EXHIBIT 2
REGULATORY PERMITS

Several regulatory agencies require permit approvals prior to initiating the project. The Contractor agrees to comply fully with all applicable federal, state, and local laws and regulations including, but not limited to, the regulatory permits included or referenced in Exhibit 2.

Exhibit 2 includes regulatory approvals from the following agencies for the following permits:

- BONNEVILLE POWER ADMINISTRATION (National Environmental Policy Act; DOE/EA-2027 dated January 2018
- CLARK COUNTY (State Environmental Policy Act; Notice of Final Determination dated May 1, 2019)
- CLARK COUNTY (Floodplain Review; Floodplain Review No. FLP2018-00002 dated May 1, 2019)
- NATIONAL MARINE FISHERIES SERVICE (Section 7 of the ESA; Project Notification Form, HIP III No. 2019008 dated November 6, 2018 and associated Programmatic No. 2013-F-0199 dated November 8, 2013)
- U.S. FISH AND WILDLIFE SERVICE (Section 7 of the ESA; Intra-Service Section 7 Biological Evaluation dated May 12, 2016)
- U.S. FISH AND WILDLIFE SERVICE (Steigerwald Lake National Wildlife Refuge General Activities Special Use Permit; Permit No. 19-002 signed February 7, 2019)
- U.S. FOREST SERVICE (Columbia River Gorge National Scenic Area Act; CRGNSA Consistency Determination 18-06-G dated March 1, 2019)
- WASHINGTON DEPARTMENT OF ARCHAEOLOGY AND HISTORIC PRESERVATION (Section 106 of the National Historic Preservation Act; Memorandum of Agreement signed September 24, 2018)
- WASHINGTON DEPARTMENT OF FISH & WILDLIFE (Hydraulic Project Approval – Permit No. 2019-5-8+01 dated January 17, 2019)

The Owner has submitted the following permit applications, which are pending approval. The Owner will provide written approvals to the Contractor as soon as they are received.

- CLARK COUNTY (Shoreline Exemption)
- CLARK COUNTY (Wetland/Habitat Determination)
- U.S. ARMY CORPS OF ENGINEERS (Section 404 of the Clean Water Act)
- WASHINGTON DEPARTMENT OF ECOLOGY (Const. Stormwater General Permit)
- WASHINGTON DEPARTMENT OF ECOLOGY (Section 401 Water Quality Certification)

Department of Energy

Bonneville Power Administration
P.O. Box 3621
Portland, Oregon 97208-3621

ENVIRONMENT, FISH AND WILDLIFE

February 11, 2019

In reply refer to: EC-4

To: People Interested in the Steigerwald Floodplain Restoration Project

The Bonneville Power Administration (BPA) finalized the environmental assessment (EA) for the Steigerwald Floodplain Restoration Project. Based on the final EA, BPA is issuing a finding of no significant impact (FONSI) and made a decision to proceed with the project. This letter describes BPA's decision, the construction schedule, and how to obtain additional information.

Background: BPA is proposing to fund the Lower Columbia Estuary Partnership's proposal to restore floodplain connectivity to the Columbia River within the Steigerwald Lake National Wildlife Refuge (Refuge) in Clark County, WA. The project involves reconnecting Gibbons Creek to the Columbia River by breaching a U.S. Army Corps of Engineers' levee; removing a diversion structure, fish ladder, elevated channel, and water control structure; replacing a state highway bridge; constructing a setback levee; enhancing approximately two miles of wetland channels; and re-establishing the site's riparian forest. The project will help improve water quality and habitat to benefit steelhead and cutthroat trout; Chinook, coho, and chum salmon; and Pacific and western brook lamprey.

BPA prepared an EA to help the agency determine if the project would cause significant impacts that would warrant preparing an environmental impact statement. BPA released the draft EA for public review and comment on January 26, 2018, and received comments from ten entities. The final EA provides responses to those comments and minor revisions to the EA. Based on the EA analysis and mitigation measures to help lessen impacts, BPA found that the project will not cause any significant impacts and, therefore, an environmental impact statement is not warranted.

Decision: BPA decided to construct the Steigerwald Floodplain Restoration Project. Project construction is expected to begin in April 1, 2019, and continue through November 2021, with breaks in construction during seasonal restrictions.

Copies Available: The final EA, FONSI, and mitigation action plan are available on BPA's website at *https://www.bpa.gov/goto/SteigerwaldFloodplain*. If you previously requested a copy of the documents, they are enclosed. If you would like to obtain paper copies of these documents, please call our toll-free document request line at 1-800-622-4520; leave a request naming this project and giving your name and complete mailing address.

For More Information: If you have any questions regarding the environmental process, please contact me at 503-230-3018, or by e-mail at *cjhamel@bpa.gov*, or Travis Kessler, Contract Environmental Protection Specialist, Salient CRGT, at *tdkessler@bpa.gov*, or 503-230-5468.

Thank you for your interest in our work.

Sincerely,

/s/ Chad J. Hamel
Chad J. Hamel
Supervisory Environmental Protection Specialist

Enclosures (if requested):
Final EA
FONSI and Mitigation Action Plan

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

Summary

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

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

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

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

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

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

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 *January 22, 2019*
Scott G. Armentrout, Vice President Date
Environment, Fish and Wildlife

Mitigation Action Plan

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. If you have questions about the mitigation action plan, contact the Environmental Lead, Travis Kessler, at 503-230-5468 or 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	• Reseed and plant disturbed areas with appropriate native species and control weeds immediately following construction. • Use water trucks to apply water, as needed, to the construction area for dust control. • Protect and retain native riparian/wetland vegetation, to the extent practicable, by avoiding construction activities in these areas. • Minimize the size of the disturbance area, to the extent practicable. • Clean-up site and remove equipment, as practical, during non-construction periods.
Air Quality/Climate Change	• Apply water from water trucks to excavation areas, access and haul roads, and staging areas as needed to control fugitive dust. • Set a low speed limit on access roads to reduce dust generation. • Restrict idling of construction vehicles and machinery to a maximum of 5 minutes.

Cultural Resources	• Mark known cultural resource sites as avoidance areas on construction drawings and flag as no-work areas in the field prior to construction.
	• Protect any unanticipated cultural resources discovered during construction as follows:
	  ○ Stop all work; cover and protect the 'find' in place.
	  ○ Notify Project Manager and BPA cultural resources specialist immediately.
	  ○ Implement mitigation or other measures as instructed by BPA cultural resource specialist.

Fish	• In fish-bearing waters, construct only during in-water work windows specified by WDFW and NMFS. • Seine all in-water work areas on the Columbia River and Gibbons Creek prior to excavating or isolating work areas. • A qualified fish biologist would conduct fish salvage after isolating work areas. • All fish would be handled according to NMFS protocols for handling listed fish. • Grade channels for positive drainage to avoid fish stranding. • Operate machinery used for in-water work from top of bank to the extent possible. • Preserve riparian vegetation to the extent possible during construction. • Implement all conservation measures relevant to listed anadromous fish and bull trout from HIP III. • Construction would occur under the authority of environmental inspectors who could stop work if hazardous materials were encountered or released. • Monitor water quality in floodplain wetlands, particularly for temperature.*
Geology and Soils	• 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. • Create a Sediment Control Plan, include daily monitoring during in-water construction, regular inspection, and recording control measures.* • Use sediment barriers, such as silt fences, straw matting, and straw wattles. • Minimize the area of disturbance, use minimum areas for staging, clearing, and grubbing. • Use water trucks to apply water to control dust, as needed.

Resource Category	Mitigation Measures
	• Apply mulch or straw, or reseed exposed soil areas to reduce erosion and dust after completing work within a given area. • Sequence construction to minimize soil exposure and erosion potential. • Decompact staging areas and decommissioned access roads through disking and replanting. • Continue monitoring channel formation and levee breaches, in particular, to ensure that functioning channels are experiencing sustainable levels of accretion and erosion.* • Use adaptive management measures to respond to unexpected erosion or accretion.*
Land Use and Recreation	• Maintain access to as much of the Refuge as possible during construction. • Install signs to inform the public of the lengths of closures and alternate locations of birdwatching, hiking, or river access.
Noise, Hazardous Substances, Public Health and Safety	• Construction near residences would be limited to the hours between 7:00 a.m. and 10:00 p.m. • 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. • Additional methods of sound dampening or shielding such as noise barriers would be evaluated during construction planning and implemented to the extent practicable. • Construction phasing would be reviewed to minimize the duration of particularly noisy activities and the overall duration of construction near residences. • A description of hazardous materials to be used, and handling procedures would be available on-site.* • Written procedures for notifying environmental response agencies would be posted at the work site.* • 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. * • Workers would be trained in spill containment procedures and would be informed of the location of spill containment kits.* • Workers would wear protective clothing when working with potentially hazardous materials.* • 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.
Socioeconomics/ Environmental Justice	• Limit construction near residences or other sensitive receptors to hours specified in the General Plans of the City of Washougal and Clark County. • Work from the east side of Gibbons Creek to the degree possible. • Apply water to dirt surfaces as needed to control fugitive dust.
Transportation and Infrastructure	• 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. • Use traffic controls such as flagging, reduced speed limits, signage, and barriers to route traffic through affected areas and at truck entry/exit points. • Prepare a traffic control plan to detail items such as traffic control measures to be used and how they would be implemented.

Resource Category	Mitigation Measures
Vegetation and Wetlands	• Specimens of threatened and endangered plant species populations would be protected during construction. • 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.* • 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. • To control spread of non-native species, construction equipment would be washed before it was mobilized to and from the Refuge. • Replanting with native seed mix would occur as rapidly as possible following the completion of construction. Plantings would be mulched upon completion if needed. • 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.*
Water Resources	• 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. • Sediments for restoration activities would be obtained on-site to the degree possible. • 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. • A Spill Prevention Control and Countermeasures Plan would be developed. • Only use hydraulic fluids approved for work in aquatic environments. • Heavy equipment would be washed before delivery to project site to remove oils, fluids, grease, weed seeds, etc. • Heavy equipment would be regularly inspected and cleaned. • Pollution and control measures identified in the SWPPP would be implemented. • All non-emergency maintenance of equipment would be performed off-site. • All waste (solid waste, hazardous materials, etc.) would be disposed off-site as regulated by the state. • All equipment, materials, supplies, and waste would be removed from project site when complete. • Activities would be scheduled and water flows and levels would be managed to provide dry working conditions as much as possible. • Prepare and implement a SWPPP and an erosion control plan, consistent with NPDES requirements and Section 401 consultation. • Clean Water Act permit-specific protection measures would be applied. • 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.

Resource Category	Mitigation Measures
	• BMPs for erosion and sediment control would be applied during operations. • In-water work areas would be isolated from the active river channel. • Levee breeching would be timed with Columbia River flows to minimize erosion. • 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. • Machinery for in-water work would be operated from atop levees or within adjacent out of water areas as much as possible.
Wildlife	• Construction occurring during October would avoid primary cackling and Canada goose habitat by a minimum of 500 ft. • 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. • 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. • 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.

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

Notice of Final Determination
SEPA Determination of Non-Significance

The Clark County Department of Community Development has received an application for development review, as described below. Based on a review of the submitted application materials, and upon review of all SEPA comments received, the **Determination of Non-Significance (DNS) for the proposal is hereby final.** As lead agency, the county has determined that the requirements for environmental analysis, protection, and mitigation measures are adequately addressed in the development regulations and comprehensive plan adopted under Chapter 36.70A RCW, and in other applicable local, state, or federal laws and rules, as provided by RCW 43.21.240 and WAC 197-11-158.

Date of Final SEPA Determination: **May 1, 2019**

Project Name: Steigerwald Floodplain Restoration Project

Case Numbers: SHL2018-00002; SEP2018-00006; FLP2018-00002; GEO2018-00002; EVR2018-00005; WET2018-00002; and HAB2018-00007

Request: Restoration of approximately 1,000 acres of floodplain habitat within the Steigerwald Lake National Wildlife Refuge.

Location: Steigerwald National Wildlife Refuge
5200 SE Lewis and Clark Hwy
Washougal, WA 98671

Parcel numbers: 135308000, 135307000, 135508000, 135819000 & 986042329

Township: 1 N **Range:** 4 E **Sections:** 16, 21, 23 & 24

Community Development
1300 Franklin Street, Vancouver, Washington
Phone: (360) 397-2375 Fax: (360) 397-2011
www.clark.wa.gov/development

SEPA Review

A Notice of Type II Development Review Application and likely SEPA Determination of Non-Significance (DNS) was mailed to the applicant state/local agencies, and property owners within 500 feet of the proposed project on May 16, 2018.

Public Comments

No public comments were submitted in response to SEPA notification.

Agency Comments

1) Comment Submitted by
State of Washington Department of Ecology
PO Box 47775
Olympia, WA 98504

Date Received
May 31, 2018

The Department of Ecology identified that project activities must comply with Clark County floodplain permitting, and that the resulting floodplain restoration will require a FEMA Letter of Map Revision. Additionally, there is a known contaminated site within a half mile of the property, and if environmental contamination is discovered during the project, it must be reported to Ecology's Southwest Regional Office. Only clean fill material can be used during project activities. The comments also identify erosion and sediment control requirements, and list construction activities that require coverage under the Department of Ecology Construction Stormwater General Permit.

Staff Response

Ecology's comments will be included as part of the conditions of approval of the associated shoreline exemption (SHL2018-00002).

Project Summary

The Lower Columbia River Estuary Partnership proposes to restore approximately 1,000 acres of floodplain habitat at the Steigerwald Lake National Wildlife Refuge (owned by the U.S. Fish & Wildlife Service). The project is located east of the City of Washougal, WA and south of the SR-14 Hwy.

Overall, the project involves removal of approximately 2.2 miles of existing levee along the Columbia River and excavation of four deeper floodplain channels to reconnect the Columbia river with the historic floodplain, wetland habitat, and Gibbons Creek. Wetland and floodplain habitat would be enhanced and restored, and fish habitat would be re-created, while native riparian vegetation will be reestablished. To the east and west of the restoration area, new setback levees will be constructed to maintain flood protection to adjacent land. Many of the public trails and maintenance access paths within the refuge will be reconfigured as part of the project, and the main visitor parking lot will be relocated out of the floodplain.

The associated Shoreline Exemption (SHL2018-00002) the Wetland and Habitat Permit (HAB2018-00007 and WET2018-00002)) for this project are expected to be issued within the next 30 days.

SEPA Appeal Process
An appeal of this SEPA determination and any required mitigations, must be filed with the Department of Community Development within fourteen (14) calendar days from the date this notice.

A **procedural SEPA appeal** is an appeal of the determination (i.e., determination of significance, determination of non-significance, or mitigated determination of non-significance).

A **substantive SEPA appeal** is an appeal of the conditions required to mitigate for probable significant issues not adequately addressed by existing Clark County Code or other law.

A **procedural or substantive appeal** must be filed within fourteen (14) calendar days of this determination, together with the appeal fee. Such appeals will be considered at a scheduled public hearing and decided by the Hearing Examiner in a subsequent written decision.

Appeals must be in writing and should contain the following information:

- Case number designated by the county
- Name of the applicant
- Name of each petitioner
- Signature of each petitioner or his or her duly authorized representative
- A statement showing the following:
  - That each petitioner is entitled to file the appeal as an interested party in accordance with CCC 40.510.020(H) or 40.510.030(H)
  - The reasons why the SEPA determination is in error
- The appeal fee

Please refer to the *Appeals* handout for more information and fees.

The decision of the Hearing Examiner is final unless:
- A motion for reconsideration is filed within fourteen (14) days of written notice of the decision, as provided under Clark County Code, Section 2.51.160; or,
- An appeal is filed with Clark County Superior Court.

Staff Contact Person: Scott Wiedemer, 564.397.5273

Responsible Official: Mitch Nickolds, Community Development Director

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Information regarding this application can be obtained by contacting the staff contact person listed below or in person at the Community Development Permit Center, 1300 Franklin Street, first floor, Vancouver, Washington, 98660.

PUBLIC WORKS DEPARTMENT
ENGINEERING &CONSTRUCTION DIVISION

FLOODPLAIN REVIEW NO. FLP2018-00002

PROJECT NAME: Steigerwald National Wildlife Refuge Floodplain Restoration

NOT A PERMIT TO CONSTRUCT (See conditions attached)

Applicant: Debrah Marriott
Company: Lower Columbia Estuary Partnership
Address: 811 SW Naito Parkway, Suite 410, Portland, OR, 97204
Phone: (503) 226-1565
Email: DMarriott@estuarypartnership.org

This permit applies to the Steigerwald National Wildlife Refuge Floodplain Restoration for the period of May 1, 2019 through May 1, 2020 that involves restoration of approximately 1,000 acres of floodplain habitat within Steigerwald National Wildlife Refuge through the removal of the existing Columbia River levee and constructing channels between the Refuge and the river in addition to restoring Gibbons Creek. Setback levees will be constructed at the east and west extents of the project to maintain flood protection for adjacent properties and/or infrastructure.

