

# CORPS OF ENGINEERS ENVIRONMENTAL GREEN SHEET POST AT CONSTRUCTION SITE

**Project Name: St. Hilaire Columbia River Pump Station Expansion and East Improvement District New Pump Station, U.S. Army Corps of Engineers Real Estate Amendment and New Easement, REMIS No. 325455**

**Environmental Compliance File Number: PM-EC-2018-0043**

**Responsible Corps of Engineers Environmental Points of Contact (POC)/Contact Information:**

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**Environmental Requirements:** The table below lists all environmental stipulations/commitments, best management practices, permit conditions, mitigation and/or monitoring requirements necessary to ensure the proposed action is implemented in compliance with the pertinent laws, regulations and Executive Orders. A record of completion of these items must be maintained in the District environmental compliance records.

**Reporting:** Status of Part A, Federal Environmental Requirements, must be provided to the Corps within 2 weeks of completion and with status updates provided once every two months as mobilization, development, and other onsite activities take place. All action specific reporting must be to the Corps, who will report directly to any regulating agencies associated with Part A requirements.

<b>PART A – Federal Environmental Requirements</b>	<b>Status as of</b>
1. All disposal of materials will be done in a legal manner.	
2. All vegetation clearing activities (removal, trimming, grading of vegetated areas) for construction will take place outside migratory bird nesting season (April 1 through August 15) to avoid “take” of migratory birds.	
3. A professional archaeological monitor must be present for all ground disturbing activities. Ground disturbing activities to include, but not limited to, vegetation clearing for access and staging areas, and excavation/trenching activities. The archaeological monitor/contractor is required to submit a monitoring report and updated site forms after construction is complete.	
4. Vegetation must be reestablished using only native plants, preferably those species listed as “First Foods”. The contractor will submit a planting plan to the Corps’ archaeologist and biologist 90 days before planting activities begin.	
5. (ESA: Assessment proposed measure) All heavy equipment (i.e., crane and excavator, etc.) will access the project site via existing roadways, parking areas, disturbed upland areas, and/or floating barges.	
6. (ESA: Assessment proposed measure; NMFS Opinion 2018-8908) All piles will be installed with a vibratory hammer.	
7. The contractor will initiate daily “soft-start” procedures to provide a warning and/or give animals near piling installation and removal activities a chance to leave the area prior to a vibratory hammer operating at full capacity; thereby, exposing fewer animals to loud underwater and airborne sounds.	
8. The contractor will initiate noise from vibratory hammers for 15 seconds at reduced energy followed by a 30-second waiting period. The procedure shall be repeated two additional times. This soft start will be employed every time there has been a delay in the use of the vibratory hammer.	
9. All excavated/dredged materials will be suitable and approved for in- water disposal based on the Sediment Evaluation Framework.	
10. A Pollution Control Plan (PCP) will be prepared by the Contractor and submitted to the Corps’ Environmental POC for review and approval. The approved PCP will be carried out commensurate with the scope of the project that includes the following: <ul style="list-style-type: none"> <li>• BMPs to confine, remove, and dispose of construction waste.</li> <li>• Procedures to contain and control a spill of any hazardous material.</li> <li>• Steps to cease work under high flow conditions.</li> </ul>	
11. Only enough supplies and equipment to complete the project will be stored on site.	
12. All equipment will be inspected daily for fluid leaks, any leaks detected will be repaired before operation is resumed.	

