetland hydrology. After construction, all disturbed areas within wetlands will be returned to their preconstruction contours, to the extent practicable, to maintain the wetland's hydrologic characteristics.

Construction and post-construction practices specified in FERC's Wetland and Waterbody Procedures (see Attachment C to Appendix B) are designed to minimize or eliminate risks due to hazardous chemicals and refueling construction equipment (Sections V.B.3 f-g and VI.C.2 h-l). In addition, Northwest has developed a Spill Plan (see Appendix G) which describes the preventive and mitigative measures that will be used to minimize the impacts associated with spills of fuel, lubricants or

other hazardous materials that could impact waterbodies and/or wetlands. The Spill Plan also identifies the types and quantities of hazardous materials that will be stored/used on the right-of-way or in staging areas. Construction contractors will be trained and prepared to demonstrate their ability to implement the Spill Plan.

The duration of construction-related disturbance within wetlands will be minimized and construction equipment operating in wetland areas limited to that needed to clear the right-of-way, dig the trench, remove the pipe, fabricate and install the pipe, backfill the trench, and restore the right-of-way. All other construction equipment will use access roads located in upland areas to the maximum extent practicable. Where access roads in upland areas do not provide reasonable access, Northwest will limit all other construction equipment to one pass through the wetland using the right-of-way in wetlands that cannot be appropriately stabilized.

Northwest's Wetland, Waterbody, and Critical Area Buffer Mitigation Plan (see Section 2.2 in Appendix I) addresses revegetation procedures, also outlined in the ECRP, which would be applied in wetlands and wetland buffers to ensure habitat restoration; appropriate revegetation measures will be applied based on the wetland habitat types. Revegetation would include seeding with an applicable seed mixture and supplemental planting to restore preconstruction functions and values. Table 1-3 in Appendix 1 to Appendix I provides a wetland and wetland buffer seed treatment guide which indicates the specific seed mixture and supplemental planting treatment for each affected wetland and wetland buffer.

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 **See Appendix H – Wetland/Stream Inventory**

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 **See Appendix H – Wetland/Stream Inventory**

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 ☐ Not applicable

A Wetland, Waterbody, and Critical Area Buffer Mitigation Plan is provided in Appendix I.

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

As described in the mitigation plan (see Appendix I), the Project will not permanently fill wetlands or wetland buffers, nor cause permanent wetland vegetation type conversion impacts. To mitigate for the Project's temporal impacts to wetlands (1.66 acres, which includes 0.59 acre of impacts to scrub-shrub and forested wetlands) and wetland buffers (9.65 acres, including 2.39 acres of Westside Lowlands Conifer-Hardwood Forests), Northwest will rectify the impacts through restoration and revegetation. In addition, Northwest will implement riparian vegetation enhancement plantings within the Project's temporary construction right-of-way and TEWAs (1.4 acres) on the east floodplain of the Cedar River and will install an Engineered Log Jam (ELJ) habitat enhancement structure immediately downstream of the Project on the east bank of the Cedar River.

Further, Northwest will compensate for temporal wetland impacts to palustrine forested and scrub-shrub wetlands as well as the temporary short-term effects associated with the open cut crossing of the Cedar River. Northwest discussed compensatory mitigation for the Project's potential effects with the U.S. Army Corps of Engineers, Washington Department of Ecoloy (WDOE), Washington Department of Fish and Wildlife (WDFW), National Marine Fisheries Service (NMFS), U.S.

Fish and Wildlife Service (FWS), and King County during interagency meetings conducted in 2012 associated with the wet open cut crossing of the Cedar River. During these meetings, King County directed Northwest to an established Mitigation Reserves Program[3] which is an "in-lieu fee" mitigation program that is certified under 2008 federal rules. Northwest expects to utilize this program to compensate for short-term effects associated with the crossing of the Cedar River, as well as the Project's temporal wetland effects. Northwest will evaluate the various mitigation opportunities within the Cedar-Lake Washington Service Area portion of King County's Mitigation Reserves Program with the various regulatory agencies during the Project's permitting process.

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)
See Table 3 in Appendix A						

[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]

The trench through all wetlands crossed by the pipeline will be backfilled with native material removed from the trench. No fill will be imported.