The included hydraulic report and no-rise analysis indicates that there will be no net rise to the BFE along the Columbia River due to work on this project. The project has the following characteristics:

- **Federal Emergency Management Agency (FEMA) Zone:** AE
- **FEMA FIRM Panel**: 53011C0553D, 53011C0554D, 53011C0560D, 53011C0562D, 53011C0570D
- **Parcel Numbers**: 135508000, 135819000, 135823000, 135835000, 501100000, 986042329, 135308000, 135307000
- **Watershed:** Gibbons Creek
- **Sub Watershed:** Steigerwald Lake

The submitted application materials indicate that the proposed project will not cause a rise to the regulatory 100-year Base Flood Elevation (BFE). The submitted materials meet all applicable requirements defined in Chapters 40.420 and 40.386 of the Clark County Code.

NOTES:

1. **Permit will expire after one year of date of issuance. If necessary, a separate application may be submitted for a one-year extension.**
2. **Mean Sea Level (msl) datum is National Geodetic Vertical Datum (NGVD) of 1929(47).**
3. **The term "100-year flood" is a statistical designation, and should be interpreted as meaning that there is a 1-in-100 chance that a flood could occur in any given year that will equal or exceed the 100-year flood level as estimated by the Flood Insurance Rate Maps (FIRM).**

If you have any questions please contact Melissa Tracy ext. 5843.

THIS PERMIT IS SUBJECT TO THE ATTACHED CONDITIONS.

Brian Apple, P.E.
Engineer III (Clark County Public Works)

THIS PERMIT is subject to the following conditions, which are hereby accepted and agreed to by the Applicant:

STANDARD CONDITIONS

1. The Applicant verifies: a) that the information provided is in accordance with Chapter 40.420 and all other applicable Clark County Code; and b) that engineering and structural design will be in accordance with Chapters 40.420 and 40.386. **The Property Owner is responsible for ensuring that all design and construction professionals obtain and thoroughly review these permit conditions and Chapter 40.420 prior to commencing any design or construction work associated with this application.** You can research the Clark County Code on our web site at www.clark.wa.gov.

2. The requirements of Chapter 40.420 are considered to be part of this permit. The above code requirements and these permit conditions take precedence over any less restrictive conflicting County or local laws, ordinances or codes.

3. The criteria established in Chapter 40.420 and conditions stated on this permit are **minimum** requirements only. Clark County review is for conformance with minimum standards of Chapter 40.420 and 40.386 of the Clark County Code only, and does not relieve the Applicant or the Applicant's engineer from responsibility for the design.

4. All temporary floodway encroachments and any associated damages are the responsibility of the permittee.

5. The floodplain permit is applicable to the Steigerwald National Wildlife Refuge Floodplain Restoration as described in the following Clark County Permit Number: SHL2018-00002. This permit does not authorize any additional work other than as approved in the above land use decisions.

CONDITIONS FOR NEW CONSTRUCTION

6. The Applicant shall arrange for all permits and/or inspections required for the proposed project.

CONDITIONS FOR GRADING

7. Erosion control, in accordance with CCC 40.386, shall be provided during all phases of construction, and methods and locations for erosion control shall be clearly shown on any and all plans submitted to Clark County.

8. All exposed ground impacted by the proposed construction activities shall be stabilized and protected from erosion in accordance with CCC 40.386.

9. Exposed bank material shall be **permanently** protected from erosive velocities associated with flood flows near the project area in accordance with CCC 40.386.

SPECIAL CONDITIONS

10. All conditions of all related permits are considered a part of this permit.

11. A CLOMR (Case No: 18-10-1527R) was submitted to FEMA for adjustment of the Flood Insurance Study (FIS) and related Flood Insurance Rate Map(s) (FIRM) due to the project. After project completion, submit materials for obtainment of a Letter of Map Revision (LOMR) for the affected FIRM and FIS report.

12. A signed Flowage & Access Easement between the James Property and the Port of Camas-Washougal is in-place prior to any project work.

Applicant has reviewed and agrees to all conditions listed above:
Please sign below and submit to the Clark County Public Works Engineering and Construction Division.

By: _____.

Date: _____.

1300 Franklin Street, 4th Floor • P.O. BOX 9810 • VANCOUVER, WASHINGTON 98666-9810
(360) 397-6118 • FAX (360) 397-6187

HIP III
PROJECT NOTIFICATION FORM
HIP III No: 2019008

Lead Action Agency: BPA			
NMFS Tracking #: 2013/9724	**Statutory Authority:** ☒ ESA & EFH ☐ ESA		**USFWS Tracking #:** NA
Date of Request:	11/6/2018		
Project Title:	**Steigerwald Floodplain Restoration Project**		
BPA Project #:	**2003-011-00**	**Contract #:**	**77262**
BPA EC Contact:	**Travis Kessler**		
Project Sponsor Contact:	**Chris Collins**	**Phone:**	**503-226-1565 x235**
Project Affiliation:	Click here to enter text.		
NMFS Branch Office:	**Washington Coast & Lower Columbia Branch - Scott.Hecht@noaa.gov**		
USFWS Field Office:	**NA**		
Lat/Long: (in decimal degrees, WGS84)	**45.5646; -122.3000**	**County:**	CLARK, WA
6th Field HUC:	**170800010804; Latourell Creek-Columbia River**		

Project Start Date:	4/1/2019	**Project End Date:**	10/1/2019	**Completed Form Due Date:**	10/30/2019

(Project Completion Form (PCF) and/or Herbicide Use Form (HUF) due ≤ 30-days after Project End Date)

Does the project consist of Surveys only?*	Yes ☐	No☒
Does the project consist of Invasive Plant Control only?**	Yes ☐	No☒
Does the project require work area isolation/fish salvage?	Yes ☒	No☐
Does the project require a variance?	Yes ☒	No☐

(If project only consists of surveys then no PCF is necessary)
****(If project only consists of Invasive Plant Treatments then only a HUF is necessary)***

RISK LEVEL		
LOW	MED	HIGH
☐	☐	☒

Project Description

List the project activities and describe the intended result(s); tell when the project is to occur; describe how the activities will be implemented; provide any other pertinent information.

Restoration will be achieved by removing the levee along the Columbia River and constructing channels between the Refuge and the river, as well as restoring Gibbons Creek's alluvial fan. New (setback) levees will be constructed at the east and west extents of the project to maintain flood protection for the Port and other adjacent properties and infrastructure. The SR 14 roadway along the northern boundary of the Refuge will also be raised approximately 3 feet to reduce water level impacts to the road. Gibbons Creek restoration will include removal of the diversion structure, the elevated canal, and the culvert and fish ladder at the downstream end of the creek. Other project measures include grading within the refuge to expand habitat, placing woody debris in floodplain channels to enhance aquatic habitat, and constructing pedestrian bridge crossings along the primary floodplain channels and Gibbons Creek. Wetlands and riparian areas within the Refuge will also be revegetated with native plant species.

ESA coverage for FWS species already complete under FWS Intra-Service Biological Evaluation Form, completed 6/1/16.

Variance Request

Describe how the effects of the requested variance fall within the range of effects described for the proposed activities in the HIP III Opinion, by addressing the following:

1) Define the requested variance and the relevant criterion by page number.

Use of herbicides and discing to control invasive species (primarily reed canary grass) on 199.5 acres of the site. Activity category 3a, Manage Vegetation Using Physical Control, allows for discing but requires a minimum buffer width of 35 feet. Activity category 3b, Manage Vegetation Using Herbicides, addresses herbicide use.

Pre-planting treatment: Discing and broadcast spraying will occur on the 53.0 acres identified on the attached map as Reed Canarygrass Management Zone, some of which is delineated wetland and/or adjacent to perennial waterbodies. The remaining 146.5 acres do not require herbicides or discing during site preparation.

Plant establishment: Post-planting spot sprays are required for plant establishment in all replanted areas (199.5 total acres).

Herbicides to be applied are limited to Glyphosate (max. application rate of 3.75 lbs per acre) and Triclopyr (TEA) (max. application rate of 9.0 lbs per acre).

The following BMPs will be strictly adhered to:

- **Herbicides will be applied only by a licensed applicator.**
- **The applicator will be responsible for preparing and carrying out the herbicide transportation and safety plan outlined in Draft HIP IV Handbook.**
- **Herbicides will not be mixed within 150 feet of any waterbody.**
- **No spraying in standing water.**
- **When broadcast spraying, maintain a 15' buffer from inundated areas. Only spot spray allowed within 15' of standing water.**
- **No spraying in areas with potential for near term inundation by the Columbia River or**

Gibbons Creek, including not spraying in low elevation portions of the site until the freshet has receded (typically July).
- No spraying within 48 hours of forecasted precipitation.
- When broadcast spraying, maximum boom height shall be no greater than 6" above top of vegetation.

2) Environmental conditions anticipated at the time of the proposed work (flow and weather conditions).

Disc: Two treatments occurring on the 53.0-acre Reed Canarygrass Management Zone in July-Sept 2019 (before the levee is breached). This portion of the site will be dry. No standing water, saturated soils, or precipitation is expected.

Broadcast spray: One to two applications occurring on the 53.0-acre Reed Canarygrass Management Zone in April-Sept 2019 (before the levee is breached). This portion of the site will be relatively dry. No spray within 15' of inundated areas (though none expected) or within 48 hours of forecasted precipitation.

Spot spray: Two treatments annually occurring from 2020 through 2024.
- 59.9 acres treated in 2020 and 2021 (before levee removal).
- 199.5 acres treated in 2022, 2023 and 2024 (after removal of the levee).
- No spray until treated portion of the site is dry or within 48 hours of forecasted precipitation.

3) Biological justification as to why a variance is necessary and a brief rationale why the variance will either provide a conservation benefit or, at a minimum, not cause additional adverse effects beyond the scope of the Opinion.

This project proposes to reconnect 965 acres of diked floodplain to the river (approximately 560-acres will be regularly inundated). Based on aerial imagery (dating to the 1930s) and Government Land Office surveys of the site, much of this acreage, which is now grazed or infested with reed canarygrass, was historically forested. The project proposes to reforest 199.5 acres of the floodplain to restore the site as close as practical to its historic condition. Herbicides and discing are required to prepare portions of the site for planting and to help control invasive species and maximize survival of native plantings.

NMFS Species/Critical Habitat Present in Action Area:

Anadromous Fish:

- ☒ Lower Columbia River Chinook
- ☒ Lower Columbia River coho
- ☒ Lower Columbia River steelhead
- ☒ Middle Columbia River steelhead
- ☒ Upper Columbia River spring-run Chinook
- ☒ Upper Columbia River steelhead
- ☒ Columbia River chum
- ☒ Green sturgeon
- ☐ Upper Willamette River Chinook
- ☐ Upper Willamette River steelhead
- ☒ Snake River spring/summer-run Chinook
- ☒ Snake River fall-run Chinook
- ☒ Snake River Basin steelhead
- ☒ Snake River sockeye
- ☒ Pacific eulachon

Essential Fish Habitat Species:

- ☒ Salmon (West Coast Salmon FMP)
- ☐ Estuarine Composite (Ground fish, pelagics)

USFWS Species/Critical Habitat Present in Action Area:

ESA coverage for FWS species already complete under FWS Intra-Service Biological Evaluation Form, completed 6/1/16.

Types of Action:

Identify the types of action(s) proposed.

1. Fish Passage Restoration (Profile Discontinuities)

- ☒ a. Dams, Water Control or Legacy Structure Removal
- ☐ b. Consolidate, or Replace Existing Irrigation Diversions
- ☒ c. Headcut and Grade Stabilization
- ☐ d. Low Flow Consolidation
- ☐ e. Providing Fish Passage at an Existing Facility

Fish Passage Restoration (Transportation Infrastructure)

- ☒ f. Bridge and Culvert Removal or Replacement
- ☒ g. Bridge and Culvert Maintenance
- ☐ h. Installation of Fords

2. River, Stream, Floodplain, and Wetland Restoration

- ☐ a. Improve Secondary Channel and Wetland Habitats
- ☒ b. Set-back or Removal of Existing, Berms, Dikes, and Levees
- ☒ c. Protect Streambanks Using Bioengineering Methods
- ☒ d. Install Habitat-Forming Natural Material Instream Structures (Large Wood, Boulders, and Spawning Gravel)
- ☒ e. Riparian Vegetation Planting
- ☒ f. Channel Reconstruction*

3. Invasive and Non-Native Plant Control

- ☒ a. Manage Vegetation using Physical Controls
- ☒ b. Manage Vegetation using Herbicides

4. Piling Removal.

- ☐ Piling Removal

5. Road and Trail Erosion Control, Maintenance, and Decommissioning

- ☐ a. Maintain Roads
- ☐ b. Decommission Roads

6. In-channel Nutrient Enhancement

- ☐ In-channel Nutrient Enhancement

7. Irrigation and Water Delivery/Management Actions

- ☐ a. Convert Delivery System to Drip or Sprinkler Irrigation
- ☐ b. Convert Water Conveyance from Open Ditch to Pipeline or Line Leaking Ditches or Canals
- ☐ c. Convert from Instream Diversions to Groundwater Wells for Primary Water Sources
- ☐ d. Install or Replace Return Flow Cooling Systems
- ☐ e. Install Irrigation Water Siphon Beneath Waterway
- ☐ f. Livestock Watering Facilities
- ☒ g. Install New or Upgrade/Maintain Existing Fish Screens

8. Fisheries, Hydrologic, and Geomorphologic Surveys

☐ Fisheries, Hydrologic, and Geomorphologic Surveys

9. Special Actions (Terrestrial Species)

☒ a. Install/develop Wildlife Structures
☐ b. Fencing Construction for Livestock Control
☒ c. Implement Erosion Control Practices
☒ d. Plant Vegetation
☒ e. Tree Removal for LW Projects

NMFS Hydro Division Review

Does the project require approval from NMFS Hydro Division for:

Fish Passage Restoration **(Profile Discontinuities)**	Yes ☒	No ☐	Approval Date: 10/31/17
Install New or Upgrade/Maintain Existing Fish Screens	Yes ☒	No ☐	Approval Date: 10/31/17
Channel Reconstruction	Yes ☒	No ☐	Approval Date: 10/31/17

USFWS Terrestrial Species Review

Does the project require confirmation of NLAA Effects determination for:

Mammalian Species	Yes ☐	No ☒	Approval Date: DATE
Invertebrate Species	Yes ☐	No ☒	Approval Date: DATE
Avian Species	Yes ☐	No ☒	Approval Date: DATE
Plant Species	Yes ☐	No ☒	Approval Date: DATE

RRT REVIEW (for medium or high risk projects only)

Medium Risk Project requiring internal RRT review Yes ☐ No ☒

High Risk project requiring inter-agency review? Yes ☒ No ☐

Date of RRT Approval: 10/31/2017 RRT Reviewer: Doug Knapp

BPA Determination of Consistency with all Requirements of the HIP III Consultation

The BPA must certify that the proposed project is consistent with all requirements and applicable terms and conditions of the HIP III Consultation.

BPA EC Contact (constitutes your electronic signature): Travis Kessler

Date of Certification: 11/6/2018

From:	Kessler,Travis D (CONTR) - ECF-4
To:	"Darlene Siegel"
Subject:	FW: [EXTERNAL] Re: Steigerwald Floodplain Restoration - Fish Passage Approval
Date:	Tuesday, February 19, 2019 10:53:46 AM

Hi Darlene,

Please see the email below on October 31, 2017 from Jeff Brown that documents fish passage approval.

Thanks,

Travis Kessler
(CONTR) SalientCRGT
Environmental Protection Specialist
Bonneville Power Administration
Office: 503.230.5468
Cell: 971.930.6838
tdkessler@bpa.gov

From: Scott Hecht - NOAA Federal [mailto:scott.hecht@noaa.gov]
Sent: Tuesday, February 19, 2019 9:05 AM
To: Kessler,Travis D (CONTR) - ECF-4
Cc: Jim B. Muck - NOAA Federal; Bonnie Shorin
Subject: [EXTERNAL] Re: Steigerwald Floodplain Restoration - Fish Passage Approval

Hi Travis-
Please see the below email from Jeff and thanks Bonnie for your mining efforts. Jeff provided his recommendation to grant a variance to the branch chief at the time (Bonnie).

