PACIFICORP ENERGY
A DIVISION OF PACIFICORP

825 NE Multnomah, Suite 1500
Portland, Oregon 97232

May 14, 2012

Washington Department of Fish and Wildlife
Habitat Program
Attn: Steven West
600 Capitol Way N
Olympia, WA 98501-1091

Re: PacifiCorp Energy
Lewis River Hatchery Upper Intake Maintenance
Permit Application Package
Cowlitz County, Washington

Dear Mr. West,

Under cover of this letter, please find the application material required for PacifiCorp to conduct maintenance on the Lewis River Hatchery Upper Intake. As you're aware, the upper intake pump supplies water to the Lewis River Hatchery. The facility is in need of repair and is currently out of compliance with National Marine Fisheries Service (NMFS) pump screen criteria. Per Eric Kinne's direction, we have prepared a Joint Aquatic Resource Permit Application (JARPA) and a State Environmental Policy Act (SEPA) checklist. This permit application package has been prepared to obtain the necessary Hydraulic Project Approval (HPA) and State Environmental Policy Act (SEPA) Determination of Non-Significance to complete the project. We have confirmed that this maintenance action is exempt from U.S. Army Corps of Engineers Section 404 and Section 10 permitting requirements. We also expect this maintenance to be exempt from Cowlitz County Shorelines and Critical Areas permit requirements which will be confirmed upon Cowlitz County's review of this application. The facility is already permitted under an existing land lease through with the Department of Natural Resources (DNR). Lastly, PacifiCorp is required by the Department of Ecology (DOE) to prepare an in-water work protection plan (IWWPP) for all work below the ordinary high water mark (OHWM) of state and federally regulated waters. We have included this IWWPP plan for your information.

PacifiCorp proposes to complete the project between August 1 and August 15, 2012. If you have questions or need additional information please contact me by phone at 503.813.7039, or by email at Briana.Weatherly@Pacificorp.com.

Sincerely,

Briana Weatherly

Briana Weatherly
Environmental Compliance Analyst
PacifiCorp Energy – Hydro Resources

Cc:
Washington Department of Fish and Wildlife
Attn: Steven West
2108 Grand Boulevard
Vancouver, Washington 98661

Encl.

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]
Lewis River Hatchery Upper Intake Maintenance

Part 2–Applicant

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

2a. Name (Last, First, Middle) and Organization (if applicable)			
Weatherly, Briana – PacifiCorp Energy (PacifiCorp)			
2b. Mailing Address (Street or PO Box)			
825 NE Multnomah Street, Suite 1500			
2c. City, State, Zip			
Portland, Oregon 97232			
2d. Phone (1)	**2e.** Phone (2)	**2f.** Fax	**2g.** E-mail
503-813-7039	503-819-2281	503-813-6659	Briana.weatherly@pacificorp.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)
Same as applicant.
3b. Mailing Address (Street or PO Box)
N/A

[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			
N/A			
3d. Phone (1)	**3e.** Phone (2)	**3f.** Fax	**3g.** E-mail
N/A	N/A	N/A	N/A

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)			
Aaron Roberts - Washington Department of Fish and Wildlife; Manager Lewis River Complex			
4b. Mailing Address (Street or PO Box)			
4404 Old Lewis River Rd.			
4c. City, State, Zip			
4d. Phone (1)	**4e.** Phone (2)	**4f.** Fax	**4g.** E-mail
360-225-4390		N/A	Aaron.Roberts@dfw.wa.gov

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
☒ 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]

4404 Old Lewis River Road

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

Woodland, Washington 98674

5d. County [help]

Cowlitz County

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

¼ Section	Section	Township	Range
NW	Section 7	5 North	2 East

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

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

45.937089° N lat. / -122.620080° W long

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

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

EG0701001

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 JARPA Attachment C.		

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

On August 24, 2011, a biologist from Mason, Bruce and Girard, Inc. (MB&G) inspected the project area and adjacent areas within 300 feet for wetlands. No wetland features were located within 300 feet of the project area.

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

Within the project area, the Lewis River is designated as a Type 1 (Type S) Shoreline of the State. The Lewis River flows west into the Columbia River downstream of the proposed project area. On August 24, 2011, an MB&G biologist inspected the project area and adjacent areas within 300 feet for streams and wetlands. No additional water features were located within 300 feet of the project area.

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

☒ Yes ☐ No ☐ Don't know

Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (Panel No. 5300320305D) indicate that the project lies within the 100-year floodplain for the Lewis River and is within Zone A. Merwin Reservoir levels and instream flow below Merwin Dam are moderated and controlled by PacifiCorp in response to flood conditions, as required by PacifiCorp's High Runoff Operation Procedures. Although flooding of the project area is possible it is less likely due to the upstream PacifiCorp owned and operated dams.

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

The proposed project will repair an intake pump located adjacent to and partially within the Lewis River. The Lewis River Hatchery Upper Intake Maintenance (upper intake) project area is nearly 100% paved but does contain small sections of a disturbed upland riparian vegetation community that consists primarily of non-native, introduced species. Typical plant species within this community are summarized below (Table 1). Each plant species' status as either a native, introduced or a noxious weed species is also listed. Table 1 does not constitute a complete inventory of plant species within the site, but is presented to convey the general vegetation community identified during the site investigation.

Table 1. Typical Vegetation within the Disturbed Upland Riparian Vegetation Community in the vicinity of the Lewis River Hatchery Upper Intake Maintenance Project.

Scientific Name	Common Name	Native Status[1]
Cirsium arvense	Canada thistle	Introduced
Cornus sericea	Redosier dogwood	Native
Cytisus scoparius	Scotch broom	Introduced
Holcus lanatus	Common velvetgrass	Introduced
Phalaris arundinacea	Reed canarygrass	Native
Rubus armeniacus	Himalayan blackberry	Introduced
Schedonorus phoenix	Tall fescue	Introduced
Trifolium pretense	Red clover	Introduced

The existing Lewis River Hatchery site provides limited habitat value for most wildlife species. The hatchery facility experiences frequent human disturbance and noise associated with normal fish hatchery activities. The adjacent properties are rural residential, agricultural, and forested lands that provide habitat for deer, elk, small mammals, songbirds, raptors, and aquatic species (within the Lewis River).

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

The property is currently used as a fish hatchery. The hatchery raises salmon and trout to meet the terms and conditions of the Federal Energy Regulatory Commission 2008 license (FERC No. 935) and preceding Lewis River Settlement Agreement.

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

Adjacent properties include rural residential properties, forested areas and agricultural areas.

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

The only structure within the immediate vicinity of the project area includes the upper intake pump and pump station. The pump station supplies water to the fish hatchery and consists of concrete platforms, turbine pumps, screens and buried intake pipes. The majority of the hatchery complex is located outside the project areas and includes four operational outbuildings, an office, and several hatchery operator residences. The hatchery also includes four concrete ponds which are used for holding juvenile and adult fish.

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

The project can be accessed by following Lewis River Road (Highway 503) approximately 8 miles east out of Woodland, Washington. Make a right turn on Old Lewis River Road. The project area is located along the bank of the Lewis River on Old Lewis River Road, northeast of the fish hatchery facility (See Vicinity Map - Appendix A).

Part 6–Project Description

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

The upper intake that serves as one of the two intakes for the Lewis River Hatchery is in need of repair and is currently out of compliance with National Marine Fisheries Service (NMFS) pump screen criteria. The upper intake is located along the north bank of the Lewis River at RM 16 within Cowlitz County, Washington. The upper intake supplies water to the hatchery buildings and ponds 13, 14, and 15 (see photos in Appendix B). This intake consists of a “river torpedo" connected to a concrete wet well with two 36-inch diameter buried intake pipes. In 1989, the wet well was covered by a NMFS screen criteria compliant 63-ft long, static screen panel placed in the river at a 39-degree angle (to horizontal). In 2009, the upstream intake screen panel suffered a structural collapse due to debris racking during a flood event, causing the screen to buckle inward and collapse. This left several approximately 3 to 12-inch wide gaps between the screen panels and concrete support walls, resulting in noncompliance with NMFS screen criteria.

To bring the upstream intake screen panel into compliance with NMFS criteria, the screen panel and wet well support wall will be repaired using divers and small hand tools. Divers will remove the existing fish screen and place it in an upland area where it will be cleaned and straightened to its original design. Divers will bolt a new, pre-fabricated steel support frame along the top of the existing concrete wet well wall to provide a flat and level surface for the screen panel. The straightened screen panel will then be reinstalled and welded to the new steel support frame (see plan sheets in Appendix C). It is anticipated that in-water work will be completed within a 24-hour period. In total, less than ½ cubic yard of new fill material (i.e. the steel support frame

and bolts) will be added to the existing facility. The remainder of the project will involve repairs to an existing facility that will not require the additional placement of fill within the Lewis River.

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

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

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.

The upper intake construction will include improving known weak points in the screen support system. Damaged structural elements will be replaced with new structural elements designed to resist larger loads. Additional elements will be installed to brace the existing structure. Damaged members will be replaced with members of the same size, with the upper connection having a larger weld to resist a larger potential hydraulic head differential. The connection at the bottom of the sloped wide flange will be a prefabricated C-shaped member that will fit over the front and back of the concrete wall. The original connection will be welded to the C channel. Screen panels will be removed in sections, and the concrete intake bays that hold the screens will be cleaned of organic material, loose sand, and gravel. Epoxy anchors will be installed in the existing concrete to support the new screen frame. Some screens may need to be replaced if they are damaged, otherwise they will be slid back into place once the frame is rebuilt. Since the pump is fed by two different intake pipes, the upper intake repairs can be made by isolating half of the torpedo screen, and by removing half of the flat panel intake screen during repair. This approach will allow the intake pump to operate, maintaining half the design flow to the hatchery facilities during construction.

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: August 1, 2012 End date: August 15, 2012 ☐ See JARPA Attachment D

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

PacifiCorp is required to bring the pump intake screens at the Lewis River Hatchery into compliance with NMFS criteria as required by the Federal Energy Regulatory Commission (FERC) Settlement Agreement. The upper intake fish screen sustained damage during the 2009 flood event and suffered a structural collapse that brought the upper intake out of compliance with NMFS criteria. The structural repairs will bring the fish screens back into NMFS fish protection compliance.

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

The fair market value of the project is approximately $30,000.

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

A site investigation was conducted by a wetland scientist from MB&G on August 24, 2011. No wetlands were identified within or adjacent to the project areas.

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

☐ Yes ☒ No ☐ Don't know

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

☐ Yes ☒ No ☐ Don't know

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

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

☐ Yes ☒ No

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

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

☐ Yes ☒ No ☐ Don't know

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

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

☐ Yes ☐ No ☒ Not applicable

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

Not applicable.

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)
N/A	N/A	N/A	N/A	N/A	N/A	N/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: Not Applicable

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]

Not applicable.

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]

Not applicable.

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

For work occurring below the Ordinary High Water Mark (OHWM) of the Lewis River, Best Management Practices (BMPs) will be employed to minimize adverse impacts on water quality and aquatic habitat. All work will be conducted in accordance with conditions specified in Merwin Hydroelectric Project (FERC No. 935) 401 Water Quality Certification/Order No. 3678 issued by the Washington Department of Ecology (DOE) on October 9, 2006. As required by Condition 4.5.2(b) of the 401 Certification, an In-Water Work Protection Plan (IWWPP) has been prepared for the project, and is available as Appendix D of this application. In addition, the following avoidance measures and BMPs will be strictly adhered to for all work occurring within and near the OHWM of the Lewis River.

- Work below the OHWM of the Lewis River will be completed during the preferred in-water work period (i.e., between August 1 and August 15, 2012, as requested through submittal of this application).
- In-water work will be minimized to the maximum extent practical. Where possible, structural components of the upper intake will be removed and worked on in upland areas.
- Construction activities (except for efforts to avoid or minimize resource damage) will cease under high water conditions that could result in complete inundation of the project area. All materials, equipment, and fuel will be removed if flooding of the area is expected to occur within 24 hours. It should be noted that flooding of the work area is very unlikely given the proposed timing of work activities and regulation of the OHWM by Merwin Dam.
- Work within or near the Lewis River will include implementation of all reasonable measures to minimize the impacts of construction activity on aquatic resources. These measures include BMPs to control sedimentation, proper use of chemicals, oil and chemical spill prevention and control, and clean-up of surplus construction supplies or other solid wastes. The IWWPP prepared for the project will include further information pertaining to these specific project-related BMPs.
- All construction debris will be properly disposed of in an approved upland site outside of the 100-year floodplain.
- In the event of a discharge of oil, fuel or chemicals into the Lewis River, or onto land with a potential for entry into the Lewis River, containment and clean-up efforts will be implemented immediately and take precedence over normal

work. PacifiCorp will immediately notify the State of Washington Emergency Management Division at 800-258-5990 of any fuel or chemical discharges to the environment. In addition to the State of Washington Emergency Management Division, PacifiCorp will notify the National Response Center at 800-424-8802 if the discharge is to the Lewis River. Clean-up will include proper disposal of any spilled material and used clean-up materials.

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

☒ Yes ☐ No

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

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

☐ Yes ☒ No ☐ Not applicable

A compensatory waters mitigation plan has not been prepared for the project because the proposed project is considered maintenance to an existing facility. In addition, the proposed project is recommended by the NMFS and Washington Department of Fish and Wildlife (WDFW). Potential deleterious impacts that may be associated with the repair activity are being mitigated off-site, through PacifiCorp's agreement to fund and build numerous enhancement measures throughout the Lewis River basin, per the Lewis River Settlement Agreement. These enhancements range in scope from bank stabilizations to large and very extensive aquatic habitat improvements for spawning fish species.

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]

Not applicable.

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
Repairs at the Upper Intake	Lewis River	Below OHWM of Lewis River	1 day	1/2 cubic yard (steel c-frame and bolts)	1,800 square feet (60 feet x 30 feet)

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

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

A pre-fabricated steel frame support totaling approximately ½ cubic yard will be bolted to the existing concrete slab below the OHWM of the Lewis River. .The remainder of the proposed project will result in no net gain of fill material within the Lewis River.

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]

No excavation or dredging is anticipated to be necessary at the upper intake.

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
Washington Department of Fish and Wildlife	Eric Kinne	(360) 906-6747	March 16, 2012
Army Corps of Engineers	Danette Guy; Peter Olmstead	(360) 906-7274	March 16, 2012
Cowlitz County Planning Department	Ron Melin	(360) 577-3052	March 22, 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

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.

The project is located within the 5th field, Lower Lewis River HUC (1708000206).

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 #.

The project is located in Water Resource Inventory Area Number 27.

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.

☒ 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 ☒ Not applicable

Name of manual: Not applicable

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

The Lewis River Hatchery has been in operation since the 1940s.

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 entire project will occur atop paved parking areas, fill material, or partially below the OHWM of the Lewis River. As such, a cultural resource survey is not necessary and has not been conducted.

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]

There are six species of fish with the potential to occur within the Lewis River near the proposed project that are currently listed as threatened under the federal Endangered Species Act:

- Chinook salmon, Lower Columbia River Evolutionarily Significant Unit (ESU) (Threatened)
- Coho salmon, Lower Columbia River ESU (Threatened)
- Chum salmon, Columbia River ESU (Threatened)
- Steelhead trout, Lower Columbia River Distinct Population Segment (DPS) (Threatened)
- Bull trout, Columbia River DPS (Threatened)
- Eulachon (Columbia River smelt), Southern DPS (Threatened)

The proposed project has the potential to affect the species listed above; however, the project activities were analyzed and considered in the NMFS Biological Opinion for the Operation of PacifiCorp and Cowlitz PUD's Lewis River Hydroelectric Projects, dated August 27, 2007 and the U.S. Fish and Wildlife (USFWS) Biological Opinion for the Federal Energy Regulatory Commission for the Lewis River Hydroelectric Projects, dated September 15, 2006.

Columbia River smelt were listed as threatened in 2010 and therefore were not addressed in the 2007 NMFS Biological Opinion. The southern Distinct Population Segment (DPS) of this species is known to utilize the Lewis River for spawning (76 FR 515). Smelt typically spend 3 to 5 years in saltwater before returning to freshwater to spawn from late winter through mid spring (76 FR 515). The proposed project will be conducted outside of the time period when smelt could be found in the Lewis River. Therefore, the project is expected to have no effect on this species (See SEPA checklist in Appendix E for additional information).