<b>PART A – Federal Environmental Requirements</b>	<b>Status as of</b>
13. Before operations begin, and as often as necessary during operation, all equipment that will be used below the Ordinary High Water Mark will be steam cleaned until all visible oil, grease, mud, and other visible contaminants are removed.	
14. Stationary power equipment operated within 150 feet of the Columbia River will be diapered to prevent leaks.	
15. New pump station intake screens will be equipped with a self-monitoring system that will measure hydraulic head and reduce intake velocities as necessary to maintain an approach velocity of 0.2 feet per second (fps), in compliance with NMFS criteria.	
16. New pump station intake screens will be placed more than 20 feet below the OHWM.	
17. Approximately 0.037 acre (64 percent) of the new overwater station decks will be grated to allow for 60 percent light penetration.	
18. Waterproof lighting equipped with a daylight sensor will be installed under the overwater portions of the new concrete deck (0.046 acre) at the new EID pumping station to provide under deck lighting during the daytime to detract salmonid predators.	
19. (ESA: USFWS Opinion 01EOFW00-2018-F-0234) To the extent possible, monitor any detectable adverse effects to bull trout. <i>(All construction staff will be briefed at the project kickoff to be watchful for dead, injured, sick, or otherwise affected fish and include the results in updates. During pile driving a qualified environmental monitor, such as a fishery biologist, must be on site to assist with monitoring fish impacts.)</i>	
20. (ESA: USFWS Opinion 01EOFW00-2018-F-0234) During the project implementation, any observed adverse effects to bull trout that may occur from these activities will be documented and reported to the Corps Biology POC immediately.	
21. (ESA: USFWS Opinion 01EOFW00-2018-F-0234) All documented project inspection records, reports, and plans must be made available for review by the Corps upon request.	
22. (ESA: Corps and USFWS coordination) Only a qualified biologist will handle sick, injured or dead fish and will do so according to the USFWS Law Enforcement procedures. The Corps will contact the USFWS and convey procedural requirements.	
23. (ESA: USFWS Opinion 01EOFW00-2018-F-0234) A final project report must be submitted 60 days after completion of the proposed action documenting any project-related effects to the bull trout and/or bull trout critical habitat. Send the report to the Corps Biologist POC.	

<b>PART A – Federal Environmental Requirements</b>	<b>Status as of</b>
24. (ESA: NMFS Opinion 2018-8908) The applicant will conduct all work below the OHWM within as short a period as possible between December 1 and February 28.	
25. All state and federal permits are to be followed during the project implementation and after project is completed.	
26. (ESA: NMFS Opinion 2018-8908) The applicant will ensure that the overwater structures are 60 percent light penetrating and include waterproof lighting equipment under portions of the new concrete deck.	
27. (ESA: NMFS Opinion 2018-8908) A sediment turbidity curtain will be installed to minimize downstream increase turbidity and fine sediments.	
28. (ESA: NMFS Opinion 2018-8908) A Pollution Control Plan will be developed prior to the commencement of the project.	
29. (ESA: NMFS Opinion 2018-8908) The applicant will track and monitor construction activities to ensure that these conservation measures (federal environmental requirements related to ESA compliance) are meeting the objective of minimizing take. Monitoring shall be conducted by the permittee (via a qualified fishery biologist or similarly qualified biologist or ecologist) and shall include daily visual survey for fish in the nearshore area inside the in-water work area.	
<p>(ESA: NMFS Opinion 2018-8908) The applicant will submit a completion of project report to the Corps Biologist POC 60 days after project completion. The applicant shall report all monitoring items to include, at a minimum, the following:</p> <ul style="list-style-type: none"> <li>i. Size and maximum surface area that is covered by structures.</li> <li>ii. Piling: number, size and type of piles installed. <ul style="list-style-type: none"> <li>a. Piling installation: Provide a log of the dates, start and stop time, and total duration of all vibratory pile installations.</li> </ul> </li> </ul>	
30. If a sick, injured or dead specimen of a threatened or endangered species is found in the action area, the finder must notify the Corps Biology POC immediately.	

**PART B - Compliance with other requirements** *(This section is provided as a courtesy to assist the applicant with tracking total environmental requirements, but may not identify all applicable requirements. Applicant should refer to the applicable permit to ensure all requirements are met.)*

