

**DEPARTMENT OF ENERGY**  
**Bonneville Power Administration**  
**Steigerwald Floodplain Restoration Project**  
**Finding of No Significant Impact**  
**January 2019**

**Summary**

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Bonneville Power Administration (BPA) is announcing its environmental findings regarding the Steigerwald Floodplain Restoration Project. BPA proposes to fund the Lower Columbia Estuary Partnership (LCEP) to restore portions of the Columbia River Floodplain at the Steigerwald Lake National Wildlife Refuge (Refuge) near Washougal, Washington. The project would involve reconnecting Gibbons Creek and the Steigerwald Lake floodplain to the Columbia River by breaching the Washougal Columbia River Levee (WCRL) as well as the naturally-occurring levee upon which the WCRL was constructed; constructing two new setback levees; removing a diversion structure, fish ladder, elevated channel, and water control structure; relocating the Refuge parking lot and bathrooms; reconfiguring refuge trails; enhancing wetland channels; and re-establishing the site's historical riparian vegetation. Goals of the project include restoring floodplain connectivity to the Columbia River; improving water quality and habitat to benefit fish; maintaining required levels of flood protection and reducing outputs of contamination to the Columbia River; eliminating the need to dredge the Gibbons Creek channel to maintain water flow capacity; and reducing annual costs associated with pumping water at the Port of Camas-Washougal (Port).

BPA issued and requested public comment on a draft Environmental Assessment (EA) (DOE/EA-2027 dated January 2018) that evaluated the proposed action and its potential environmental effects. Based on the analysis in the EA, BPA has determined that the proposed action is not a major Federal action significantly affecting the quality of the human environment, within the meaning of the National Environmental Policy Act (NEPA) of 1969 (42 United States Code [U.S.C.] § 4321 *et seq.*). Therefore, the preparation of an Environmental Impact Statement is not required, and BPA is issuing this Finding of No Significant Impact (FONSI) for the proposed action. Comments received on the draft EA, as well as the responses to the comments, are provided in the final EA.

The attached Mitigation Action Plan (MAP) lists all of the mitigation measures that BPA and the Tribe are committed to implementing as part of the proposed action. The FONSI also includes a statement of findings on how the proposed action impacts wetlands and floodplains. Impacts to wetlands and floodplains would be avoided where possible and minimized by the mitigation measures (see attached Mitigation Action Plan) where there is no practicable alternative.

**Public Availability**

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BPA will mail this FONSI to interested parties, post the FONSI on its website (<https://www.bpa.gov/goto/SteigerwaldFloodplain>), and mail a notification of availability to potentially affected parties.

**Project Background**

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Under the Northwest Power Act, 16 USC § 839b(h)(10)(A), BPA has an obligation to protect, mitigate, and enhance fish and wildlife, and their habitats, affected by the development and

operation of the Federal Columbia River Power System (FCRPS). To help accomplish this, the Act requires BPA to fund fish and wildlife protection, mitigation, and enhancement actions consistent with the Northwest Power Act and the Northwest Power and Conservation Council's (Council) Fish and Wildlife Program, the purposes of the Act, and other environmental laws. Under this program, the Council reviews habitat improvement (or restoration) plans submitted by various entities and makes recommendations to BPA about which fish and wildlife projects to fund. In the Columbia River Estuary, the Council's Fish and Wildlife Program includes strategies to protect, mitigate, and enhance salmon and steelhead spawning and rearing habitat. For example, the Council recommends habitat restoration work to reconnect ecosystem functions, such as removing or lowering dikes and levees that block access to habitat, and protecting or restoring off-channel habitat. BPA's commitments under the 2008 FCRPS Biological Opinion (BiOp) include providing for improved survival of listed salmon and steelhead species in the Columbia River Estuary and a focus on current and future restoration project implementation over a wide range of site characteristics and sizes throughout the Columbia River Estuary.

The Proposed Action has been developed by LCEP. The Proposed Action has been reviewed by the Expert Regional Technical Group (ERTG), which evaluates restoration proposals to determine the amount each project would benefit the survival of ESA-listed salmon and steelhead.