Scott

On Tue, Oct 31, 2017 at 10:11 AM, Jeffrey Brown - NOAA Federal <jeffrey.brown@noaa.gov> wrote:
Hi Bonnie and Doug,

I have no problem with the setback including the flapgates provided they're set at the same elevation and will provide no less inundation than was provided in the pre-project condition. This is a pretty good example of where a variance is appropriate, and the spirit of the document, vice the letter (the spirit being that HIP doesn't envision adding new flap gates where none previously existed) is being met, even if the letter may not be. As far a procedure under HIP, the branch chief (is that you now, Bonnie?) will actually approve the variance. My input is a recommendation to that effect.

Thanks for the opportunity to provide input.

-Jeff

Jeff Brown P.E.
Hydraulic Engineer

NOAA Fisheries Service
Portland, Oregon
(503)230-5437

Scott Hecht, Ph.D.
Branch Chief, Washington Coast-Lower Columbia
NOAA Fisheries, West Coast Region

Office: 360-534-9306
Cell: 562-505-3441
510 Desmond Drive SE
Lacey, Washington
98503

On Thu, Feb 14, 2019 at 11:17 AM Jim B. Muck - NOAA Federal <jim.b.muck@noaa.gov> wrote:

> Please check Scott Hect, Branch Chief of the Lower Columbia. Yes, I remember a project with Jeff Brown.
>
> Jim
>
> *Jim B. Muck*
> *Oregon Coast Branch*
> *Oregon-Washington Coastal Office*
> *National Marine Fisheries Service*
> *2900 NW Stewart Parkway*
> *Roseburg, Oregon 97471*
>
> *541-957-3394 Office Phone*
> *jim.b.muck@noaa.gov*

On Tue, Feb 12, 2019 at 3:03 PM Kessler,Travis D (CONTR) - ECF-4 <tdkessler@bpa.gov> wrote:

> Hi Jim,
>
> This is a follow up email to the voicemail I left you a bit ago. I am the EC Lead from BPA finishing up with the Steigerwald Project and wanted to know if you had record of the fish passage approval from Jeff Brown from NOAA. I have an email from May 10th, 2018 that you sent to Bonnie Shorin, but I need an actual email or some documentation from Jeff Brown that shows that he approved it with the date. Do you have anything that shows approval?
>
> Thanks,
>
> ***Travis Kessler***
> (CONTR) SalientCRGT

Environmental Protection Specialist
Bonneville Power Administration
Office: 503.230.5468
Cell: 971.930.6838
tdkessler@bpa.gov

01EWFW00-2016-F-0856

United States Department of the Interior

FISH AND WILDLIFE SERVICE
28908 NW Main Ave.
Ridgefield, WA 98642
Phone: (360) 887-4106 FAX: (360) 887-4109

In Reply Refer To:
Ridgefield National Wildlife Refuge

May 12, 2016

Martha Jensen
Branch Manager, Federal Activities
Division of Consultation and Conservation Planning
Washington Fish and Wildlife Office
510 Desmond Dr. SE
Lacey, Washington 98503

Dear Ms. Jensen:

The U.S. Fish and Wildlife Service (Service), Ridgefield National Wildlife Refuge Complex, (Complex), in co-operation with Bonneville Power Administration, Lower Columbia River Estuary Partnership, Port of Camas and Washougal, and the U.S. Army Corps of Engineers (USACE), proposes to restore approximately 1,000 acres of historic Columbia River floodplain habitat within the Steigerwald Lake National Wildlife Refuge (Refuge). The Refuge is located east of Washougal, Washington at the western boundary of the Columbia River Gorge National Scenic Area (CRGNSA). A perennial stream, Gibbons Creek, flows into the Refuge from its watershed north of the Refuge and continues through the Refuge out to the Columbia River.

The purpose of the project is to restore floodplain processes and hydrologic connectivity between Gibbons Creek, the Columbia River, and the adjacent floodplain habitats within the Refuge. This would be achieved by removing the levee between the Refuge and the Columbia River, and constructing channels between the Refuge and the river, as well as restoring Gibbons Creek's alluvial fan. Setback levees will be constructed at the east and west extents of the project to maintain flood protection for the Port and adjacent properties. Gibbons Creek restoration will include removal of the diversion structure, the elevated canal, and the culvert and fish ladder at the downstream end of the creek. Other restoration measures include grading within the Refuge to expand habitat, and installing pedestrian bridge crossings along two of the primary floodplain channels to maintain visitor services. Wetlands and riparian areas within the Refuge would also be revegetated with native plant species. The project would provide multiple benefits including but not limited to restoring Federally-listed salmon species habitat; eliminating maintenance dredging in Gibbons Creek; reducing interior flood risk to Port developments; improving fish passage; eliminating take of Federally-listed salmonids during Gibbons Creek overflows; and improving the overall quality of fish and wildlife habitat.

The Complex has evaluated the potential impacts to Federally-listed species under the Service's jurisdiction and has determined that the project may affect a portion of the population of Nelson's checkermallow (*Sidalcea nelsoniana*), that occurs on the Refuge. Nelson's checkermallow occurs in portions of the Refuge that would be periodically inundated and the resulting change in hydrology may impact the population. We have included our Intra-Service Biological Evaluation form and formal consultation and request your concurrence with our determination. Consultation with the National Marine Fisheries Service for impacts to species under their jurisdiction is being done in accordance with the Programmatic Biological Opinion for Bonneville Power Administration's Columbia River Basin Habitat Improvement Program (HIP III).

If you have any questions or require additional information, please contact Wildlife Biologist, Alex Chmielewski at 360-887-3883 or alex_chmielewski@fws.gov. Thank you for your consideration.

Sincerely,

Christopher Lapp
Project Leader

CC: Chris Collins LCEP, Portland OR
Dave Goodman, BPA, Portland, OR
Files, Ridgefield NWRC

Intra-Service Section 7 Biological Evaluation Form

Originating Person: Alex Chmielewski Telephone Number: 360-887-3883
Date Submitted: 4/15/2016

I. **Service Program and Geographic Area or Station Name**: Steigerwald Lake NWR

II. **Location**: Clark County, WA

III. **Species/Critical Habitat in Action Area**:

Nelson's Checkermallow (*Sidalcea nelsoniana*) (Threatened)

Golden Paintbrush (*Castilleja levisecta*) (Threatened)

Bull Trout (*Salvelinus confluentus*) Mainstem Columbia DPS, (Threatened)

The following species are managed by the National Marine Fisheries Service (NMFS) and a separate consultation will be conducted by the Bonneville Power Administration under the existing HIPIII process described in the 2013 programmatic Biological Opinion.

Chinook Salmon (*Oncorhynchus kisutch)*

Snake River Fall-run (Threatened)
Snake River Spring/Summer-run (Threatened)
Lower Columbia River (Threatened)
Upper Columbia River Spring-run (Endangered)

Coho Salmon (*Oncorhynchus mykiss*)
Lower Columbia River/Southwest Washington

Steelhead (*Oncorhynchus nerka*)
Snake River Basin (Threatened)
Upper Columbia River (Endangered)
Middle Columbia River (Threatened)
Lower Columbia River (Threatened)

Chum salmon (*Oncorhynchus keta*)
Columbia River (Threatened)

Eulachon (*Thaleichthys pacificus*)
Southern DPS (Threatened)

IV. Project Description:

The U.S. Fish and Wildlife Service (Service), Ridgefield National Wildlife Refuge Complex, (Complex), in co-operation with Bonneville Power Administration, Lower Columbia River Estuary Partnership, Port of Camas and Washougal, and the U.S. Army Corps of Engineers (USACE), proposes to restore approximately 1,000 acres of historic Columbia River floodplain habitat within the Steigerwald Lake National Wildlife Refuge (Refuge). The Refuge is located east of Washougal, Washington at the western boundary of the Columbia River Gorge National Scenic Area (CRGNSA). A perennial stream, Gibbons Creek, flows into the Refuge from its watershed north of the Refuge and continues through the Refuge out to the Columbia River.

There is a five mile-long levee constructed by the USACE that separates the Refuge from the Columbia River. In addition, the Army Corps realigned Gibbons Creek through a diversion structure, an elevated canal (Highline Canal), and a culvert and fish ladder before discharging into the Columbia River on the south side of the levee.

The purpose of the project is to restore floodplain processes and hydrologic connectivity between Gibbons Creek, the Columbia River, and the adjacent floodplain habitats within the Refuge. This would be achieved by removing the levee and constructing channels between the Refuge and the river, as well as restoring Gibbons Creek's alluvial fan, as shown in Figure 1-2 below. New (setback) levees will be constructed at the east and west extents of the project to maintain flood protection for the Port and adjacent properties. Gibbons Creek restoration will include removal of the diversion structure, the elevated canal, and the culvert and fish ladder at the downstream end of the creek. Other restoration measures include grading within the refuge to expand habitat, and installing pedestrian bridge crossings along two of the primary floodplain channels to maintain visitor services. Wetlands and riparian areas within the Refuge would also be revegetated with native plant species. The project would provide multiple benefits including but not limited to restoring ESA listed salmon species off channel habitat; eliminating maintenance dredging in Gibbons Creek; reducing interior flood risk to Port developments; improving fish passage; eliminating take of federally-listed salmonids during Gibbons Creek overflows; and improving the overall quality of fish and wildlife habitat.

B. Determination: Determine the anticipated effects of the proposed project on species and critical habitats listed in item III.

Bull Trout

Current bull trout abundance, spatial distribution, and temporal use of the mainstem Columbia River have not been thoroughly documented. Bull trout exhibit both anadromous and resident (or fluvial) life histories, however, current knowledge does not support anadromous populations of bull trout occurring in the mainstem Columbia River (USFWS 2015). Occasional transient

individual bull trout may be present in the main stem of the Columbia River in the vicinity of the project. Bull trout are not known to occur in Gibbons Creek or any other Refuge waterbody. Bull trout in the lower Columbia River below Bonneville Dam primarily inhabit tributary systems, including the Lewis, Klickitat, and Hood Rivers.

Since 2000, three bull trout have been incidentally caught and documented at Bonneville Dam or immediately downstream of the dam at the mouth of Hamilton Creek; during this time period, there were also several records of bull trout upstream of Bonneville near Drano Lake, the mouth of the Klickitat River, and John Day Dam. There are nine records of bull trout at or near Bonneville Dam between 1941 and 1998. The sightings for which measurements are available indicate that observed bull trout were from 9 to 15 inches in length, consistent with the expected size of the resident form. The majority of sightings since 1941 have occurred between late March and late May, with a few sightings between mid-June and early September. In 2009, there were sightings of one fish on May 30 and two on June 2 at Bonneville Dam. The fish appeared to be bull trout, but recent genetic analyses have revealed that arctic char are also present in the Columbia River. Arctic char are indistinguishable from bull trout by sight, so the identification could not be confirmed (BPA 2010).

Individual bull trout may enter the project area following construction, but Gibbons Creek does not provide suitable year-round habitat for bull trout and the Refuge does not expect that the construction of the project will create a significant amount of suitable habitat for bull trout adults, or juveniles. Additionally, few transient individuals are expected within the mainstem Columbia based on poor habitat conditions and high water temperatures present for much of the year. With absence of occurrences in or near the Refuge and the low potential to affect occasional transient individuals in the vicinity of the project, the Refuge has determined that the project may affect, but is unlikely to adversely affect bull trout.

Nelson's checkermallow and Golden paintbrush

Populations of two federally listed plant species have been introduced within the Refuge: Nelson's checkermallow (*Sidalcea nelsoniana*) and golden paintbrush (*Castilleja levisecta*). Each of these species are listed as threatened under the Federal Endangered Species Act (ESA) and are currently being managed by the Service for their recovery via their published respective Recovery Plans (USFWS 2010b; USFWS 2000). As a result, the Service has introduced recovery populations of the checkermallow and golden paintbrush at the Refuge (see approximate locations on Figure 1-2). Three plots of checkermallow, totaling 575 plugs were planted in 2011. Golden paintbrush was seeded in two plots in 2014, supplemented by 852 plugs, split between the sites, in 2015. Both these two golden paintbrush plots are above the elevation that is likely to be impacted by the proposed action. Considering the presence of golden paintbrush on Refuge lands in the vicinity of the project, the Refuge has determined that the proposed project may affect, but is unlikely to adversely affect golden paintbrush.

Only two plots of the Nelson's checkermallow are within the project impact area. These two plots may be affected by changes in hydrology as a result of the project. The effect the project on the Nelson's checkermallow introduced populations has yet to be determined but the Refuge estimates that 113 checkermallow plants are present in areas that will become more frequently inundated. A more detailed description of the project design and features is included in the attached 30% Basis of Design Report.

The proposed action will result in significant hydrologic changes to the project impact area. Large portions of the site will be inundated for various periods of time during rainfall and snowmelt events, as well as Columbia River high flow periods. The timing, depth, and period of inundation may vary significantly from year to year. Whereas wildlife species have some ability to emigrate from flooded areas, the vegetation community is likely to be altered in the frequently-inundated areas; particularly when the inundation occurs during the growing season (i.e. late spring freshets).

Hydrologic modeling for the project design indicate that under proposed conditions, both of the two lower elevation plots containing Nelson's checkermallow would experience increased inundation from Columbia River flooding at and above the 2-year flood event (see attached hydrodynamic modeling assessment memo, Appendix 2, Figure 3). The inundation would vary annually in terms of depth, timing, and duration, but would likely occur during winter storm events or the spring freshet. The spring freshet coincides with the post-emergence of the plants and may impact plant survival or seed production.

In addition to seasonal flood events, the hydrologic conditions will likely be altered by beaver dams constructed in the various stream channels, as well as debris dams which may form following floods. These blockages will result in the creation of permanent and/or semi-permanently flooded wetlands in lower elevation areas of the project impact area. The exact locations of these features have not been determined and will likely change significantly through time.

Opening the project impact area to the Columbia River will have other indirect effects. Invasive plant propagules are likely to enter the Refuge and it is likely that species such as false indigobush (*Amorpha fruticosa*) and purple loosestrife (*Lythrum salicaria*) will become more abundant and widespread. These species have the potential to impact listed plant sites and possibly outcompete these listed species. Additional actions such as mechanical and/or chemical treatments may be required to manage any infestations.

***No Effect*:**

None

***May Affect but Not Likely to Adversely Affect*:**

Bull Trout (*Salvelinus confluentus*) Mainstem Columbia DPS, Critical Habitat Unit 8, (Threatened)

Golden Paintbrush (*Castilleja levisecta*) (Threatened)

May affect and likely to adversely affect:

Nelson's Checkermallow (*Sidalcea nelsoniana*) (Threatened)

Part 3 – Formal Consultation

IV. Status of the Species/Critical Habitat

Species Name

Nelson's Checkermallow (*Sidalcea nelsoniana*)

Species Description

Nelson's checkermallow was federally listed as threatened in 1993. No critical habitat was designated. The recovery plan for the species was completed in 1998 and updated in 2010 (USFWS 2010).

The species occurs in the Willamette Valley of Oregon, Oregon's Coast Range, and sites in Clark and Cowlitz Counties in southwest Washington. The species is known to occur in 62 patches within 5 relict population centers in Oregon, and at 3 sites in Washington.

Critical Habitat Description

Critical habitat for the species has not been designated.

Life History

Life history information was obtained from the Recovery Plan (USFWS 2010) as well as the unpublished restoration plan for Steigerwald Lake NWR (USFWS 2012) Nelson's checkermallow is a perennial broadleaf plant in the mallow family (Malvaceae). The pink to red flowers are borne 1.5-5 feet tall spike-like, elongated clusters. Plants have either perfect flowers (male and female) or pistillate flowers (female only). The plant can reproduce vegetatively, by rhizomes, and by seed. Flowering generally occurs in early to late June, but may occur as early as mid-May and extend into

August. Fruits have been observed as early as mid-June and as late as mid-October. Above-ground portions of the plant die back in the fall, usually followed by some degree of regrowth at the base, with the emergence of small, new leaves that persist through the winter directly above the root crown.

Nelson's checkermallow most frequently occurs in open areas such as swales, grasslands, and meadows with wet depressions, or along streams. The species also grows in wetlands within remnant prairie grasslands. Some populations occur in disturbed areas such as roadsides and stream crossings where non-native plants, such as reed canarygrass (*Phalaris arundinacea*), blackberry (*Rubus* spp.), Queen Anne's lace (*Daucus carota*), and nonnative pasture grasses are also present, provided these species do not occur in high densities and out-compete the checkermallow.

This species can occur in a wide variety of soil types from well-drained loams to poorly drained clay loams. In the Willamette Valley, Nelson's checkermallow occurs on soils in the Wapto, Bashaw and Mcalpin Series (NRCS mapped soil unit STATSGO 81) and Malabon, Coburg and Salem Series (NRCS mapped soil unit STATSGO 91). In Washington, the species occurs in Sauvie Island and Hillsboro soil series (USDA SCS 1972).