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]

PacifiCorp Wildlife Biologist, Kendel Emerson, conducted a search of the most recent Department of Natural Resources (DNR) Natural Heritage Program (NHP) database. This search did not indicate the presence of threatened or endangered species or priority habitats within the vicinity of the proposed project (other than described in Section 9K, above). As such, the proposed project will not affect priority habitats or listed species. The project is located within a Fish and Wildlife Habitat Critical Area, per Cowlitz County Code, since the Lewis River is a Type 1 (Type S) waters of the state. The proposed project is likely to fall under Critical Areas and Shoreline Maintenance Exemptions (Ron Melin, Cowlitz County Planning Department, email comm., March 22, 2012 [email available upon request]).

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. ☒ N/A

☒ A SEPA determination is pending with the Washington Department of Fish and Wildlife. The expected decision date is prior to August 1, 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): Maintenance of an existing structure.

Other city/county permits:

☐ Floodplain Development Permit ☐ Critical Areas Ordinance ☒ Critical Areas Exemption (Maintenance)

STATE GOVERNMENT

Washington Department of Fish and Wildlife:

☒ Hydraulic Project Approval (HPA) ☐ Fish Habitat Enhancement Exemption ☐ N/A

Washington Department of Ecology:

☐ Section 401 Water Quality Certification ☒ N/A*

*Work will be completed under 401 Water Quality Certification/Order No. 3678

Washington Department of Natural Resources:

☐ Aquatic Resources Use Authorization*

*Project is under the existing Department of Natural Resources Aquatic Lease No. 41427 (available upon request).

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)*

*Exempt per email from the ACOE dated March 16, 2012 (available upon request).

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)

PacifiCorp - Briana Weatherly	Briana Weatherly	5-10-12
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.

Aaron Roberts	Aaron Roberts	05-10-12
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.
ORA publication number: ENV-019-09

2009

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

US Army Corps of Engineers ®
Seattle District

AGENCY USE ONLY

Date received:

Agency reference #: _____

Tax Parcel #(s): _____

_____

_____

JARPA Attachment C:
Contact information for adjoining property owners, lessees, etc. [help]

Use this attachment only if you have more than four adjoining property owners.

TO BE COMPLETED BY APPLICANT [help]

UPI #:

Project Name:

Use black or blue ink to enter answers in white spaces below or fill in electronically by clicking on fields.

5h. Contact information for all adjoining property owners, lessees, etc. [help]

Name	Mailing Address	Tax Parcel # (if known)
Bechly, Julius/Carol	385 Stanford Drive Woodland, WA 98674	EG0612009
Bosel, Paula R.	P.O. Box 1267 Woodland, WA 98674	EG0613002, EG0613002N
Hunter, Bruce C.	4365 Old Lewis River Road Woodland, WA 98674	EA1201002, EA1201011
Moir, Louise A./Warren E.	4555 Old Lewis River Road Woodland, WA 98674	EA0615001
Chilton, Inc.	115 Butte Hill Road Woodland, WA 98674	EG0612001
Dye, Richard T. Jr./Arlene R.	311 Stanford Drive Woodland, WA 98674	EG0612019
Rodman, Neal	400 Stanford Drive Woodland, WA 98674	EG0612010
State Department of Fish and Wildlife	4404 Old Lewis River Road Woodland, WA 98674	EG0603002, EG0612002, EG0612005

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.
ORA publication number: ENV-022-09

Appendix A

Vicinity Map

Lewis River Hatchery Upper Intake Maintenance

Cowlitz County, Washington

Figure 1.
Project Area and Vicinity Map

Lewis River Hatchery Maintenance Project
Cowlitz County, Washington

Center of Project	
Lat:	45° 56' 12"
Lon:	-122° 37' 3"

MB&G

1 inch = 2 miles

0 0.5 1 2 Miles

Source: Topo from ESRI. All other data from MB&G. Reproduced for infomation purposesand may not be suitable for legal, engineering or surveying purposes. Conclusions drawn are the responsibility of the user.

Figure1_Vicinity.mxd 05/05/2011

Appendix B

Ground Level Color Photographs

Lewis River Hatchery Upper Intake Maintenance

Cowlitz County, Washington

1

2

MB&G	**LEWIS RIVER HATCHERY INTAKE REPAIR PROJECT**
Photos from McMillen, LLC	1. View to the northwest (upstream) showing the upstream pump intake, including the wet well and static screen panel. 2. View to the southeast (downstream) showing the upstream pump intake.

Appendix C

Plan Sheets

Lewis River Hatchery Upper Intake Maintenance

Cowlitz County, Washington

PACIFICORP ENERGY
A PACIFICORP COMPANY

MCMILLEN, LLC

PACIFICORP ENERGY
LEWIS RIVER HATCHERY
UPSTREAM WATER INTAKE REPAIR

CONSTRUCTION DRAWINGS
APRIL 2011

FINAL DESIGN SUBMITTAL

PACIFICORP
LEWIS RIVER HATCHERY
UPSTREAM WATER INTAKE REPAIR

COWLITZ COUNTY

LOCATION MAP
NTS

VICINITY MAP
NTS

PROJECT LIMITS
COWLITZ COUNTY, WASHINGTON

DRAWING INDEX	
DWG NO.	TITLE
	GENERAL
–	COVER SHEET
G–1	LOCATION MAP, VICINITY MAP AND DRAWING INDEX
G–2	STANDARD SYMBOLS AND ABBREVIATIONS
G–3	OVERALL SITE PLAN, CONTRACTOR STAGING AND GENERAL ARRANGEMENT
G–4	DEMOLITION PLAN AND SECTIONS
G–5	PROJECT SEQUENCING
	STRUCTURAL
GS–1	STANDARD STRUCTURAL NOTES
S–1	INTAKE PLAN AND SECTION
S–2	INTAKE SECTIONS AND DETAILS

McMILLEN, LLC
1401 SHORELINE DRIVE
SUITE 100
BOISE, ID 83702
OFFICE: 208.342.4214
FAX: 208.342.4216

SAP#	
PL#	
DATE	APRIL 2011
ENG –	DES –
DR –	CH –
APPROVAL	

LEWIS RIVER HATCHERY
UPSTREAM WATER INTAKE REPAIR
LOCATION MAP, VICINITY MAP
AND DRAWING INDEX

PACIFICORP ENERGY
A PACIFICORP COMPANY
HYDRO

SCALE: AS NOTED | SHEET G–1 | REV. A

No.	DATE	REVISION	BY	CHK	APP
A	4/6/11	FINAL DESIGN SUBMITTAL	DL	CCB	CCB

PLOT SCALE: AS NOTED

REFERENCE DRAWINGS
DRAWING No.
REFERENCE DRAWINGS
DRAWING No.

ABBREVIATIONS

A/E	ARCHITECT/ENGINEER
AB	ANCHOR BOLT
ABC	AGGREGATE BASE COURSE
ABAN	ABANDON
AC	ALTERNATING CURRENT
ACK	ACKNOWLEDGE
ACP	ASPHALTIC CONCRETE PAVEMENT
AD	ADDENDUM, AREA DRAIN
ADDL	ADDITIONAL
ADH	ADHESIVE
ADJ	ADJUSTABLE, ADJACENT
AF	AMP FRAME, AMP FUSE
AFF	ABOVE FINISH FLOOR
AFG	ABOVE FINISH GRADE
AGGR	AGGREGATE
AI	AREA INLET
ALIG	ALIGNMENT
ALUM	ALUMINUM
AMB	AMBIENT
ANC	ANCHOR
AP	ACCESS PANEL
APRX	APPROXIMATE
APVD	APPROVED
ASSY	ASSEMBLY
AT	AMP TRIP
ATM	ATMOSPHERE
AUTO	AUTOMATIC
AUX	AUXILIARY
AVE	AVENUE
AVG	AVERAGE
BD	BOARD
BE	BOTH ENDS, BELL END
BF	BOTH FACES, BOTTOM FACE, BLIND FLANGE, BOARD FEET
BITUM	BITUMINOUS
BKG	BACKING
BL	BASE LINE
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BM	BENCHMARK, BEAM
BOC	BACK OF CURB
BOP	BOTTOM OF PIPE, BEGINNING OF PIPE
BOT	BOTTOM
BP	BASE PLATE
BRG	BEARING
BRGP	BEARING PLATE
BRKT	BRACKET
BS	BOTH SIDES
BTW	BETWEEN
BTWLD	BUTT WELD
BU	BELL UP, BUILT UP
BUR	BUILT-UP ROOFING
BW	BOTH WAYS
BYP	BYPASS
C TO C	CENTER TO CENTER
C	CONDUIT
CAV	CONTINUOUS ACTING AIR VALVE
CB	CATCH BASIN
CCB	CONCRETE BLOCK
CCW	COUNTER CLOCKWISE
CE	CONCRETE EDGE
CF	CUBIC FEET (FOOT)
CHFR	CHAMFER
CHD	CHORD
CHH	COMMUNICATION HANDHOLE
CIP	CAST-IN-PLACE
CJ	CONSTRUCTION JOINT
CJP	COMPLETE JOINT PENETRATION
CL	CENTERLINE, CLASS, CLOSE
CLJ	CONTROL JOINT
CLR	CLEAR
CMP	CORRUGATED METAL PIPE
CO	CLEAN OUT, CONCRETE OPENING
COL	COLUMN
COM	COMMON
COMB	COMBINATION
COMP	COMPOSITION, COMPRESSIBLE, COMPOSITE
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
COOR	COORDINATE
CORR	CORRUGATED
CP	CONTROL POINT
CPLG	COUPLING
CRL	CORROSION RESISTANT LINING
CSC	COMPRESSION SLEEVE COUPLING
CSK	COUNTERSINK
CTR	CENTER
CTRL	CONTROL
CVT	CULVERT
CU	CUBIC
CW	CLOCKWISE
CY	CUBIC YARD

D	DEEP, DIFFUSER
DB	DUCT BANK, DECIBEL, DRY BULB
DBA	DEFORMED BAR ANCHOR
DC	DIRECT CURRENT
DEG	DEGREE
DEG C	DEGREE CENTIGRADE
DEG F	DEGREE FAHRENHEIT
DEMO	DEMOLITION
DET	DETAIL
DI	DUCTILE IRON
DIA	DIAMETER
DIAG	DIAGONAL, DIAGRAM
DIFF	DIFFERENTIAL, DIFFERENCE
DIM	DIMENSION
DISCH	DISCHARGE
DIST	DISTANCE, DISTRIBUTION
DIV	DIVISION
DMJ	DOUBLE MECHANICAL JOINT
DP	DEPTH
DUP	DUPLICATE
DWG	DRAWING
E	EAST, ELECTRICAL (DWG DISCIPLINE)
EA	EACH
EDB	ELECTRICAL DUCT BANK
EE	EACH END
EF	EACH FACE
EFF	EFFLUENT, EFFICIENCY
EL	ELBOW
ELEV	ELEVATION
EMBD	EMBEDDED
EMER	EMERGENCY
ENCL	ENCLOSURE
ENGR	ENGINEER
EOP	END OF PIPE
EQ	EQUAL
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
ES	EACH SIDE, EQUAL SPACE,
EST	ESTIMATE
EW	EACH WAY
EXC	EXCAVATION
EXST	EXISTING
EXP	EXPANSION, EXPOSED
EXT	EXTERIOR, EXTERNAL, EXTENSION
FAB	FABRICATE
FBO	FURNISHED BY OWNER
FC	FLUSHING CONNECTION
FCA	FLANGED COUPLING ADAPTER
FD	FLOOR DRAIN
FDC	FLEXIBLE DUCT CONNECTION
FDTN	FOUNDATION
FE	FLANGED END
FES	FIRE EXTINGUISHER CABINET
FG	FINISHED GRADE
FIG	FIGURE
FL	FLOW, FLOW LINE
FLEX	FLEXIBLE
FLG	FLANGE
FLR	FLOOR
FN	FENCE
FO	FINISHED OPENING
FOC	FACE OF CONCRETE
FOT	FLAT ON TOP
FPT	FEMALE PIPE THREAD
FR	FRAME
FRP	FIBERGLASS REINFORCED PLASTIC
FS	FLOOR SINK
FT	FEET, FOOT
FTG	FOOTING, FITTING
FUT	FUTURE
FW	FIELD WELD
FWD	FORWARD
FWE	FURNISHED WITH EQUIPMENT
GA	GAGE (METAL THICKNESS)
GAL	GALLON
GALV	GALVANIZED
GB	GRADE BREAK
GC	GROOVED COUPLING
GEN	GENERAL
GND	GROUND
GP	GUY POLE
GR	GRADE
GRTG	GRATING
GT	GREASE TRAP
GVL	GRAVEL
H	HIGH
HC	HORIZONTAL CENTERLINE
HDR	HEADER
HEX	HEXAGONAL
HH	HANDHOLE
HID	HIGH INTENSITY DISCHARGE HOLLOW
HM	METAL
HORIZ	HORIZONTAL
HP	HORSEPOWER
HPC	HORIZONTAL POINT OF CURVATURE
HPT	HORIZONTAL POINT OF TANGENCY
HR	HOUR

HR	HOUR
HS	HIGH STRENGTH
HSS	HOLLOW STRUCTURAL SHAPE
HT	HEIGHT
HWL	HIGH WATER LEVEL
HYD	HYDRAULIC
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IF	INSIDE FACE
IN	INCH
INC	INCLUDE
INF	INFLUENT
INSTR	INSTRUMENTATION
INT	INTERSECTION
INTR	INTERMEDIATE
INV	INVERT
IPS	IRON PIPE SIZE
IPT	INTERNAL PIPE THREAD
IR	INSIDE RADIUS
IRR	IRRIGATION
ISO	ISOMETRIC
JB	JUNCTION BOX
JCT	JUNCTION
JF	JOINT FILLER
JT	JOINT
KO	KNOCK OUT
L	LENGTH
LAD	LADDER
LATL	LATERAL
LB	LAG BOLT, POUND
LE	LIFTING EYE
LF	LINEAR FOOT
LG	LONG
LIN	LINEAR
LIQ	LIQUID
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LNG	LONGITUDINAL
LOC	LOCATION
LP	LOW POINT
LT	LEFT
LTD	LIMITED
LW	LIGHTWEIGHT
LWC	LIGHTWEIGHT CONCRETE
LWL	LOW WATER LEVEL
MACH	MACHINED
MAINT	MAINTENANCE
MAN	MANUAL
MATL	MATERIAL
MAX	MAXIMUM
MB	MACHINE BOLT
MC	MECHANICAL COUPLING
MECH	MECHANICAL
MED	MEDIUM
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MIR	MIRROR
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
MMB	MEMBRANE
MO	MASONRY OPENING
MOD	MODIFY
MON	MONUMENT
MPT	MALE PIPE THREAD
MSL	MEAN SEA LEVEL
MT	MOUNT
MU	MASONRY UNIT
MW	MONITORING WELL
N	NORTH, NEUTRAL
NA	NOT APPLICABLE
NAT	NATURAL
NEG	NEGATIVE
NO	NUMBER
NOM	NOMINAL
NPS	NOMINAL PIPE SIZE
NPT	NATIONAL PIPE THREAD
NTS	NOT TO SCALE
NWL	NORMAL WATER LEVEL
O TO O	OUT-TO-OUT
OC	ON CENTER
OD	OUTSIDE DIAMETER
OED	OPEN END DUCT
OG	ORIGINAL GROUND
OH	OVERHEAD
OPNG	OPENING
OPP	OPPOSITE
OPT	OPTIONAL
OR	OUTSIDE RADIUS
ORIG	ORIGINAL
OVFL	OVERFLOW
OVHG	OVERHANG
OZ	OUNCE