### **Proposed Action**

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Under the Proposed Action, BPA would fund the Steigerwald Floodplain Restoration Project. The Proposed Action would include restoring floodplain processes including provision of off-channel rearing habitat, flood storage, and increased habitat complexity in the Columbia River Estuary. Primary actions would include breaching natural and constructed levees on the Columbia River; developing floodplain channels; realigning Gibbons Creek; constructing setback levees, an emergency closure structure on SR14, and a floodwall; and revegetating with native riparian and wetland vegetation. Infrastructure associated with Gibbons Creek includes a structure that diverts water away from the historical Gibbons Creek channel, an elevated canal that carries water across the Steigerwald floodplain, and a fish ladder at the mouth of Gibbons Creek that would be removed. The trail network at the Refuge would be improved by reconfiguring and lengthening it by approximately 1 mile. The project would also include relocating infrastructure associated with USFWS management of the area, including the parking area and kiosk, and raising SR14 to 38.5 ft. North American Vertical Datum of 1988 (NAVD88), which would reduce flood risk to the SR14 base and roadway. All components of the completed project, other than the Washougal Flood Damage Reduction (FDR) system (described in section 3.14.1.2) and SR14, would be owned by USFWS and maintained in a manner consistent with current Operations and Maintenance (O&M) practices. The Gibbons Creek channel, the setback levees, and closure structure would be owned and maintained by the Port, which would update its O&M manual to reflect the changes to the FDR system. The Port would also deploy the closure structure when the Columbia River approached its 500-year flood stage, and remove it when the threat of flooding passes. SR14 and all components of the road prism beneath it would continue to be owned and maintained by Washington State Department of Transportation.

## **No-Action Alternative**

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Under the no action alternative, BPA would not fund the Steigerwald Floodplain Restoration Project and LCEP would not construct the project. The Refuge would remain in its current state as a levee-protected floodplain, and USFWS would continue to manage the lands for wildlife habitat. The Port would continue to maintain the WCRL on the south side of the refuge, and operation of pumps at the west end of the floodplain would continue as needed to remove runoff from Gibbons Creek and overland sources. Fish access to Gibbons Creek would continue in its limited state, and maintenance associated with removal of sediments at the Gibbons Creek diversion structure would continue. Refuge facilities including the parking area, interpretive features, vault toilet, and boardwalk would remain in their current location, and SR14 would not be raised.

## **Significance of the Potential Impacts of the Proposed Action**

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Impacts are described for both construction and operations. The impact levels are characterized as high, moderate, low, or no impact. Impacts that were determined to be minimal or barely noticeable were characterized as “low,” those that were more than negligible were characterized as “moderate,” and those characterized as “high” were those considered to be noticeable, significant impacts. These impact levels are based on the considerations of context and intensity defined in the Council on Environmental Quality regulations (40 Code of Federal Regulations 1508.27). High impacts could be considered significant impacts, while moderate and low impacts would not be. It was determined that the proposed action would have no significant impacts.

The following table on pages 8 through 11 summarizes the proposed action’s potential impacts and the reasons these impacts would not be significant.

**Aesthetics/Visual Resources:** The impacts would be low.

Project construction would result in temporary visual quality impacts, the raising of SR 14, and the construction of the floodwall, which would result in a permanent reduction of view into the Refuge. However, the project would result in reestablishment of the site’s historical riparian vegetation, increased vantage points for Columbia River vistas, and more frequent inundation, which would result in long-term visual improvements.

**Air Quality/Climate Change:** The impacts would be moderate.

Project construction would result in temporary impacts associated with emissions and dust generated from construction vehicles. The completed project would provide beneficial air quality/climate change impacts by providing refuge to juvenile fish during higher peak flows and floods. In addition, the completed project would increase the capacity of the SR14 Bridge to withstand anticipated future 500-year discharges from Gibbons Creek.

**Cultural Resources:** The impacts to the Washougal-Columbia River Levee would be moderate, while impacts to other potential cultural resources would be low.

