

WAC 197-11-960 Environmental checklist.

ENVIRONMENTAL CHECKLIST

Purpose of checklist:

The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decide whether an EIS is required.

Instructions for applicants:

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can.

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later.

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Use of checklist for nonproject proposals:

Complete this checklist for nonproject proposals, even though questions may be answered "does not apply." IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (part D).

For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer," and "affected geographic area," respectively.

A. BACKGROUND

1. Name of proposed project, if applicable:

Skamania Hatchery Intake Renovation Project

2. Name of applicant:

Washington Department of Fish and Wildlife (WDFW)

3. Address and phone number of applicant and contact person:

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The following person is acting as an agent on behalf of the applicant:

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4. Date checklist prepared:

September 2011

5. Agency requesting checklist:

Washington Department of Fish and Wildlife; Skamania County Community Development Department

6. Proposed timing or schedule (including phasing, if applicable):

At the time of this writing, proposed actions are anticipated to occur over a period of eight months, beginning in April 2012. The standard in-water work window for the West Fork Washougal River is August 1 – 31 (USACE undated; WDFW undated). However, because construction cannot be completed in a four week timeframe and the hatchery diversion reach (where actions would occur) is nearly dewatered from late July through mid-October, in-water activities are proposed to take place from July 15 – October 15. This window was approved by Anne Friesz (WDFW, Area Habitat Biologist, pers comm., 12/20/10) and discussed with NMFS (T. Rymer, pers comm., 12/16/10). The temporary hatchery water supply screens would be installed beginning July 15, and cofferdam installation would occur immediately following establishment of the temporary water supply. If the WDFW review process for the issuance of the HPA determines that a shorter window is more appropriate, work would occur during the specified period; however, it may be necessary to remobilize the following year to complete the project if the window does not provide adequate time for instream work.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

WDFW plans to add a velocity barrier/picket weir atop the crest of a natural fall at the downstream end of the diversion reach. This barrier would prevent fish from ascending the falls, and would facilitate the removal of hatchery steelhead from the West Fork Washougal River. This work is currently unfunded and therefore undergoing separate regulatory consultation.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

- **Biological Assessment, HDR Engineering, June 2011**
- **Joint Aquatic Resource Permit Application, HDR Engineering, June 2011**
- **Wetland Delineation Report, HDR Engineering, October 2011**
- **Critical Areas Variance Supplement, HDR Engineering, October 2011**
- **Skamania County Clearing and Grading Permit Application, WDFW and HDR Engineering, October 2011**

In addition, WDFW has sent correspondence to the Washington State Department of Archaeology and Historic Preservation (DAHP) and local tribes regarding this project. No responses of concern have been received.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

None at this time; however, a picket barrier weir is proposed to be installed downstream of the affected project area, in the same parcel as the existing hatchery. This barrier is proposed to be installed in the summer of 2012 or 2013.

10. List any government approvals or permits that will be needed for your proposal, if known.

Federal

- **Section 404 Permit (Clean Water Act – Corps)**
- **Section 7 Endangered Species Act Compliance/Consultation (USFWS and NMFS)**
- **Magnuson Stevens Act Compliance/Consultation (NMFS)**
- **National Environmental Policy Act (NEPA) Compliance (Corps)**
- **Section 106 National Historic Preservation Act Compliance/Consultation**

State

- **Hydraulic Project Approval (WDFW)**
- **Section 401 Water Quality Certification or Conditional Approval for Construction (Ecology)**
-

Skamania County

- **Shoreline Master Program Compliance (Shoreline Substantial Development Permit and Variance)**
- **Building Permit**

- Clearing and Grading Permit
- Critical Area Water Resource Buffer Variance

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

WDFW proposes to replace the existing surface water intake structure and fishway for the Skamania Hatchery, located on the West Fork Washougal River in Skamania County. This aquatic species enhancement project will increase instream flow and available habitat during the summer low flow periods. The new intake and fishway would be constructed in roughly the same footprint as the original structure, though the fishway would extend about 30 feet downstream of the existing fishway entrance along portions of the left bank that were armored with excavated bedrock and riprap in the 1950s.

The existing intake does not currently meet screening and passage guidelines of the National Marine Fisheries Service (NMFS) or WDFW, and the existing fishway is relatively non-functional over most flows. In addition, the weir used to pool water for the intake was not originally extended all the way to the right bank. To address these issues, a new intake and fishway are proposed to be installed in the same location of the existing structures, and the existing weir is proposed to be extended about four feet to the right bank. The proposed new intake and fishway would bring the Hatchery into compliance with regulatory criteria set forth by NMFS and WDFW for screening and passage. Addressing passage and screening deficiencies also complies with recommendations for hatcheries in the Washougal River Subbasin (LCFRB 2004). Access to upstream habitats would be created that is not currently available during low flow. The new intake would prevent entrainment of fish, particularly juvenile salmon. No increase in the volume of withdrawal at the intake is proposed. Following construction of the new intake and fishway, the downstream bank would be re-armored using existing materials, and 2 large logs with intact rootwads would be incorporated into the armoring to provide habitat complexity along the shoreline. The rootwad revetments would also enhance streambank habitat for native fish species. A concrete box in the existing cross-river weir would be filled to improve the structure's stability.

To accomplish the in-water work associated with this action, temporary bulk bags would be installed to isolate the in-water work area from the river. The cofferdams would be removed following construction. The area isolated by cofferdams would be pumped out to make it dry. This pumped water would be directed to an upland areas where any sediment would settle or filter into the ground prior to discharge downstream of the construction area. This upland settling area would be cleared of existing small trees and brush, but not grubbed.