PAR	PARALLEL
PC	POINT OF CURVE, PRECAST
PCC	POINT OF COMPOUND CURVATURE
PCF	POUNDS PER CUBIC FOOT
PCT	PERCENT
PED	PEDESTAL
PEN	PENETRATION
PERF	PERFORATED
PERM	PERMANENT
PERP	PERPENDICULAR
PH	PHASE
PI	POINT OF INTERSECTION
PJP	PARTIAL JOINT PENETRATION
PL	PLATE, PROPERTY LINE
POS	POSITIVE, POSITION
PP	POWER POLE
PRC	POINT OF REVERSE CURVATURE
PREFAB	PREFABRICATED
PRELIM	PRELIMINARY
PREP	PREPARE
PRES	PRESSURE
PRI	PRIMARY
PROP	PROPERTY
PROT	PROTECTION
PS	PIPE SUPPORT
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
PSIG	POUNDS PER SQUARE INCH GAGE
PT	POINT, POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
PZ	PIEZOMETER
Q	RATE OF FLOW
QTR	QUARTER
QTY	QUANTITY
QUAL	QUALITY
R&R	REMOVE AND REPLACE
R&S	REMOVE AND SALVAGE
R	RADIUS
RB	ROCK BEAM
REC	RECESS
RECD	RECEIVED
RECT	RECTANGULAR
RED	REDUCER
REF	REFERENCE
REINF	REINFORCING
REM	REMOVE
REQD	REQUIRED
RESIL	RESILIENT
RET	RETAINING
REV	REVISION
RGH	ROUGH
RGS	RIGID GALVANIZED STEEL
RGS-PVC	PVC COATED RGS
RND	ROUND
ROW	RIGHT OF WAY
RPM	REVOLUTIONS PER MINUTE
RR	RAILROAD
RSP	ROCK SLOPE PROTECTION
RT	RIGHT
S	SOUTH
SAN	SANITARY
SB	SPLASH BLOCK
SCH	SCHEDULE
SCHEM	SCHEMATIC
SCN	SCREEN
SE	STEEL/ALUMINUM EDGE
SEC	SECONDARY, SECONDS
SECT	SECTION
SEP	SEPARATE
SF	SQUARE FOOT
SHT	SHEET
SHTG	SHEATHING
SL	SLOPE
SLTD	SLOTTED
SLV	SLEEVE
SMLS	SEAMLESS
SOG	SLAB ON GRADE
SOP	STAKEOUT POINT
SP	STANDPIPE
SPA	SPACING
SPEC	SPECIFICATION
SPLY	SUPPLY
SPT	SET POINT
SQ	SQUARE
SST	STAINLESS STEEL
ST	STREET
STA	STATION
STD	STANDARD
STIF	STIFFENER
STIR	STIRRUP
STL	STEEL
STOR	STORAGE
STR	STRAIGHT
SUB	SUBSTITUTE
SUC	SUCTION
SUSP	SUSPENDED
SY	SQUARE YARD
SYM	SYMBOL
SYMM	SYMMETRICAL
SYN	SYNTHETIC
SYS	SYSTEM

TAN	TANGENT
TBF	TURBULENT FOUNTAIN SCREEN
TBM	TEMPORARY BENCHMARK
TEMP	TEMPORARY, TEMPERATURE
THD	THREAD
TOB	TOP OF BANK
TOC	TOP OF CONCRETE
TOD	TOP OF DUCT
TOF	TOP OF FOOTING
TOG	TOP OF GRATING
TOL	TOLERANCE
TOP	TOP OF PLATE
TOPO	TOPOGRAPHY
TOS	TOP OF SLAB, TOP OF STEEL
TOW	TOP OF WALL
TP	TELEPHONE POLE
TRANS	TRANSITION
TRD	TRENCH DRAIN
TYP	TYPICAL
UG	UNDERGROUND
ULT	ULTIMATE
UNO	UNLESS NOTED OTHERWISE
UTIL	UTILITY
VA	VOLT AMPERE
VAC	VACUUM
VAR	VARIABLE
VB	VALVE BOX
VC	VERTICAL CURVE
VCT	VERTICAL CENTERLINE
VEL	VELOCITY
VENT	VENTILATION
VERT	VERTICAL
VIF	VERIFY IN FIELD
VIN	VINYL
VOL	VOLUME
VPC	VERTICAL POINT OF CURVATURE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY
W/	WITH
W/O	WITHOUT
W	WEST
WC	WATER COLUMN
WD	WIDTH
WG	WATER GAGE
WL	WATER LEVEL
WLD	WELDED
WM	WIRE MESH
WP	WATERPROOF
WTHP	WEATHERPROOF
WS	WATER SURFACE
WT	WEIGHT, WATER TIGHT
WWF	WELDED WIRE FABRIC
XSECT	CROSS SECTION

GENERAL NOTES:

1. THESE ABBREVIATIONS APPLY TO THE ENTIRE SET OF CONTRACT DRAWINGS.
2. LISTING OF ABBREVIATIONS DOES NOT IMPLY ALL ABBREVIATIONS ARE USED IN THE CONTRACT DRAWINGS.
3. ABBREVIATIONS SHOWN ON THIS SHEET INCLUDE VARIATIONS OF THE WORD. FOR EXAMPLE, "MOD" MAY MEAN MODIFY OR MODIFICATION; "INC" MAY MEAN INCLUDED OR INCLUDING; "REINF" MAY MEAN EITHER REINFORCE OR REINFORCING.
4. SCREENING OR SHADING OF WORK IS USED TO INDICATE EXISTING COMPONENTS OR TO DE-EMPHASIZE PROPOSED IMPROVEMENTS TO HIGHLIGHT SELECTED TRADE WORK. REFER TO CONTEXT OF EACH SHEET FOR USAGE.

SYMBOLS

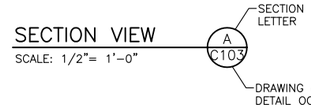
PLAN

SCALE: 1/2"= 1'-0"

SECTION IDENTIFICATION

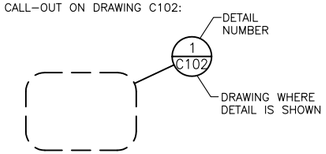
(1) SECTION CUT ON DRAWING C102:

(2) ON DRAWING C103 THIS SECTION IS IDENTIFIED AS:

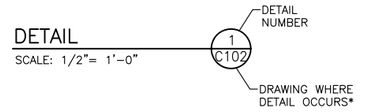


DETAIL IDENTIFICATION

(1) DETAIL CALL-OUT ON DRAWING C102:



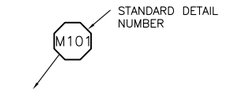
(2) ON DRAWING C103 THIS SECTION IS IDENTIFIED AS:



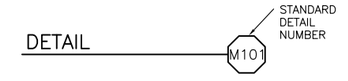
*NOTE: IF PLAN AND SECTION (OR DETAIL CALL-OUT AND DETAIL) ARE SHOWN ON SAME DRAWING. DRAWING NUMBER IS REPLACED BY A LINE.

STANDARD DETAIL IDENTIFICATION

(1) DETAIL CALL-OUT ON PLAN OR SECTION:



(2) ON DETAIL DRAWINGS, IDENTIFIED AS:



* IF PLAN AND SECTION, OR DETAIL CALL-OUT AND DETAIL ARE SHOWN ON SAME SHEET, SHEET NUMBER IS REPLACED BY A LINE (-).

McMILLEN, LLC
1401 SHORELINE DRIVE
SUITE 100
BOISE, ID 83702
OFFICE: 208.342.4214
FAX: 208.342.4216

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LEWIS RIVER HATCHERY
UPSTREAM WATER INTAKE REPAIR
STANDARD SYMBOLS AND ABBREVIATIONS

PACIFICORP ENERGY
A PACIFICORP COMPANY
HYDRO

SCALE: AS NOTED | SHEET G-2 | REV. A

REVISION	DATE	BY	CHK	APP
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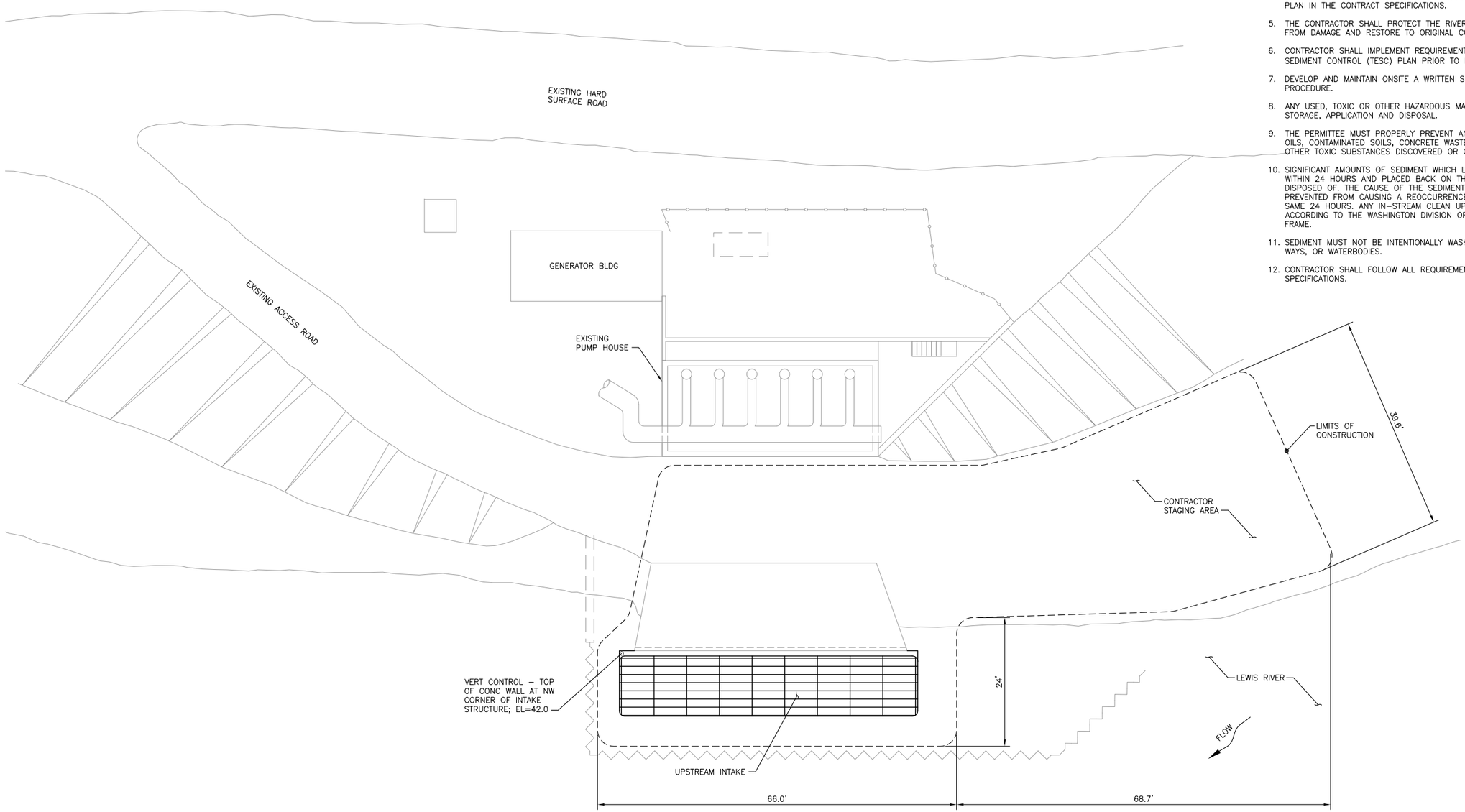
PLOT SCALE: AS NOTED

REFERENCE DRAWINGS | DRAWING No. | REFERENCE DRAWINGS | DRAWING No.

NOTES:

1. THE EXISTING ACCESS ROAD SHALL BE MAINTAINED AND PROTECTED THROUGHOUT CONSTRUCTION.
2. THE PUMP HOUSE STRUCTURE AND EXISTING FACILITIES SHALL BE PROTECTED THROUGHOUT CONSTRUCTION.
3. CONTRACTOR SHALL MANTAIN ACCESS TO THE PUMP HOUSE FOR THE PACIFICORP CREW DURING CONSTRUCTION.
4. THE PUMP HOUSE WILL ONLY BE TAKEN OUT OF SERVICE FOR BRIEF PERIODS DURING CONSTRUCTION. SEE DETAILED CONSTRUCTION SCHEDULE AND SEQUENCING PLAN IN THE CONTRACT SPECIFICATIONS.
5. THE CONTRACTOR SHALL PROTECT THE RIVER BANKS AND SURROUNDING AREA FROM DAMAGE AND RESTORE TO ORIGINAL CONDITION AT PROJECT COMPLETION.
6. CONTRACTOR SHALL IMPLEMENT REQUIREMENTS OF THE TEMPORARY EROSION AND SEDIMENT CONTROL (TESC) PLAN PRIOR TO INITIATING DEMOLITION ACTIVITIES.
7. DEVELOP AND MAINTAIN ONSITE A WRITTEN SPILL PREVENTION AND RESPONSE PROCEDURE.
8. ANY USED, TOXIC OR OTHER HAZARDOUS MATERIALS MUST INCLUDE PROPER STORAGE, APPLICATION AND DISPOSAL.
9. THE PERMITTEE MUST PROPERLY PREVENT AND MANAGE HAZARDOUS WASTE, USED OILS, CONTAMINATED SOILS, CONCRETE WASTE, SANITARY WASTE, LIQUID WASTE, OR OTHER TOXIC SUBSTANCES DISCOVERED OR GENERATED DURING CONSTRUCTION.
10. SIGNIFICANT AMOUNTS OF SEDIMENT WHICH LEAVE THE SITE MUST BE CLEANED UP WITHIN 24 HOURS AND PLACED BACK ON THE SITE AND STABILIZED OR PROPERLY DISPOSED OF. THE CAUSE OF THE SEDIMENT RELEASE MUST BE FOUND AND PREVENTED FROM CAUSING A REOCCURRENCE OF THE DISCHARGE WITHIN THE SAME 24 HOURS. ANY IN-STREAM CLEAN UP OF SEDIMENT SHALL BE PERFORMED ACCORDING TO THE WASHINGTON DIVISION OF STATE LANDS AND REQUIRED TIME FRAME.
11. SEDIMENT MUST NOT BE INTENTIONALLY WASHED INTO STORM SEWERS, DRAINAGE WAYS, OR WATERBODIES.
12. CONTRACTOR SHALL FOLLOW ALL REQUIREMENTS OF THE PROJECT PERMITS AND SPECIFICATIONS.