Excavation for the Proposed Action would result in moderate impacts to the Washougal-Columbia River Levee because the levee would be breached, which would be minimized by mitigation agreed to in the Memorandum of Agreement between BPA and the Washington Department of Archaeology and Historic Preservation. This mitigation includes completing a Multiple Property Documentation form and creating a public interpretive panel. Impacts to inadvertent discovery of cultural resources would be low due to implementation of measures from BPA’s Inadvertent Discovery of Cultural Resources Procedure, which requires that ground-disturbing actions must be discontinued in the event of discovery of cultural resources.

**Fish:** Impacts would be moderate.

Short-term construction impacts could impact fish due to turbidity or accidental spills of contaminants, as well as loss of riparian vegetation and access to spawning area. These short-

term construction impacts would be mitigated by implementation of mitigation measures. However, the Proposed Action would increase habitat area, increase habitat diversity, improve channel complexity, improve water quality, and restore/increase access to wetland, floodplain, side channel, and stream habitat for spawning and juvenile salmonid rearing in the long term.

**Geology and Soils:** Impacts would be low.

Temporary erosion at levee breach locations would cause localized turbidity or surface erosion during construction. Post-construction, hydric soils would form over time in wetland creation areas, and a more free-flowing Gibbons Creek alignment would lead to reduced sedimentation at the location of the existing Gibbons Creek diversion structure in the long term.

**Land Use and Recreation:** Impacts would be moderate.

In the short term, the visitor parking area at the Refuge would be closed during project construction, and noise and visual impacts during construction could affect the visitor experience. Post-construction, access trails would be reconfigured and the trail network would be enhanced and lengthened.

**Noise:** Impacts would be temporary and moderate.

Project construction would result in noise to residents neighboring the project area along Gibbons Creek and SR14, while there would be no impacts to noise in the long-term after construction.

**Hazardous Substances:** Impacts would be low.

Accidental spills of fuels, lubricants, or solvents used by equipment during construction, or herbicides during project maintenance, could affect water quality, plants, or animals. However, best management practices would be implemented during construction to minimize the risk of spills.

**Public Health and Safety:** Impacts would be moderate.

Project construction may have the potential for injury to construction workers and the potential for increased emergency response times if traffic is impeded during construction along SR14. However, construction site safety best management practices would be employed to mitigate for potential injury, and emergency response vehicle passage would be prioritized in the traffic control plan during construction. While the larger inundated area could increase the potential for mosquito outbreaks, the current level of flood protection would be maintained or increased from both the Columbia River and Gibbons Creek.

**Socioeconomics and Environmental Justice:** Impacts would be low to moderate.

Project construction would result in the short-term generation of local construction jobs, equipment, supplies, and services. While there would be short-term noise, dust, and traffic impacts and long-term visual impacts and loss of direct access to Gibbons Creek, these impacts

would be temporary during construction of the project and mitigation measures would be implemented to reduce the impacts. There would also be an increased level of flooding protection associated with the installation of the Gibbons Creek floodwall and berm.

**Transportation and Infrastructure:** The short-term impacts would be moderate, while long-term impacts would be low.

The construction period associated with raising SR14 and the closure structure would result in restricting traffic to one lane in each direction, with the potential for temporary full closures. In addition, construction would result in a temporary loss of visitor parking at the Refuge associated with the closure and replacement of the parking area. Future installation of temporary flood barriers on SR14 would result in traffic delays and detours through Washougal city streets. However, these impacts would only be short term.

**Vegetation and Wetlands:** The impacts would be moderate.

During construction, vegetation would be cleared where construction activities are proposed, such as in areas where levee modifications and channel creation would occur and at borrow areas, access roads, and staging areas. These actions would result in temporary disruption of wetland and riparian plant communities, and could allow for introduction of non-native plant species, which thrive in disturbed areas. When construction is completed, these areas would be restored to native vegetation communities through seeding or by planting with plugs. Newly created wetlands would create additional habitat.

**Water Resources:** The impacts would be moderate.

Construction actions could lead to temporary increases in turbidity in floodplains, wetlands, and the Columbia River. Post-construction, increased exchange with the Columbia River could improve water quality within the floodplain lakes. As new wetlands are inundated and vegetation decomposes, there could be changes in dissolved oxygen, pH, phosphorous, and nitrogen. While the current level of flood protection would remain in place, the level of protection from Gibbons Creek flooding would increase, less pumping would be needed at the Port of Camas-Washougal, and USFWS would no longer need to dredge sediment at the SR14 Bridge.