Population Dynamics (including size, variability, and stability)

Nelson's Checkermallow was introduced to the Refuge in 2011. Three plots were established within the Refuge. Each plot is surveyed annually and the number of plants and their reproductive status (flowering/non-flowering) is recorded. Table 1 describes the results of the annual surveys.

Table 1. Summary of Steigerwald Lake *Sidalcea nelsoniana* outplantings, 2011-2015.

	2011	2012	2013	2014	2015
CLT (Straub) Field (165 plugs)					
Total live plants	158 (95.8%)	151 (91.5%)	134* (81.2%)	168 (102%)	141 (85.5%)
Flowering plants	62 (39.2%)	106 (70.2%)	101* (61.2%)	147 (89%)	131 (79.4%)
Trailhead Pond (64 plugs)					
Total live plants	61 (95.3%	13 (20.3%)	2 (3.1%)	2 (3.1%)	1 (1.6%)
Flowering plants	38 (62.3%)	8 (12.7%)	1 (1.6%)	1 (1.6%)	0
East Stevenson Field (346 plugs)					
Total live plants	338 (97.7%)	250 (72.3%)	82 (23.7%)	104 (30%)	112 (32.4%)
Flowering plants	230 (66.5%)	207 (59.8%)	66 (19.1%)	104 (30%)	87 (25.1%)

Plants in the East Stevenson Field and Trailhead Pond plots are likely to be impacted by the proposed project as they are south of State Route 14 and at elevations that would be inundated

during regular annual flood events. The CLT plot, which supports the largest and most stable population to date, is north of Route 14 and at a location where the hydrology of the site in unlikely to be altered by the project.

The number of plants in the East Stevenson plot declined in the first 2 growing seasons after planting, and has since stabilized with 80 to 112 plants remaining the last 3 years. The number of plants in Trailhead Pond plot has also declined and only one small plant was alive in June of 2015. This plot is driest of the 3 and after experiencing the drought of 2015, may not continue to support any plants in the future.

Status and Distribution (including reasons for listing, range-wide trends, new threats)

Nelson's checkermallow was listed as Threatened in 1993. An updated recovery plan was completed in 2010, which provides much of the information included in the following sections. Nelson's checkermallow has occurred in Benton, Clackamas, Linn, Marion, Polk, Tillamook, Yamhill, and Washington Counties, Oregon, and Cowlitz and Lewis Counties, Washington. It is currently known from about 90 sites, comprising about 517 hectares (1,277 acres) of total cover, distributed from southern Benton County, Oregon, northward through the central and western Willamette Valley, to Cowlitz and Lewis Counties, Washington (USFWS 2010).

Historically, Nelson's checkermallow habitat was maintained by naturally occurring fires and fires set by Native Americans. Conversion of wet prairie habitat to agriculture and commercial/residential development or transportation infrastructure, degraded available habitat. Fire suppression has allowed introduced and native woody species to invade habitat for Nelson's checkermallow. Invasive and introduced plant species that outcompete checkermallow are also responsible for declines relative to historic conditions (USFWS 2010).

Remnant prairie patches in the Willamette Valley have been modified by livestock grazing, fire suppression, or agricultural land conversion. Stream channel alterations, such as straightening, splash dam installation, and rip-rapping cause accelerated drainage and reduce the amount of water that is diverted naturally into adjacent meadow areas altering the hydrology and making the areas unsuitable for checkermallow.

Other threats to Nelson's checkermallow include seed predation by weevils (Gisler and Meinke 1998), and loss of genetic diversity and local isolation resulting from small population size and habitat fragmentation (Gisler 2003).

Analysis of the Species/Critical Habitat likely to be Affected

V. Environmental Baseline

The Service has introduced recovery populations of the checkermallow and golden paintbrush at the Refuge (see approximate locations on Figure 1-2). Three plots of checkermallow, totaling 575 plugs were planted in 2011. Annual surveys are conducted in June at the approximate peak of flowering. The plugs were planted in rows approximately 8 feet apart to facilitate monitoring and management. The population in the plots appears to have stabilized after the initial losses. In 2015, 254 plants were counted of which 218 were flowering (see Table 1, above). Some new seedlings appear to have established next to mature plants, but most reproduction appears to be via rhizomes (J. Arnett, pers. observation 2015).

The Service is actively managing the plots to reduce competition with non-native grasses and broad-leaved plants. Broad-leaved weeds such as tansy ragwort and Canada thistle (*Cirsium arvense*) are hand-pulled annually in late spring and summer. The plots are also mowed in late summer after the checkermallow has gone into senescence.

VI. Effects of the Action

The 113 plants (2015 survey data) in the East Stevenson Field and Trailhead Pond plots would potentially be impacted by the proposed project as they are at elevations that would be inundated during regular annual flood events. The 141 plants CLT plot, which supports the largest and most stable population to date, is north of Route 14 and at a location where the hydrology of the site in unlikely to be altered by the project.

The proposed inundation would vary annually in terms of depth, timing, and duration, but would likely occur during winter storm events or the spring freshet. The spring freshet coincides with the post-emergence of the plants and may impact plant survival or seed production.

Nelson's checkermallow occur in a variety of soil types and moisture levels, though its vigor at the Refuge does coincide with sites with somewhat poorly drained soils and moderate summer soil moisture levels. The East Stevenson field plot is oriented along a slight elevation gradient. Plants located in the southern (lower elevation/wetter) portion of the plot are larger and more robust than those at the drier northern portion of the plot. It is possible that the plants in the drier portion of the plot will survive the proposed changes to the hydrology of the site. However, to be conservative, the Refuge will assume that all 113 plants south of Route 14 will be adversely affected.

The Refuge proposes to replace the plants that are likely to be affected by the proposed project. Beginning in 2016, seed would be collected from mature plants in the East Stevenson Field and propagated in pots at the Refuge's nursery for out planting in an extension of the CLT plot in 2017 (one year prior to project construction). Approximately 350 plugs would be out-planted to account for some initial losses. The expanded plot would be included in the Refuge's annual checkermallow management and monitoring efforts.

Analyses of the Effects of the Action

The proposed action would have both direct and indirect adverse effects on two of the three plots supporting Nelson's checkermallow within the Refuge. It is likely that 113 individual plants (2015 data) would be impacted, though some of the plants in the northern portion of the east Stevenson field plot may persist. One plot, the CLT field that supported 141 plants in 2015 would not be impacted.

Direct effects of the proposed action would include seasonal inundation and changes to hydrology that may render the impacted plots unsuitable for Nelson's checkermallow seed production or survival. Inundation and prolonged soil saturation would reduce the availability of soil oxygen to the plant roots, leading to root damage. Plant stalk damage may occur if inundation occurs during the growing season as the leaves are deprived of oxygen and light levels are insufficient for plant processes. Opportunities to mitigate these impacts within the plots south of Route 14 are limited. The Refuge proposes to establish new plants in areas with suitable soils and hydrology that would not be impacted by the proposed project (see above).

Indirect effects that are likely to adversely affect Nelson's checkermallow include the potential introduction of invasive species such as purple loosestrife and false indigobush. Propagules of these two species are transported by Columbia River flows and may enter the Refuge and become established within the two plots south of Route 14. Both these species are highly aggressive and may outcompete Nelson's checkermallow for light and soil resources over time. To mitigate this effect, the Refuge will continue to manage the plots for invasive plants.

VII. Cumulative Effects

Current and future Refuge actions will be designed to enhance the sites where Nelson's checkermallow occurs and include invasive plant control and mowing to reduce competition from grasses and broadleaf plants in the plots. Monitoring of the current plots and adjacent uplands will continue even after the proposed project to ensure that surviving plants are mowed following senescence and are not impacted by invasive plants.

The Refuge has no plans to undertake additional actions that would adversely affect Nelson's checkermallow. No additional cumulative effects are expected.

VIII. Conclusion

After reviewing the current status of Nelson's checkermallow, the environmental baseline for the Refuge, and the effects (direct, indirect, and cumulative) of the proposed project, it is the Service's biological opinion that the action, as proposed with best management practices and mitigative measures, is not likely to jeopardize the continued existence of Nelson's checkermallow or its habitat.

No critical habitat has been designated for this species, therefore, no adverse modification of critical habitat will result from the proposed action.

IX. Incidental Take

Sections 7(b)(4) and 7(o)(2) of the Act generally do not apply to listed plant species. However, limited protection of listed plants from take is provided to the extent that the Act prohibits the removal and reduction to possession of Federally listed endangered plants or the malicious damage of such plants on areas under Federal jurisdiction, or the destruction of endangered plants on non-Federal areas in violation of State law or regulation or in the course of any violation of a State criminal trespass law.

The Service does not anticipate the proposed action will incidentally take any Golden paintbrush. The Service anticipates as many as 113 Nelson checkermallow plants could be taken as a result of this proposed action. The incidental take is expected to be in the form of mortality.

In the accompanying biological opinion, the Service determined that this level of anticipated take is not likely to result in jeopardy to the species and/or destruction or adverse modification of critical habitat.

The Service believes the following reasonable and prudent measure(s) are necessary and appropriate to minimize impacts of incidental take of Nelson's checkermallow: 1) maintain current monitoring and management efforts as long as checkermallow is present in plots south of Route 14, 2) collect seed from plants south of Route 14, propagate these plants, and outplant at least 350 plants in suitable habitat that is not expected to be impacted by current, proposed, or future actions.

In order to be exempt from the prohibitions of section 9 of the Act, the Refuge must comply with the following terms and conditions, which implement the reasonable and prudent measures described above and present reporting/monitoring requirements. These terms and conditions are non-discretionary: 1) Continue to conduct annual monitoring in plots where Nelson's checkermallow occurs; 2) continue to conduct annual vegetation management (invasive plant

control and mowing); and 3) outplant additional checkermallow plants in suitable protected habitat and monitor the new populations to ensure the population does not decline because of the proposed action.

The Service believes that no more than 113 Nelson's checkermallow plants will be incidentally taken as a result of the proposed action. The reasonable and prudent measures, with their implementing terms and conditions, are designed to minimize/eliminate the impact of incidental take that might otherwise result from the proposed action. If, during the course of the action, this level of incidental take is exceeded, such incidental take represents new information requiring reinitiation of consultation and review of the reasonable and prudent measures provided. The Service must immediately provide an explanation of the causes of the taking and review the need for possible modification of the reasonable and prudent measures.

X. Conservation Recommendations

Section 7(a)(1) of the Act directs federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are generally discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information. The Service offers the following recommendations as stated above: 1) Continue to conduct annual monitoring in plots where Nelson's checkermallow occurs, 2) continue to conduct annual vegetation management (invasive plant control and mowing), and 3) outplant additional checkermallow plants in suitable protected habitat and monitor the new populations to ensure the population does not decline because of the proposed action.

Construction of the project will also include conservation measures for the applicable categories of action as required by BPA's HIP III Handbook. For all of the above mentioned Federally-listed plant species that may occur in project areas within the scope of this proposed action, the following criteria will be applied:

1) Prior to restoration activities at areas with listed plants, all project staff will be familiarized with identification of any ESA-listed plants in the area and will be aware of ESA-listed plant locations within the project area.
2) Access points and tracks within occupied or suitable habitats for ESA-listed plant species must be limited and clearly marked to avoid soil compaction and damage to ESA-listed plant species from vehicles and/or foot traffic.
3) Revegetation activities in habitats where ESA-listed plants may occur or within their critical habitat must be approved by the Service prior to implementation.
4) Dust-abatement additives and stabilization chemicals will not be used within 10 m (33 ft) of listed plants or critical habitat for listed plants and will not be used without Service approval.
5) Restoration activities will avoid actions that cause soil compaction, erosion, or deposition, or change the hydrology or drainage of a site with listed plants or critical habitat for listed plants.
6) Vehicle and equipment staging areas will be located at least 30 m (100 ft) from listed plants or critical habitat for listed plants.

XI. Reinitiation Notice-Closing Statement

This concludes formal consultation on the action(s) outlined in the (request/reinitiation request). As provided in 50 CFR §402.16, re-initiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

If you have any questions regarding this Formal Opinion, please contact Alex Chmielewski @ 360-887-3883 or email alex_chmielewski@fws.gov.

Signature Page

Signature [Supervisor at originating station] _____ Date 5/19/16

Reviewing Ecological Services Office Evaluation (check all that apply):

A. Concurrence ___✓___ **Nonconcurrence** _____

Explanation for nonconcurrence:

B. Formal consultation required Nelson's Checkermallow
List species or critical habitat unit(s):

C. Conference required _____
List species or critical habitat unit(s):

Name of Reviewing Office: R1 Office of Refuge Biology

_____ 6/1/16
Signature Date

Literature Cited:

Bonneville Power Administration. 2010. Columbia River Crossing Biological Assessment, June 2010.

Gisler, S. D. 2003. Reproductive isolation and interspecific hybridization in the threatened species, *Sidalcea nelsoniana*. Unpublished master's thesis, Oregon State University Department of Botany and Plant Pathology. 173 pp.

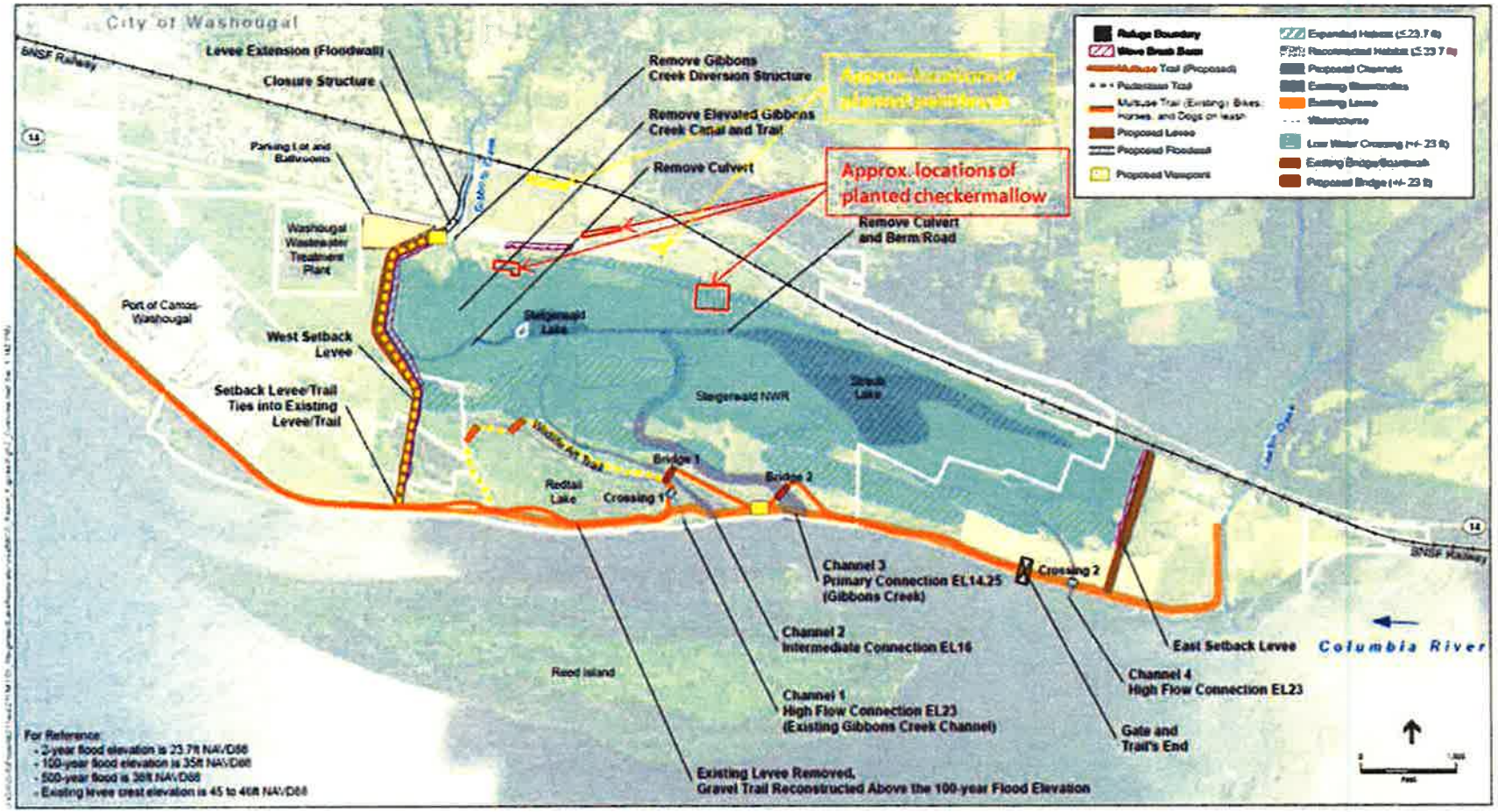
Gisler, S. D., and R. Meinke. 1998. Reproductive ecology and conservation of Nelson's checker-mallow (*Sidalcea nelsoniana*). Part I: Pre-dispersal seed predation. Part II: Pollination ecology. Unpublished report to the U.S. Fish and Wildlife Service. Oregon State Office. 28 pages.