This project also includes the installation of a pipeline that would convey post-hatchery use water back to the point of withdrawal where the water would be discharged into the fishway. This pumpback line would require the construction of a small pump station at the hatchery. The pipeline would be buried from the hatchery to the intake and would provide 5-8 cubic feet per second (cfs) to the hatchery diversion reach during low flow periods (late June – mid October) when portions of the reach would otherwise be dewatered. This project element is anticipated to increase the quantity of instream habitat in the diversion reach during summer low flow periods. The pumpback pipe would be primarily routed through uplands, though it would cross Vogel Creek and discharge into the fishway on the West Fork Washougal.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

The Skamania Hatchery is located on the West Fork Washougal River in Skamania County (T2 North, 5 East, SE ¼ Section 29; 45.621788 N lat. / -122.217346 W. long [NAD 83]). The hatchery is sited at about river mile 0.5 of the West Fork, and the intake is about 1,700 feet upstream of the hatchery outfall. The project area is bounded to the east and north by a privately owned parcel, to west by the west bank of the West Fork Washougal River, and to the south by the Skamania Hatchery property boundary (see Figure 1, Appendix A). Figures and photos of the project area are presented in Appendix A. Appendix B presents detailed site plans for the project.

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site (circle one): **Flat** rolling, hilly, steep slopes, mountainous, other:

Areas proposed for construction are generally flat; however, steep rocky slopes occur on the parcel immediately adjacent to the intake location.

b. What is the steepest slope on the site (approximate percent slope)?:

According to the Skamania County Planning Department, Tax Parcel 02-05-29-0-0-0700-00 (northern parcel where intake is located) is located in a Class II Landslide Hazard Area, with an average slope of approximately 40%. The parcel is also located within a Class I Erosion Hazard Area due to the soil types susceptibility to wind and water erosion. However, the slope in the vicinity of the intake structure is about 1-2%, and the County is not requiring an erosion or landslide hazard report.

Tax Parcel 02-05-32-1-0-0-100-00 is located in a Class II Landslide Hazard Area due to an overall average slope of approximately 15% with underlain soils of silt and clay. The slope in the vicinity of the hatchery site, where pumpback pipeline installation would occur, is about 1%. The parcel is located in a Class I Erosion Hazard Area due to the soil types susceptibility to wind and water erosion.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.

Tax Parcel 02-05-29-0-0-0700-00 (intake location – see Figure 3, Appendix A): The USDA Natural Resources Conservation Service (NRCS) identifies three soil types located on the parcel:

- 1. # 2 (Arents, 0 to 5 percent slopes. These very deep, well drained to somewhat excessively drained soils are on alluvial river terraces),**
- 2. #76 (Mountzion clay loam, 15 to 30 percent slopes), and**
- 3. #107 (Skelida silt loam, 5 to 15 percent slopes).**

Tax Parcel 02-05-32-1-0-0-100-00 (hatchery parcel): NRCS identifies four soil types on this parcel; the hatchery and intake access road are primarily located in areas classified as Soil Type #2:

- 1. #2 (Arents, 0 to 5 percent slopes. These very deep, well drained to somewhat excessively drained soils are on alluvial river terraces),**
- 2. #76 (Mountzion clay loam, 15 to 30 percent slopes; very deep, well drained soil is on foot slopes and back slopes of mountains),**
- 3. #77 (Mountzion clay loam, 30 to 65 percent slopes; well drained soil is on back slopes of mountains.), and**
- 4. #107 (Skelida silt loam, 5 to 15 percent slopes, very deep, well drained soil is on terraces).**

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

No areas or history of unstable soils on the project site are known.

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

Fill proposed below the OHWM is described below under the “Water” section. In uplands, minor grading may be required for installation of the pumping station (48 square feet), and for a small enclosure at the intake that would house electrical and mechanical controls. Approximately 600cy of upland soils would be excavated for installation of the pipeline (trench 3 feet wide, 4 feet deep and 1,350 feet long). Excavated soils would be placed atop the buried pipeline. In areas landward of the OHWM in the vicinity of the intake structure, portions of the new intake would constitute filling of the existing structure’s footprint, along with portions of the fishway that are landward of the OHWM, and associated re-armoring of the bank (including installation of 2 large logs) immediately downstream of the intake and fishway.

Fill material would be comprised of locally-available materials. Native soils and recycled excavated soils would be used for backfill.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

Minor erosion could occur as a result of clearing and grading activities landward of the OHWM of the West Fork Washougal River; however, best management practices (see 1h, below) during construction would minimize the potential for erosion.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

A small enclosure at the intake (about 30 square feet) and the pump house (48 square feet) would be constructed. No new roads would be required to accommodate construction equipment and access to the site. The total new amount of impervious surface on the hatchery parcel is nearly immeasurable compared to the combined size of the two parcels (43 acres) that comprise the hatchery site. Following pipeline installation, excavated soils would be placed atop the pipeline. In the areas where the pipe is laid under the intake access road, the road would be re-graded and gravel replaced. In areas where the pipe is installed on vegetated hatchery grounds, maintained lawns would be re-seeded.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

- Implement erosion and sediment control measures to minimize soil and sediment transfer to the West Fork Washougal River. Measures may include, but are not limited to the following: placement of silt fences, weed-free straw matting/bales or fiber wattles. These would be placed along the wetland edge and top of bank in the vicinity of intake/fishway construction. Erosion control devices would be sequentially placed along the top of bank during excavation for the pumpback pipeline. Silt fencing along the top of bank would also prevent the removal of sparse vegetation along the armored bank to minimize adverse effects to the stream buffer.
- Excavation spoils that would be replaced atop the pipeline following installation would be side-cast within the access road work area. No side-cast material would be permitted to enter the wetland or waterbodies (West Fork Washougal River or Vogel Creek).
- Excavated bank material would be covered and stockpiled away from the stream channel or flanked with sediment fencing, hay bales or fiber wattles to minimize opportunity for fine sediment to be transported into the stream. Following construction, excavated materials would be transported off site to an approved receiving location to be determined by the Contractor, or maintained onsite for use in future hatchery-related construction projects.
- Scattered riparian vegetation on the stream bank would be protected to the extent possible. All disturbed areas that are currently vegetated would be revegetated upon project completion using native plant species. Temporarily disturbed areas would be reseeded following construction to prevent erosion into wetlands and waterbodies.

2. Air

a. What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

Emissions during construction of the proposed project would include short-term, intermittent amounts of dust due to grading activities and exhaust from construction equipment (e.g., front end loader, excavator, concrete pump truck, concrete trucks, etc.). The completed project would not produce any emissions.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

There are no known off-site sources of emissions or odor that would affect the proposed project.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

During construction, impacts to air quality would be reduced and controlled through implementation of standard federal, state, and local emission control criteria. These could include spraying areas of exposed soils with water for dust control, covering any exposed soil stockpiles, and reducing exhaust emissions by maintaining vehicles and equipment in working order, as well as minimizing vehicle and equipment idling.