The estimated fill volume (of native material) calculated for all wetlands crossed by the pipeline in King County is 147.51 cubic yards. The estimated volume assumes four feet of cover over the pipeline within a three-foot wide trench (bottom of trench) with 0.75:1 slopes. Therefore, the top of the trench is approximately 9.3 feet wide, with a total crossing length of 539.05 feet through the wetlands in King County.

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]

Approximately 147.51 cubic yards of trench excavation will be required for installation of the pipeline through wetlands. A backhoe will be used to excavate and backfill the trench. Excavated native wetland material removed from the pipeline trench will be temporary stockpiled adjacent to the wetland and will be used to backfill and restore original contours after the pipe is installed.

[3] http://www.kingcounty.gov/environment/waterandland/wetlands/mitigation-credit-program.aspx

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

Table 4 in Appendix A lists the 5 waterbodies crossed by the Project. Construction of the Project may result in minor, short-term impacts to waterbodies. Clearing and grading of streambanks, removal of riparian vegetation, in-stream trenching, trench dewatering, and backfilling could result in modification of aquatic habitat; increased sedimentation; turbidity; increase in temperature; decreased dissolved oxygen concentrations; releases of chemical and nutrient pollutants from sediments; and introduction of chemical contaminants, such as fuel and lubricants. To minimize adverse impacts at waterbody crossings, Northwest proposes to adopt and implement, with requested variances (see Table 5 in Appendix A), FERC's Upland Plan and FERC's Wetland and Waterbody Procedures during the construction, post-construction restoration, and operation of the Project. Northwest has incorporated FERC's Upland Plan and FERC's Wetland and Waterbody Procedures into the Project design and the Project-specific ECRP (see Appendix B), which has been developed to minimize the potential for erosion, sedimentation, and other adverse water quality effects. Construction and environmental practices specified in FERC's Wetland and Waterbody Procedures will minimize impacts to fisheries of concern.

Sediment barriers will be installed immediately after initial disturbance of the waterbody or adjacent upland. Sediment barriers will be properly maintained throughout construction and reinstalled as necessary (such as after backfilling of the trench) until replaced by permanent erosion controls or restoration of adjacent upland areas is complete and revegetation has stabilized the disturbed areas. To minimize the potential for sedimentation during construction, all spoil from waterbody crossings will be placed in the right-of-way at least 10 feet away from the water's edge. All spoil will be contained within sediment filter devices such as silt fences and/or straw bales to prevent the flow of spoil off of the right-of-way or into surface waters. Other specific methods to minimize erosion-related impacts are described in the Project's ECRP (see Appendix B).

The proposed alignment crosses four minor unnamed intermittent headwater waterbodies. While expected to be dry, if any of these four intermittent waterbodies are flowing at the time of construction, they would be crossed using dry open cut crossing procedures (flume or dam and pump). A full discussion of the fluming and dam and pump crossing methods and safeguards are provided in Appendix D and Appendix E. Pipeline construction at waterbody crossings will be conducted within the WDFW-recommended in-water construction window from August 1 to 31 (WDFW, 2012). Construction during low flows will minimize the potential for sedimentation and turbidity and the time it takes to complete in-stream construction.

A summary of fluming procedures follows:

- A flume pipe (or pipes) is placed on the bottom of the waterbody and aligned with the flow of the stream. The size of the flume pipe and the number of pipes to be used is determined by the potential amount of flow in the particular waterbody at the time of construction. The flume pipe is longer than the construction area width of the crossing.
- A temporary dam of sandbags and plastic is constructed at the upstream end of the flume, resulting in the entire stream flow passing through the flume and bypassing the construction area. This allows continuous stream flow to downstream reaches.
- A similar temporary dam of sandbags and plastic is constructed at the downstream end of the flume. This prevents the water in the stream from backflowing into the construction area.
- All instream excavation is done between the dams. The dams prevent turbid water created by construction from flowing downstream.
- Adequate downstream flow rates will be maintained through the flume pipe.
- Temporary spoil placement will be at least 10 feet from the waterbody and will be contained by sediment barriers.
- Native backfill material excavated from the trench will be replaced and
- All banks will be stabilized and temporary sediment barriers will be installed within 24 hours of completing the crossing.
- Flumes will be removed as soon as possible following backfilling of the trench