1. Comply with the Construction Specific Conditions and Conditions for In-Stream Work from Oregon DEQ Section 401 Water Quality Certification, 2017-00414.
2. Comply with the requirements of Clean Water Act and Rivers and Harbors Act permitting. (Clean Water Act Section 404, Rivers and Harbors Act Section 10)
3. The applicant must comply with the requirements of Department of State Lands permitting, as they relate to the environment.
4. (CWA: Oregon DEQ Section 401 Water Quality Certification, 2017-00414) Erosion Control: During construction, erosion control measures must be implemented to prevent or control movement of soil into waters of the state. The Applicant is required to develop and implement an effective erosion and sediment control plan. Any project that disturbs more than one acre is required to obtain an NPDES 1200-C construction stormwater general permit from DEQ. In addition, the Applicant must do the following, unless otherwise authorized by DEQ in writing:
  - a. Maintain an adequate supply of materials necessary to control erosion at the project construction site.
  - b. Deploy compost berms, impervious materials, or other effective methods during rain events or when stockpiles are not moved or reshaped for more than 48 hours. Erosion of stockpiles is prohibited.
  - c. Inspect erosion control measures daily and maintain erosion control measures as often as necessary to ensure the continued effectiveness of measures. Erosion control measures must remain in place until all exposed soil is stabilized.
    - i. If monitoring or inspection shows that the erosion and sediment controls are ineffective, the Applicant must mobilize immediately to make repairs, install replacements, or install additional controls as necessary.
    - ii. If sediment has reached 1/3 of the exposed height of a sediment or erosion control, the Applicant must remove the sediment to its original contour.
  - d. Use removable pads or mats to prevent soil compaction at all construction access points through, and staging areas in, riparian or wetland areas to prevent soil compaction, unless otherwise authorized by DEQ.
  - e. Flag or fence off wetlands not specifically authorized to be impacted to protect from disturbance and/or erosion.
  - f. Place dredged or other excavated material on upland areas with stable slopes to prevent materials from eroding back into waterways or wetlands.
  - g. Place clean aggregate at all construction entrances, and utilize other BMPs, including, but not limited to truck or wheel washes, when earth moving equipment is leaving the site and traveling on paved surfaces. The tracking of sediment off site by vehicles is prohibited.
  - h. This certification does not authorize the placement of BMPs into waters of the state unless specifically outlined in the application and authorized by DEQ.
5. (CWA: Oregon DEQ Section 401 Water Quality Certification, 2017-00414) Spill Prevention: The Applicant must fuel, operate, maintain and store vehicles and equipment, and must store

construction materials, in areas that will not disturb habitat either directly or result in potential discharges. In addition, the following specific requirements apply:

- a. Vehicle staging, cleaning, maintenance, refueling, and fuel storage must take place in a vehicle staging area placed 150 feet or more from any waters of the state. An exception to this distance may be authorized upon written approval by DEQ if all practicable prevention measures are employed and this distance is not possible because of any of the following site conditions:
  - i. Physical constraints that make this distance not feasible (e.g., steep slopes, rock outcroppings);
  - ii. Natural resource features would be degraded as a result of this setback;
  - iii. Or Equal or greater spill containment and effect avoidance is provided even if staging area is less than 150 feet of any waters of the state.

- b. If staging areas are within 150 feet of any waters of the state, as allowed under subsection (a)(iii) of this condition, full containment of potential contaminants must be provided to prevent soil and water contamination, as appropriate.
- c. All vehicles operated within 150 feet of any waters of the state must be inspected daily for fluid leaks before leaving the vehicle staging area. Any leaks detected in the vehicle staging area must be repaired before the vehicle resumes operation.
- d. Before operations begin and as often as necessary during operation, equipment must be steam cleaned (or undergo an approved equivalent cleaning) until all visible external oil, grease, mud, and other visible contaminants are removed if the equipment will be used below the bank of a waterbody.
- e. All stationary power equipment (e.g., generators, cranes, stationary drilling equipment) operated within 150 feet of any waters of the state must be covered by an absorbent mat to prevent leaks, unless other suitable containment is provided to prevent potential spills from entering any waters of the state.
- f. An adequate supply of materials (such as straw matting/bales, geotextiles, booms, diapers, and other absorbent materials) needed to contain spills must be maintained at the project construction site and deployed as necessary.
- g. All equipment operated in state waters must use bio-degradable hydraulic fluid.
- h. A maintenance log documenting equipment maintenance inspections and actions must be kept on-site and available upon request.

6. (CWA: Oregon DEQ Section 401 Water Quality Certification, 2017-00414) Spill & Incident Reporting:

- a. In the event that petroleum products, chemicals, or any other deleterious materials are discharged into state waters, or onto land with a potential to enter state waters, the Applicant must promptly report the discharge to the Oregon Emergency Response System (OERS, 1-800-452-0311). The Applicant must immediately begin containment and complete cleanup as soon as possible.
- b. If the project operations cause a water quality problem which results in distressed or dying fish, the Applicant must immediately do the following: cease operations; take appropriate corrective measures to prevent further environmental damage; collect fish specimens and water samples; and notify DEQ, ODFW and other appropriate regulatory agencies.