3. Water

a. Surface:

- 1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.
- **The mainstem of the West Fork Washougal, a tributary to Washougal River, is included in the project area. The Washougal River is a tributary to the Columbia River.**
 - **Vogel Creek, a small tributary to the West Fork Washougal, is located approximately 800 feet downstream of the existing intake structure.**
 - **A narrow depression seep wetland is present along the toe of slope landward of the intake access road, approximately 150 feet downstream of the intake structure (see Photos 9 and 10 in Appendix A). This small wetland would not be disturbed during construction, and the wetland boundary would be staked with silt fencing to ensure that construction equipment does not enter the wetland.**

Figure 4 in Appendix A depicts the intake site plan with the wetland location overlain atop the plan. Figures and photos of the wetland and waterbodies (Vogel Creek and West Fork Washougal River) are presented in Appendix A. Appendix B presents detailed site plans for the project, and shows the location of waterbodies.

- 2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

No work would be conducted in wetlands; however, portions of the wetland buffer that are currently vegetated with herbaceous species typical of disturbed areas (hairy cat's ear, clover) would be temporarily disturbed due to the presence of construction equipment and the confined nature of the work area near the intake. In addition, the existing intake access road comprises a portion of the western buffer of the small wetland. Due to the presence of the access road, the buffer's functions are limited with regard to habitat and water resource functions. A 3-foot wide trench would be excavated within the intake access road to allow for installation of the pumpback pipeline. During excavation and during the entire construction period, the edge of the wetland would be staked with silt fencing to protect the area from erosion and to prevent the entrance of construction-related debris.

The pumpback pipeline would cross Vogel Creek. This would require temporary in-water work isolation to excavate the streambed to allow for pipeline installation. This work would be accomplished over a period of about 4 days during the in-water work window.

The following project actions would be conducted below the OHWM of the West Fork Washougal River during the project-specific in-water work period (July 15 – October 15; see attached site plans in Appendix B):

Temporary Hatchery Water Supply

Since the Skamania Hatchery must continue to operate during intake replacement, a temporary water supply would be necessary to provide water to the hatchery. The temporary hatchery water supply would be provided from a deep pool within the hatchery diversion reach, about 1,200 feet downstream of the intake.

Temporary screens and suction lines would be placed into one of the two pools (to be determined at the time of construction). The pumps and temporary water supply lines would be located above the OHWM. All temporary intake equipment would be installed beginning July 15. Screens and suction lines would be placed in the channel using machinery operated from the top of the bank. The water supply would be screened according to NMFS guidelines for the protection of juvenile salmonids. To meet the water supply needs for the hatchery during the instream work window, it is anticipated that the screens would measure 5 feet x 5 feet x 4 feet. A suction hose would be positioned behind the screen to pull water into the temporary water supply line. The screens would be monitored daily by hatchery staff, and manually cleaned as necessary. Upon completion of instream construction, the temporary screens and pumps would be removed and flow would be restored to the hatchery through the new intake and existing surface water pipeline.

Surface Water Intake

The existing Skamania Hatchery intake would be demolished using a hydraulic breaker mounted on an excavator boom, man-sized jackhammers, and concrete saws. Demolished components would be removed from the site

using excavators and dump trucks, and disposed of at an approved upland location to be determined by the Contractor and approved by WDFW.

Following demolition of the existing intake, a cast-in-place concrete intake would be installed just upstream of the existing weir, in approximately the same footprint as the existing intake (Sheet 6). The intake would be composed of reinforced concrete and steel screens. A cement pumper truck would work from the bank and not from inside of the cofferdam. Poured concrete would be allowed to cure to required strength prior to final back fill. In total, the intake/fishway structure would occupy approximately 1,230 square feet along the left bank, about 400 square feet of which is below the OHWM.

The intake would be sized to withdraw up to 20 cfs of surface water for year-round continuous use as permitted under existing surface water rights. The active intake would be screened according to NMFS and WDFW screening criteria to prevent entrainment or impingement of juvenile salmonids at the screen face. The intake would consist of flat plate screens located just off-channel behind a trash rack. A traveling brush would be provided to automatically clean the screen panels while the trashrack would be raked manually.

The intake facility, including screens and racks, would be keyed into the existing bank and would be sited as flush to the bank as possible so that it does not protrude into the stream channel. Construction of the intake and fishway structure would disturb approximately 65 linear feet of riverbank, which is currently extensively armored with bedrock/riprap and contains the existing intake/fishway. The bank is relatively devoid of riparian vegetation with the exception of a few scattered immature alder or willows and weedy herbaceous species. The intake would be constructed to withstand impacts from LWD mobilized during high flow events, and inundation with river sediment load. An existing log boom (untreated wood) is currently anchored in front of the existing intake screen to serve as a debris deflector. A new untreated wood log boom would replace the existing one.

Fishway

A new vertical slot fishway would be constructed downstream of the intake. The vertical slot fishway would be constructed of reinforced concrete integrating several pools with maximum water drops of 12 inches (as per NMFS and WDFW passage criteria for adult anadromous species). The facility would incorporate gates to provide auxiliary water from the forebay as well as from a pump back water supply from the hatchery. Adults would exit through the coarse trash rack upstream of the fishway.

Construction of the fishway would require the excavation below the OHWM. The fishway structure would be approximately 33 feet long and 19 feet wide. In total, the intake/fishway structure would result in the loss of approximately 400 square feet of existing bed and bank habitat (now lined extensively with riprap) below the OHWM. The bank does not currently contribute to instream gravel recruitment, nor does the bank serve as high quality riparian habitat. Recycled bedrock and riprap would be repositioned at the upstream and downstream entrances of the fishway to stabilize the structure.