The dam and pump crossing method is similar to the fluming method, except instead of a flume pipe to divert stream flow to the downstream side of the construction zone, pumps are used to pump water around the upstream and downstream dams isolating the construction zone. Flumes or dams and pumps will be completely installed and functioning prior to any

in-stream disturbance. All dry open cut crossings will be completed as a single effort to minimize the time of in-stream disturbance. Based on available data and field review, none of the 4 minor intermittent headwater waterbodies crossed by the Project supports fish; therefore, fish removal/salvage between the temporary dams would not be required. The dry open-cut crossing techniques eliminate almost all of the downstream turbidity and sedimentation caused by in-stream construction. Short-term elevated downstream turbidity levels may result from installation of the dam for fluming or dam and pump crossings. This occurs when sandbags, placed on the bottom of the creek to support the flume pipe or for the dam and pump method, are removed after construction is completed (see Appendix D and Appendix E). The short-term elevated turbidity levels experienced during installation and removal of the dams is unavoidable, and the only practicable BMP that can be used to control the level is for the contractor to proceed with installation and removal in a well-planned and expeditious manner.

All waterbodies will be backfilled with material removed from the trench. The channel bottom and banks will be returned to preconstruction contours as practical; banks will be stabilized; and temporary sediment barriers will be installed within 24 hours of completing the crossing.

As described in detail in the Cedar River Crossing Methodology Plan (see Appendix F), the installation method chosen for the Cedar River crossing is a wet open cut. Several alternatives were considered; however, due to the width of the river, the volume of flowing water, and other significant physical factors, Northwest determined that the wet open cut method is the only crossing method that could be successfully implemented at this particular location. A site-specific plan describing the open cut crossing is included as Attachment 2 to the Cedar River Crossing Methodology Plan (see Appendix F). The intent of this site-specific crossing plan is to ensure that the crossing can be successfully and safely completed in the least amount of time to minimize the duration of in-stream construction activities, turbidity increases, and water quality effects. Northwest would complete the crossing within the WDFW-recommended in-water construction window from August 1 to 31 and would schedule the crossing for the first half of the month as recommended by WDFW to minimize potential effects to anadromous fish species. This schedule also coincides with the seasonal low flow period for the river which will minimize potential water quality and aquatic resource effects.

King County has data from a water quality monitoring station (A438) on the Cedar River which is located approximately 2,000 feet downstream of the proposed crossing at the bridge on East Jones Road at 196th Avenue South East. Data at this station have been collected from 1972 through 2008. Data for the most recent 10-year period from 1999 to 2008 indicated that turbidity as measured by total suspended solids (TSS) for the month of August, during the Project's proposed crossing period for the Cedar River, was 1.3 mg/l during non-storm flows and 2.5 mg/l during storm flows (see Figure 1).

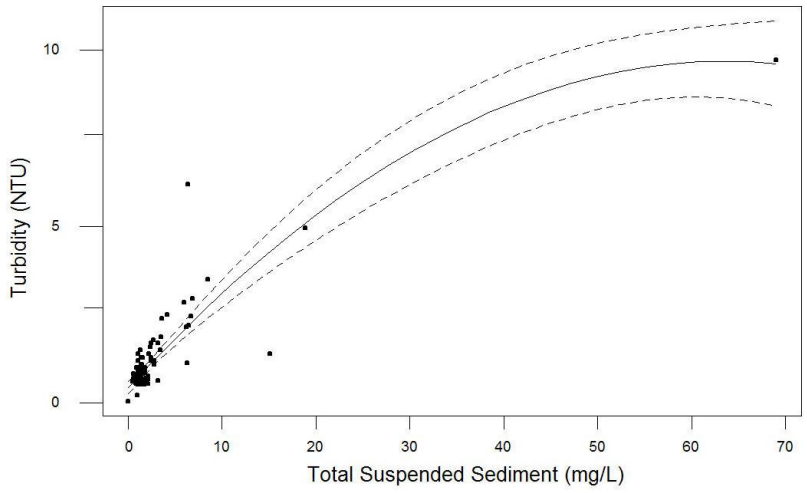

Figure 1
Relationship of Turbidity (NTUs) to Total Suspended Sediment (mg/L) in the Cedar River Measured by King County at Station A438 from1999 to 2008. The Regression (solid line) Equation is $Y = 0.436 + 0.290 X – 0.002 X^2$ ($r^2 = 0.764$, $P < 0.001$) with 95 percent Confidence Intervals (dashed lines)