PLAN

SCALE: 1"= 10'

0" 10' 20'

1"=10'

McMILLEN, LLC

1401 SHORELINE DRIVE
SUITE 100
BOISE, ID 83702

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FAX: 208.342.4216

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LEWIS RIVER HATCHERY
UPSTREAM WATER INTAKE REPAIR
OVERALL SITE PLAN, CONTRACTOR STAGING AND GENERAL ARRANGEMENT

PACIFICORP ENERGY
A PACIFICORP COMPANY

HYDRO

SCALE: AS NOTED | SHEET G-3 | REV. A

PLOT SCALE: AS NOTED

No.	DATE	REVISION	BY	CHK	APP
A	4/6/11	FINAL DESIGN SUBMITTAL	DL	CCB	CCB

REFERENCE DRAWINGS

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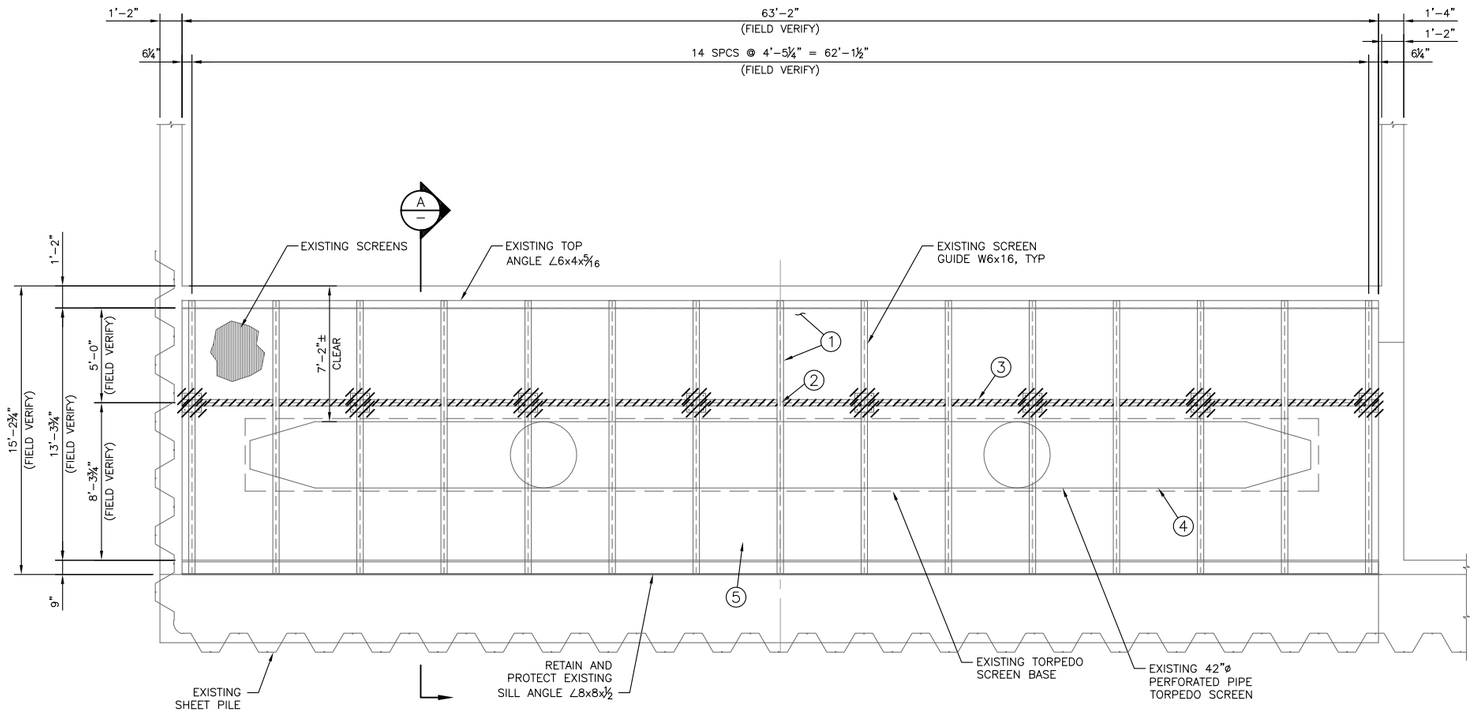
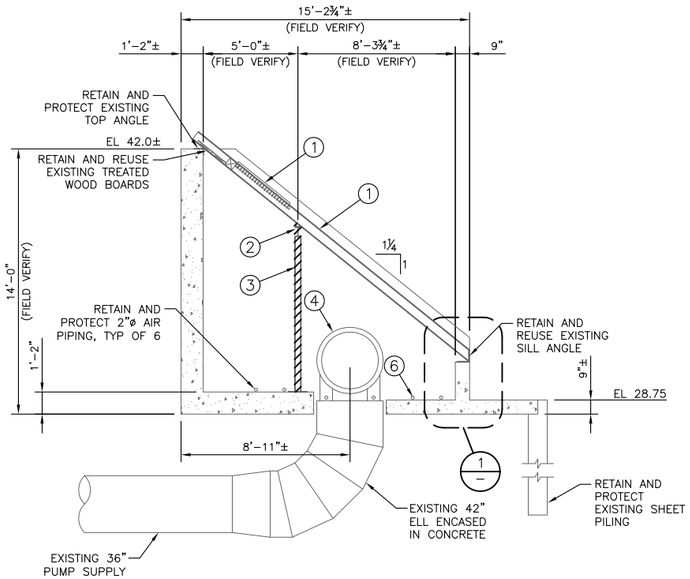


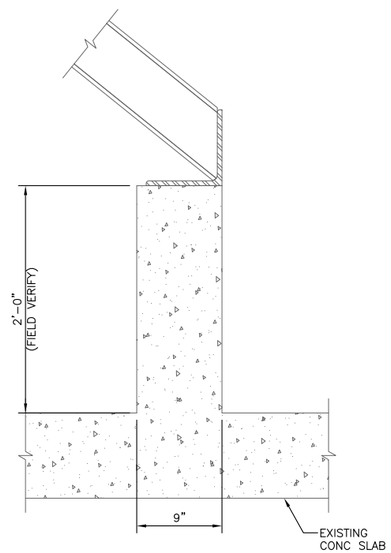
PLAN – UPSTREAM INTAKE

SCALE: 1/4"= 1'-0"



SECTION

SCALE: 1/4"= 1'-0"



DETAIL

SCALE: 1 1/2"= 1'-0"

KEY NOTES:

1. REMOVE AND REUSE THE EXISTING SCREENS AND W6x16 SCREEN GUIDE BEAMS.
2. CUT THE W6X16 HORIZONTAL CENTER BEAM FLUSH WITH THE CENTER OF THE TORPEDO SCREENS AND REMOVE AND DISPOSE OF IT.
3. REMOVE ALL THE W4X13 COLUMNS AND BASE PLATES AND INSPECT THEM FOR DAMAGE. REPLACE THE THREE MOST DAMAGED COLUMNS AND BASE PLATES. THE REMAINING DAMAGED BASE PLATES AND COLUMNS SHALL BE REPAIRED BY THE CONTRACTOR.
4. REMOVE AND PROTECT (1) OF THE EXISTING TORPEDO SCREENS WHILE MAINTAINING OPERATION OF THE OTHER TORPEDO SCREEN.
5. ALL SEDIMENT AND DEBRIS SHALL BE REMOVED FROM INSIDE THE WATER INTAKE STRUCTURE AND TRANSFERRED TO AN APPROVED WASTE DISPOSAL SITE.

SHEET NOTES:

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING DIMENSIONS PRIOR TO ORDERING OR FABRICATING STEEL.
2. ALL DEBRIS AND DEMOLISHED MATERIALS SHALL BE DISPOSED OF AT AN APPROVED OFFSITE LOCATION.
3. DEMOLITION SHALL BE COORDINATED WITH THE HATCHERY TO SCHEDULE THE REQUIRED OUTAGE.

McMILLEN, LLC
1401 SHORELINE DRIVE
SUITE 100
BOISE, ID 83702
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LEWIS RIVER HATCHERY
UPSTREAM WATER INTAKE REPAIR
DEMOLITION PLAN AND SECTIONS

PACIFICORP ENERGY
A PACIFICORP COMPANY
HYDRO

SCALE: AS NOTED | SHEET G–4 | REV. A

PLOT SCALE: AS NOTED

No.	DATE	REVISION	BY	CHK	APP
A	4/6/11	FINAL DESIGN SUBMITTAL	DL	CCB	CCB

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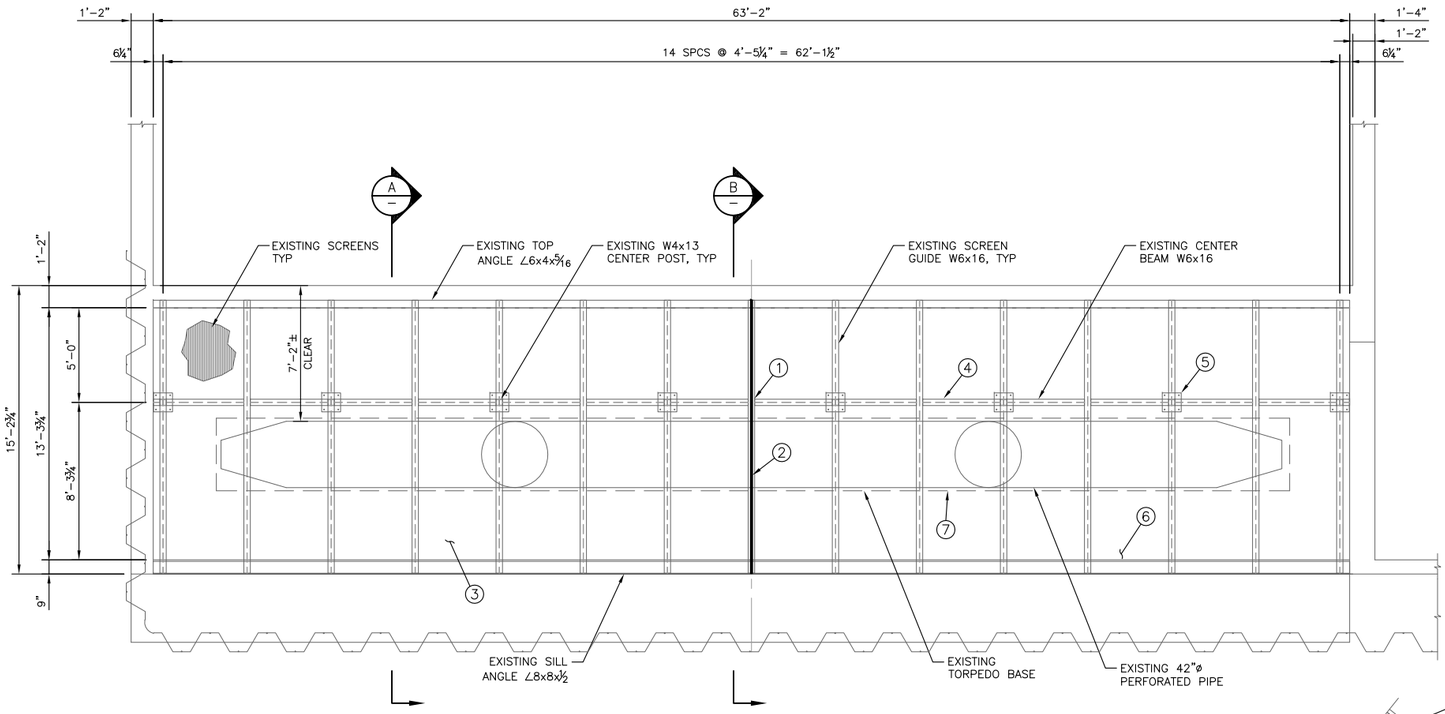


PLAN – UPSTREAM INTAKE

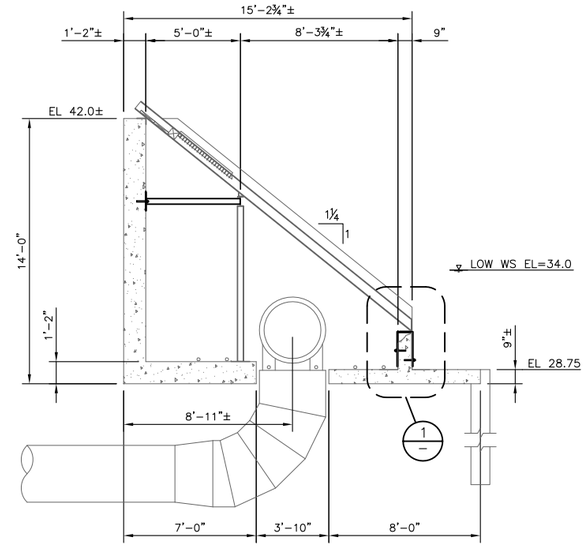
SCALE: 1/4"= 1'-0"

KEY NOTES:

1. CUT THE W6X16 HORIZONTAL CENTER BEAM FLUSH WITH THE CENTER POST AND SCREEN GUIDE
2. INSTALL TEMPORARY STEEL DIVIDER PLATE TO PROTECT DIVERS AND FISH.
3. REMOVE CLEAN AND REUSE THE EXISTING SCREENS AND SCREEN GUIDE BEAMS.
4. REMOVE AND DISPOSE OF THE W6X16 HORIZONTAL CENTER BEAM.
5. REMOVE ALL THE W4X13 COLUMNS AND BASE PLATES AND INSPECT THEM FOR DAMAGE. REPLACE THE THREE MOST DAMAGED COLUMNS AND BASE PLATES. THE REMAINING DAMAGED BASE PLATES AND COLUMNS SHALL BE REPAIRED BY THE CONTRACTOR.
6. ALL SEDIMENT AND DEBRIS SHALL BE REMOVED FROM INSIDE THE WATER INTAKE STRUCTURE AND TRANSFERRED TO AN APPROVED WASTE DISPOSAL SITE.
7. REMOVE AND PROTECT (1) OF THE EXISTING TORPEDO SCREENS WHILE MAINTAINING OPERATION OF THE OTHER TORPEDO SCREEN.
8. MODIFY SUPPORT FRAMING AS SHOWN IN SECTION A.
9. INSTALL TORPEDO SCREEN.
10. INSTALL MODIFIED FRAMING AND SCREENS.
11. REPEAT (1) – (10) FOR THE OTHER SIDE.
12. REMOVE STEEL DIVIDER PLATE.

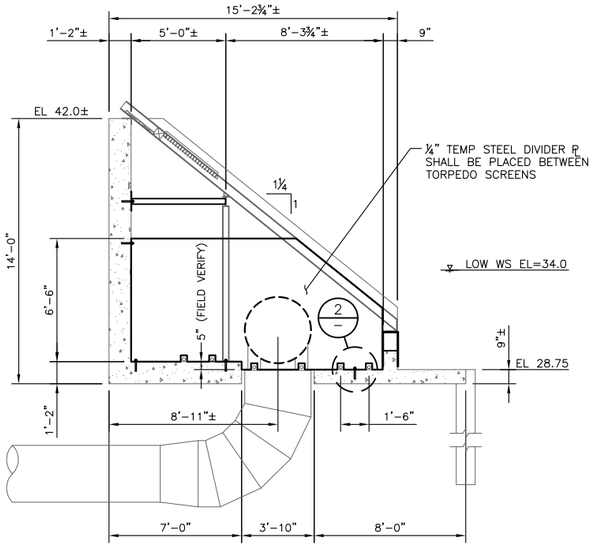
SHEET NOTES:

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING DIMENSIONS PRIOR TO ORDERING OR FABRICATING STEEL.