Juvenile Fish Bypass Pipe

Juveniles migrating downstream and encountering the intake facility would be bypassed around the intake screens and fishway through an 18-inch bypass pipe. The pipe would return juveniles to the river at the downstream end of the fishway, and would extend beyond the downstream rootwads. Installation of the juvenile bypass pipe would remove approximately 5 linear feet of riverbank, which is currently armored with riprap. The pipe would discharge juveniles to a small "recovery" pool that would be enhanced with native rocks to facilitate safe transfer back to the river.

Weir Box Fill

A 22-foot long segment of the existing in-stream weir was constructed with boulders in a concrete 'box' on the downstream side of the weir. With time many of these boulders have been swept away in high flows. A stability analysis has revealed that the weight of the boulders was important to the stability of the weir. This project would restore the weight and stability of the structure with the addition of concrete in place of the lost rocks. This concrete would be placed within the cofferdam, in the dry, and be fully cured before exposure to river water.

Bank Re-Armoring with Rootwad Revetment

Once the intake and fishway are constructed, approximately 19 linear feet of streambank downstream of the fishway would be armored using a combination of logs with intact rootwads, recycled riprap, native soils,

geotextile fabric, and live native willow whips. Wire rope would be used to anchor the logs to bolster rocks, which would consist of a line of 3-foot diameter rocks under the logs for support and scour cutoff. Hand-placed boulders would be installed waterward of the logs at the base. This bank is currently armored exclusively with riprap to the top of bank to protect the intake and associated access road. As such, the armoring is an existing condition. In addition to the riprap, two large logs with rootwads intact would be incorporated into the bank just downstream of the juvenile fish return pipe, within the confines of the left bank intake cofferdam.

The rootwads would be positioned approximately one foot below the OHWM so that they are immersed during typical flows (See Sheet 12, Appendix B). As such, rootwads would be about one foot above the substrate to provide overhead cover and refuge habitat for fish, including juvenile salmonids. Logs and rootwads used in the armoring would consist of Douglas fir, or any conifer tree species that provides a dense, flattened root mass. The rootwads would measure no less than 4 feet in diameter, attached to logs no less than 15 feet in length (20 feet preference) (Sheet 12, Appendix B). Following installation of the logs, live willow bundles would be provided, with willow cuttings placed at a frequency of three per foot, staggered approximately three feet on-center.

Weir Extension

The original weir at the intake location did not extend all the way to the right bank. WDFW plans to extend the weir approximately 4.5 feet to the bank to create a uniform height across the full span. Concrete and reinforcing steel would be used to extend the structure. Sandbags and visquene would be set on the upstream side of the proposed work area. The downstream side is comprised of bedrock and would be a few feet above the downstream surface water level. As such, no cofferdam would be necessary at the downstream end of the work area. The dewatering would be accomplished using a small gas-driven pump that routes water into the larger cofferdam area for the intake/fishway.

- 3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

No material would be placed in wetlands.

In total, approximately 1,000 square feet of the West Fork Washougal River, and 40 square feet of Vogel Creek would be affected by the proposed project due to discharge of dredge or fill material. Approximately 164 cy of bank and bed materials would be excavated below the OHWM of the West Fork, and 16 cy of material would be excavated below the OHWM of Vogel Creek. Approximately 161cy of fill would be placed waterward of the OHWM in the West Fork, and 15cy would be placed waterward of the OHWM in Vogel Creek. Table 1 presents a breakdown of the cut/fill quantities for project components below the OHWM. This information has been included in the JARPA prepared and submitted for this project.

Fill material would be comprised of locally-available materials. Native soils and recycled excavated soils would be used for backfill.

Table 1. Cut and Fill Volumes for Skamania Hatchery Intake Renovation Project – Quantities Waterward of OHWM.

Activity (clear, dredge, fill, pile drive, etc.)	Waterbody name	Impact location	Duration of impact	Amount of material to be placed in or removed from waterbody	Area (sq. ft. or linear ft.) of waterbody directly affected
Remove riprap and existing intake/fishway infrastructure	West Fork Washougal River	Waterward of top of bank, below OHWM	Permanent	-163.6 cy	400 square feet
Add concrete/metal for new fishway and intake	West Fork Washougal River	Waterward of top of bank, below OHWM	Permanent	145.8 cy	400 square feet
Add concrete to instream weir box	West Fork Washougal	Waterward of top of bank, below OHWM	Permanent	15 cy	123 square feet
Add concrete for weir extension	West Fork Washougal	Waterward of top of bank, below OHWM	Permanent	0.4cy fill, 0.2cy removed	7 square feet
Add riprap and rootwads for armoring	West Fork Washougal River	Waterward of top of bank, below OHWM	Permanent	31.4cy removed, 7.3cy fill; 2 logs with rootwads added	19 linear feet
Excavate streambed (for install of pumpback line)	Vogel Creek	Streambed	Temporary – 2-4 days	Net volume added = 1.0 cy	40 square feet

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

Existing surface water withdrawals occur at the Vogel Creek and West Fork Washougal River intakes. Approximately 1.8 cfs is withdrawn from Vogel Creek during the fall, winter and spring months for egg incubation and early rearing at the hatchery. Surface water withdrawals from the West Fork Washougal River are shown in Table 2. These withdrawals are authorized under existing surface water rights for the hatchery. There would be no increase in the amount of water withdrawn from either waterbody associated with this project. However, the point of withdrawal would be temporarily relocated (3 months) while the existing intake is taken off-line and the new intake is constructed. Since the Skamania Hatchery must continue to operate during intake replacement, a temporary water supply would be necessary to provide water to the hatchery (described in 3a2, above). The temporary hatchery water supply would be provided from a deep pool within the hatchery diversion reach, about 1,200 feet downstream of the intake. Screened pumps for this temporary water supply would operate from about July 15 through October 15 of the construction year, until the new intake is on-line. Operation of the temporary water supply would result in a reduction of the hatchery diversion reach between the intake and outfall since the temporary water supply location is well downstream of the existing intake.