GeoEngineers conducted an analysis to evaluate the potential impacts associated with the proposed open cut crossing of the Cedar River on in-stream TSS concentrations (see Appendix J) during August when the crossing is proposed (i.e., background TSS levels are 1.3 or 2.5 mg/l). The results of the plume analysis indicated that the downstream distance for the entire plume to settle out, assuming a flow range of 130 to 200 cfs during construction and no BMPs in place, was estimated to be between 2,238 and 2,883 feet.

The lower Cedar River has been classified as core summer salmonid habitat and for salmonid spawning, rearing, and migration as a designated water use by Washington (WAC 173-201a-200 (1)(e) (see Table 200[1][e]), exceedance of turbidity by in-stream activities is limited to 5 NTUs above background (with background <50 NTU) to within 300 feet downstream in waterbodies with flows >100 cfs, which are expected during August, when construction will occur. Background turbidity (NTUs) in the Cedar River is directly related to TSS, measured over all months between 1999 and 2008 (see Figure 1).

TSS concentrations during the wet open cut of the Cedar River have been estimated (see Appendix J) based on equipment used to excavate the pipeline trench, particle sizes likely to be excavated, particle fall velocities through the water column, current flows, water volume, and hydraulics expected during construction in August. Two estimates of TSS concentration were modeled (see Table 1). One was based on median flows (130 cfs occurring with 50 percent probability) measured at Renton (USGS gage 12119000); the other was based on higher flows (200 cfs occurring with 20 percent probability) between August 1 and August 15, the period when Northwest proposes in-stream construction. As shown in Table 1, it is predicted that the open cut crossing of the Cedar River will be in compliance with the WAC 173-201a-200 (1)(e) turbidity criteria, because turbidity, as estimated by NTUs, should not exceed 5 NTUs above background 300 feet downstream of the crossing. As shown in Table 1, it is estimated that under a median flow regime in August, that 38 feet downstream of the crossing, the NTUs generated by the Project are estimated to be 3.6, and under a high flow regime at 49 feet downstream of the crossing, the NTUs generated by the Project are estimated to be 4.1, which would comply with the (WAC 173-201a-200 (1)(e)) water quality turbidity criteria.

Table 1
Characteristics and Modeled Settling for the Five Smaller Particles Expected to be Excavated during Wet Open-Cut of the Cedar River with Expected Median and High Flows During August Included in the Model (GeoEngineers, 2012 – provided in Appendix J)

Flow Regime Particle Type	Particle Diameter (µm)	Average Distance (ft) to Settle Downstream [3]	Percent Fraction in Suspension After Particle Settling	TSS (mg/L) Concentration After Particle Settles [4]	Equivalent Turbidity as NTUs [5]
Median Flows [1]					
Coarse Sand	425	23	40	19	5.1
Medium Sand	250	38	25	12	3.6
Fine Sand	150	79	15	7	2.4
Very Fine Sand	75	258	9	4	1.6
Silt	3.1	2,238	0	0	N/A
High Flows [2]					
Coarse Sand	425	30	40	22	5.7
Medium Sand	250	49	25	14	4.1
Fine Sand	150	102	15	8	2.6
Very Fine Sand	75	333	9	5	1.8
Silt	3.1	2,883	0	0	N/A

[1] Median flows (130 cfs occurring with 50 percent probability) reported at Renton between August 1 and August 15.
[2] High flows (200 cfs occurring with 20 percent probability) reported at Renton between August 1 and August 15.
[3] TSS concentration is unknown prior to particle settling.
[4] Assumes TSS concentrations above background levels.
[5] NTUs above background levels, estimated from the regression equation in Figure 1.