7. (CWA: Oregon DEQ Section 401 Water Quality Certification, 2017-00414) Vegetation Protection and Restoration:

- a. The Applicant must protect riparian, wetland, and shoreline vegetation in the authorized project area (as defined in the permit application materials) from disturbance through one or more of the following:
  - i. Minimization of project and impact footprint;
  - ii. Designation of staging areas and access points in open, upland areas;
  - iii. Fencing and other barriers demarcating construction areas; and
  - iv. Use of alternative equipment (e.g., spider hoe or crane).
- b. If authorized work results in vegetative disturbance and the disturbance has not been accounted for in planned mitigation actions, the Applicant must successfully reestablish vegetation to a degree of function equivalent to or better than before the disturbance. The standard for success is 80% cover for native plant species. The vegetation must be reestablished by the completion of authorized work and include the following:
  - i. Restoring damaged streambanks to a natural slope, pattern, and profile suitable for establishment of permanent woody vegetation, unless precluded by pre-project conditions (e.g., a natural rock wall).
  - ii. Replanting or reseeding each area requiring revegetation before the end of the first planting season following construction.
  - iii. Planting disturbed areas with native plants and trees in all cases except where the use of non-native plant materials may be essential for erosion control.
  - iv. Using invasive species to reestablish vegetation is prohibited.
  - v. Herbicides, pesticides and fertilizers must be applied per manufacturer's instructions, and only if necessary for vegetation establishment. If chemical treatment is necessary, the Applicant is responsible for ensuring that pesticide application laws, including with the 2300-A pesticide NP DES general permit are met. Please review the information on the following website for more information: [www.deq.state.or.us/wq/wqpermit/pesticides.htm](http://www.deq.state.or.us/wq/wqpermit/pesticides.htm).

Additionally:

- 1. Unless otherwise approved in writing by DEQ, applying surface fertilizer within stormwater treatment facilities or within 50 feet of any stream channel is prohibited;
  - 2. Other than spot application to cut stems, no herbicides are allowed within stormwater treatment facilities or within 150 feet of waters of the state. Mechanical, hand, or other methods may be used to control weeds and unwanted vegetation within stormwater treatment facilities or within 150 feet of waters of the state; and
  - 3. No pesticides may be used within stormwater treatment facilities or within 150 feet of waters of the state.
- vi. Install wildlife-friendly fencing as necessary to prevent access to revegetated sites by livestock or unauthorized persons.
  - vii. vii. Minimize soil compaction, especially in areas that are designated to be replanted. If soils are compacted, decompact staging areas and work construction areas prior to replanting. Leave topsoil when possible. Chip materials from clear and grub operation and spread on soil surface, unless cleared areas contained invasive species.