Table 2. Average monthly surface water withdrawal (cfs) at West Fork Washougal River Intake

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Hatchery diversion at WF intake	20	20	20	18.7	16.5	16.5	16.3	15.6	13.8	19.4	20	20

Although there would be no increase in surface water withdrawals, following construction the proposed pumpback pipeline would return a portion of the diverted flow back to the intake during low flow summer months. During the late spring and summer, the hatchery intake diverts a substantial portion of the river, creating a 1,750 feet dewatered diversion reach from the intake to the hatchery outfall. In order to provide flow to this reach during low flow months, WDFW proposes to pump 5-8 cfs of post-hatchery use water back upstream to the point of diversion (top of fishway) from late June through October. This would result in an increase in flow in the diversion reach.

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

The proposed project lies within the 100-year floodplain of the mainstem West Fork Washougal River as well as Vogel Creek.

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

Construction of the proposed elements would not involve discharges of waste materials to surface waters. The existing hatchery discharges post-hatchery use water, containing effluent, into the West Fork Washougal under an existing NPDES permit for upland fin-fish rearing. As such, any water pumped back to the point of withdrawal would also comply with NPDES discharge parameters.

b. Ground:

1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.

No waste materials would be discharged into ground water due to construction or operation of the proposed project.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

Waste and sewage material would not be discharged into the ground; however, seepage water pumped from the in-water construction area would be settled in uplands. This water could contain concrete leachate, as described below. Once the cofferdams are installed in the West Fork Washougal River for weir repairs and removal/installation of the intake and fishway, the work area would be dewatered with screened pumps and fish salvage would occur. Pumps would be placed adjacent to the internal upstream wall of the cofferdam to remove seepage water from the work area. Seepage water would be pumped from the isolation area and routed by overland pipe for filtration (series of filtration bags) prior to return to the river. Although this would minimize exposure of clean river water to wet concrete and other construction-related materials, a small amount of concrete leachate would likely settle into the ground during the short-term in-water work period when concrete is being poured.

c. Water runoff (including stormwater):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

The source of runoff during construction would be precipitation; however, during the proposed instream work period, precipitation is low in the project area. Temporary erosion and sedimentation during construction is expected to be minimal; however, erosion and sedimentation control measures would be applied during construction as noted above in B1.h. Following construction, runoff from the roof of the small pumphouse would be minimal, and, due to topography, could not flow into the West Fork. No additional stormwater treatment is proposed.

2) Could waste materials enter ground or surface waters? If so, generally describe.

With implementation of the project impact minimization measures, described below, no waste materials are anticipated to enter the ground or surface waters during construction or operation of the proposed project.

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:

During construction, equipment would be operated and maintained in such a manner as to minimize the risk of an uncontrolled discharge of pollutants. Best Management Practices will include the following:

General Impact Minimization Measures

1. Use of sediment barriers such as fences, weed-free straw matting/bales or fiber wattles as necessary in all work areas sloping toward the West Fork Washougal River and Vogel Creek, as well as along top of bank of creeks and wetlands, to intercept any surface flow that might transport sediment to the stream channel.
2. Staging of construction equipment and materials would occur at least 20 feet away from the river or creek. Although a larger distance is desirable, the nature of the construction area is highly restricted as a nearly vertical bedrock hillside is parallel to the intake access road. Staging only at the existing hatchery would result in difficulties for on-going operations and fish hauling, though some staging would likely occur on hatchery grounds.
3. To the extent feasible, machinery would be operated from the top of the stream bank along adjacent uplands and previously cleared areas.
4. Fuel storage and refueling would occur in a staging area, no closer than 100 feet from the river, and 50 feet from Vogel Creek. Temporary hatchery water supply pumps and associated fuel storage tanks would be within 20 feet of the river. Fuel storage and refueling areas would be operated using best management practices (use of catch-basins, sediment berms) and would be equipped with an appropriate spill containment system. Absorbent pads and a fuel spill response kit of appropriate size for the equipment on-site would be readily available throughout the construction period.
5. Heavy equipment that may work below the OHWM would be washed before it is delivered to the job site.
6. Equipment would be inspected before use to remove vegetation and dirt clods.
7. Machinery would be inspected daily for fuel or lubricant leaks.
8. Excess excavated materials would be covered and stockpiled away from the river and flanked with sediment fencing or fiber wattles to minimize opportunity for fine sediment to be transported into the river. Following construction, surplus excavated materials would be transported off site to an approved receiving location to be determined by the contractor, and approved by the Owner's inspector.

Construction of In-River Components

1. In-water work is proposed to occur from July 15 through October 15, a requested extension of the standard in-water work window. Although the instream work window established for this area by WDFW is August 1 – 31, in-water work associated with the project would likely require 10-12 weeks to complete. If the HPA process determines that a shorter window is more appropriate, work will occur during the specified period. However, this analysis considers effects to listed fish for the proposed July 15 – October 15th instream work period.
2. All construction cofferdams would be removed from the river by October 15; however, every effort would be made to complete in-water work as soon as possible.
3. Super-sack bags would be filled with clean gravel (such as pea gravel) and would be tethered together.
4. Hydraulically operated equipment that may work below the OHWM would be operated with vegetable-based fluid in the hydraulic system.
5. Existing riparian vegetation would be protected to the extent possible.
6. Impacts to waters of the U.S. would be authorized as required under Section 404 of the Clean Water Act, as administered by the USACE.
7. To minimize effects from ground disturbance during construction, weed-free straw matting, silt fences, or other materials would be used to reduce the opportunity for soil erosion into the river or creek channel. All disturbed areas would be revegetated upon project completion using native plant species. Some annual grasses may be used for short term erosion control and cover.
8. Diesel or electric sump pumps would be used if needed to capture seepage flow from cofferdam areas. All seepage flow would be settled or filtered prior to discharge back to the river. The method would be determined by the Contractor with consideration of the volume of seepage flow; however, the following is currently proposed:
 - a. A series of silt filter bags, composed of geotextile fabric, would be placed atop a bench on the hillside above the existing intake access road, approximately 86 feet landward of the river bank. Existing brush would be cut to the ground (not grubbed) and a heavy geotextile fabric would be laid down prior to bag placement. Seepage water would be pumped into these bags to capture silt and the bags would allow for infiltration of post-treatment water back to the river or creek. Following use of the

bags, the tops of the bags would be removed, and the remainder containing the silt and sandy material would be seeded and planted.