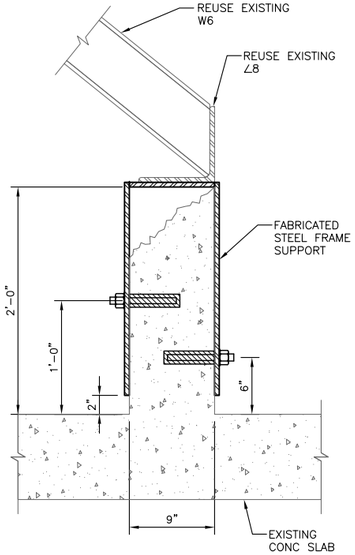
SECTION

SCALE: 1/4"= 1'-0" (A)



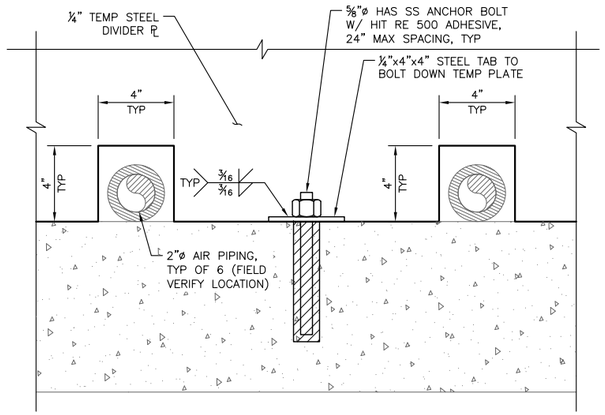
SECTION

SCALE: 1/4"= 1'-0" (B)



DETAIL (1)

SCALE: 1 1/2"= 1'-0"



DETAIL (2)

SCALE: 3"=1'-0"

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LEWIS RIVER HATCHERY
UPSTREAM WATER INTAKE REPAIR
PROJECT SEQUENCING

PACIFICORP ENERGY
A PACIFICORP COMPANY
HYDRO

SCALE: AS NOTED | SHEET G–5 | REV. A

McMILLEN, LLC
1401 SHORELINE DRIVE
SUITE 100
BOISE, ID 83702
OFFICE: 208.342.4214
FAX: 208.342.4216

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PLOT SCALE: AS NOTED

No.	DRAWING No.	REFERENCE DRAWINGS
A	DRAWING No.	REFERENCE DRAWINGS
B	DRAWING No.	REFERENCE DRAWINGS

STRUCTURAL NOTES:

1) GENERAL:

A. IBC=2009 INTERNATIONAL BUILDING CODE
B. CONSTRUCTION DOCUMENTS:
   1. THE CONTRACTOR SHALL REVIEW THE APPROVED CONSTRUCTION DOCUMENTS AND NOTIFY THE ENGINEER OF ANY ERRORS OR DISCREPANCIES PRIOR TO THE START OF CONSTRUCTION.
   2. THE CONTRACTOR SHALL FURNISH AND INSTALL EVERYTHING REQUIRED TO PROVIDE A COMPLETE STRUCTURE AS SHOWN HEREIN. IF THERE IS AN OMISSION ON THE PLANS, SUCH OMISSION SHALL NOT BE CONSTRUED TO MEAN THAT THE CONTRACTOR IS NOT REQUIRED TO FURNISH OR PROVIDE EVERYTHING THAT IS NECESSARY TO COMPLETE THE PROJECT TO THE MINIMUM REQUIREMENTS OF THE IBC AND ALL OTHER SPECIFICATIONS, CODES AND STANDARDS NOTED ON THE APPROVED CONSTRUCTION DOCUMENTS.
   3. THE CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY IF ANY UNIDENTIFIED EXISTING UNDERGROUND UTILITIES ARE DISCOVERED.
   4. THE STRUCTURAL CONSTRUCTION DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT ARE NOT LIMITED TO, BRACING AND/OR SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. CONTRACTOR AT HIS/HER OWN EXPENSE SHALL ENGAGE PROPERLY QUALIFIED PERSONS TO DESIGN BRACING, SHORING, ETC. OBSERVATION VISITS TO THE SITE BY THE ENGINEER SHALL NOT INCLUDE OBSERVATION OF THE ABOVE NOTED ITEMS.
   5. UNDER NO CIRCUMSTANCES CAN STRUCTURAL COMPONENTS BE SUBSTITUTED, OMITTED, OR ALTERED FROM THE APPROVED SET OF CONSTRUCTION DOCUMENTS WITHOUT WRITTEN APPROVAL FROM THE ENGINEER.
C. DIMENSIONS AND NOTATIONS:
   1. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS. DO NOT SCALE DRAWINGS.
   2. ABBREVIATIONS USED ON THE APPROVED CONSTRUCTION DOCUMENTS SHALL BE CONSIDERED TYPICAL ABBREVIATIONS FOR THE INDUSTRY. THE CONTRACTOR SHALL BE RESPONSIBLE TO NOTIFY THE ENGINEER IMMEDIATELY OF ANY ABBREVIATIONS THAT ARE UNKNOWN TO THE CONTRACTOR.
D. SHOP DRAWINGS:
   1. SHOP DRAWINGS, AS REQUIRED PER THESE STRUCTURAL NOTES, SHALL BE SUBMITTED TO THE ENGINEER IN A TIMELY FASHION PRIOR TO FABRICATION TO ALLOW FOR PROPER REVIEW AS REQUIRED PER SECTION 107.3.4.2 OF THE IBC.
   2. SHOP DRAWING ITEMS SHALL NOT BE INSTALLED UNTIL THE CONSTRUCTION DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL AND SHOP DRAWINGS HAVE BEEN APPROVED BY THE ENGINEER PER SECTION 107.3.4.2 OF THE IBC.
   3. DURING SHOP DRAWING REVIEW, DIMENSIONS AND QUANTITIES ARE NOT REVIEWED BY THE ENGINEER AND MUST BE VERIFIED BY THE CONTRACTOR. THE CONTRACTOR SHALL REVIEW AND STAMP SHOP DRAWINGS PRIOR TO REVIEW BY ENGINEER.
   4. THE DRAWINGS FOR CUSTOM-MADE PRECAST CONCRETE UNITS SHALL BE SHOP DRAWINGS FURNISHED BY THE PRECAST CONCRETE PRODUCER, STAMPED BY AN ENGINEER LICENSED IN THE STATE OF WASHINGTON AND SUBMITTED FOR APPROVAL BY THE ENGINEER. THESE DRAWINGS SHALL SHOW COMPLETE DESIGN, INSTALLATION, AND CONSTRUCTION INFORMATION IN SUCH DETAIL AS TO ENABLE THE ENGINEER TO DETERMINE THE ADEQUACY OF THE PROPOSED UNITS FOR THE INTENDED PURPOSE. DETAILS OF STEEL REINFORCEMENT SIZE AND PLACEMENT AS WELL AS SUPPORTING DESIGN CALCULATIONS SHALL BE INCLUDED. THE PRECAST CONCRETE UNITS SHALL BE PRODUCED IN ACCORDANCE WITH THE APPROVED DRAWINGS.
E. SPECIAL INSPECTION:
   1. THE OWNER SHALL EMPLOY A SPECIAL INSPECTION SERVICE AS REQUIRED PER THESE STRUCTURAL NOTES.
   2. THE CONTRACTOR SHALL EMPLOY A MATERIAL TESTING SERVICE AS REQUIRED PER THESE STRUCTURAL NOTES.
F. TYPICAL NOTES AND DETAILS:
   1. SPECIFIC NOTES AND DETAILS SHALL TAKE PRECEDENCE OVER STANDARD TYPICAL NOTES AND DETAILS.
   2. STANDARD TYPICAL NOTES AND DETAILS ARE TO BE USED WHEN REFERRED TO OR WHEN NO OTHER MORE RESTRICTIVE OR DIFFERENT DETAILS ARE SHOWN ON THE DRAWINGS.
   3. WORK NOT PARTICULARLY SHOWN OR SPECIFIED SHALL BE THE SAME AS SIMILAR PARTS THAT ARE SHOWN OR SPECIFIED.
G. CODE REQUIREMENTS:
   1. ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE FOLLOWING CODES:
      - IBC
      - ANY OTHER REGULATING AGENCIES WHICH MAY HAVE AUTHORITY OVER ANY PORTION OF THE WORK, INCLUDING THE STATE OF WASHINGTON.
   2. SPECIFICATIONS, CODES AND STANDARDS NOTED SHALL BE OF THE LATEST APPROVED ISSUE, INCLUDING SUPPLEMENTS, UNLESS NOTED OTHERWISE.
   3. CONTRACTOR SHALL BE PROPERLY REGISTERED IN THE STATE OF WASHINGTON PER WASHINGTON STATE LAW.

2) DESIGN CRITERIA:

A. IBC
B. DESIGN LOADS:
   1. HYDROSTATIC
      A) LIVE LOAD = 62.4 PCF

3) STRUCTURAL AND MISCELLANEOUS STEEL:

A. ALL STRUCTURAL STEEL WORK SHALL CONFORM TO THE LATEST EDITION OF THE AISC SPECIFICATIONS.
B. PLATES, ANGLES AND BARS SHALL CONFORM TO ASTM A36.
C. WELDS: PROVIDE E70XX ELECTRODES, IN ACCORDANCE WITH AWS D1.4.
D. BOLTS, UNO:
   1. PROVIDE A325N BOLTS FOR STEEL-TO-STEEL CONNECTIONS
   2. PROVIDE A307 BOLTS FOR STEEL-TO-CONCRETE CONNECTIONS
   3. EPOXY BOLT OR EXPANSION BOLT SUBSTITUTIONS FOR EMBEDDED BOLTS IS PROHIBITED WITHOUT WRITTEN CONSENT FROM THE ENGINEER.
   4. ALL EPOXY BOLT APPLICATIONS REQUIRE SPECIAL INSPECTION PER THESE STRUCTURAL NOTES.
E. ALL STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED, AND ERECTED IN ACCORDANCE WITH THE AISC CODE OF STANDARD PRACTICE, EXCEPT AS MODIFIED IN THESE NOTES AND THE PROJECT SPECIFICATIONS.
F. SPLICING OF STEEL MEMBERS, UNLESS SHOWN ON THE DRAWINGS, IS PROHIBITED WITHOUT WRITTEN APPROVAL OF THE PROJECT ENGINEER.
G. SUBMIT SHOP DRAWINGS OF STRUCTURAL STEEL LAYOUT FOR REVIEW BY THE ENGINEER PRIOR TO FABRICATION.
H. SURFACE TREATMENT, SHOP APPLIED
   1. STEEL
      a) GALVANIZED SURFACES. UNLESS OTHERWISE SPECIFIED, ALL ELEMENTS SHALL BE HOT-DIP GALVANIZED CONFORMING TO THE APPLICABLE REQUIREMENTS OF ASTM A123, A153, A385 AND A525. PROVIDE MINIMUM OF 2.3 OZ./SQ FT GALVANIZING ON ALL SURFACES.
      b) PAINTED SURFACES (STRUCTURAL STEEL). STRUCTURAL STEEL SHALL BE PAINTED WITH A MODIFIED ALKYD RUST INHIBITIVE PRIMER (2.0 MILS) AND EXTERIOR ALKYD GLOSS ENAMEL (2.5 MILS).
      c) NO GALVANIZED MATERIAL IS TO BE USED ON MATERIAL THAT IS IN DIRECT CONTACT WITH FISH REARING WATER.
   2. STAINLESS STEEL SHALL HAVE THE STANDARD MILL FINISH, BE CLEANED OF ALL FOREIGN MATTER BEFORE DELIVERY TO THE JOB. STAINLESS STEEL SHALL HAVE SMOOTH POLISHED SURFACES AND EDGES.
   3. TOUCH-UP GALVANIZED METAL SURFACES DAMAGED IN FABRICATION WITH "GALV-WELD", MANUFACTURED BY GALV-WELD PRODUCTS, KENCO DIVISION, SOUTHERN COATING AND CHEMICAL CO., SUMTER, S.C. 29150, OR APPROVED EQUIVALENT.
I. SURFACE TREATMENT FIELD APPLIED
   1. STEEL
      a) GALVANIZED SURFACES. DAMAGED SHOP GALVANIZED SURFACES AND ALL FIELD APPLIED GALVANIZING SHALL BE DONE WITH "GALV-WELD" OR APPROVED EQUIVALENT PRIOR TO INSTALLATION.
      b) PAINTED SURFACES DAMAGED SHOP PRIMED SURFACES AND ALL FIELD PRIMING SHALL BE DONE PER MANUFACTURER'S RECOMMENDATIONS.
   2. STAINLESS STEEL. NO FIELD APPLIED FINISH REQUIRED.

4) SPECIAL INSPECTION PROGRAM:

A. THE OWNER SHALL EMPLOY AN APPROVED AGENCY FOR SPECIAL INSPECTION SERVICES TO PERFORM SPECIAL INSPECTIONS IN ACCORDANCE WITH CHAPTER 17 OF THE IBC.
B. AN APPROVED AGENCY SHALL BE AN ESTABLISHED AND RECOGNIZED AGENCY REGULARLY ENGAGED IN CONDUCTING TESTS OR FURNISHING INSPECTION SERVICES.
C. A SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL SHOW COMPETENCE TO THE SATISFACTION OF THE BUILDING OFFICIAL FOR THE INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION. A SPECIAL INSPECTOR SHALL ALSO DEMONSTRATE A THOROUGH WORKING KNOWLEDGE OF CHAPTER 17 OF THE IBC AS SUMMARIZED BELOW. IF THERE IS ANY OMISSION ON THE SUMMARIZED LIST BELOW, SUCH OMISSION SHALL NOT BE CONSTRUED TO MEAN THAT THE SPECIAL INSPECTOR IS NOT REQUIRED TO INSPECT EVERYTHING THAT IS NECESSARY TO MEET THE MINIMUM REQUIREMENTS OF THE IBC.
D. SPECIAL INSPECTORS SHALL KEEP RECORDS OF INSPECTIONS. THE SPECIAL INSPECTOR SHALL SUBMIT INSPECTION REPORTS TO THE BUILDING OFFICIAL AND THE ENGINEER IN A TIMELY FASHION.
E. SPECIAL INSPECTION REPORTS SHALL INDICATE THAT WORK INSPECTED WAS DONE IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THE DISCREPANCIES ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE BUILDING OFFICIAL AND THE ENGINEER.

5) SPECIAL INSPECTIONS:

A. SPECIAL INSPECTION AS HEREIN REQUIRED OF THE FOLLOWING MATERIALS, INSTALLATION, FABRICATION, ERECTION OR PLACEMENT OF COMPONENTS AND CONNECTIONS REQUIRING SPECIAL EXPERTISE TO ENSURE COMPLIANCE WITH APPROVED CONSTRUCTION DOCUMENTS AND REFERENCED STANDARDS.
B. FABRICATORS:
   1. SPECIAL INSPECTION IS REQUIRED PER SECTION 1704.2 WHERE FABRICATION OF STRUCTURAL LOAD-BEARING MEMBERS AND ASSEMBLIES IS BEING PERFORMED ON THE PREMISES OF A FABRICATOR'S SHOP, UNLESS THE FABRICATOR IS REGISTERED AND APPROVED TO PERFORM WITHOUT SPECIAL INSPECTION.
C. STEEL:
   1. SPECIAL INSPECTION IS REQUIRED PER SECTION 1704.3 AND TABLE 1704.3.
   2. PERIODIC INSPECTION IS REQUIRED FOR:
      - STEEL FRAME JOINT DETAILS
D. WELDING:
   1. SPECIAL INSPECTION IS REQUIRED PER SECTION 1704.3.1.
   2. CONTINUOUS INSPECTION IS REQUIRED FOR:
      - GROOVE WELDS
      - MULTI-PASS FILLET WELDS
      - SINGLE PASS FILLET WELDS >5/16"
   3. PERIODIC INSPECTION IS REQUIRED FOR:
      - SINGLE PASS FILLET WELDS <5/16"
      - DECK WELDS
   4. SPECIAL INSPECTORS SHALL BE PROVIDED DURING STRUCTURAL WELDING INCLUDING THE WELDING OF REINFORCING STEEL NOT PERFORMED IN A CERTIFIED FABRICATION FACILITY.
E. BOLTS:
   1. SPECIAL INSPECTION IS REQUIRED PER SECTION 1704.3.3.
   2. CONTINUOUS INSPECTION IS REQUIRED FOR:
      - SLIP CRITICAL TYPE CONNECTIONS
   3. PERIODIC INSPECTION IS REQUIRED FOR:
      - BEARING TYPE CONNECTIONS
      - MATERIAL VERIFICATION OF HIGH STRENGTH BOLTS, NUTS, AND WASHERS.
   4. BOLTS OR REBAR INSTALLED IN CONCRETE AND REQUIRING THE USE OF AN EPOXY APPLICATION REQUIRE A SPECIAL INSPECTOR BE PRESENT DURING THE INSTALLATION PROCESS, PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

McMILLEN, LLC
1401 SHORELINE DRIVE
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LEWIS RIVER HATCHERY
UPSTREAM WATER INTAKE REPAIR
STANDARD STRUCTURAL NOTES