**Wildlife:** The impacts would be moderate.

Construction would result in the short-term displacement of terrestrial wildlife and avian species, and in the permanent loss of a portion of the great blue heron rookery. However, the project would result in long-term increases in riparian habitat for wintering waterfowl and nesting birds, and increases in the extent and diversity of habitat for aquatic wildlife.

## **Determination**

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Based on the information in the EA, as summarized here, BPA has determined that the proposed action is not a major Federal action that significantly affects the quality of the human environment, within the meaning of NEPA (42 U.S.C. § 4321 *et seq*). Therefore, preparation of an EIS is not required, and BPA is issuing this FONSI.

Issued in Portland, Oregon

/s/ Scott G. Armentrout  
Scott G. Armentrout, Vice President  
Environment, Fish and Wildlife

January 22, 2019  
Date

## **Mitigation Action Plan**

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This mitigation action plan for the Steigerwald Floodplain Restoration Project includes all of the mitigation measures recommended in the Environmental Assessment (DOE/EA-2027) to mitigate adverse environmental impacts. It includes some measures that are essential to ensure there are no significant effects of the proposed action, and other measures to decrease effects that could occur, but would not be considered significant.

Mitigation measures have been incorporated into the project planning and design, and would be implemented during construction and after construction is completed (when the site is being stabilized and revegetated).

The Lower Columbia Estuary Partnership would implement this project, and contractors would build it. To ensure that the contractor would implement mitigation measures, the relevant portions of this mitigation action plan would be included in the construction contract specifications (the directions to the contractor) for the project. This would obligate the contractor to implement the mitigation measures that relate to their responsibilities during construction and post-construction.

If you have general questions about the project, contact the BPA Estuary Program Lead, Jason Karnezis, at 503-230-3098 or [jpkarnezis@bpa.gov](mailto:jpkarnezis@bpa.gov). If you have questions about the mitigation action plan, contact the Environmental Lead, Travis Kessler, at 503-230-5468 or [tdkessler@bpa.gov](mailto:tdkessler@bpa.gov). This mitigation action plan may be amended if revisions are needed due to new information or if there are any significant project changes.

## Mitigation Action Table

Resource Category	Mitigation Measures
Aesthetics/Visual Resources	<ul style="list-style-type: none"> <li>• Reseed and plant disturbed areas with appropriate native species and control weeds immediately following construction.</li> <li>• Use water trucks to apply water, as needed, to the construction area for dust control.</li> <li>• Protect and retain native riparian/wetland vegetation, to the extent practicable, by avoiding construction activities in these areas.</li> <li>• Minimize the size of the disturbance area, to the extent practicable.</li> <li>• Clean-up site and remove equipment, as practical, during non-construction periods.</li> </ul>
Air Quality/Climate Change	<ul style="list-style-type: none"> <li>• Apply water from water trucks to excavation areas, access and haul roads, and staging areas as needed to control fugitive dust.</li> <li>• Set a low speed limit on access roads to reduce dust generation.</li> <li>• Restrict idling of construction vehicles and machinery to a maximum of 5 minutes.</li> </ul>
Cultural Resources	<ul style="list-style-type: none"> <li>• Mark known cultural resource sites as avoidance areas on construction drawings and flag as no-work areas in the field prior to construction.</li> <li>• Protect any unanticipated cultural resources discovered during construction as follows:               <ul style="list-style-type: none"> <li>○ Stop all work; cover and protect the ‘find’ in place.</li> <li>○ Notify Project Manager and BPA cultural resources specialist immediately.</li> <li>○ Implement mitigation or other measures as instructed by BPA cultural resource specialist.</li> </ul> </li> </ul>
Fish	<ul style="list-style-type: none"> <li>• In fish-bearing waters, construct only during in-water work windows specified by WDFW and NMFS.</li> <li>• Seine all in-water work areas on the Columbia River and Gibbons Creek prior to excavating or isolating work areas.</li> <li>• A qualified fish biologist would conduct fish salvage after isolating work areas.</li> <li>• All fish would be handled according to NMFS protocols for handling listed fish.</li> <li>• Grade channels for positive drainage to avoid fish stranding.</li> <li>• Operate machinery used for in-water work from top of bank to the extent possible.</li> <li>• Preserve riparian vegetation to the extent possible during construction.</li> <li>• Implement all conservation measures relevant to listed anadromous fish and bull trout from HIP III.</li> <li>• Construction would occur under the authority of environmental inspectors who could stop work if hazardous materials were encountered or released.</li> <li>• Monitor water quality in floodplain wetlands, particularly for temperature.*</li> </ul>
Geology and Soils	<ul style="list-style-type: none"> <li>• Prepare and implement a Stormwater Pollution Prevention Plan (SWPPP) and an erosion control plan, consistent with National Pollutant Discharge Elimination System (NPDES) requirements and Section 401 consultation.</li> <li>• Create a Sediment Control Plan, include daily monitoring during in-water construction, regular inspection, and recording control measures.*</li> <li>• Use sediment barriers, such as silt fences, straw matting, and straw wattles.</li> <li>• Minimize the area of disturbance, use minimum areas for staging, clearing, and grubbing.</li> <li>• Use water trucks to apply water to control dust, as needed.</li> </ul>