USDA, SCS. 1972. Soil Survey of Clark County, Washington. Soil Conservation Service, Washington, D.C. 113 pages.

USFWS. 2010. Recovery Plan for the Prairie Species of Western Oregon and Southwest Washington. U.S. Fish and Wildlife Service, Portland Oregon. 241 pages.

USFWS. 2012. Introduction of *Sidalcea nelsoniana* on the Steigerwald River National Wildlife Refuge, Clark County, Washington (unpubl.). U.S. Fish and Wildlife Service, Portland Oregon. 5 pages.

USFWS. 2015. U.S. Fish and Wildlife Service, Coastal Recovery Unit Implementation Plan for Bull Trout, September 2015, http://www.fws.gov/pacific/bulltrout/pdf/Final_Coastal_RUIP_092915.pdf



SOURCE: LCEP 2013, Clark County, National Hydrography Dataset, USACE LIDAR, 2016
Service Layer Credits: ESRI 2013

Steigerwald Restoration Design . D1407440.02

Figure 1-2
Proposed Floodplain Restoration Overview
Washougal, Washington

Discretionary Project Funding Assignments

Alex:

- Biological Supplies/Materials-$4,000 (CC purchase) **FXRS12610100000**
- Herbicide-$7,500 (AR for Contract purchase) **FXRS12610100000**
- Upgrade or replace timers for lift pumps $5,000 (CC or AR for Contract based on bid submittal) **FSRS12620116CAV**

Keith:

- Federal Financial Agreement-FOR Habitat and Restoration-$75,000 *itemized as following:*
  (Scope of Work with Budget)
  $28,000 Oak Release Project **FXRS12610I1030**
  $15,000 Volunteer Invasive Plant Control **FXRS126101V1030**
  $32,000 Base Funds **FXRS12610100000**

Valerie:

- Laptop-$2,000 (CC purchase) **FXRS12610100000**
- Office Furniture Upgrades-$20,000 (CC or AR for Contract based on bid submittal) **FVRS72010100340**
- Labor & Position Support Costs Inputs:
  Labor for YCC: $22,000 **FXRS12630100000**
  Labor for Office Aid: $9,000 **FVRS80810100000**
  Labor for Tractor Op.: $12,500 **FVRS72010100340**
  Labor for I&M Biologist: ?
  MC for I&M Biologist: $9,290 **FXRS12610100000**
  Labor for SWO:$24,884 **FXRS12640100000**
  MC for SWO: $5,387 **FXRS12640100000**
- Printer/scanner for STGR office: $5000 **URBAN FUNDS**
- Fuel Purchase to support DM project: $20,000 (AR for Contract based on bid submittal) **FSRS12620116CAV**
- RDS 2 Pay Periods of McNichols salary to DM project: $[illegible] **FSRS12620116CAV**

Gary:

- Gravel-$9,000 (AR for Contract) **FXRS126201A1030**
- Gravel for STGR Parking Lot: $2,000 (CC purchase) **FXRS12620100000**
- Port Trailhead Components -$18,000 **FXRS126201A1030** *itemized as following:*
  20 CY of #57 1/2"-1 1/2" clean crushed base rock for the area under the pavers.
  10CY of 3/4"-0 crushed rock for the areas under the stone bands and the boulders
  12 800-1200lb boulders
  Concrete for Kiosk
  Labor costs for John Schweitzer (TRNWR)
  Native Plants
  Port Contribution?
  950 SF of pavers (same pavers as Oak Woodland overlook)
  2 ton of "A" split Columbia River basalt for the stone bands
  1 basalt column bench 6'-8' long
- Transport of JD 690 excavator from and to Willipa-$5000 (CC purchase) **FSRS12620116CAV**

Eric H.

- Maintenance Supplies/Materials-$30,000 (CC purchase) **FXRS126201A1030**
- Tree Picker Rental-$1,000 (CC purchase) **FXRS126201R1030**
- Truck Transmission Repair- $6,000 (CC Purchase) **FXRS126201A1030**
- HHR body repair-$1,000 (CC Purchase) **FXRS126201A1030**

Eric A.

- Door Modification and electric service for Tuff Shed-$2,000 (CC purchase) **FXRS126201A1030**
- Alarm System for STGR office-$3,000 (CC or AR for Contract based on bid submittal) **FXRS126201A1030**
- Concrete Pad and electric service for new Haz Mat Bldg.-$3,000 (CC or AR for Contract based on bid submittal) **FXRS126201A1030**
- New portable restroom-$2,000 (CC purchase) **FXRS126201A1030**
- New phone system for HQ-$9,000 (AR for Contract based on bid submittal) **FXRS12630100000**
- Federal Financial Agreement-$16,500 (Scope of Work with Budget) **FGRS80810100000**

Josie

- Visitor Services Supplies/Materials-$5,000 (CC purchase) **FXRS12630100000**
- Posting Board Structure-$5,000 (AR for Contract based on bid submittal) **FXRS12630100000**
- Tuff Shed Shelving-$2,000 (CC purchase) **FXRS12630100000**
- Air Duct Cleaning for Office $400 (CC purchase) **FXRS12610100000**
- Update and replace Oaks to Wetlands trail signs-$2000 (CC purchase) **FXRS12610100000**
- Trail Benches-$5,000 (CC or AR for Contract based on bid submittal) FXRS12620100000

Sarah

- Federal Financial Agreement-FOR Education and Outreach-$150,000 *itemized as following:*
  (Scope of Work with Budget)
  $40,000 Plankhouse Position and Program Support **FVRS72010100340**
  $50,000 Urban Outreach Support RDG **URBAN FUNDS**
  $50,000 Urban Outreach Support STGR **URBAN FUNDS**
  $5,000 Administrative supplies/support RDG **URBAN FUNDS**
  $5,000 Birdfest Coord. Support **FVRS80810100000**

Chris

- Asphalt repair at Carty Entrance-$2000 (CC purchase) **FXRS12610100000**

Steigerwald Lake National Wildlife Refuge
General Activities
Special Use Permit

Permit #: 19-002

(For Official Use Only)

Permit Term: From: 2/8/2019 To: 2/28/2020

1) Permittee Name/Business: Deborah Marriott, Executive Director, Lower Columbia Estaury Paretnership

2) Permit Activity Type: Field Activities associated with dike breach and habitat restoration

2) Permit Status:

- [x] Approved *If approved, provide special conditions (if any) in the text box below.*
- [ ] Denied *If denied, provide justification in the text box below.*

Special Conditions Permittees must inform the Refuge Manager (360-887-4106) or Refuge Biologist (360-887-3883) prior to accessing the Refuge. Off-road vehicle access is prohibited to prevent rutting and soil compaction during periods of soil saturation. No walking or digging will be permitted in areas where Federally-listed species (golden paintbrush and Nelson's checkermallow) occur (planted sites marked with t-posts. All gates that are opened by researchers must be immediately closed and locked following entry/exit through the gate. All data collected from the site will be shared with Ridgefield NWRC. This agreement does not imply or establish a use precedent. Future programs will be based upon the satisfactory use of the land for wildlife benefits, permittee performance, and administrative needs.

3) Are there additional special conditions attached to the permit? ◉ Yes ○ No ○ N/A

4) Are other licenses/permits required, and have they been verified? ○ Yes ○ No ◉ N/A

5) Are Insurance and/or Certification(s) required, and have they been verified? ○ Yes ○ No ◉ N/A

6) Record of Payments: ○ Full ○ Partial ◉ Exempt

7) Is a surety bond or security deposit required? ○ Yes ○ No ◉ N/A

This permit is issued by the U.S. Fish and Wildlife Service and accepted by the applicant signed below, subject to the terms, covenants, obligations, and reservations, expressed or implied therein, and to the notice, conditions, and requirements included or attached. A copy of this permit should be kept on-hand so that it may be shown at any time to any refuge staff

8) Permit approved/issued by: (Signature and title)

Date: 2/6/19

9) Permit accepted by: (Signature of permittee)

Thomas M. Argent, for Deborah Marriott

Date: 02/07/2019

General Conditions and Requirements

1) Responsibility of Permittee: The permittee, by operating on the premises, shall be considered to have accepted these premises with all facilities, fixtures, or improvements in their existing condition as of the date of this permit. At the end of the period specified or upon earlier termination, the permittee shall give up the premises in as good order and condition as when received except for reasonable wear, tear, or damage occurring without fault or negligence. The permittee will fully repay the Service for any and all damage directly or indirectly resulting from negligence or failure on his/her part, and/or the part of anyone of his/her associates, to use reasonable care.

2) Operating Rules and Laws: The permittee shall keep the premises in a neat and orderly condition at all times, and shall comply with all municipal county, and State laws applicable to the operations under the permit as well as all Federal laws, rules, and

regulations governing national wildlife refuges and the area described in this permit. The permittee shall comply with all instructions applicable to this permit issued by the refuge official in charge. The permittee shall take all reasonable precautions to prevent the escape of fires and to suppress fires and shall render all reasonable assistance in the suppression of refuge fires.

3) Use Limitations: The permittee's use of the described premises is limited to the purposes herein specified and does not, unless provided for in this permit, allow him/her to restrict other authorized entry onto his/her area; and allows the U.S. Fish and Wildlife Service to carry on whatever activities are necessary for: (1) protection and maintenance of the premises and adjacent lands administered by the U.S. Fish and Wildlife Service; and (2) the management of wildlife and fish using the premises and other U.S. Fish and Wildlife Service lands.

4) Transfer of Privileges: This permit is not transferable, and no privileges herein mentioned may be sublet or made available to any person or interest not mentioned in this permit. No interest hereunder may accrue through lien or be transferred to a third party without the approval of the Regional Director of the U.S. Fish and Wildlife Service and the permit shall not be used for speculative purposes.

5) Compliance: The U.S. Fish and Wildlife Service's failure to require strict compliance with any of this permit's terms, conditions, and requirements shall not constitute a waiver or be considered as a giving up of the U.S. Fish and Wildlife Service's right to thereafter enforce any of the permit's terms or conditions.

6) Conditions of Permit not Fulfilled: If the permittee fails to fulfill any of the conditions and requirements set forth herein, the U.S. Fish and Wildlife Service shall retain all money paid under this permit to be used to satisfy as much of the permittee's obligation as possible.

7) Payments: All payment shall be made on or before the due date to the local representative of the U.S. Fish and Wildlife Service by a postal money order or check made payable to the U.S. Fish and Wildlife Service.

8) Termination Policy: At the termination of this permit the permittee shall immediately give up possession to the U.S. Fish and Wildlife Service representative, reserving, however, the rights specified in paragraph 11 below. If he/she fails to do so, he/she will pay the U.S. Fish and Wildlife Service, as liquidated damages, an amount double the rate specified in this permit for the entire time possession is withheld. Upon yielding possession, the permittee will still be allowed to reenter as needed to remove his/her property as stated in paragraph 11 below. The acceptance of any fee for the liquidated damages or any other act of administration relating to the continued tenancy is not to be considered as an affirmation of the permittee's action nor shall it operate as a waiver of the U.S. Fish and Wildlife Service's right to terminate or cancel the permit for the breach of any specified condition or requirement.

9) Revocation Policy: The Regional Director of the U.S. Fish and Wildlife Service may revoke this permit without notice for noncompliance with the terms hereof, or for violation of general and/or specific laws or regulations governing national wildlife refuges, or for nonuse. It is at all times subject to discretionary revocation by the Director of the Service. Upon such revocation the U.S. Fish and Wildlife Service, by and through any authorized representative, may take possession of said premises for its own and sole use, and/or may enter and possess the premises as the agent of the permittee and for his/her account.

10) Damages: The U.S. Fish and Wildlife Service shall not be responsible for: any loss or damage to property including but not limited to crops, animals, and machinery; injury to the permittee or his/her relatives or to the officers, agents, employees, or any other(s) who are on the premises from instructions; the sufferance from wildlife or employees or representatives of the U.S. Fish and Wildlife Service carrying out their official responsibilities. The permittee agrees to hold the U.S. Fish and Wildlife Service harmless from any and all claims for damages or losses that may arise to be incident to the flooding of the premises resulting from any associated government river and harbor, flood control, reclamation, or Tennessee Valley Authority activity.

11) Removal of Permittee's Property: Upon the expiration or termination of this permit, if all rental charges and/or damage claims due to the U.S. Fish and Wildlife Service have been paid, the permittee may, within a reasonable period as stated in the permit or as determined by the U.S. Fish and Wildlife Service official in charge, but not to exceed 60 days, remove all structures, machinery, and/or equipment, etc., from the premises for which he/she is responsible. Within this period the permittee also must remove any other of his/her property including his/her acknowledged share of products or crops grown, cut, harvested, stored, or stacked on the premises. Upon failure to remove any of the above items within the aforesaid period, they shall become the property of the U.S. Fish and Wildlife Service.

CRGNSA Consistency Determination

Steigerwald Habitat Restoration and Flood Control Project, CD-18-06-G

Steigerwald Lake National Wildlife Refuge

Parcel/Tax Lot # 135305000, 134385000, 986042329, 135308000, 135307000, 134226000, 135509000, 133921000, 133928000, 133912000, 134137000, 134588000, 71078076, 71078073, 71078075, 135508000, 501103000

Columbia River Gorge National Scenic Area

Clark County, Washington

March 1, 2019

Background

The proposed development is a resource enhancement project to restore approximately 1,000 acres of historic Columbia River floodplain habitat and natural riverine processes along the north bank of the Columbia River within the Steigerwald Lake National Wildlife Refuge and surrounding properties within the Columbia River Gorge National Scenic Area boundary. The proposed development is required to be consistent with the purposes of the Columbia River Gorge National Scenic Area Act as determined by the Forest Service pursuant to Section 14(d) of the Columbia River Gorge National Scenic Area Act. A complete consistency review application was received my office in July, 2017.

Decision

I find that the above proposal is consistent with the Columbia River Gorge National Scenic Area (CRGNSA) Management Plan provided that it is implemented as described in the application materials and the project's Environmental Assessment, the CRGNSA Consistency Determination Findings of Fact, referenced as CD-18-06-G, and provided the following conditions are applied:

1. All concrete used for the pedestrian bridges will be stained with Federal standard color 14064. All metal railings and hardware will be hot dipped galvanized and finished with Natina or equivalent steel weathering coating. The USFS-CRGNSA Scenic specialist will approve color and materials prior to installation.
2. The applicant is responsible for survival of all plantings proposed as part of application for a minimum of 5 years from project completion, or a sufficient time for natural vegetation to establish.

3. All chain link or other metal fencing will be treated with natina (or similar weathering agent) to assure visual subordinance. The USFS-CRGNSA Scenic specialist will approve color and materials prior to installation.
4. All material excavated during project activities will be either reused as part of new construction (as described in the application materials), or removed and hauled to a licensed disposal location outside of the CRGNSA.
5. All signage, whether new or salvaged and reused, shall have support structures with low visual impact, be non-reflective, and colored to blend with the setting. Sign content, color, and materials must be approved by USFS-CRGNSA Scenic specialist prior to installation.
6. Revegetation near bridges will be installed to provide visual screening of the bridges as seen from nearby KVAs.
7. To compensate for the potential of loss of the experimental populations of Nelson's checkermallow by periodic inundation after the project is complete, new plantings will be installed outside of the area that will be periodically inundated.
8. Should any historic or prehistoric cultural resources be uncovered during project activities, the applicant shall cease work and immediately notify the CRGNSA office and the Washington State Department of Archaeology & Historic Preservation. The applicant should also notify the Indian Tribal governments within 24 hours if the resources are prehistoric or otherwise associated with Native American Indians.

It is the responsibility of the applicant to ensure that all of the conditions included in this determination are met, and that all of these conditions are explicitly included in contracts for any work performed by contractors or subcontractors, or by other project partners or their contractors or subcontractors.

This decision pertains solely to the proposal's consistency with the applicable guidelines in the Management Plan for the Columbia River Gorge National Scenic Area. The applicant is responsible for conducting all necessary surveys or studies, and for securing any other required local, state, or federal permits.