To minimize the potential water quality effects associated with the open cut crossing, Northwest would install silt booms and attempt to temporarily contain spoils excavated from the trench to limit the quantity of material exposed to streamflow and transport, as recommended by GeoEngineers (see Appendix J). If these BMPs can be deployed and maintained throughout construction, GeoEngineers estimated that the entire plume could settle out or reach background levels at 1,300 feet compared to a maximum estimated distance ranging between 2,238 and 2,883 feet without the use of BMPs. During in-water work, Northwest would conduct water quality monitoring daily by logging turbidity NTU values following the procedures required by permit conditions and detailed in the Project's Draft Water Quality Monitoring Plan which is provided in Appendix M.

As specified in the site-specific crossing plan for the Cedar River (see Attachment 2 to Appendix F), one block net would most likely be installed across the Cedar River upstream from the construction location. The purpose of the block net upstream is to limit fish movement into the construction site and exposure to turbidity generated during wet open cut construction. The work area cannot be isolated or entirely cleared of fish (e.g., by herding or by capture and release). Therefore, no block net would be placed downstream from the construction location because doing so would trap fish

between block nets and the construction site with risks of exposure to potentially lethal concentrations of suspended solids during construction (there would be no avenue for escape to less turbid waters downstream). The upstream block net would be monitored at least three times per 12-hour period that the block net is in place, for fish, particularly juveniles that may be impinged on the net. Inspection frequency would be increased if necessary to minimize impinging and injuring fish. The net would also be checked for accumulation of debris and proper function as conditions warrant. If too many fish become impinged or injured and/or the block net cannot be maintained in functional capacity, it would be removed even if fish could access the construction zone from upstream.

To avoid and minimize potential impacts, Northwest contracted with GeoEngineers to conduct a site-specific hydrologic analysis, stream scour analysis, and channel migration hazards assessment for the Cedar River crossing (see Appendix K). Stream scour at this crossing was evaluated for the 50- and 100-year flood recurrence intervals and is estimated to be 6.5 and 7.5 feet below thalweg depth, respectively, absent bedrock. Where bedrock is encountered at shallower depths than the estimated scour depth, the elevation of the competent bedrock would represent the limit of scour. As indicated in the site-specific open cut crossing plan for the Cedar River (see Appendix F), the proposed depth of cover over the pipeline across the Cedar River will be between 6 and 12 feet below the streambed depending on the depth at which bedrock is encountered. If bedrock is not encountered (unlikely) during in-water trench excavation, the trench depth would be approximately 12 feet from the mid-channel bed, which would place the 16-inch pipeline below the estimated 100-year scour depth.

None of the four minor intermittent waterbodies crossings displays evidence or characteristics of excessive stream scour or migration, which could include bank erosion, pool formation, or aggradation. GeoEngineers determined lateral migration and vertical scour risk to be low at these crossings. Therefore, the standard pipeline burial depth (top of pipe buried to 5 feet below the streambed) is judged to be adequate to mitigate the stream scour risk along these crossings.

A restoration report was prepared by GeoEngineers, which provides recommendations for reconstructing and stabilizing the steep west bank of the Cedar River to reduce the potential for stream erosion and scour. Several methods for protecting the slope from the erosive forces of the river were considered, such as wood-based toe material and other bioengineering techniques, but it was ultimately concluded that only a hard type revetment could adequately protect the slope (see Appendix L). The topographic conditions along the east bank of the river can be stabilized using bioengineering techniques and will be regraded to a stable configuration to minimize erosion and ensure long-term stability. The bank will be stabilized using erosion control fabric and will be reseeded and planted with willow sprigs and whips. These measures are described in detail in the ECRP (see Appendix B). Northwest will also install an Engineered Log Jam (ELJ) habitat enhancement structure immediately downstream of the Project crossing on the east bank of the Cedar River. In addition, riparian vegetation enhancement plantings will be implemented within the Project's temporary construction right-of-way and TEWAs (1.4 acres) on the east floodplain of the Cedar River.