PACIFICORP ENERGY
A PACIFICORP COMPANY
HYDRO

SCALE: AS NOTED | SHEET GS-1 | REV. A

No.	REVISION	DATE	BY	CHK	APP
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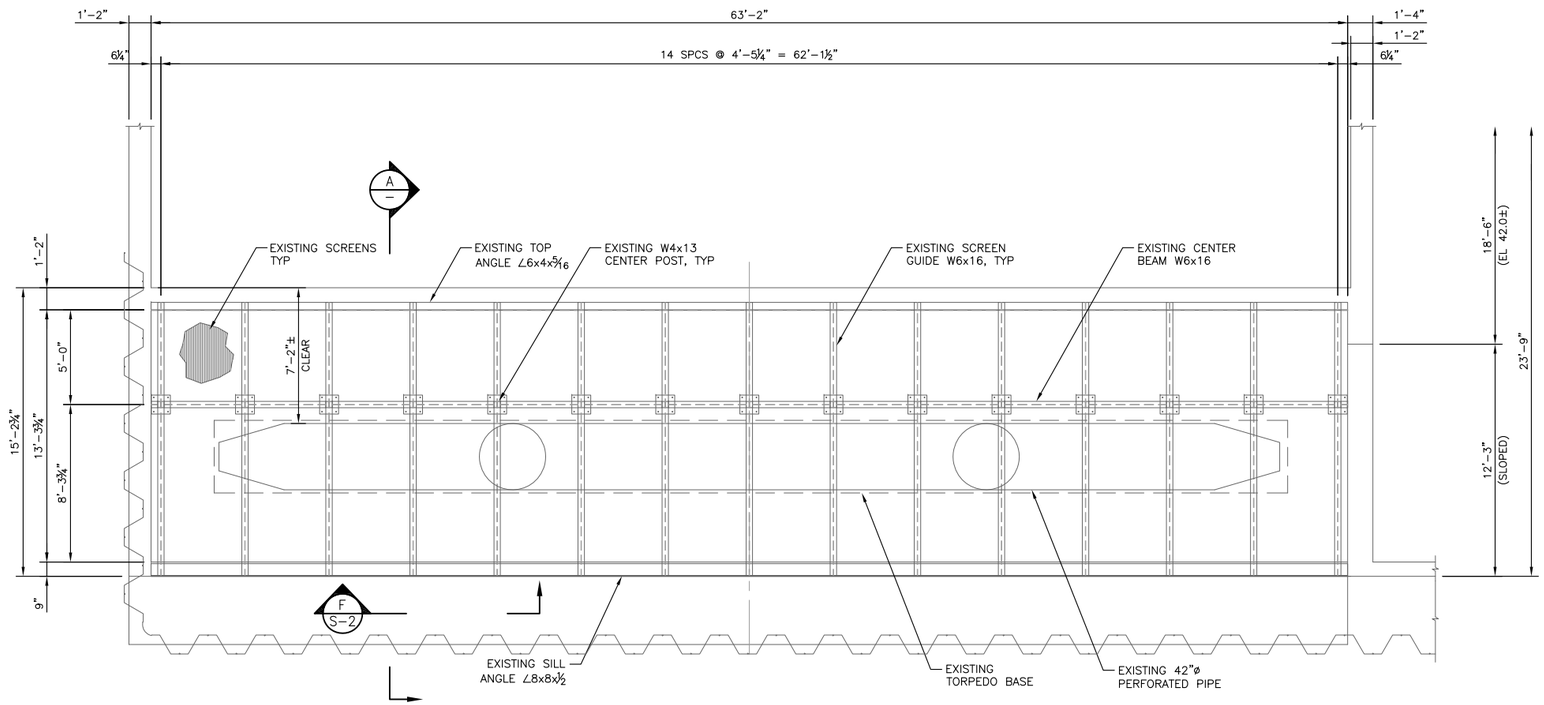
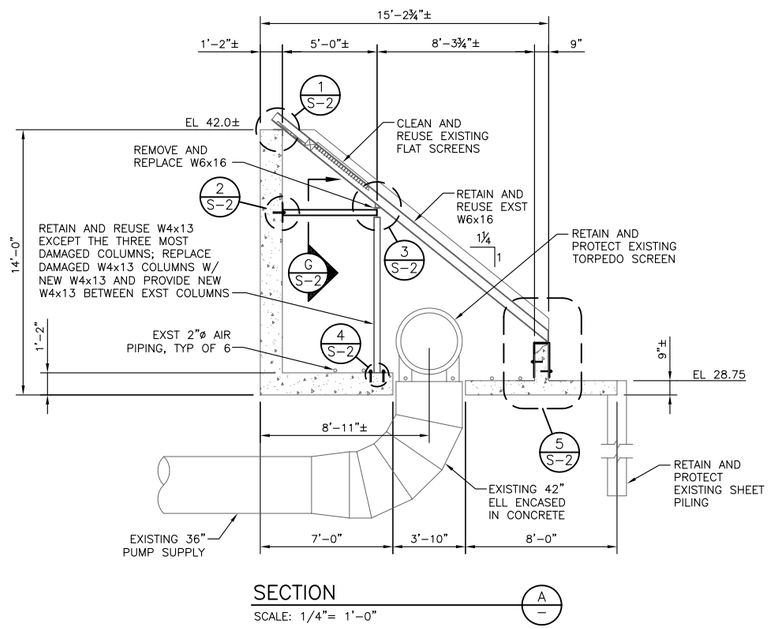


PLAN – UPSTREAM INTAKE

SCALE: 1/4"= 1'-0"



SECTION

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A
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SHEET NOTES:

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING DIMENSIONS PRIOR TO ORDERING OR FABRICATING STEEL.

McMILLEN, LLC
1401 SHORELINE DRIVE
SUITE 100
BOISE, ID 83702
OFFICE: 208.342.4214
FAX: 208.342.4216

SAP#	
PL#	
DATE	APRIL 2011
ENG –	DES –
DR –	CH –
APPROVAL	

LEWIS RIVER HATCHERY
UPSTREAM WATER INTAKE REPAIR
INTAKE PALN AND SECTION

PACIFICORP ENERGY
A PACIFICORP COMPANY
HYDRO

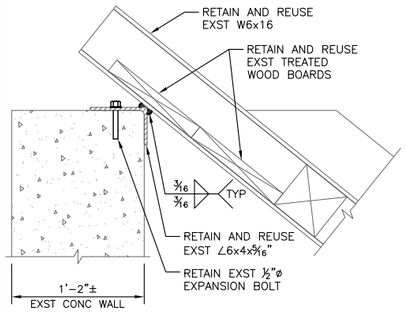
SCALE: AS NOTED | SHEET S-1 | REV. A

PLOT SCALE: AS NOTED

No.	DATE	REVISION	BY	CHK	APP
A	4/6/11	FINAL DESIGN SUBMITTAL	DL	CCB	CCB

No.	DATE	REVISION

DRAWING No.	REFERENCE DRAWINGS
DRAWING No.	REFERENCE DRAWINGS



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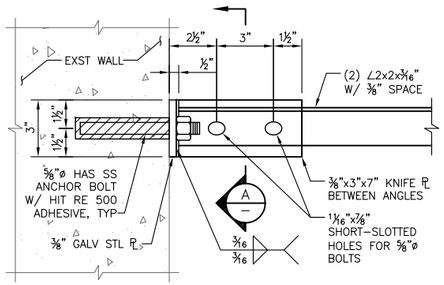

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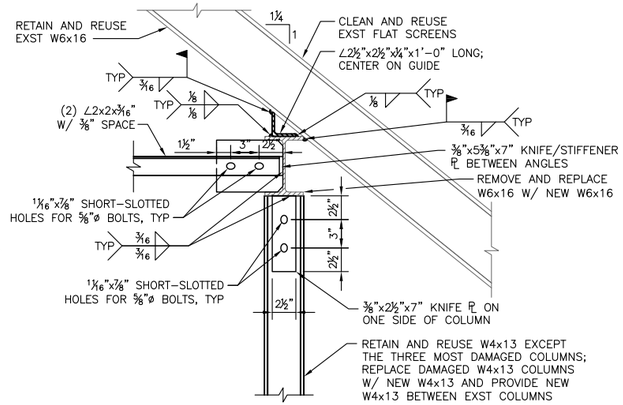

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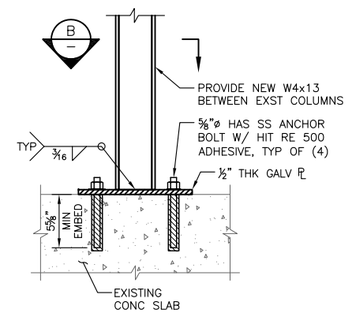

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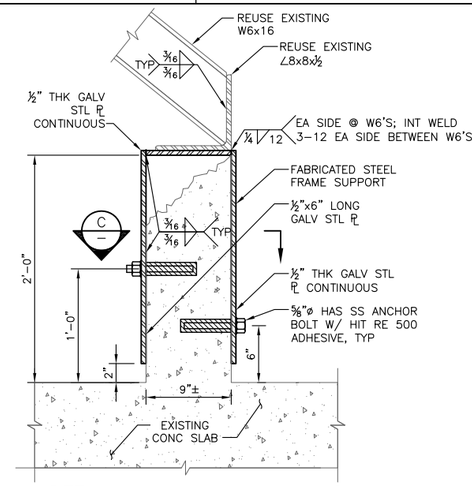

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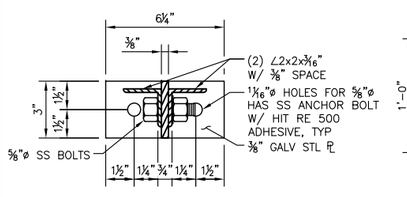

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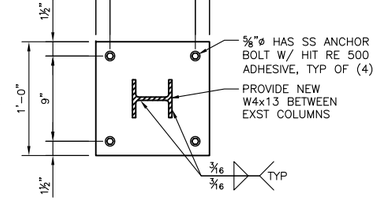

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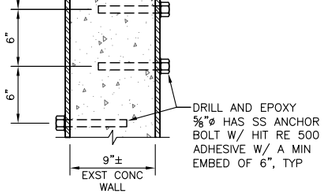

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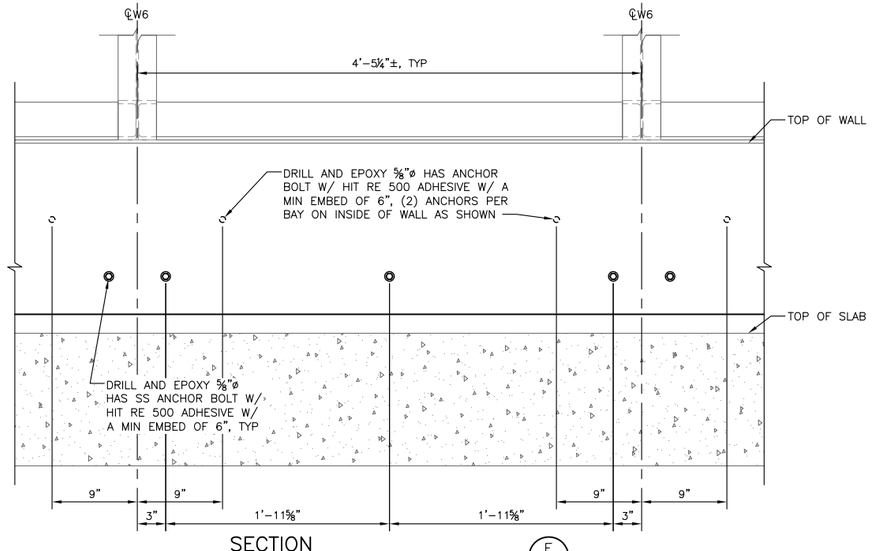

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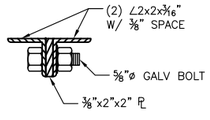

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McMILLEN, LLC
1401 SHORELINE DRIVE
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OFFICE: 208.342.4214
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SAP#			
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DATE	APRIL 2011		
ENG	–	DES	–
DR	–	CH	–
APPROVAL			

LEWIS RIVER HATCHERY
UPSTREAM WATER INTAKE REPAIR
INTAKE SECTIONS AND DETAILS

PACIFICORP ENERGY A PACIFICORP COMPANY — HYDRO

SCALE: AS NOTED | SHEET S-2 | REV. A

No.	DATE	REVISION	BY	CHK	APP
A	4/6/11	FINAL DESIGN SUBMITTAL	DL	CCB	CCB

PLOT SCALE: AS NOTED

REFERENCE DRAWINGS
DRAWING No.
REFERENCE DRAWINGS
DRAWING No.

Appendix D

In-Water Work Protection Plan

Lewis River Hatchery Upper Intake Maintenance

Cowlitz County, Washington

PACIFICORP ENERGY
A PACIFICORP COMPANY

In-Water Work Protection Plan

Lewis River Hatchery

Upper Intake Maintenance

Routine Maintenance and Small Projects

May 2012

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TABLES

SECTION 1
INTRODUCTION

1.0 INTRODUCTION

The purpose of this In-Water Work Protection Plan (IWWPP) is to address the requirements of Section 4.5.2(b) of the Section 401 Water Quality Certifications/Order issued by the Washington Department of Ecology (WDOE) for the Federal Energy Regulatory Commission (FERC) relicensing of the Swift No. 2, Yale, and Merwin Hydroelectric Projects. Sections of each respective 401 Certification require the preparation of an IWWPP, which consists of a series of measures designed to protect water resources during in-water work activities.

1.1 Project Description

The Lewis River Hatchery upstream intake is located along the north bank of the Lewis River at River Mile (RM) 16 within Cowlitz County, Washington (Township 5 north, Range 1 east, Section 12). The upstream intake supplies water to the hatchery buildings and ponds 13, 14, and 15 (fish release ponds and adult collection pond, see attached photo). This intake consists of a "river torpedo" connected to a concrete wet well with two 36-inch diameter buried intake pipes. In 1989, the wet well was covered by a 63-ft long, static screen panel placed in the river at a 39-degree angle (to horizontal). In 2009, the upstream intake screen panel suffered a structural collapse due to debris racking during a flood event, causing the screen to buckle inward and collapse. This left several approximately 3 to 12-inch wide gaps between the screen panels and concrete support walls, resulting in noncompliance with National Marine Fisheries Service (NMFS) screen criteria.

To bring the upstream intake screen panel into compliance with NMFS criteria, the screen panel and wet well support wall will be repaired by divers using hand tools. Divers will remove the existing fish screen and place it in an upland area where it will be cleaned and straightened to its original design. Divers will then bolt a new, pre-fabricated steel support frame along the top of the existing concrete wet well wall to provide a flat and level surface for the screen panel. The straightened screen panel will then be reinstalled and welded to the new steel support frame (see attached plan sheets). It is anticipated that in-water work will be completed within a 24-hour period. In total, less than ½ cubic yard of new material (i.e., the steel support frame and bolts) will be added to the existing facility. The remainder of the project will involve repairs to an existing facility that will not require structural changes or fill within the Lewis River.

The responsible parties for this project are:

PacifiCorp Energy (owner)
825 NE Multnomah Street, Suite 1500
Portland Oregon 97232

Project Manager: Nathan Higa
Phone: (503) 813-5753
nathan.higa@pacificorp.com

Compliance Lead: Briana Weatherly
Phone: (503) 813-7039
briana.weatherly@pacificorp.com

1.2 Species Present

There are six species of fish present or potentially present within the Lewis River near the proposed project that are currently listed as threatened under the federal Endangered Species Act (ESA). These species are also listed on the state's Priority Species List.

- Lower Columbia River Evolutionarily Significant Unit (ESU) Chinook salmon (*Oncorhynchus tshawytscha*) (Threatened)
- Lower Columbia River ESU Coho salmon (*O. kisutch*) (Threatened)
- Columbia River ESU Chum salmon (*O. keta*) (Threatened)
- Lower Columbia River Distinct Population Segment (DPS) Steelhead trout (*O. mykiss*) (Threatened)
- Columbia River DPS Bull trout (*Salvelinus confluentus*) (Threatened)
- Southern DPS Eulachon (Pacific smelt) (*Thaleichthys pacificus*) (Threatened)

Non-listed fish species that are present in the Lewis River system include:

- Cutthroat trout (*O. clarki clarki*)
- Kokanee (*O. nerka*)
- Rainbow trout (*O. mykiss*)
- Mountain whitefish (*Prosopium williamsoni*)
- Largescale sucker (*Catostomus macrocheilus*)
- Other resident fish

The proposed project's effect on ESA-listed salmonids has been addressed in two separate Biological Assessments prepared by PacifiCorp for the United States Fish and Wildlife Service (USFWS) and the NMFS. Both documents address the impacts associated with the continued operation of the Swift No. 2, Yale, and Merwin hydroelectric facilities. In addition, both documents address specific impacts associated with the construction and operation of the numerous fish enhancement projects scheduled (and ordered) to be constructed throughout the Lewis River system. The USFWS and NMFS concurred with

the Biological Assessments and issued independent Biological Opinions describing Best Management Practices (BMPs) and other protective measures to be undertaken to protect listed species and other aquatic resources present within the Lewis River system.

Columbia River smelt were listed as threatened in 2010, following the issuance of the Biological Opinions. The southern Distinct Population Segment (DPS) of this species is known to utilize the Lewis River for spawning (76 FR 515). Smelt typically spend 3 to 5 years in saltwater before returning to freshwater to spawn from late winter through mid spring (76 FR 515). The proposed project will be conducted outside of the time period when smelt could be found in the Lewis River. Therefore, the project is expected to have no effect on this species (See SEPA checklist in Appendix E for additional information).