- b. If possible, leakage under the cofferdam would be captured from the internal upstream face of the cofferdam using a small caged pump or a trailer-mounted pump; water would be pumped to the downstream side of the cofferdam. This would effectively collect creek water prior to entry into the work area. Silt-laden seepage water that is not feasibly captured would be routed to a silt bag system prior to discharge back to the river.
9. All pumps used for the temporary hatchery water supply would be screened according to NMFS and WDFW criteria. Pumps would be monitored daily by hatchery staff, and manually cleaned during the work period. Following construction, pumps would be removed.
10. A project biologist would be present during placement and removal of the cofferdams to ensure that minimization measures are implemented and that any site specific adjustments made during that phase of the project afford appropriate protection to ESA-listed species and their habitat.
11. A construction pollution and erosion control plan would be prepared and carried out by the Contractor to prevent pollution related to construction activities. The pollution and erosion control plan would address equipment and materials storage sites, fueling operations, staging areas, hazardous materials, spill containment and notification, and debris management.
12. If the independent WDFW-proposed velocity barrier project at the downstream end of the hatchery diversion reach is not implemented prior to this project, adult steelhead removal from holding pools (temporary hatchery water supply location during intake construction) would be conducted by experienced WDFW biologists trained in adult salmonid handling. Fish would be seined and dip-netted into inner tube sleeves. Wild fish would be transferred directly to a haul truck (cold, oxygenated water) and then returned to a suitable holding pool upstream of the intake area using inner tube sleeves to minimize stress.
13. Machinery for in-water elements would primarily be operated from the top of the stream bank along adjacent upland areas and excavation for installation of the fishway and intake would take place from the bank to the extent possible. During cofferdam installation, equipment may be driven in the flowing water. Given the predominant bedrock nature of the substrate, and anticipated low flows during the beginning of the in-water work window, it is possible that equipment could operate atop gravel bars or bedrock. If possible, equipment would be located atop bedrock to the extent possible to limit substrate compaction during the placement of cofferdam materials. Following placement of the cofferdam, equipment would not operate in the active flow.
14. Cofferdam materials (supersacks with visquene) would be placed by one of two methods:
 - a. An excavator working atop bedrock in the channel (to the extent possible) would place materials it receives from an excavator located on the top of bank.
 - b. A land-based crane would place materials in the channel.

4. Plants

a. Check or circle types of vegetation found on the site:

_____ deciduous tree: alder, maple, aspen, other: willows, (saplings in riparian corridor)

_____ evergreen tree: fir, cedar, pine, other

_____ shrubs

_____ Grass, invasive weedy species (hairy cat's ear, clover)

_____ pasture

_____ crop or grain

_____ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other: water parsley, soft rush, blackberry

_____ water plants: water lily, eelgrass, milfoil

_____ other types of vegetation

b. What kind and amount of vegetation will be removed or altered?

It is estimated that approximately three conifers would be removed to accommodate pipeline crossing of Vogel Creek (pipeline would be buried under the creek), and two trees would be removed from the bedrock bench, immediately landward of the intake structure. These trees range in size from 12-inches to 24-inches in diameter. They are located within 100 feet of the West Fork Washougal River. Several immature alder and fir saplings (10-15 feet in height and 1-2-inches in diameter), and a sparse assemblage of rose and willow that have become established in the armored bank

downstream of the existing intake would be removed. In addition, maintained lawns on the hatchery grounds would be disturbed due to excavation for pipeline installation. A small vegetated area that comprises portions of the buffer for a small wetland landward of the intake access road would likely be temporarily disturbed during construction. Temporarily disturbed areas would be reseeded following pipeline installation, and banks would be replanted with native shrubs (willows) following work at the intake and fishway location.

c. List threatened or endangered species known to be on or near the site.

No threatened or endangered plant species are known to be on or near the site.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

All disturbed areas would be revegetated upon project completion using native plant species. During construction, silt fencing would be placed along the wetland edge and along top of bank to protect wetland plants and the scattered shrub vegetation along the armored bank that comprises the stream buffer. To mitigate for the loss of three trees from the Vogel Creek riparian corridor due to pipeline placement, which would be maintained on-site and used as habitat enhancement features adjacent to Vogel Creek, WDFW proposes some plantings atop the banks the West Fork and Vogel Creek. Disturbed riparian areas along Vogel Creek would be replanted with native shrubs, including snowberry (*Symphoricarpos* spp.). Two western red cedar (*Thuja plicata*) and two grand fir (*Abies grandis*) saplings (species recommended per Skamania County Code Title 22) would be planted along the banks of Vogel Creek and the West Fork Washougal. Native willow species (*Salix sitchensis*) would be planted amid the re-armored portions of the left bank downstream of the new intake and fishway location on the West Fork.

5. Animals

a. Circle any birds and animals which have been observed on or near the site or are known to be on or near the site:

birds: hawk, heron, eagle, songbirds,
mammals: deer, bear, elk, beaver, other:
fish: bass, salmon, trout, herring, shellfish, other:

b. List any threatened or endangered species known to be on or near the site.

The federally threatened Lower Columbia River (LCR) Distinct Population Segment of steelhead and the LCR Evolutionarily Significant Unit (ESU) of coho are known to use the mainstem West Fork Washougal River in the project area. LCR Chinook occasionally occupy waters immediately downstream of the hatchery outfall, downstream of a set of natural falls (downstream of project area). Staff at the Skamania Hatchery have not collected Chinook in the hatchery's adult collection ladder, and they have not observed Chinook in the diversion reach or in the vicinity of the outfall.

Pockets of suitable, though fragmented, habitat for listed spotted owls occur in the area; however, spotted owls have not been observed onsite and none are documented on Priority Habitat Species data maps obtained for the project area.

c. Is the site part of a migration route? If so, explain.

Skamania County is part of the migratory corridor for neotropical songbirds, particularly riparian habitats in the county. Neotropical songbirds visit the county in the spring. Bald eagles migrate into the county during the winter and are known to nest along the West Fork Washougal River across from the hatchery parcel.