Hazardous materials, chemicals, fuels and lubricating oils will not be stored nor will concrete-coating activities be performed within 100 feet of any waterbody (whether flowing or not at the time of construction). Northwest has prepared a Spill Plan for the Project (see Appendix G). Adherence to this plan will minimize impacts to waterbodies during construction. In addition, Northwest would use vegetable oil based hydraulic fluids in the excavators that would conduct in-water excavation and backfilling activities required to complete the open cut crossing of the Cedar River.

To minimize potential waterbody crossing impacts from equipment traffic, Northwest will install temporary construction bridges across all intermittent waterbody crossings that are flowing at the time of construction. FERC's Wetland and Waterbody Procedures (see Section V. B. 5. a.) allow one pass of clearing equipment and equipment necessary for installation of the temporary bridges to cross waterbodies prior to bridge installation. All other construction equipment will only cross waterbodies with water in the streambed using equipment bridges. However, since the Project will utilize Northwest's existing easement for the South Seattle Delivery Lateral and all of the intermittent waterbodies crossed by the Project are minor, Northwest's EI, in consultation with Northwest's Chief Inspector, will determine if it is necessary to cross any of these waterbodies without installing a temporary bridge. A temporary construction bridge will not be installed across the Cedar River. Bridges will be designed and maintained to withstand and pass the highest flow that would occur while the bridge is in place. Bridges will be maintained to prevent soil from entering the streams, and equipment bridges will be removed as soon as possible after permanent seeding.

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

☒ Yes ☐ No **See Table 4 in Appendix A**

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 ☐ Not applicable

The Wetland, Waterbody, and Critical Area Buffer Mitigation Plan is provided in Appendix I.

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]

See answer to 7g.

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 to be placed in or removed from waterbody	Area (sq. ft. or linear ft.) of waterbody directly affected
See Tables 3 and 4 in Appendix A					

[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]

The trench through all streams and wetlands crossed by the pipeline will be backfilled with native material removed from the trench. No imported fill will be used during trench backfilling.

The estimated fill volume calculated for dry-ditch crossing (flume or dam and pump) is 35.14 cubic yards. The estimated volume assumes five feet of cover over the pipeline installed in a three-foot wide trench (bottom of trench) with 0.75:1 slopes. Therefore, the top of the trench is approximately 10.83 feet wide, with a total crossing length of 94.56 feet for all crossings.

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]

Approximately 35.14 cubic yards of trench excavation will be required for all pipeline removal and replacement activities through waterbodies. Excavated native material removed from the pipeline trench will be used for backfill and to restore original contours after the pipe is installed. A backhoe will be used to excavate and backfill the trench.

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
U.S. Fish and Wildlife	Karen Myers	(360) 753-9440	May 16, 2012
National Marine Fisheries Service	Jody Walters	(360) 753-9530	May 16, 2012
WDOE	Rebekah Padgett	(425) 649-7129	May 16, 2012
WDFW	Larry Fisher	(425) 313-5683	May 15, 2012
Muckleshoot Tribe	Martin Fox		May 16, 2012
King County	Ron Ainslie	(206) 296-7142	May 16, 2012

9b. Are any of the wetlands or waterbodies identified in Part 7 or Part 8 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: http://www.ecy.wa.gov/programs/wq/303d/.

☒ Yes ☐ No

Cedar River – Category 5 for Fecal Coliform

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.

1711001203 - Lake Sammamish
1711001201 – Cedar River

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

- Go to http://www.ecy.wa.gov/services/gis/maps/wria/wria.htm to find the WRIA #.

WRIA 8 – Cedar-Sammamish

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

- Go to http://www.ecy.wa.gov/programs/wq/swqs/criteria.html 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: http://www.ecy.wa.gov/programs/sea/sma/laws_rules/173-26/211_designations.html.

☐ Rural ☐ Urban ☐ Natural ☐ Aquatic ☒ Conservancy ☐ Other _____

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

- Go to http://www.dnr.wa.gov/BusinessPermits/Topics/ForestPracticesApplications/Pages/fp_watertyping.aspx for the Forest Practices Water Typing System.

See Tables 3 and 4 in Appendix A.