Administrative Review (Appeal) Opportunities

A written request for review of this Consistency Determination, with reasons to support the request, must be received within 20 days of the date shown with the Area Manager signature below. Requests for review should be addressed to: Request for CRGNSA Review, Regional Forester, P.O. Box 3623, Portland, OR 97208. A copy of the request must simultaneously be sent to the USFS-CRGNSA Office, 902 Wasco Street, Suite 200, Hood River, OR 97031.

IMPLEMENTATION DATE

This project may begin immediately as long as it complies with the conditions as described in items (1-8) above. This decision expires two years after the date on this determination. If implementation has not commenced before that date, a new consistency review or extension shall be required.

CONTACT

The Columbia River Gorge National Scenic Area staff prepared an analysis file in conjunction with this project. For further information, contact Casey Gatz at the Columbia River Gorge National Scenic Area, phone: (541) 308-1704, e-mail: cgatz@fs.fed.us.

MARCH 1, 2019

LYNN BURDITT — Date

AREA MANAGER

FINDINGS OF FACT

Landowners:	US Fish And Wildlife Service (USFWS) Port Of Camas Washougal City Of Washougal Friends Of The Columbia Gorge (FOCG) Land Trust Christopher & Julia Hickey Gibbons Creek Mobile Estates LLC Sharleen James BNSF Railway Company Washington State Department of Transportation (WSDOT)
Applicant:	Lower Columbia Estuary Partnership
Proposed Action:	A resource enhancement project to restore approximately 1,000 acres of historic Columbia River floodplain habitat and natural riverine processes along the right (north) bank of the Columbia River within the Steigerwald Lake National Wildlife Refuge (Refuge) and surrounding properties within the Columbia River Gorge National Scenic Area (CRGNSA) boundary
Location:	Township Range Section: Sections 14, 15, 16, 22, 23, Of Township 1 North, Range 4 East (Willamette Meridian) Tax Lot Id: 135305000, 134385000, 986042329, 135308000, 135307000, 134226000, 135509000, 133921000, 133928000, 133912000, 134137000, 134588000, 71078076, 71078073, 71078075, 135508000, 501103000
National Scenic Area Designation:	GMA
Land Use Designation:	Public Recreation, Open Space, Large Scale Agriculture, Small Woodland
Landscape Setting	River Bottomlands, Pastoral, Coniferous Woodlands

The following findings of fact contain the applicable standards and guidelines from the Management Plan for the Columbia River Gorge National Scenic Area (CRGNSA). The Management Plan, as adopted in 2004 and updated in 2011, is in effect. Beginning in section C., The CRGNSA Management Plan guidelines are displayed in regular type. The findings are displayed in **bold type**.

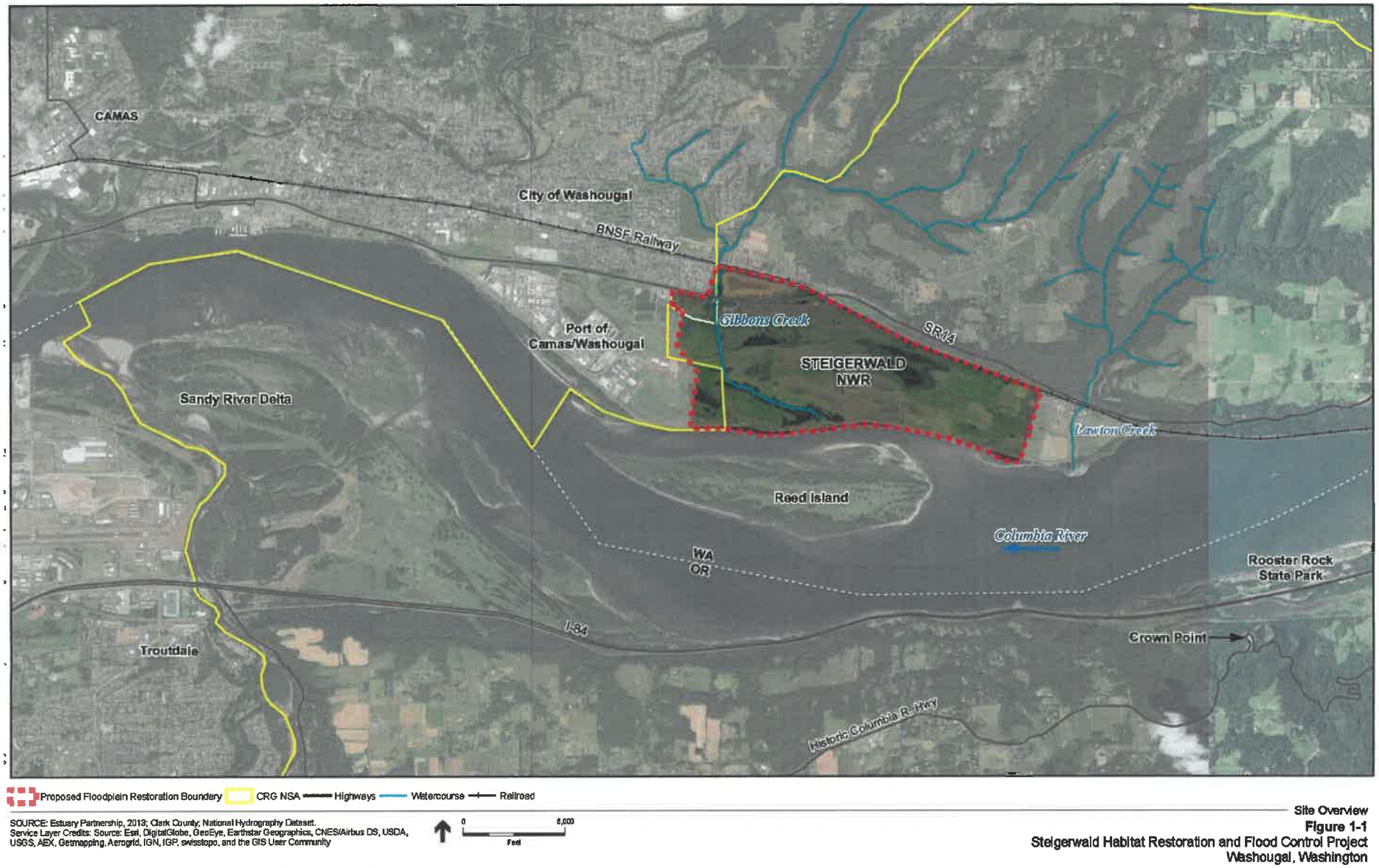


Figure 1 Vicinity map for the Steigerwald Habitat Restoration and Flood Control Project.

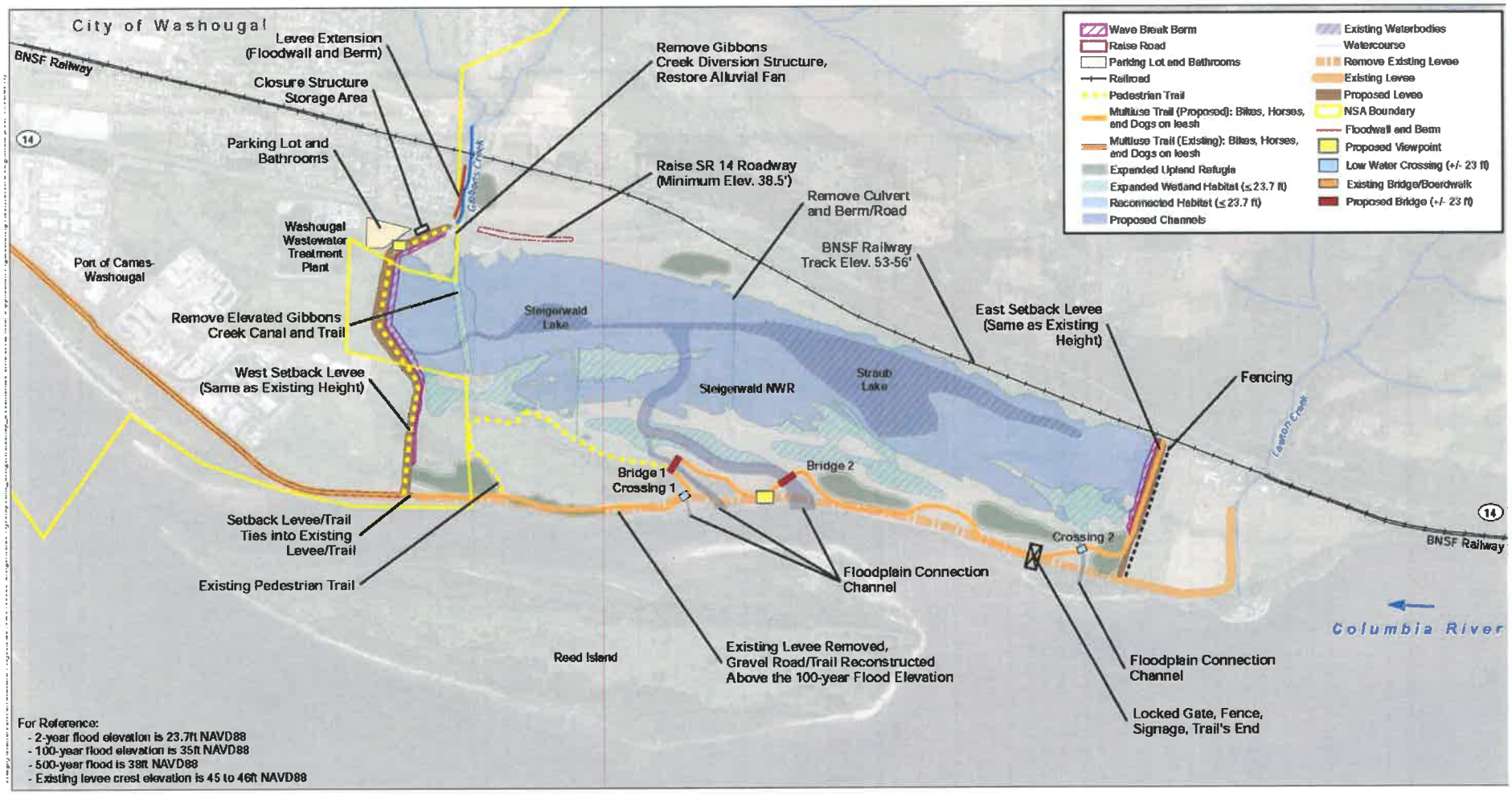


Figure 1 -4
Steigerwald Habitat Restoration and Flood Control Project
Washougal, Washington

Figure 2. Steigerwald Habitat Restoration and Flood Control Project Proposed Action Map

Additional figures and detail are included in the Appendixes.

A. Public Comment

A notice describing the project was sent to a mailing list of known interested parties and adjacent landowners on July 31, 2018. A period of 30 days was allowed for public comment. The following comments were received:

Comment: Friends of the Columbia Gorge submitted a comment letter describing CRGNSA Management Plan review criteria, including application requirements and resource impact review.

> *Response: The Consistency Review and Findings of Fact document the project's compliance with relevant requirements and guidelines of the CRGNSA Management Plan.*

Comment: Richard Holt, President of the Washington Waterfowl Association and Albert O'Connor of the Vancouver Wildlife League submitted comments stating that they supported the No Action Alternative for the project that was outlined in the NEPA documentation prepared by the Bonneville Power Administration for the project. They believe that the project proposes to benefit fish habitat over waterfowl habitat, which they oppose.

> *Response: The comment is about potential project alternatives rather than consistency with CRGNSA requirements and guidelines. The comment was forwarded to the applicants and to the Bonneville Power Administration (BPA), the agency that prepared the Environmental Assessment for the project.*

B. Project Proposal

The project proposal below is a summary drawn from the application materials.

Project Purpose and Objectives:

Restore floodplain connectivity and physical processes to historic (pre□disturbance) conditions to the greatest extent possible through;

- Restoring Gibbons Creek to the Refuge floodplain by removing the Gibbons Creek water control structures, elevated canal, and fish ladder.
- Restoring Gibbons Creek sediment transport processes and allowing the historic 1500-foot-wide alluvial fan to rebuild on the floodplain, restoring a unique natural feature of significant ecological importance.
- Reconnecting the Refuge to the Columbia River by removing 2.2 miles of the constructed levee down to the elevation of the historic naturally-occurring levee and then excavating four floodplain channels that connect the Refuge floodplain to the Columbia River at low, medium, and high river stages as occurred historically.

Provide access to restored habitats for native fish and wildlife species through;

- Restoring unimpeded fish access and passage between Gibbons Creek, the Refuge, and the Columbia River for all native species and life stages by

removing the Gibbons Creek water control structures, elevated canal, and fish ladder and excavating four floodplain channels that connect the Refuge floodplain to the Columbia River at low, medium, and high river stages.

Improve the habitat capacity of restored channels, wetlands, and the adjacent riparian and upland regions through;

- Improving the quality, diversity, and function of over 900 acres of aquatic and riparian habitats (Photo 13 in Appendix B) by:
    - Reconnecting and enhancing 570 acres of off-channel refugia for out-migrating salmonids (rearing and over-wintering habitats for multiple up-river and Lower Columbia River ESUs).
    - Constructing 2.2 stream miles of habitat for Lower Columbia River coho salmon, steelhead, lamprey, and potentially chum salmon.
    - Installing approximately 1,750 pieces of large wood to build 245 large wood habitat structures to match densities found in reference streams and wetlands.
    - Allowing free flow of water within the Refuge's wetlands by removing a 0.7-mile maintenance road that bisects the Refuge, removing the Gibbons Creek elevated channel (which also bisects the Refuge), and removing the culverts and water control structures associated with these soil prisms.
    - Re-establishing self-sustaining emergent wetland, herbaceous wetland, and riparian native plant communities by excavating and scraping reed canarygrass from 115 acres of the Refuge to elevations supporting wetland vegetation, treating invasive vegetation over approximately 5 years, and replanting 292 acres of wetlands and Columbia River and Gibbons Creek riparian areas with native riparian and wetland plants historically found in the CRGNSA River Bottomland landscape setting.
    - Remeandering 1.45 miles of Gibbons Creek that was historically straightened and ditched including recontouring the banks to improve its floodplain connectivity (Photo 15-16 in Appendix B).
- Restoring resiliency to over 900 acres of floodplain habitat to plan for the effects of climate change, including rising estuarine water levels and higher variability (flashiness) in Gibbons Creek hydrology. This entails:
    - Constructing multiple levee breach invert elevations (Photo 19 in Appendix B) to accommodate potential changes to the Columbia River hydrograph in combination with expected sea level rise over the next 50 to 75 years.
    - Creating over 900 acres of floodplain habitats with native plant species that are adapted to migrating to higher and lower elevations in response to changing Columbia River hydrographs.
    - Constructing four floodplain channels that accommodate low, intermediate, and high Columbia River flows; a variety in channel depths and widths accounts for decreases in spring and summer flows of the Columbia River as well as accommodating higher flows and depths associated with the increase in peak flows from the restored Gibbons Creek.
- Remove 1,600 feet of rip-rap on the Columbia River shoreline.

Reduce Gibbons Creek internal flood risk to existing Port, transportation, municipal, and residential facilities and maintain their existing level of protection from Columbia River floods.

- Restore Gibbons Creek connectivity to the Refuge floodplain, increase the SR 14 bridge's hydraulic capacity and decrease Gibbons Creek flood risk by removing the Gibbons Creek water control structures, elevated canal, and fish ladder and constructing a concrete flood wall north of SR 14.
- Construct two setback levees on the Refuge, one each on its western and eastern border, to maintain the existing level of Columbia River flood risk reduction (well above the 1,000-year flood stage). Construct a flood wall, rather than levee between Gibbons Creek and privately held lands north of SR-14 on the western boundary of the Refuge (Photo 14 in Appendix B).
- Raise 1,795 feet of SR 14 approximately three feet to the Columbia River's 500-year flood stage.

Maintain or enhance recreation and visual opportunities.

- Increase the Refuge's hiking trail network by 0.9 miles over current conditions by extending the Columbia River Dike Trail (CRDT) onto newly purchased Friends of the Columbia Gorge Land Trust property, relocating the Gibbons Trail Art Walk from the Gibbons Creek elevated channel to the west setback levee, and meandering the CRDT along the southern portion of the Project site.
- Construct two new bridges to cross constructed floodplain channels (Photo 17 in Appendix B).
- Construct two new overlooks to replace the two overlooks eliminated during levee removal.
- Reinstall Gibbons Trail Art Walk pieces affected by construction.
- Expand bike parking at two new locations on the CRDT to accommodate cyclists wishing to enter Refuge trails where biking is prohibited, from five racks to seven
- Relocate the Refuge public parking lot, restrooms, bike parking, and interpretive signage to Refuge property just outside of the Scenic Area Boundary.
    - Expand current parking from 20 to 30 spaces.
    - Maintain existing number of ADA parking spaces (two).
    - Maintain existing number of bike parking racks at the parking lot (two).
- Remove 6,000 feet of agricultural fencing associated with historic past cattle use on the Refuge.
- Meander the CRDT into interior portions of the Refuge to provide views of wetland areas.
- Restore the site's historic riparian communities, many of which Refuge trails will pass through or visitors will see from Refuge trails. This contrasts with monotypic views of the Columbia River and reed canary grass dominated grasslands that users currently view.