SECTION 2
IN-WATER WORK

2.0 PROPOSED IN-WATER WORK SEQUENCE

The upper intake maintenance includes improving known weak points in the screen support system. Damaged structural elements will be replaced with new structural elements designed to resist larger loads. Additional elements will be installed to brace the existing structure. Damaged members will be replaced with members of the same size, with the upper connection having a larger weld to resist a larger potential hydraulic head differential. The connection at the bottom of the sloped wide flange will be a prefabricated C-shaped member that will fit over the front and back of the concrete wall. The original connection will be welded to the C channel. Screen panels will be removed in sections, and the concrete intake bays that hold the screens will be cleaned of organic material, loose sand, and gravel. Epoxy anchors will be installed in the existing concrete to support the new screen frame. Some screens may need to be replaced if they are damaged, otherwise they will be slid back into place once the frame is rebuilt. Since the pump is fed by two different intake pipes, upper intake repairs can be made by isolating half of the torpedo screen, and by removing half of the flat panel intake screen during repair. This approach will allow the intake pumps to operate, maintaining half the design flow to the hatchery facilities during construction.

In-water work for this project will occur without any heavy equipment coming in direct contact with the Lewis River; all work that is scheduled to occur within the Lewis River will be accomplished by divers with hand tools. With the exception of underwater foot traffic from divers, no ground disturbing activities will be associated with this proposed maintenance project. Due to the very minor actions and limited risk of turbidity, hydroacoustic related impacts, temperature impacts, or other water quality impacts, PacifiCorp does not propose to isolate the in-water work area from the main channel of the Lewis River. Isolating the work area carries a risk of unnecessarily trapping fish which would otherwise likely simply avoid the divers and work area.

The project is scheduled to occur between August 1 and August 15, 2011. This work window is proposed to coincide with seasonal low water levels of the Lewis River and the Washington Department of Fish and Wildlife's preferred in-water work window. The actual duration of in-water work is expected to last less than one day; however, a larger work window is proposed so that water levels can be monitored and work can occur at the lowest possible water levels.

2.1 Best Management Practices (BMPs)

In an effort to minimize and/or eliminate adverse impacts on water quality and aquatic habitat, the following BMPs will be implemented during in-water work activities:

- ***Timing of In-Water Work***: Work below the bankfull elevation (ordinary high water mark [OHWM]) will be conducted during:

  - The in-water work window of **August 1 – August 15** for the North Fork of the Lewis River (WRIA 27.0334) - as specified by the Washington Department of Fish and Wildlife (WDFW) (Gold and Fish Rule, April 2, 2009)

- ***Cessation of Work***: Construction project activities will cease under high flow/flood conditions. All materials, equipment, and fuel must be removed if flooding of the area is expected to occur within 24 hours. It should be noted that flooding of the work area is very unlikely given the proposed timing of work activities and regulation of the OHWM by Merwin Dam.
- ***Existing Permits***: Activities associated with habitat enhancement and erosion control measures must meet or exceed BMPs and other performance standards contained in the applicable state and federal permits for this project.
- ***Work Practices:*** During construction, all necessary measures shall be taken to minimize the disturbance of waters of the state and existing riparian or wetland vegetation.
  - In-water work will be minimized to the maximum extent practical. Where possible, structural components of the upper intake will be removed and worked on in upland areas.
  - All construction debris shall be properly disposed of on land outside of the 100 year floodplain so that the debris cannot enter the waterway or cause quality degradation of state waters. Retention areas, swales or impoundments will be used to prevent discharge of water from construction staging areas.
  - Some form of perimeter control (e.g., straw wattle, absorbent pad, rubber bumper) will be installed around the upland staging area to contain hazardous materials in the event of a discharge of oil, fuel or chemicals from equipment and vehicles.
  - In the event of a discharge of oil, fuel or chemicals into state waters or onto land with a potential for entry into state waters, immediately begin and complete containment and clean-up efforts, taking precedence over normal work. **Immediately notify the National Response Center at (800) 424-8802 and the State of Washington at (800) 258-5990.** Clean-up shall include proper disposal of any spilled material and used clean-up materials.
  - Do not use emulsifiers or dispersants in water of the state without prior approval from the WDOE Southwest Regional office.
  - All vehicles on site will be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage.
  - Petroleum products will be stored in tightly sealed containers which are clearly labeled.

- Materials and equipment necessary for spill cleanup will be kept on site and readily available.

SECTION 3

MONITORING

3.0 MONITORING REQUIREMENTS

Despite the very small scale of the maintenance actions described within this application package, site monitoring of BMPs will be conducted by the on-site construction crew or PacifiCorp employees. One individual from the construction crew will be assigned to ensure that proper BMPs are implemented on site and modified as needed to meet the needs of the site activities. This individual will also be responsible for maintaining site BMPs and to ensure their effectiveness.

Per the Clean Water Act Section 401 Certifications/Order No. 3678 issued for the Merwin Hydroelectric Project, the water quality parameters requiring monitoring during in-water work are turbidity and dissolved oxygen (DO). Due to the minor nature of this maintenance action and the fact that is does not involve excavation, placement of fill below the OHWM or significant disturbance of the river bed PacifiCorp does not propose any water quality monitoring for this project. In-water work will be visually monitored and if increased turbidity is observed in or immediately downstream or the work area water quality will be analyzed as specified below.

As specified in the Certification/Order, DO and turbidity monitoring will occur at least once each day (if turbidity is visually observed) during construction in or adjacent to any water bodies within the project area that may be affected by construction. Water quality compliance points will be determined based on the following parameters:

- For waters up to 10 cubic feet per second (cfs) flow at the time of construction, the point of compliance shall be 100 feet downstream from the activity that may cause a turbidity exceedance.
- For waters above 10 cfs to 100 cfs flow at the time of construction, the point of compliance shall be 200 feet downstream from the activity that may cause a turbidity exceedance.
- For waters above 100 cfs flow at the time of construction, the point of compliance shall be 300 feet downstream from the activity that may cause a turbidity exceedance.

Since the proposed project in-water work will be conducted in the main stem of the Lewis River, stream flows will exceed 100 cfs; therefore, the point of compliance for turbidity and dissolved oxygen will be 300 feet downstream from the work activity. Applicable water quality standards for turbidity and DO are shown below (Table 3.1).

Table 3.1. State water quality standards for turbidity and dissolved oxygen applicable to in-water work activities during construction of Lewis River release ponds (from WAC 173-201A-200(e)), WAC 173-201A-200(d)).

Use Category	Turbidity	Dissolved Oxygen (DO) – Lowest 1-Day Minimum
Char Spawning and rearing	Turbidity shall not exceed: • 5 nephelometric turbidity units (NTU) over background when the background is 50 NTU or less; or • A 10 percent increase in turbidity when the background turbidity is more than 50 NTU.	DO concentrations must equal or exceed 9.5 mg/L.
Core Summer Salmonid Habitat	Same as above.	DO concentrations must equal or exceed 9.5 mg/L.
Salmonid Spawning, Rearing and Migration	Same as above.	DO concentrations must equal or exceed 8.0 mg/L.
Salmonid Rearing and Migration ONLY	Turbidity shall not exceed: • 5 NTU over background when the background is 50 NTU or less; or • A 10 percent increase in turbidity when the background turbidity is more than 50 NTU.	DO concentrations must equal or exceed 6.5 mg/L.

3.1 QUALITY CONTROL AND ACCURACY

The extent of QA/QC measures will be a function of the complexity and duration of in-water work, but may involve the following:

- Instrument servicing, which may include:
    - Inspection of probe body and sensor membrane.
    - Cleaning, inspection, greasing, and replacement (if necessary) of all ‘O’ ring seals and electrical connections.
    - Replacement of DO sensor membrane if erroneous data are observed or every 6 months.
- Instrument Calibration Forms (to document instrument accuracy).
- Standardized field data sheets.

- Duplicate field measurements (to document field variability and precision).
- Blank and/or audit samples (field checks on accuracy).

3.2 Reporting

The results of in-water construction turbidity and DO monitoring will be made available to the WDOE upon request.

Any work that is found out of compliance with the provisions set forth in the 401 Water Quality Certification/Order, or conditions that result in distressed, dying or dead fish, or any discharge of oil, fuel, or chemicals into state waters, or onto land with a potential for entry into state water, or exceedance of an applicable water quality criteria is prohibited. If these conditions occur, the following steps shall be immediately taken:

- Cease operations at the location of the violation to the extent such operations may reasonably be causing or contributing to the problem.
- Assess the cause of the water quality problem and take appropriate measures to correct the problem and/or prevent further environmental damage.
- Notify WDOE of the failure to comply. Notification shall be made to: Deborah Cornett (360) 407-7269
- Oil or chemical spill events shall be reported immediately to Washington's Emergency Management Division (800) 258-5990. Other non-compliance events shall be reported to WDOE.
- A detailed written report to Ecology shall be submitted as requested. The report should describe the nature of the event, corrective action taken and/or planned, steps to be taken to prevent a recurrence, results of any samples taken, and any other pertinent information.

SECTION 4
REFERENCES

Washington Administrative Code (WAC). 2011. Title 173 – Department of Ecology (DOE). Accessed online on May 7, 2011 at the following link: http://apps.leg.wa.gov/wac/http://apps.leg.wa.gov/wac/

Washington Department of Ecology (WDOE), 2005. Stormwater Management Manual for Western Washington Volume I - Minimum Technical Requirements and Site Planning Volume II - Construction Stormwater Pollution Prevention Volume III - Hydrologic Analysis and Flow Control Design/BMPs Volume IV - Source Control BMPs Volume V – Runoff Treatment BMPs; Washington State Department of Ecology - Water Quality Program, February, 2005.

Washington State Department of Ecology. 2006. Merwin Hydroelectric Project (FERC No. 935) 401 Certification/Order No. 3678. October 9, 2006. Amended Orders No. 5000. December 21, 2007; Amended Order No. 5329. January 17, 2008; and Amended Order No. 5743. October 3, 2008.

Appendix E

SEPA Checklist

Lewis River Hatchery Upper Intake Maintenance

Cowlitz County, Washington

WAC 197-11-960 Environmental checklist.

ENVIRONMENTAL CHECKLIST

A. BACKGROUND

1. Name of proposed project, if applicable:
   Lewis River Hatchery Upper Intake Maintenance

2. Name of applicant:
   PacifiCorp Energy (PacifiCorp)

3. Address and phone number of applicant and contact person:
   Briana Weatherly
   PacifiCorp – Hydro Resources
   825 NE Multnomah, Suite 1500
   Portland Oregon 97232

4. Date checklist prepared:
   May 2012

5. Agency requesting checklist:
   Washington Department of Fish and Wildlife (WDFW)

6. Proposed timing or schedule (including phasing, if applicable):
   PacifiCorp proposes to complete the project between August 1 and August 15, 2012. This construction window corresponds to the WDFW preferred In-Water Work Window for the Lewis River.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.
   There are no plans for future additions, expansions or further activity related to the proposed Lewis River Hatchery Upper Intake Maintenance (i.e. the project).

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.
   The following documents have been prepared for the Lewis River Hydroelectric Projects or the Merwin Hydroelectric Project in particular:

   - Merwin Hydroelectric Project FERC License, Project No. 935, June 26, 2008;
   - Biological Evaluation of the United States Fish and Wildlife Service (USFWS) Listed, Proposed and Candidate Species as Related to PacifiCorp and Cowlitz PUD's Lewis River Hydroelectric Projects, January 15, 2005;
   - Final Environmental Impact Statement for the Lewis River Projects, March 2006;
   - National Marine Fisheries Service Biological Opinion for the Operation of PacifiCorp and Cowlitz PUD's Lewis River Hydroelectric Projects, August 27, 2007;
   - USFWS Biological Opinion for the FERC Relicensing of the Lewis River Hydroelectric Projects, September 15, 2006;
   - Lewis River Historic Properties Management Plan;
   - Washington Department of Ecology, Merwin Hydroelectric Project (FERC No. 935) 401 Certification/Order No. 3678, October 9, 2006.

- Washington Department of Fish and Wildlife Hydraulic Project Approval for WDFW Finfish Hatchery Maintenance and Operations (Control Number 113942-2).

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.

There are no known pending governmental approvals of other proposals directly affecting the property.

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

The following permits or authorizations will likely be required to construct the proposed project.

State and Federal Approvals and Permits:

- Hydraulic Project Approval (HPA) –WDFW
- State Environmental Policy Act (SEPA) Checklist Determination
- In-Water Work Protection Plan Approval – Washington Department of Ecology (DOE)

The proposed maintenance is exempt from Section 404 and Section 10 permits per an email from ACOE regulatory specialist, Mr. Peter Olmstead dated March 12, 2012 and will likely be exempt from County permitting requirements per an email from Cowlitz County Planner Ron Melin dated March 22, 2012 (both emails available upon request)

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.)

The upper intake that serves as one of the two intakes for the Lewis River Hatchery is in need of repair and is currently out of compliance with National Marine Fisheries Service (NMFS) pump screen criteria. The upper intake is located along the north bank of the Lewis River at RM 16 within Cowlitz County, Washington. The upper intake supplies water to the hatchery buildings and ponds 13, 14, and 15 (see photos in Appendix B). This intake consists of a “river torpedo" connected to a concrete wet well with two 36-inch diameter buried intake pipes. In 1989, the wet well was covered by a 63-ft long, static screen panel placed in the river at a 39-degree angle (to horizontal). In 2009, the upstream intake screen panel suffered a structural collapse due to debris racking during a flood event. The screen buckled inward and collapsed, leaving several approximately 3 to 12-inch wide gaps between the screen panels and concrete support walls, resulting in noncompliance with NMFS screen criteria.

To bring the upstream intake screen panel into compliance with NMFS criteria, the screen panel and wet well support wall will be repaired using divers and small hand tools. Divers will remove the existing fish screen and place it in an upland area where it will be cleaned and straightened to its original design. Divers will bolt a new, pre-fabricated steel support frame along the top of the existing concrete wet well wall to provide a flat and level surface for the screen panel. The straightened screen panel will then be reinstalled and welded to the new steel support frame (see plan sheets in Appendix C). It is anticipated that in-water work will be completed within a 24-hour period. In total, less than ½ cubic yard of new fill

material (i.e. the steel support frame and bolts) will be added to the existing facility. The remainder of the project will involve repairs to an existing facility that will not require the additional placement of fill within the Lewis River.

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 Lewis River Hatchery is located at 4404 Old Lewis River Road, Woodland, Washington 98674 in Cowlitz County, Washington (Figure 1, Appendix A). The upper intake is located in Township 5 North, 2 East, Section 7. The project is located along the Lewis River approximately 2 miles southwest of Ariel, Washington. The project can be accessed by following Lewis River Road (Highway 503) approximately 8 miles east out of Woodland, Washington. The County Tax Parcel Number is: EG0701001.

B. ENVIRONMENTAL ELEMENTS

1. **Earth**

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

Near the upper intake, the upper terrace adjacent to the river is relatively flat and is almost entirely paved.

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

The steepest slope on the site is immediately along the Lewis River on the western and eastern sides of the upper intake. Slopes adjacent to the river at this location are approximately 20-30%.

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.

Soil maps from the Natural Resource Conservation Service (NRCS) indicate that the project site is comprised of Greenwater fine sandy loam, 8 to 45 percent slopes (Mapping Unit 66), Olequa silt loam, 20 to 30 percent slopes (Mapping Unit 144), and Water (Mapping Unit 263). However, it should be noted that the entire bank of the Lewis River adjacent to the upper intake is comprised of rocky fill material and riprap and does not represent a natural soil profile.

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

At the upper intake, surfaces are comprised almost entirely of riprap, fill material and asphalt pavement that appear to be stable.

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

The purpose of the proposed project is to repair the damaged upper intake facility for the Lewis River Hatchery. All repairs will occur within or atop an existing facility and there will be no ground disturbance or

grading associated with the proposed project. Approximately ½ cubic yard of steel and other structural components will be bolted (below the OHWM) to the existing facility to replace damaged components.