8. (CWA: Oregon DEQ Section 401 Water Quality Certification, 2017-00414) Solid Waste: The applicant or its contractors must obtain a DEQ clean fill determination or Solid Waste Letter of Authorization or other DEQ solid waste approval for any manner of upland disposal.
9. (CWA: Oregon DEQ Section 401 Water Quality Certification, 2017-00414) Notification to DEQ: The Applicant must provide pre-construction notification to DEQ one week prior to the start of construction. Contact information can be found at the end of the certification.
10. (CWA: Oregon DEQ Section 401 Water Quality Certification, 2017-00414) Fish protection/ Oregon Department of Fish and Wildlife timing: The Applicant must perform in-water work only within the ODFW preferred time window as specified in the Oregon Guidelines for Timing of In-Water Work to Protect Fish and Wildlife Resources, or as authorized otherwise under a Department of State Lands removal/fill permit. Exceptions to the timing window must be recommended by ODFW and/or the NMFS as appropriate.
11. (CWA: Oregon DEQ Section 401 Water Quality Certification, 2017-00414) Aquatic life movements: Any activity that may disrupt the movement of aquatic life living in the water body, including those species that normally migrate through the area, is prohibited. The Applicant must provide unobstructed fish passage at all times during any authorized activity. Exceptions must be reviewed and recommended by Oregon Department of Fish Wildlife and/or NMFS as appropriate.
12. (CWA: Oregon DEQ Section 401 Water Quality Certification, 2017-00414) Isolation of in-water work areas: The Applicant must isolate in-water work areas from the active flowing stream, unless otherwise authorized as part of the approved application, or authorized by DEQ. The Applicant is referred to DE Q's Oregon Sediment and Erosion Control Manual, April 2005, for isolation techniques (see <a href="http://www.deq.state.or.us/wq/stormwater/docs/escmanual/appxd.pdf">http://www.deq.state.or.us/wq/stormwater/docs/escmanual/appxd.pdf</a> ).
13. (CWA: Oregon DEQ Section 401 Water Quality Certification, 2017-00414) Cessation of Work: The Applicant must cease project operations under high flow conditions that will result in inundation of the project area. Only efforts to avoid or minimize turbidity or other resource damage as a result of inundation of the exposed project area are allowed during high flow conditions.
14. (CWA: Oregon DEQ Section 401 Water Quality Certification, 2017-00414) Turbidity: The Applicant must implement best management practices (BMPs) to minimize turbidity during in-water work. Any activity that causes turbidity to exceed 10% above natural stream turbidities is prohibited except as specifically provided below: <ul style="list-style-type: none"> <li>a. Monitoring: Turbidity monitoring must be conducted and recorded as described below. Monitoring must occur at two hour intervals each day during daylight hours when in-water work is being conducted. A properly calibrated turbidimeter is required. <ul style="list-style-type: none"> <li>i. Representative Background Point: The Applicant must take and record a turbidity measurement every two hours during in-water work at an undisturbed area 100 feet upcurrent from the in-water disturbance, in order to establish background turbidity levels. The background turbidity, location, date, and time must be recorded immediately prior to monitoring at the compliance point.</li> <li>ii. Compliance Point: The Applicant must monitor every two hours, 300 feet downcurrent from the disturbance, at approximately mid-depth of the waterbody</li> </ul> </li> </ul>



and within any visible plume. The turbidity, location, date, and time must be recorded for each measurement.

- b. Compliance: The Applicant must compare turbidity monitoring results from the compliance points to the representative background levels taken during each two-hour monitoring interval. Pursuant to OAR 340-041-0036, short term exceedances are allowed as follows:

<b>MONITORING WITH A TURBIDIMETER EVERY 2 HOURS</b>	
<b>TURBIDITY LEVEL</b>	<b>Restrictions to Duration of Activity</b>
0 to 5 NTU above background	No Restrictions
5 to 29 NTU above background	Work may continue for a maximum of 4 Hours. If turbidity remains 5-29 NTU above background, stop work and modify BMPs. Work may resume when NTU is 0-5 above background.
30 to 49 NTU above background	Work may continue for a maximum of 2 Hours. If turbidity remains 30-49 NTU above background, stop work and modify BMPs. Work may resume when NTU is 0-5 above background.
50 NTU or more above background	Stop work immediately and inform DEQ

- c. Reporting: The Applicant must record all turbidity monitoring required by subsections (a) and (b) above in daily logs. The daily logs must include calibration documentation; background NTUs; compliance point NTUs; comparison of the points in NTUs; location; date; and time for each reading. Additionally, a narrative must be prepared discussing all exceedances with subsequent monitoring, actions taken, and the effectiveness of the actions. The Applicant must make available copies of daily logs for turbidity monitoring to DEQ, USAGE, NMFS, USFWS, and ODFW upon request. An example turbidity log is attached to this certification.
- d. BMPs to Minimize In-stream Turbidity: The Applicants must implement the following BMPs, unless accepted in writing by DEQ:
- i. Sequence/Phasing of work - The Applicant must schedule work activities so as to minimize in-water disturbance and duration of in-water disturbances;
  - ii. Bucket control - All in-stream digging passes by excavation machinery and placement of fill in-stream using a bucket must be completed so as to minimize turbidity. All practicable techniques such as employing an experienced equipment operator, not dumping partial or full buckets of material back into the wetted stream, adjusting the volume, speed, or both of the load, or using a closed-lipped environmental bucket must be implemented;
  - iii. Machinery may not be driven into the flowing channel, unless authorized in writing by DEQ;
  - iv. Containment measures such as silt curtains, geotextile fabric, and silt fences must be implemented and properly maintained in order to minimize in-stream sediment suspension and resulting turbidity.