Resource Category	Mitigation Measures
	<ul style="list-style-type: none"> <li>• Apply mulch or straw, or reseed exposed soil areas to reduce erosion and dust after completing work within a given area.</li> <li>• Sequence construction to minimize soil exposure and erosion potential.</li> <li>• Decompact staging areas and decommissioned access roads through disking and replanting.</li> <li>• Continue monitoring channel formation and levee breaches, in particular, to ensure that functioning channels are experiencing sustainable levels of accretion and erosion.*</li> <li>• Use adaptive management measures to respond to unexpected erosion or accretion.*</li> </ul>
Land Use and Recreation	<ul style="list-style-type: none"> <li>• Maintain access to as much of the Refuge as possible during construction.</li> <li>• Install signs to inform the public of the lengths of closures and alternate locations of birdwatching, hiking, or river access.</li> </ul>
Noise, Hazardous Substances, Public Health and Safety	<ul style="list-style-type: none"> <li>• Construction near residences would be limited to the hours between 7:00 a.m. and 10:00 p.m.</li> <li>• Equipment would be fitted with best available sound muffling devices to the extent practicable, and mufflers would be regularly checked to ensure they are functioning properly.</li> <li>• Additional methods of sound dampening or shielding such as noise barriers would be evaluated during construction planning and implemented to the extent practicable.</li> <li>• Construction phasing would be reviewed to minimize the duration of particularly noisy activities and the overall duration of construction near residences.</li> <li>• A description of hazardous materials to be used, and handling procedures would be available on-site.*</li> <li>• Written procedures for notifying environmental response agencies would be posted at the work site.*</li> <li>• Spill containment kits with written instructions for cleanup and disposal adequate for the types and quantities of materials used at the site would be available at the work site. *</li> <li>• Workers would be trained in spill containment procedures and would be informed of the location of spill containment kits.*</li> <li>• Workers would wear protective clothing when working with potentially hazardous materials.*</li> <li>• Any waste liquids generated at the staging areas would be temporarily stored under an impervious cover until they could be properly transported to and disposed of at a facility that is approved for receipt of hazardous materials.</li> </ul>
Socioeconomics/ Environmental Justice	<ul style="list-style-type: none"> <li>• Limit construction near residences or other sensitive receptors to hours specified in the General Plans of the City of Washougal and Clark County.</li> <li>• Work from the east side of Gibbons Creek to the degree possible.</li> <li>• Apply water to dirt surfaces as needed to control fugitive dust.</li> </ul>
Transportation and Infrastructure	<ul style="list-style-type: none"> <li>• Coordinate with Washington State Department of Transportation, the City of Washougal, and Clark County to obtain an agreement for the use of the detour route.</li> <li>• Use traffic controls such as flagging, reduced speed limits, signage, and barriers to route traffic through affected areas and at truck entry/exit points.</li> <li>• Prepare a traffic control plan to detail items such as traffic control measures to be used and how they would be implemented.</li> </ul>