Project Actions

The project entails several removal actions and several new construction actions.

Removal actions:

- **Remove Gibbons Creek Elevated Channel, Diversion Structure, Fish Ladder, and Culverts**
  The Gibbons Creek Diversion Structure is built just west of the CRGNSA however the elevated soil prism upon which the diversion structure and elevated channel are constructed do extend into the CRGNSA. The diversion structure will be demolished and removed. This entails removing the concrete apron, concrete walls, steel grating, railing, fencing, and screens. Removing the fish ladder entails removing all concrete and 15 steel weirs. The soil prism upon which the elevated channel and diversion structure are built will be removed down to natural floodplain elevations on the Refuge. Approximately 3,250 linear feet of a soil prism, as wide as 150 feet at its base, and 16 feet above the natural floodplain elevation will be removed, approximately 68,300 cubic yards.
- **Remove Columbia River Levee on Refuge**
  The Columbia River Levee is built on the Refuge's southern border. This action will remove approximately 200,000 cubic yards of soil over 11,300 lineal feet (2.2 miles). Excavation will remove the entirety of fill placed over the naturally occurring Columbia River levee on the Refuge. The current levee, from east to west is 46.4-45.0 feet high and the naturally occurring levee ranges between approximately 30 to 40 feet high. Other materials associated with the levee removal are fencing on the levee's northern side, an 84-inch corrugated metal pipe culvert that passes water underneath the levee from Gibbons Creek to the fish ladder and the associated above ground control valve closure structure, concrete pad, fencing, and gravel maintenance road used as the Columbia River Dike Trail (CRDT).
- **Remove Columbia River Dike Trail and Gibbons Art Walk**
  The CRDT is a soil and gravel trail built on top of the existing levee and the Gibbons Creek Art Walk is built on the side slopes of the Gibbons Creek elevated channel. The entirety of the CRDT within the project footprint will be closed and removed. The CRDT on the adjacent Captain William Clark Park and other Refuge, Port, and City lands will remain open. The entirety of the Gibbons Creek Art Trail will be closed and removed. Both trails will be removed concurrently with the removal of the soil prisms upon which they are built. Public access to the Refuge will be closed during this work to maintain public safety. Gravels and soils will be reused as base materials for the setback levees or trails.
- **Remove and Relocate Parking lot**
  All facilities within the current parking lot will be removed. The asphalt entrance to the parking lot from SR 14 will be completely removed. The asphalt will be disposed of in a licensed waste management facility outside of the CRGNSA. The gravel driveway, parking area gravel surface, and a locked gravel access road leading to the Gibbons Creek diversion structure will also be removed. Gravels will be utilized as base materials for the west setback levee or the new parking lot. The parking lot will be relocated to a location at the western edge of the Refuge, outside of the National Scenic Area boundary. Materials salvaged for reuse at the new parking lot are the decorative metal entry gate at the Refuge entrance, a locking gate to the diversion structure access road, boulders, instructional parking signage, parking lot wheel stops, informational kiosk and boot cleaner, bike racks, and two pit vault restroom facilities.

New construction actions:

- **Build West Setback Levee**
  The west setback levee (along with the eastern setback levee and the raising of SR 14 road prism) is constructed to increase the overall level of flood protection to Port, City, transportation, and private properties outside of the restoration area (Figure 1-4). The west setback levee is made up of three sections: an earthen levee south of SR 14 (much of which is outside of the CRGNSA), a concrete emergency closure structure that the Port will install across SR 14 during 500-year flood events (entirely outside of CRGNSA), and a mixed floodwall/earth berm component built north of SR 14, lying between Gibbons Creek and private properties (much of which is inside the CRGNSA).
- **Build East Setback Levee**
  The east setback levee (along with the west setback levee and the raising of SR 14 road prism) is constructed to provide the equivalent level of flood protection to Port, City, transportation, and private properties outside of the restoration area (Figure 1-4). The east setback levee protects private ranch lands immediately to the east of the Project. The east setback levee is upstream from the west setback levee and consequently is built at a slightly higher elevation. The setback levee configuration entirely avoids all existing trees. The entirety of the east setback levee is within the CRGNSA. The levee averages 100 feet wide.
- **Raise State Route 14**
  WSDOT is requiring the project to raise approximately 1,795 linear feet of SR 14 to the Columbia River's 500-year flood elevation to maintain appropriate flood protection standards once the FDR levee is reconfigured. The highway road prism will not be expanded laterally, and the two culverts that pass overland flow from the north side of the Refuge to the south side will not require removal or replacement. The culvert outlets on the south side of SR 14 will be retrofitted with black, non-reflective flap gates to maintain designed flooding in locations where habitat improvements are located.
  To raise the highway, existing pavement will be removed in the first year of construction and disposed of at a licensed waste management facility outside of the CRGNSA. Road fill base rock, new pavement, a gravel shoulder, and a native upland grass and forb vegetated filter strip seeded into the base of both sides of SR 14, will be installed. Within the raised area there are four access roads aprons intersecting the SR 14 scenic travel corridor (Figure 3-4). All pavement apron connections within the road raising area of SR 14 will be removed and disposed of at a licensed waste management facility. These aprons will be rebuilt in asphalt to realign at the new road surface elevation excepting for the two westernmost intersections, the current entrance to the Refuge parking lot south of SR 14 and an entrance into fields north of SR 14. These aprons and access points will be eliminated and be reseeded with a native upland seed mix made up of grasses and forbs.
  As part of the removal of the access road apron leading to the Refuge's office and maintenance facilities, an existing culvert will be removed and replaced with a new 12-inch corrugated metal pipe culvert. Exposed metal ends of the culvert will be treated with Natina or painted with a dark brown paint with a flat matte finish.
- **Realign and Restore Gibbons Creek**
  Realignment occurs in two reaches, north and south of SR 14. Both reaches include placement of large wood habitat structures to reference densities for undisturbed streams in the Pacific Northwest and placement of constructed riffles composed of naturally occurring stream cobble. Cobble will be used to restore natural substrate conditions and for intentional construction of

riffles, bars, and erosion countermeasures to protect the SR 14 bridge, newly constructed channel, and replacement footbridge.
Currently the single-family private lot at the northernmost portion of the Gibbons Creek project area contains two small bridges that provide access over Gibbons Creek to the eastern portion of the property. These two bridges, one of which is a foot bridge and one a small equipment bridge, were built after Gibbons Creek was straightened. As part of channel remeandering and construction of the levee berm in this area, both bridges will be removed. The lower (pedestrian) bridge will be removed during construction of the flood berm. The northernmost (equipment) bridge, which is located 100 feet downstream of the BNSF railroad bridge and the Old Evergreen Highway, will be replaced with a pre-fabricated rail-car bridge with cedar decking and timber posts and hand-rail. The bridge is 8 feet wide by 50 feet long and will be constructed above the creek's 100-year water surface elevation. The bridge foundations will occur entirely above the ordinary high-water mark. Any exposed metal hardware components will be painted with a dark-toned matte paint.

- **Expanding Floodplain Wetlands and Constructing Channels from Floodplain to the Columbia River**
  Restoring hydrologic connectivity to the Refuge floodplain is accomplished by breaching the natural fluvial Columbia River Levee (once the FDR levee is removed) in four locations. This will reconnect existing low-lying floodplain wetlands to shallow inundation during the spring freshet. Reconnected wetlands are expanded from 455 acres to 570 acres to provide increased hydraulic velocity refuge, cover, and access to important food sources for rearing juvenile salmonids. Each channel is designed to be self-sustaining and is based on stream simulation design principles that account for hydraulic, sediment, and biological transport processes and functions.

Construction practices common to all project actions

Excavators, tractors, scrapers, and dump trucks will be used to remove and haul materials away. Non-soil materials (asphalt, concrete, wood, metal, etc.) will be removed off site and disposed of at a licensed waste management facility outside of the CRGNSA. Gravels and soils will be reused on site as part of materials for the two setback levees, the riparian vegetated wind-wave soil berm constructed to protect the levees and allow riparian planting, or as otherwise needed at other project locations needing gravels or soils.

Other usable materials – fences, signs, gates, benches, bike racks, etc. – will be salvaged and reused to the greatest extent possible within the project. Where needed they will be adapted to meet CRGNSA scenic standards.

All plants and seeding used for revegetation and restoration will be native plant species selected for the ecological characteristics of the site.

PRACTICABLE ALTERNATIVE TEST

Because the proposed development includes activities within wetlands, aquatic or riparian areas, or their buffers, a Practicable Alternative Test is required, and was submitted by the applicant as part of the development application.

In order to restore floodplain connectivity and physical processes to historic (pre-disturbance) conditions to the greatest extent possible; provide access to restored habitats for native fish and wildlife species; improve the habitat capacity of restored channels, wetlands, and the adjacent riparian and upland regions; dramatically reduce Gibbons Creek internal flood risk to existing Port, transportation, municipal, and residential facilities and maintain their existing level of protection from Columbia River floods; and maintain or enhance recreation and visual opportunities the proposed work for this project must be implemented within the buffers for Gibbons Creek and the floodplain wetlands (Figure 1-6 in Appendix A).

There is no other practicable alternative to locate a project of this size that achieves the proposed goals and objectives of this project within the floodplain habitat of the lower Columbia River within the boundaries of the CRGNSA (Appendix A, Figure 4-3).

The Estuary Partnership developed the listed goals and objectives between 2013-2017 through extensive engagement and presentation of design iterations with Project stakeholders. These meetings were with public and private landowners (USFWS, Port, WSDOT, City, BNSF, FOCG Land Trust, and private individuals), environmental permitting agencies (United States Army Corps of Engineers (USACE), Washington Department of Fish and Wildlife (WDFW), Ecology, and others), and funding organizations. The primary alternatives analyzed by stakeholders were a no-action alternative, an alternative that proposed a new SR 14 bridge crossing over Gibbons Creek (eliminated due to cost and impacts to adjacent landowners and scenic resources), and various alignments of the western setback levee. The selected setback levee alignment best meets the project goals (i.e., maximizes the acreage of restored floodplain), provides the greatest room for the historic alluvial fan to redevelop, minimizes tree removal (Figure 6-1 in Appendix A) and allows for the City's neighboring property to be developed in the future as a municipal water supply.

The preferred alternative was selected over the no-action alternative because it meets the USFWS' long term goals for the Refuge and improves the use value of the Refuge for wildlife and Refuge visitors. The Preferred Alternative also reduces flood risk and Operations and Maintenance costs for Port infrastructure; reduces flood risk to State Route 14, the City's wastewater treatment plant, and private residences; and best meets BPA's Federal Columbia River Power System mitigation obligations, which align well with restoration of habitat for native species. A full description of the project alternatives is in Section 2 of the Environmental Assessment prepared as part of the National Environmental Policy Act (NEPA) and available at https://www.bpa.gov/efw/Analysis/NEPADocuments/Pages/Steigerwald_Floodplain_Restoration.aspx. A side by side comparison of these alternatives is found in section 2.11 of the Environmental Assessment.

The trail system is built entirely on uplands and contains two bridge crossings over constructed channels. The trail system is designed to avoid wetlands, minimize removal of existing trees, and maximize the recreational experience of walking through the historic CRGNSA River Bottomland landscape setting adjacent to the Columbia River.

PUBLIC INTEREST TEST

Because the proposed development includes activities within wetlands, aquatic or riparian areas, or their buffers, a Public Interest Test is required, and was submitted by the applicant as part of the development application.

The Estuary Partnership developed the project's goals and objectives between 2013-2017 through extensive engagement and presentation of design iterations with Project stakeholders. These meetings were with public and private landowners (USFWS, Port, WSDOT, City, BNSF, FOCG Land Trust, and private individuals), environmental permitting agencies (USACE, WDFW, Ecology, and others), and funding organizations (primarily BPA). The extent of beneficial effects from the proposed project actions are expected to last into perpetuity and are designed to accommodate potential changes to the Columbia River hydrograph in combination with expected sea level rise over the next 50 to 75 years.

The design of the proposed project also facilitates the Cities of Camas and Washougal to construct a groundwater supply project, protected by the two setback levees, to supply water for these cities. The municipal well field is in the early planning stages. Additionally, the City of Washougal's Waste Water Treatment Plant and the Port's industrial properties will no longer be subject to interior flood risk from Gibbons Creek floodwaters diverted onto these properties. During the 1996 floods, portions of the Industrial Park and Waste Water Treatment Plant were inundated and potentially contaminated floodwaters were pumped back into the Columbia River. The Port will reduce their overall operations and maintenance expenses associated with the yearly pumping of Gibbons Creek floodwaters back into the Columbia River.

Short term detrimental effects of the project include limited public access to the Refuge during Season 1 of construction, and full closure of the Refuge, to maintain public safety, during Season 2 of construction.

Additionally, after Season 2 of construction, there will be a temporal loss of approximately 25 acres of impaired- function monocultural wetlands dominated by invasive reed canarygrass, primarily associated with the construction of the two setback levees. Upon completion of Season 2 of construction, with both Columbia River and Gibbons Creek hydrology accessible to enter the floodplain, the site is expected to realize a net increase in wetland acreage of 91 acres. 200 acres of riparian and wetland habitats will also receive native plantings, which combined with the restoration of hydrologic connections, will increase the functionality and extent of the Refuge's wetlands.

C. LAND USE DESIGNATIONS

Finding: The project is located in GMA Open Space, GMA Large-scale Agriculture, GMA Small Woodland, and GMA Public Recreation. For a map of the Land Use Designations within this proposal, please refer to Figure 3-1 in Appendix A of the proposal.

OPEN SPACE

The Open Space designation occupies the western third of Refuge lands within the CRGNSA boundary. It continues eastward and stops at the raised maintenance road. The elevated Gibbons

Creek channel, culvert, and fish ladder are located within this section. A portion of the Gibbons Creek Art Trail is within this section as well as a seasonal spur trail, the Columbia River Overlook, and the western half of the Columbia River Dike Trail.

The Management Plan, Part II, Chapter 3 Open Space Designations, states:

Review Uses

1. The following uses may be allowed on all lands designated Open Space subject to compliance with guidelines for the protection of scenic, cultural, natural, and recreation resources:

> E. Resource enhancement projects for the purpose of enhancing scenic, cultural, recreation and/or natural resources, subject to the guidelines in "Resource Enhancement Projects" (Part II, Chapter 7: General Policies and Guidelines). These projects may include new structures (e.g., fish ladders, sediment barriers) and/or activities (e.g., closing and revegetating unused roads, recontouring abandoned quarries).

Finding: The project proposal is to restore floodplain connectivity and physical and natural processes, provide access to restored and improved habitats for native fish and wildlife species, reduce Gibbons Creek internal flood risk to existing infrastructure, and enhance recreation and visual opportunities. The project includes new construction and the removal of existing structures to support the resource enhancement objectives. The proposal is a resource enhancement project and qualifies as a review use.

LARGE-SCALE AGRICULTURE

The Large-Scale Agriculture designation occupies the eastern two-thirds of the site and the portion of the Refuge located north of SR 14. The eastern half of the Columbia River Dike Trail is also located here, ending at a locked gate as the levee continues onto private lands.

The Management Plan, Part II, Chapter 1 Agricultural Designations, states:

Review Uses

1. The following uses may be allowed on lands designated Large-Scale or Small-Scale Agriculture subject to compliance with guidelines for the protection of scenic, cultural, natural, and recreation resources:

> M. Resource enhancement projects for the purpose of enhancing scenic, cultural, recreation and/or natural resources, subject to the guidelines in "Resource Enhancement Projects" (Part II, Chapter 7: General Policies and Guidelines). These projects may include new structures (e.g., fish ladders, sediment barriers) and/or activities (e.g., closing and revegetating unused roads, recontouring abandoned quarries).

Finding: The project proposal is to restore floodplain connectivity and physical natural processes and to provide access to restored and improved habitats for native fish and wildlife species. The proposal is a resource enhancement project and qualifies as a review use.

SMALL WOODLAND

The Small Woodland designation occupies a small area of the project site and is located south of the BNSF railroad tracks along the northern boundary of the project site. This area will be a component of the reconnected habitat utilized for natural resource enhancement.