☒ 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: Stormwater Management Manual for Western Washington (revised 2005) and

King County Department of Natural Resources and Parks. 2009. Surface Water Design Manual. Available at: http://www.kingcounty.gov/environment/waterandland/stormwater/documents/surface-water-design-manual.aspx

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

Of the 4-mile Project, 3.85 miles will occur within Northwest's existing, permanent, maintained easement; however portions of the 100-foot wide temporary construction right-of-way will be required outside Northwest's existing easement.

The Project is co-located with the BPA transmission line corridor for approximately 2.0 miles between MPs 1.32 and 2.95 and MPs 3.65 and 4.0 (see Environmental Alignment Sheets behind the Figures Tab).

Land use varies along the Project: rural residential developments, pasture, mixed forestland, industrial/commercial, and utility/transportation corridor. Livestock occurrence is limited to only a few pasture areas. The Project route crosses through the southern edge of the Cedar Hills Regional Landfill operation managed by King County.

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

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

☒ Yes ☐ No **The report has been filed with SHPO (see concurrence letter in Appendix N).**

9k. 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 (*Oncorhynchus tshawytscha*) Puget Sound Evolutionarily Significant Unit (ESU), Threatened with Critical Habitat in the Cedar River,

Steelhead (*Oncorhynchus mykiss*) Puget Sound Distinct Population Segment (DPS), Threatened (no critical habitat),

Bull trout (*Salvelinus confluentus*) Coastal-Puget Sound Distinct Population Segment (DPS), Threatened (no critical habitat

Note: *Northwest prepared a Draft Biological Assessment (BA), which was submitted to FERC with the Certificate Application filed June 4, 2012.*

9l. 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]

River lamprey (*Lampetra ayresi*) PHS Candidate Status
Pygmy whitefish (*Prosopium coulteri*) PHS Sensitive Status
Chinook salmon (*Oncorhynchus tshawytscha*) PHS Candidate Status
Coho salmon (*Oncorhynchus kisutch*) PHS Candidate Status
Sockeye salmon (*Oncorhynchus nerka*) PHS Candidate Status
Steelhead (*Oncorhynchus mykiss*) PHS Candidate Status
Bull trout (*Salvelinus confluentus*) PHS Candidate Status
Townsend's western big-eared bat (*Corynorhinus townsendii townsendii*) PHS Candidate Status
Cascade red fox (*Vulpes vulpes cascadensis*) PHS Candidate Status
Bald eagle (*Haliaeetus leucocephalus*) PHS Sensitive Status
Vaux's swift (*Chaetura vauxi*) PHS Candidate Status
Pileated woodpecker (*Dryocopus pileatus*) PHS Candidate Status
Purple martin (*Progne subis*) PHS Candidate Status
Pacific pond turtle (*Actinemys marmorata*) State Endangered Status
Western toad (*Anaxyrus boreasi*) PHS Candidate Status
Instream Priority Habitat (Cedar River)
Riparian Priority Habitat (Cedar River floodplain & riparian vegetation)

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.ecy.wa.gov/opas/.
- Governor's Office of Regulatory Assistance at (800) 917-0043 or help@ora.wa.gov.
- For a list of agency addresses to send your application, click on the "where to send your completed JARPA" at http://www.epermitting.wa.gov.

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

- For more information about SEPA, go to www.ecy.wa.gov/programs/sea/sepa/e-review.html.

☐ 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 2nd Quarter 2013. SEPA will be filed with King County Summer 2012.**

☐ 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): _____

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

Washington Department of Ecology:

☒ Section 401 Water Quality Certification

Washington Department of Natural Resources:

☒ Aquatic Resources Use Authorization

FEDERAL GOVERNMENT

United States Department of the Army permits (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 permits:

☐ General Bridge Act Permit ☐ Private Aids to Navigation (for non-bridge projects)

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) **To obtain permission to visit the site, please contact Clay Gustaves with Northwest Pipeline at 425-868-1010x2065 or clay.gustaves@williams.com.**

Randy Miller		June 6, 2012
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.

Authorized Agent Printed Name	Authorized Agent Signature	Date

11c. Property Owner Signature (if not applicant). [help]
Not required if project is on existing rights-of-way or easements.

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 of Regulatory Assistance (ORA). People with hearing loss can call 711 for Washington Relay Service. People with a speech disability can call (877) 833-6341.
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