Due to the variability in lifecycle of steelhead, summer steelhead adult migration in the Washougal River basin occurs throughout the year, with seasonal peaks in activity from April through November. Wild steelhead smolts out-migrate between March and June, with a peak in April or May. Adult coho enter the Washougal River from early September and continue through December, though coho typically do not enter the West Fork until October. Coho spend one year in fresh water, and emigrate as age-1 smolts the following spring.

d. Proposed measures to preserve or enhance wildlife, if any:

The entire project is intended to enhance conditions for aquatic species in the West Fork Washougal River. The proposed pumpback pipeline element of the project is specifically intended to enhance instream flow and available habitat during the summer low flow period in the West Fork Washougal River. Water would be returned to the diversion reach, providing habitat for resident fish species. In addition, the new fishway would allow access to upstream habitats that is not currently available during low flow periods. The new screened intake would prevent entrainment/impingement of

fish, particularly juvenile salmon. The proposed rootwad revetments just downstream of the intake would enhance streambank habitat for native fish species along the left bank, which is currently armored with extensive amounts of riprap.

Specific measures targeted at reducing impacts to aquatic species during construction include the following:

- Construction activities below the OWHM will be conducted during the WDFW and NMFS-approved in-water work window specific to this project (July 15 – October 15). All cofferdams will be removed from the river by October 15, and all concrete pouring will occur before the end of September.
- Installation and removal of cofferdams would be accomplished over several hours to allow streamflow to be reduced and rewatered gradually. Immediately prior to initiating construction activities, qualified fisheries biologists would remove all fish species present from the immediate area where the cofferdams would be installed. Herding, capture and release operations would be implemented as follows:
 - A fishery biologist experienced with work area isolation and competent to ensure the safe handling of all ESA-listed fish would conduct or supervise any required capture and release operation. Adult fish would be guided from the area behind the cofferdams. As part of any dewatering process, WDFW personnel would use beach seines (herding) and sanctuary nets (solid-bottomed) to herd fish from the area or capture and release (water to water transfer) all fish observed in the area.
 - Fish would be removed from the wetted areas prior to riprap removal and operation of construction equipment in the wetted channel (to set the cofferdam). Block nets would be placed to prevent fish from re-entering the cofferdam placement area until the cofferdam is installed.
 - If electrofishing equipment is used to capture fish, NMFS electrofishing guidelines would be followed. Electrofishing operations, if necessary, would be conducted by WDFW personnel. Once captured, fish would be placed into a 5 gallon bucket using small dip-nets. Captured fish would be released back into the river channel a safe distance (approximately 150 feet) upstream of the work area.
 - Seining or electrofishing would not be used if water temperatures exceed 18°C (64° F.). The capture team would handle ESA-listed fish with extreme care, using sanctuary nets to keep fish in water during transfer procedures to prevent the added stress of out-of-water handling.
 - Fish biologists would record species and lengths of any fish mortalities encountered. That data would be provided to USFWS and NMFS.

6. Energy and natural resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Power for the new intake would be supplied by a buried conduit from the existing electrical service on the hatchery grounds. This conduit would be buried in the same trench as the pumpback pipeline, until the northern terminus where it would split (under the intake access road) to an electrical panel. Power for the pumpback station would be provided by a buried electrical conduit from the existing electrical service on the hatchery.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

The proposed project would not affect the potential use of solar energy by adjacent properties.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

No energy conservation features are included as part of the proposed project. However, the intake pipeline currently delivers surface water to the hatchery via gravity-feed. This method of delivery would be maintained.

7. Environmental health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

Materials likely to be present during construction include gasoline and diesel fuels, hydraulic fluids, oils, lubricants, solvents, paints and other chemical products. A spill of one of these chemicals could potentially occur during construction as a result of either equipment failure or worker error. Contaminated soils or sediments could also be exposed during excavation. If disturbed, contaminated substances could expose construction workers and potentially other individuals in the vicinity through blowing dust, stormwater runoff or vapors.

1) Describe special emergency services that might be required.

Special emergency services are not anticipated to be required for the proposed project.

2) Proposed measures to reduce or control environmental health hazards, if any:

A spill prevention plan would be required and prepared by the Contractor for the proposed project to address equipment and materials storage sites, fueling operations, staging areas, hazardous materials, and spill containment and notification. A pollution control plan would also be required and prepared by the Contractor.

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

The proposed project is located in a rural environment; noises in the project area are limited to agricultural practices, light road traffic (associated with hatchery haul trucks, personnel, and local residents), and flow from the West Fork Washougal River. These types of noise are not expected to affect the proposed project.

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Noise levels in the project area would temporarily increase during construction. Noise levels during construction would be limited to the maximum permissible sound levels per the Skamania County Code (Chapter 8.22 – Noise Regulations, under Chapter 8, Health and Safety).

Operation of the new Skamania Hatchery intake and associated pumpback pipeline is not anticipate to generate short-term or long-term types of noise or noise levels different than existing noise conditions in the project area.

3) Proposed measures to reduce or control noise impacts, if any:

Construction equipment would be operated in a manner pursuant to the Skamania County Code (Chapter 8.22).

8. Land and shoreline use

a. What is the current use of the site and adjacent properties?

Portions of the site are currently developed and in use as part of the Skamania Hatchery, which has been in operation since the 1950s. There are several private residences, and private and County roads that traverse adjacent properties, though most of adjacent areas are undeveloped forested communities. A private residence and associated irrigated pasture are located immediately east/northeast of the hatchery and intake location, and several residences are present across the river. Parcels upstream on the same bank (left bank) of the river are primarily forested and undeveloped.

b. Has the site been used for agriculture? If so, describe.

The site has not been used for agriculture.

c. Describe any structures on the site.

Existing site features and facilities collectively operate to allow for adult steelhead collection from the West Fork, egg incubation, and early rearing of hatchery juveniles. Existing features are illustrated in Appendix B, Site Plans.

Existing facilities include:

- **Concrete channel-spanning intake weir**
- **Intake, and fish ladder structure**
- **Heavily armored banks downstream of intake, parallel to and between the intake access road and river**
- **Hatchery office**
- **Hatchery residences (3)**
- **Garage**
- **Several utility/storage buildings**
- **Mechanical and control building**

- **Parking areas**
- **Rearing raceways**
- **Adult holding ponds**
- **Pollution abatement pond**
- **Hatchery building**
- **Adult fish ladder**
- **Hatchery outfall**
- **Gravel intake access road and associated riprap armoring along the road**

d. Will any structures be demolished? If so, what?