Resource Category	Mitigation Measures
Vegetation and Wetlands	<ul style="list-style-type: none"> <li>• Specimens of threatened and endangered plant species populations would be protected during construction.</li> <li>• Refuge staff would monitor the amount of managed and unmanaged grassland to ensure continued compliance with the Compatibility Determination for winter forage area for geese.*</li> <li>• Staging and refueling areas would be established at least 150 ft. away from wetlands and other waterbodies to the extent possible, and they would include containment measures.</li> <li>• To control spread of non-native species, construction equipment would be washed before it was mobilized to and from the Refuge.</li> <li>• Replanting with native seed mix would occur as rapidly as possible following the completion of construction. Plantings would be mulched upon completion if needed.</li> <li>• Work would include developing a plan to monitor and maintain native plant communities and control non-native and invasive plants. It would include mechanical and chemical treatment methods for non-native species.*</li> </ul>
Water Resources	<ul style="list-style-type: none"> <li>• Water and sediment quality would be sampled during project planning to establish the environmental baseline, and post-construction to identify any pollutants that could be released during construction or operations.</li> <li>• Sediments for restoration activities would be obtained on-site to the degree possible.</li> <li>• Staging areas, storage sites (fuel, chemical, equipment, and materials), and potentially polluting activities would be identified and secured using methods identified in the SWPPP, and would be located 150 ft. or more from any natural water body or wetland, or on an adjacent, established road area in a location and manner that would preclude erosion into or contamination of the stream or floodplain.</li> <li>• A Spill Prevention Control and Countermeasures Plan would be developed.</li> <li>• Only use hydraulic fluids approved for work in aquatic environments.</li> <li>• Heavy equipment would be washed before delivery to project site to remove oils, fluids, grease, weed seeds, etc.</li> <li>• Heavy equipment would be regularly inspected and cleaned.</li> <li>• Pollution and control measures identified in the SWPPP would be implemented.</li> <li>• All non-emergency maintenance of equipment would be performed off-site.</li> <li>• All waste (solid waste, hazardous materials, etc.) would be disposed off-site as regulated by the state.</li> <li>• All equipment, materials, supplies, and waste would be removed from project site when complete.</li> <li>• Activities would be scheduled and water flows and levels would be managed to provide dry working conditions as much as possible.</li> <li>• Prepare and implement a SWPPP and an erosion control plan, consistent with NPDES requirements and Section 401 consultation.</li> <li>• Clean Water Act permit-specific protection measures would be applied.</li> <li>• Erosion control measures would be applied to construction, staging, and access areas (e.g., silt fence or straw wattle along the entire length of levee removal along the Columbia River, turbidity curtains installed at the channel connections to the Columbia River). Erosion control measures would be removed at appropriate times.</li> </ul>

Resource Category	Mitigation Measures
	<ul style="list-style-type: none"> <li>• BMPs for erosion and sediment control would be applied during operations.</li> <li>• In-water work areas would be isolated from the active river channel.</li> <li>• Levee breaching would be timed with Columbia River flows to minimize erosion.</li> <li>• Stockpiled soils would be covered if they were to be inactive for more than a few days. Remaining soils would be incorporated into Refuge lands or disposed of as deemed appropriate by planners and Refuge staff.</li> <li>• Machinery for in-water work would be operated from atop levees or within adjacent out of water areas as much as possible.</li> </ul>
Wildlife	<ul style="list-style-type: none"> <li>• Construction occurring during October would avoid primary cackling and Canada goose habitat by a minimum of 500 ft.</li> <li>• Recommend in construction specifications that construction should be timed to avoid disturbing the great blue heron rookery during the breeding season of January to August.</li> <li>• If it is not possible to avoid the great blue heron rookery during the breeding season, a hazing program should be implemented in January to discourage birds from establishing broods.</li> <li>• Trees to be removed between January 15 and September 1 would be surveyed for active nests. Trees with active nests would be avoided by 500 ft. to the degree possible. Alternatively, trees to be removed could be removed during the non-breeding season of September to January 15.</li> </ul>

\* Measures that are intended to address potential long-term impacts, and which would be implemented during both construction and operations.