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

All of the construction related activity is occurring atop existing facilities; staging and other upland activities will occur atop paved or graveled areas. Therefore, there is little risk of erosion.

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

No new permanent structures or facilities are proposed; the project purpose is to repair existing structures. As such, 0% of the site will be covered with new impervious surfaces post-project.

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

Perimeter controls (e.g. straw wattles, absorbent booms, rubber bumpers) will be installed around the proposed staging and work areas to control potential spills from entering the Lewis River. An In Water Work Protection Plan (IWWPP) has been prepared for the project and is available in Appendix B of this application package. In addition, per WAC 173-201A-210(1)(e)(i)((C), and PacifiCorp's Merwin 401 Water Quality Certification, (Condition 4.5.4(b)(iii)), turbidity will be visually monitored during construction to ensure compliance with state water quality standards.

a. **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.

The use of construction equipment (e.g., boom lift, contractor vehicles) will be necessary to access and repair the existing structure. The operation of the equipment will result in short-term vehicular exhaust emissions lasting for the duration of construction. Efforts will be made to limit use of construction equipment and to reduce the idle times of engines.

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

Emissions will be generated from trucks transporting construction materials to and from the project site. After construction is completed, no additional off-site emissions will be produced.

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

All heavy equipment will be required to operate with appropriate vehicle emission control devices that are in compliance with current air quality standards. Efforts will be made to limit construction equipment movement at each site and to reduce the idle times of engines.

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 Lewis River is a designated Type 1 Shoreline of the State within the project site. The Lewis River flows into the Columbia River approximately 10 miles downstream of the proposed project area. On August 24, 2011, an MB&G wetland scientist inspected the proposed project areas and adjacent areas within 300 feet for streams, ponds, and wetlands; no additional wetland or water features were observed.

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.

Work will be required within and immediately adjacent to the Lewis River. All in-water work will be accomplished using hand tools and divers. No heavy equipment will be required to come in contact with the Lewis River during construction. The upper intake construction includes improving known weak points in the screen support system. Damaged structural elements will be replaced with new structural elements designed to resist larger loads. Additional elements will be installed to brace the existing structure. Damaged members will be replaced with members of the same size, with the upper connection having a larger weld to resist a larger potential hydraulic head differential. The connection at the bottom of the sloped wide flange will be a prefabricated C-shaped member that will fit over the front and back of the concrete wall. The original connection will be welded to the C channel. Screen panels will be removed in sections, and the concrete intake bays that hold the screens will be cleaned of organic material, loose sand, and gravel. Epoxy anchors will be installed in the existing concrete to support the new screen frame. Some screens may need to be replaced if they are damaged, otherwise they will be slid back into place once the frame is rebuilt. Since the pump is fed by two different intake pipes, upper intake repairs can be made by isolating half of the torpedo screen, and by removing half of the flat panel intake screen during repair. This approach will allow the upper intake pumps to operate, maintaining half the design flow to the hatchery facilities during construction.

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.

As described in the Joint Aquatic Resource Permit Application (JARPA), a maximum of ½ cubic yard of fill material will be placed below the OHWM of the Lewis River as part of the proposed project.

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

No surface water diversions will result from the project. All in-water work is relatively minor and will be accomplished by divers using small hand tools. Surface water withdrawals and isolation would likely result in prolonged and unnecessary impacts to the Lewis River.

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

Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (Panel No. 5300320305D) indicate that the project lies within the 100-year floodplain and is within Zone A. It should be noted that flooding of the work area is extremely unlikely given the proposed timing of work activities and regulation of the OHWM by Merwin Dam.

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.

There will be no discharges of waste materials into surface waters associated with the project.

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 groundwater will be withdrawn, nor will water be discharged into groundwater sources as a result of the 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.

Not applicable. No waste material will be discharged into the ground from septic tanks or other sources.

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 footprint of the project area is small and ground disturbance is not required. Therefore, stormwater is not anticipated to be generated by the project. Some form of perimeter control (e.g. straw wattles, absorbent booms, rubber bumpers) will be installed around the staging areas to control potential spills or leaks from equipment and contractor vehicles.

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

The actions associated with this maintenance project will be accomplished via hand tools and divers. Materials to be added and removed include steel and structural components which will not negatively impact the Lewis River. Potential waste materials from upland areas will be minimized to the maximum extent practical and is further described in the proceeding question and answer.

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

Some form or perimeter control (e.g., straw wattles, absorbent booms, rubber bumpers) will be installed as necessary and will remain in place throughout the duration of the project to contain potential spills from

entering the Lewis River. Since the entire project will either occur below the OHWM or atop paved surfaces, runoff will not be measurably affected.

4. **Plants**

Although the majority of the project site is paved, adjacent areas contain a disturbed upland riparian vegetation community that consists primarily of non-native, introduced species. Typical plant species within this community are summarized below (Table 1). Each plant species' status as either a native, introduced or a noxious weed species is also listed. Table 1 does not constitute a complete inventory of plant species within the sites, but is presented to convey the general vegetation community identified during the site investigation.

Table 1. Typical vegetation within the disturbed upland riparian vegetation community in the vicinity of the Lewis River Hatchery Upper Intake Maintenance Project

Scientific Name	Common Name	Native Status[1]
Cirsium arvense	Canada thistle	Introduced
Cytisus scoparius	Scotch broom	Introduced
Holcus lanatus	Common velvetgrass	Introduced
Phalaris arundinacea	Reed canarygrass	Native
Rubus armeniacus	Himalayan blackberry	Introduced
Schedonorus phoenix	Tall fescue	Introduced
Trifolium pretense	Red clover	Introduced

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

_____ deciduous tree: alder, maple, aspen, other

_____ evergreen tree: fir, cedar, pine, other

X_____ shrubs

X_____ grass

_____ pasture

_____ crop or grain

_____ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other

_____ water plants: water lily, eelgrass, milfoil, other

_____ other types of vegetation

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

Vegetation will not be removed or altered.

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

There are no known threatened or endangered plant species 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:

Landscaping or other enhancement of vegetation is not proposed or necessary.

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, other:
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.

There are six species of fish present or potentially present within the Lewis River near the proposed project that are currently listed as threatened under the federal Endangered Species Act. These species are also listed on the state's Priority Species List.

- Lower Columbia River Evolutionarily Significant Unit (ESU) Chinook salmon (*Oncorhynchus tshawytscha*) (Threatened)
- Lower Columbia River ESU Coho salmon (*O. kisutch*) (Threatened)
- Columbia River ESU Chum salmon (*O. keta*) (Threatened)
- Lower Columbia River Distinct Population Segment (DPS) Steelhead trout (*O. mykiss*) (Threatened)
- Columbia River DPS Bull trout (*Salvelinus confluentus*) (Threatened)
- Southern DPS Eulachon (Pacific smelt) (*Thaleichthys pacificus*) (Threatened)

Non-listed fish species that are present in the Lewis River system include:

- Cutthroat trout (*O. clarki clarki*)
- Kokanee (*O. nerka*)
- Rainbow trout (*O. mykiss*)
- Mountain whitefish (*Prosopium williamsoni*)
- Largescale sucker (*Catostomus macrocheilus*)
- Other resident fish

The proposed project's effect on ESA-listed salmonids has been addressed in Biological Assessments prepared by PacifiCorp for the USFWS and the NMFS, respectively. Both documents address the impacts associated with the continued operation of the Swift No. 2, Yale, and Merwin hydroelectric facilities. In addition, both documents address specific impacts associated with the construction and operation of the numerous fish enhancement projects scheduled (and ordered) to be constructed throughout the Lewis River system. The USFWS and the NMFS concurred with the Biological Assessments and issued independent Biological Opinions describing Best Management Practices (BMPs) and other protective measures to be undertaken to protect listed species and other aquatic resources present within the Lewis River system.

The southern DPS of eulachon (Pacific smelt) was listed as a threatened species on March 18, 2010 (75 FR 13012), following the issuance of the Biological Opinions discussed above. Eulachon of the southern DPS are endemic to the northwest Pacific Ocean ranging south of the U.S./Washington-Canada border, with

most production originating in the Columbia River Basin. The most consistent spawning runs return to the main stem of the Columbia River (from just upstream of the estuary to immediately downstream of Bonneville Dam) and in the Cowlitz River (74 FR 10857). Spawning also occurs in the Grays, Skamokawa, Elochoman, Kalama, Lewis, and Sandy Rivers (tributaries of the Columbia River) (74 FR 10857). Critical Habitat for the southern DPS of eulachon was proposed on January 5, 2011, and includes the lower Lewis River up to River Mile (RM) 19.5 (Merwin Dam) (76 FR 515).

Adult eulachon presence within the Lewis River is generally limited to the duration of the yearly spawning run (January – March). During spawning, eulachon typically move upstream in the Lewis River approximately 10 miles to Eagle Island. However, they have been observed as far upstream as Merwin Dam (approximately 19.5 miles from the mouth of the river) (76 FR 515). Merwin Dam currently presents a passage barrier to all anadromous fish, including eulachon, and it is unknown whether eulachon ascended the river beyond RM 19.5 prior to construction of the dam (76 FR 515). The Lewis River has periodically produced very large spawning runs of eulachon; nearly half of the total commercial eulachon catch for the Columbia River Basin in 2002 and 2003 came from the Lewis River (76 FR 515).

The spawning reach for this species is more or less limited to portions of a river that are tidally influenced. Entry into the spawning river appears to be related to water temperature and the occurrence of high tides. Spawning occurs at night in substrates ranging from silt, sand or gravel, to cobble and detritus (Wilson et. al. 2006). Eulachon eggs typically hatch in 20 to 40 days, with incubation time dependent on water temperature. Shortly after hatching, the 4-8 millimeter long larvae are carried downstream and dispersed by estuarine, tidal, and ocean currents, where they are then retained in low salinity surface waters of estuaries for several weeks or longer before entering the ocean (76 FR 515; Wilson et. al. 2006). Larval eulachon have been caught along the Lewis River by the WDFW during sampling efforts conducted in 2007, 2008, and 2009 (76 FR 515). For additional information on the habitat requirements, life history, and limiting factors for recovery of the southern DPS eulachon, see the Federal Register published on March 18, 2010 (75 FR 13012) and January 5, 2011 (76 FR 515).

As noted, NMFS's 2010 listing of southern DPS eulachon occurred following issuance of the Biological Opinions issued for the Lewis River projects; thus, no ESA coverage exists for proposed actions that may affect this DPS. In light of this, PacifiCorp conducted an assessment of the proposed project to determine whether a separate Biological Assessment/Biological Opinion and corresponding protection measures would be necessary to specifically address impacts to southern DPS eulachon. PacifiCorp concluded that impacts could largely be avoided through strategic timing of in-water work and planned protection measures, such as implementing perimeter controls in upland areas and minimizing work below the OHWM (i.e. removing parts of the upper intake to be repaired in upland areas). Therefore, additional protection measures specific to eulachon are not warranted. The proposed maintenance work will occur between August 1 and August 15, 2012, well beyond eulachon spawning and emergence periods.

In summary, PacifiCorp has reviewed the proposed design and schedule for maintenance on the upper intake with respect to the recent listing under the ESA of the southern DPS eulachon. Given the nature, timing and limited duration of the project, consultation with NMFS is not deemed warranted.

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

The stretch of the Lewis River within and in the immediate vicinity of the project site is considered a migration route for LCR Chinook and coho salmon and southern DPS eulachon. The analysis of potential impacts to these species has been described in the preceding section of this document.

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

An IWWPP has been prepared to preserve wildlife and is available in Appendix D of this permit application package. Wildlife enhancements are not proposed or necessary.

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.

The completed project will not require any new external energy to meet its intended purpose.

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

No, the 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:

The project does not create new energy demands.

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.

Minor spills related to the operation of construction equipment, such as diesel and oil, have the potential to occur during construction. No toxic chemicals or hazardous waste materials will be generated by the project. No long-term environmental health hazards will be present as a result of implementing the proposed upgrades.

1) Describe special emergency services that might be required.

No special emergency services will be required upon completion of the project.

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

An IWWPP will be implemented for the project in accordance with the Merwin Hydroelectric Project's Water Quality Certification from the DOE. In addition, no fueling will take place within 50 feet of the wetted edge of the Lewis River. A spill response kit will be located onsite.

b. **Noise**

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

Normal noise levels in the area are relatively low. Traffic volumes on the Old Lewis River Road in the vicinity of the project site are also relatively low.

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.

Temporary construction noise will occur during construction of the project over a period of approximately two weeks. No long term change in noise level will occur.

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

When applicable, all construction vehicles and construction equipment will have the appropriate sound muffler devices properly functioning.

8. **Land and shoreline use**

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

The site is currently used as a hatchery facility along the Lewis River. Adjacent properties include rural residences and agricultural areas.

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

No, the site has not been used for agriculture.

c. Describe any structures on the site.

The main structure onsite is the upper intake pump station. The majority of the hatchery complex is removed from the project site; it includes four operational outbuildings, an office, and several hatchery operator residences. The hatchery also includes four concrete ponds that are used for holding juvenile and adult fish.

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

No structures will be demolished during construction of the project. While portions of the upper intake facility will be removed and replaced and/or repaired, the majority of the structure will remain in place.

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

The site is located in a portion of Cowlitz County that is un-zoned.

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

The project site is designated Rural Residential (RR2).

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

The current shoreline master program designation is Conservancy.

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

Fish and Wildlife Habitat Conservation Areas and Shorelines Critical Areas are present within the project area. However, the proposed project will likely fall under the Critical Areas Maintenance and Shorelines Maintenance Exemptions (Ron Melin, Cowlitz County Planning Department, email comm., March 22, 2012 [email available upon request]).

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

The completed project will not require permanent employee residence either during or following construction.

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

The project will not result in any displacements.

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

No measures are necessary to avoid or reduce displacements.

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

The project will not result in any change to the current use of land or facilities. As described, the project was designed to repair the existing upper water intake for the Lewis River Hatchery Facility.

9. **Housing**

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

The project does not include any housing developments.

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

The project does not involve demolition of existing housing.

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

No impacts to housing will occur as a result of the project.

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 proposed project does not include new structures.

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

No views will be altered by proposed repair work.

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

Does not apply.

11. **Light and glare**

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

The project does not involve the installation of new lighting.

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

No light or glare will result from the project.

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

Although there are existing light sources associated with the adjacent Lewis River Hatchery facility, they do not affect the proposal.

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

Does not apply.

12. **Recreation**

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

Recreational fishermen and boaters utilize the Lewis River in the vicinity of the proposed project.

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

The proposed project would not displace 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.

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.

There are no known places or objects listed on, or proposed for, national, state or local preservation registers 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.

There are no known culturally or historically significant sites in the immediate vicinity of the project.

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

Not applicable.

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.

The site is accessed from Old Lewis River Road. No change to site access is proposed or required.

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

No, there is no public transportation in the immediate vicinity of the proposed project.

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

There will be no changes to the Lewis River Hatchery parking area as a result of the proposed project.

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).

No, the proposed improvements will not require any new roads or streets.

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

Construction vehicles will utilize existing surface roads to access the site. No change in long-term use will

occur with the completed project.

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

No change in vehicular trips will occur with the completed proposed project.

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

Not applicable.

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.

No, the project will 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.

16. **Utilities**

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

No utilities are currently available at the project site. Electricity, water, refuse service, telephone, sanitary sewer utilities are available at the nearby Lewis River Hatchery facility.

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.

No changes to the current utility service at the site are proposed.

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: Briana Weatherly

Date Submitted: 5-10-12

Appendix F

References

Lewis River Hatchery Upper Intake Maintenance

Cowlitz County, Washington

References

Federal Register for March 18, 2010 (75 FR 13012). Endangered and Threatened Wildlife and Plants: Threatened Status for Southern Distinct Population Segment of Eulachon. Final Rule.

Federal Register for January 5, 2011 (76 FR 515). Endangered and Threatened Species, Designation of Critical Habitat for Southern Distinct Population Segement of Eulachon. Proposed Rule.

Wilson, M. F., Armstrong, R. H., Hermans, M. C., Koski, K. 2006. Eulachon: A Review of Biology and Annotated Bibliography. Alaska Fisheries Science Center, Juneau, Alaska. August 2006.