The existing Skamania Hatchery intake and small fish ladder would be demolished and replaced with new facilities (see item 3a2 above).

e. What is the current zoning classification of the site?

The current zoning classification of the site is West End Forest Lands 20.

f. What is the current comprehensive plan designation of the site?

The West End Community Comprehensive Subarea Plan designation is Forest Lands 20.

g. If applicable, what is the current shoreline master program designation of the site?

The shoreline designation for this area is Conservancy.

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

The Skamania County assessor "MapSifter" indicates that waterbodies (West Fork Washougal and Vogel Creek) occur on the parcel, and that portions of the parcel are within the floodplain and within erosion hazard areas.

PHS mapping obtained for the project documents the presence of two bald eagle (*Haliaeetus leucocephalus*) nests located immediately across the river from the main hatchery along the West Fork Washougal River. Discussions with Eric Holman, WDFW Bald Eagle biologist (pers comm., 8/25/10), indicate that the project should not result in any conflict with two existing bald eagle nests. All tree removal and habitat altering activity is greater than 750 feet away from the nests. As such, WDFW will not require a Bald Eagle Management Plan.

i. Approximately how many people would reside or work in the completed project?

There are currently three hatchery residences onsite that house families of hatchery staff. This project would not increase residences on site, or the amount of staff required at the facility.

j. Approximately how many people would the completed project displace?

The proposed project would not displace people.

k. Proposed measures to avoid or reduce displacement impacts, if any:

Not applicable, see items 8i and 8j above.

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

Measures to ensure consistency with land use plans include on-going coordination with Skamania County regarding consistency with Shoreline Master Program and the critical areas ordinance.

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

No housing units would be provided by the proposed project.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

Not applicable, see item 9a above.

c. Proposed measures to reduce or control housing impacts, if any:

Not applicable, see items 9a and 9b above.

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

The new pumping station would be made of exterior plywood and have a hollow metal door, and would be approximately 12 feet tall.

b. What views in the immediate vicinity would be altered or obstructed?

Views in the immediate vicinity would not be altered or obstructed by the proposed structures.

c. Proposed measures to reduce or control aesthetic impacts, if any:

Not applicable, see items 10a – 10b.

11. Light and glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

Construction related to intake and fishway renovations and pumpback pipe placement would occur during daylight hours. The completed new intake will be equipped with lights to allow personnel to inspect the structure for maintenance. These lights will be minor, and operated manually via switch.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

Since the proposed project would not produce any light or glare, the proposed project would not be a safety hazard or interfere with views.

c. What existing off-site sources of light or glare may affect your proposal?

Existing off-site sources of light or glare are not anticipated to affect the proposed project.

d. Proposed measures to reduce or control light and glare impacts, if any:

Not applicable, see items 11a-11c above.

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?

Recreational swimming and use of the river by local landowners occurs in the immediate vicinity of the project site. Some fishing and bird watching likely occurs along the right bank, across from the hatchery. A small trail that starts at the intake is occasionally used by hikers.

b. Would the proposed project displace any existing recreational uses? If so, describe.

Although recreational uses may be temporarily impacted during the instream construction period, the completed project would not permanently displace any existing recreational uses.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

Not applicable, see items 12a – 12b above.

13. Historic and cultural preservation

a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

No places or objects listed on, or proposed for, national, state, or local preservation registers are known to be on or next to the site.

b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

None are known to be on or next to the site. The existing hatchery water supply line is buried beneath the intake access road portion of the pipeline route. The new pipe would be buried adjacent to the existing water supply line. The entire hatchery parcel was filled about 5 feet in the 1950s during construction of the facility, and the entire hatchery site, including the intake access road and the maintained lawns of the facility, were leveled off to the edge of the river. As such, the trench required for installation of the pumpback line would be excavated in areas that have been subject to extensive previous disturbance (primarily fill). The pipeline would not be buried beneath the previous fill prism.

c. Proposed measures to reduce or control impacts, if any:

Not applicable, see items 13a – 13b above.

14. Transportation

a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.

Site is accessed via the Lewis and Clark Hwy in Vancouver, WA, using WA-14:

1. Head E on WA-14 E toward Exit 6 (20.9 mi)
2. Turn Left at Salmon Falls Road (1.5 mi)
3. Turn Left to stay on Salmon Falls Road (1.9 mi)
4. Turn Left at Washougal River Road (0.8mi)
5. Turn Right at Labarre Road (52 ft)
6. Turn Left at N Fork Road (0.4mi)
7. Take 2nd Left onto Steelhead Road, Destination on Left (446 ft)

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

The site is not currently served by public transit. The nearest transit stop is not known.

c. How many parking spaces would the completed project have? How many would the project eliminate?

The proposed project would not eliminate or add parking spaces.

d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

The proposed project would not require new roads. Following installation of the pumpback pipeline, the existing facility intake access road would be re-graveled to allow for continued access to the intake and fishway area.

e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

The proposed project would not use water, rail, or air transportation.

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

The number of vehicular trips per day to the completed project is typically 2-3 for hatchery staff. The number of trips is dependent on the frequency of hatchery personnel accessing the site for on-going activities, as well as occasional visitors to the hatchery complex.

g. Proposed measures to reduce or control transportation impacts, if any:

Because all construction would occur within the hatchery parcels and not on public roadways, impacts to transportation are not anticipated for the proposed project, therefore, no measures are proposed.

15. Public services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

The proposed project would not result in an increased need for public services.

b. Proposed measures to reduce or control direct impacts on public services, if any.

Not applicable, see item 15a above.

16. Utilities

a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

As described in 6a, power for the new intake would be supplied by a buried conduit from existing electrical service on the hatchery grounds. This conduit would be buried in the same trench as the pumpback pipeline, until the northern terminus where it would split (under the intake access road) to an electrical panel. Power for the pumpback station would be provided by a buried electrical conduit from existing electrical service on the hatchery.

C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: Raymond J Berg
Date Submitted: 10/4/2011