The Management Plan, Part II, Chapter 2 Forest Land Designations, states:

Review Uses

1. The following uses may be allowed on lands designated Commercial Forest Land or Large or Small Woodland, subject to compliance with guidelines for the protection of scenic, cultural, natural, and recreation resources:

> F. Resource enhancement projects for the purpose of enhancing scenic, cultural, recreation and/or natural resources, subject to the guidelines in "Resource Enhancement Projects" (Part II, Chapter 7: General Policies and Guidelines). These projects may include new structures (e.g., fish ladders, sediment barriers) and/or activities (e.g., closing and revegetating unused roads, recontouring abandoned quarries).

Finding: The project proposal is to restore floodplain connectivity and physical natural processes, provide access to restored and improved habitats for native fish and wildlife species, and enhance recreation and visual opportunities. The proposal is a resource enhancement project and qualifies as a review use.

PUBLIC RECREATION

The Public Recreation designation occurs entirely within the project boundary. Project activities include the removal of the existing driveway and parking lot, Gibbons Creek Art Trailhead, and the salvaging of the restrooms, and other trailhead amenities, which will be relocated outside of the CRGNSA, adjacent to their existing location.

The Management Plan, Part II, Chapter 6 Recreation Designations, states:

Review Uses

2. The following uses may be allowed on lands designated Public Recreation, subject to compliance with the "Approval Criteria for Non-Recreation Uses in Public Recreation designations," below, and the guidelines for the protection of scenic, natural, cultural, and recreation resources:

> G. Resource enhancement projects for the purpose of enhancing scenic, cultural, recreation and/or natural resources, subject to the guidelines in "Resource Enhancement Projects" (Part II, Chapter 7: General Policies and Guidelines). These projects may include new structures (e.g., fish ladders, sediment barriers) and/or activities (e.g., closing and revegetating unused roads, recontouring abandoned quarries).

Finding: The proposal is a resource enhancement project and qualifies as a review use. The project proposal includes relocating the existing parking area and vault toilets to a

location outside of the CRGNSA to allow for the enhancement of natural resources at the current parking lot site. The existing trail system would be expanded by 0.9 miles.

D. Scenic Resources

The Management Plan, Part II, Chapter 1 (Scenic Resources), GMA guidelines, states:

1. New buildings and roads shall be sited and designed to retain the existing topography and to minimize grading activities to the maximum extent practicable.

2. New buildings shall be compatible with the general scale (height, dimensions and overall mass) of existing nearby development. Expansion of existing development shall comply with this guideline to the maximum extent practicable.

Finding: No new buildings are proposed within the Scenic Area boundary. The primary changes are adjustments to existing site topography (levees). New structures associated with three road and trail segments are identified below:

Roads, trails and associated structures with grading activities	1. Rationale for site design elevation and changes in topography	2. Compatibility with nearby development
Raise 1,795 feet of SR 14 roadway approximately 3 feet	Existing topography would be raised to the minimum extent necessary to accommodate future flood events. The guideline is met.	Overall mass and dimensions of the roadway would not be noticeably changed with an approximate three foot elevation raise. The guideline is met.
0.9 new miles of trail/road. Application states: *The southern levee access road/trail would be replaced with a new gravel road/trail along the Columbia River, including two bridge crossings.*	Post-construction topography would more closely resemble natural historic conditions than current site topography. All grading activities have been engineered to accommodate potential changes to the Columbia River hydrograph in combination with expected sea level rise over the next 50 to 75 years. The guideline is met.	New trail/road segments have been designed to meet existing trail segment at existing grade, and then blend with post-construction site conditions. The guideline is met.
Two pedestrian bridge crossings on southern trail/road	Bridge crossings are designed to cross over constructed channels at topography necessary to accommodate future flood events. All grading activities have been engineered to accommodate 100 year flow and/or potential changes to the Columbia River hydrograph in	As shown in Application, Appendix B, and 90% Construction Plans page C4.8-C4.9, pedestrian bridge structures have been designed to be compatible with the setting of river bottomlands, and are similar to comparable structures in the refuge currently. Applicant has specified all concrete to be stained with Federal standard color

	combination with expected sea level rise over the next 50 to 75 years. The guideline is met.	**14064 and all metal railings and hardware to be hot dipped galvanized and finished with Natina steel coating to ensure visual subordinance within the landscape. The guideline is met.**

Based on a review of the project application and Steigerwald Habitat Restoration and Flood Control Project Environmental Assessment, all proposed new grade changes have been designed to the greatest extent practicable to be the least impactful to scenic resources and have the greatest beneficial effect to achieving project purpose (see *Goals and Objectives* and *Public Interest Test* for individual listing of benefits). Once construction is complete and plantings are established, the overall effect of the project will not notably alter the scenic resource. The site will remain consistent with the landscape settings. Guidelines met.

Recommended Condition Of Approval:

All concrete used for the pedestrian bridges will be stained with Federal standard color 14064 and all metal railings and hardware will be hot dipped galvanized and finished with Natina or equivalent steel weathering coating.

3. Project applicants shall be responsible for the proper maintenance and survival of any planted vegetation required by the guidelines in this chapter.

Finding: Plantings are proposed and are required to meet the guidelines in this section.

Recommended Condition Of Approval:

- *The applicant is responsible for survival of all plantings proposed as part of application for a minimum of 5 years from project completion, or a sufficient time for natural vegetation to establish.*

4. A site plan and land use application shall be submitted for all new buildings, except for buildings smaller than 60 square feet in area and less than or equal to 10 feet in height, as measured at the roof peak. The site plan and application shall include all information required in the site plan guidelines in "Review Uses" (Part II, Chapter 7: General Policies and Guidelines). Supplemental requirements for developments proposed on lands visible from key viewing areas are included in the key viewing areas guidelines in this chapter.

Finding: The project site plan is sufficient. The guideline is met.

5. For all proposed development, the determination of compatibility with the landscape setting shall be based on information submitted in the site plan.

Finding: A sufficient site plan was submitted and was used to determine project compatibility with the landscape setting. The guideline is met.

Guidelines 6-7 are not applicable because no new quarries are proposed for this project.

KEY VIEWING AREAS

1. The guidelines in this section shall apply to proposed developments on sites topographically visible from key viewing areas.

Finding: Project is topographically visible from KVAs. Guidelines are applicable.

The project area is topographically visible from the following KVAs:

KVA	Foreground (0-1/2 mile)	Middleground (1/2-3mile)	Background (3 miles and beyond)
HCRH		X	
Portland Women's Forum		X	
Crown Point		X	
Rooster Rock		X	
I84		X	
SR14	X		
Columbia River	X		

2. Each development shall be visually subordinate to its setting as seen from key viewing areas.

Finding: Relevant developments required to meet scenic standard of visually subordinate include:

- **Raise 1,795 feet of existing SR 14 roadway approximately three feet;**
- **Replace southern levee access road/trail with a new gravel road/trail along the Columbia River, including two bridge crossings.**
- **Construct two setback levees (east and west) including select tree removal for levee construction**
- **Construct flood wall and earthen berm on western boundary of project**
- **New gate, fence and signage at trail end and throughout project.**
- **Construct two new overlooks to replace existing two overlooks to be eliminated during levee removal.**
- **Restore the site's historic riparian communities and alluvial fan, including demolition of central access road, breaching southern levee, establishing riparian channels, installation of large wood structures and wetland plantings.**
- **Removal of Gibbons Creek elevated canal, diversion structure, fish ladder and culvert and diversion of Gibbons Creek flows from elevated canal into new floodplain channel.**

All listed relevant developments have been designed with CRGNSA scenic specialist input to ensure visual subordinance is met to the greatest extent possible while still achieving project goals and objectives. Development associated with the objectives of returning the site to its historic riparian condition would move the site more towards a natural appearing landscape consistent with an alluvial fan system, and suited to the site historically.

Due to the proximity of the two new trail bridge structures to the KVAs SR14 and Columbia River, they may be visible from these KVAs. Construction Plans specify bridge railings to be treated with natina weathering agent, and specify revegetation in the vicinity. These specifications will help the bridges achieve visual subordinance. Ensuring all metal on bridge is treated with as specified in the construction plans, and all concrete is a dark earth toned color which blends into the natural setting, would ensure the scenic standard of visually subordinate is reached.

Galvanized steel chain link fence is identified for installation throughout the site. As described, the expansion of the development of chain link fence throughout the project site would not be visually subordinate. To assure visual subordinance, a condition of approval should be added that all chain-link and other metal fence material be treated with natina or a similar weathering agent prior to installation.

Recommended Conditions Of Approval:

- *All visible metal associated with bridge structures will be treated with natina or similar weathering agent to ensure visual subordinance to the setting.*
- *All exposed concrete shall contain pigmented sealer to match federal standard color #14064.*
- *Revegetation near bridges will provide visual screening of the bridges as seen from nearby KVAs.*
- *All chain link and other metal fence material will be treated with natina or similar weathering agent to assure visual subordinance.*

3. Determination of potential visual effects and compliance with visual subordinance policies shall include consideration of the cumulative effects of proposed developments.

Finding: With the recommended conditions of approval, potential adverse visual effects will be limited to the time during construction and implementation, and the time period afterwards while screening plants become established. After this time period, the proposed developments would achieve visual subordinance. No adverse scenic impacts are expected, and therefore there would be no adverse cumulative effects.

4. The extent and type of conditions applied to a proposed development to achieve visual subordinance shall be proportionate to its potential visual impacts as seen from key viewing areas.

A. Decisions shall include written findings addressing the factors influencing potential visual impact, including but not limited to:

(1) The amount of area of the building site exposed to key viewing areas.
(2) The degree of existing vegetation providing screening.
(3) The distance from the building site to the key viewing areas from which it is visible.
(4) The number of key viewing areas from which it is visible.

(5) The linear distance along the key viewing areas from which the building site is visible (for linear key viewing areas, such as roads).

B. Conditions may be applied to various elements of proposed developments to ensure they are visually subordinate to their setting as seen from key viewing areas, including but not limited to:

(1) Siting (location of development on the subject property, building orientation, and other elements).
(2) Retention of existing vegetation.
(3) Design (color, reflectivity, size, shape, height, architectural and design details and other elements).
(4) New landscaping.

Finding: The project site is extensive and much of the area is exposed to key viewing areas (KVAs). However, new structural development is limited primarily to removal and realignment of levees and trails, which are low profile and will generally blend into the rest of the site, and two trail bridges. Given the distance of these developments from the KVAs in Oregon (between ~1.25 and 4 miles), and their dispersal across the 1000+ acres of the site, the visual effect of the project will not notably change the scenic views from these KVAs. The effect from the Columbia River and SR-14 will also be minimal. The primary overall visual effect of the project will be the increased floodplain connectivity with the Columbia River, which is in keeping with the Pastoral and River Bottomlands landscape settings.

5. New development shall be sited to achieve visual subordinance from key viewing areas, unless the siting would place such development in a buffer specified for protection of wetlands, riparian corridors, sensitive plants, or sensitive wildlife sites or would conflict with guidelines to protect cultural resources. In such situations, development shall comply with this guideline to the maximum extent practicable.

Finding: With the Recommended Conditions of Approval for Guideline 2, the proposed developments would achieve visual subordinance from key viewing areas. This guideline is satisfied.

6. New development shall be sited using existing topography and/or existing vegetation as needed to achieve visual subordinance from key viewing areas.

Finding: With the Recommended Conditions of Approval for Guideline 2, the proposed developments would achieve visual subordinance from key viewing areas.

Guidelines 4-6 are met (See Guideline 2 Recommended Conditions Of Approval: above).

7. Existing tree cover screening proposed development from key viewing areas shall be retained as specified in the Landscape Settings Design Guidelines section of this chapter.

(See Landscape Settings)

Guidelines 8-9, 11-22, 24-25, 27-30 are not applicable because there are no applicable developments proposed as part of this application. Guideline 10 is not applicable because sufficient landscaping has been proposed as a part of the development.

23. Except for water-dependent development and for water-related recreation development, development shall be set back 100 feet from the ordinary high water mark of the Columbia River below Bonneville Dam, and 100 feet from the normal pool elevation of the Columbia River above Bonneville Dam, unless the setback would render a property unbuildable. In such cases, variances to this guideline may be authorized.

Finding: The proposed action is a water-dependent development, as defined by the Management Plan glossary, and is an allowable use in this setting. The guideline is met.

26. All proposed structural development involving more than 200 cubic yards of grading on sites visible from key viewing areas shall include submittal of a grading plan. This plan shall be reviewed by the local government for compliance with key viewing area policies. The grading plan shall include the following:

A. A map of the site, prepared at a scale of 1 inch equals 200 feet (1:2,400) or a scale providing greater detail, with contour intervals of at least 5 feet, including:

(1) Existing and proposed final grades.
(2) Location of all areas to be graded, with cut banks and fill slopes delineated.
(3) Estimated dimensions of graded areas.

B. A narrative description (may be submitted on the grading plan site map and accompanying drawings) of the proposed grading activity, including:

(1) Its purpose.
(2) An estimate of the total volume of material to be moved.
(3) The height of all cut banks and fill slopes.
(4) Provisions to be used for compactions, drainage, and stabilization of graded areas. (Preparation of this information by a licensed engineer or engineering geologist is recommended.)
(5) A description of all plant materials used to revegetate exposed slopes and banks, including the species, number, size, and location of plants, and a description of irrigation provisions or other measures necessary to ensure the survival of plantings.
(6) A description of any other interim or permanent erosion control measures to be used.

Finding: A grading plan was submitted as part of the project application and contains all the requirements. The guideline is met.

LANDSCAPE SETTINGS

Finding: The project is within the Pastoral (western half of site) and River Bottomland Landscape Setting (eastern half of site and north of SR14) See Fig. 3-3 in Appendix A.

1. Accessory structures, outbuildings, and access ways shall be clustered together as much as possible, particularly towards the edges of existing meadows, pastures, and farm fields.

Finding: No relevant structures are proposed. New trail/road ways are situated in exiting development footprint and along edge of setback levee and river. The guideline is met.

2. In portions of this setting visible from key viewing areas, the following guidelines shall be employed to achieve visual subordinance for new development and expansion of existing development:

A. Except as is necessary for site development or safety purposes, the existing tree cover screening the development from key viewing areas shall be retained.

Finding: Existing tree removal proposed within site areas visible from KVAs includes:

- **1.2 acres of tree removal for west levee footprint (cottonwood/alder/ash)**
- **1.3 acres of tree removal for channel 1 and 2 (cottonwood/ alder/ ash)**
- **0.8 acres of tree removal for channel 3**
- **0.2 acres tree removal for channel 4 (cottonwood/ alder)**

According to the alternative selected, any specified tree removal is necessary to achieve selected setback levee alignment and best meets the project goals. All additional vegetation will be maintained to provide existing tree cover. The guideline is met.

B. Vegetative landscaping shall, where feasible, retain the open character of existing pastures and fields.

Finding: According to sheet L3.0 and L4.0 of Construction Plan set, revegetation plantings include plants such as native riparian upland seed mix and willow scrub mix, both consisting of primarily low growing species. Revegetation plan shows such plantings forming large swaths throughout the eastern half of refuge, maintaining the open and gently rolling characteristics of the Pastoral setting. The guideline is met.

C. At least half of any trees planted for screening purposes shall be species native to the setting or commonly found in the area. Such species include fruit trees, Douglas-fir, Lombardy poplar (usually in rows), Oregon white oak, big leaf maple, and black locust (primarily in the eastern Gorge).

D. At least one-quarter of any trees planted for screening shall be coniferous for winter screening.

Finding: All trees planted for screening are specified to be native and coniferous species are included at a satisfactory number (see Levee Overbuild Planting, L4.0 of Construction Plans). Guidelines C and D are met.

Compatible Recreation Use Guideline

Resource-based recreation uses of a very low-intensity or low-intensity nature (as defined in the "Recreation Intensity Classes" section of Part I, Chapter 4: Recreation Resources), occurring infrequently in the landscape, are compatible with this setting.

Finding: The site is within Recreation Intensity Class 1 (Very Low Intensity), which allows for trails for hiking, pathways for pedestrians and wildlife/botanical viewing and nature study areas and is compatible with the proposed development. The guideline is met.

Design Guidelines for River Bottomlands Landscape:

1. In portions of this setting visible from key viewing areas, the following guidelines shall be employed to achieve visual subordinance for new development and expansion of existing development:

A. Except as is necessary for site development or safety purposes, existing tree cover screening the development from key viewing areas shall be retained.

Finding: Existing tree removal proposed within site areas visible from KVAs includes:

- **1.2 acres of tree removal for west levee footprint (cottonwood/alder/ash)**
- **1.3 acres of tree removal for channel 1 and 2 (cottonwood/alder/ash)**
- **0.8 acres of tree removal for channel 3**
- **0.2 acres tree removal for channel 4 (cottonwood/alder)**

According to project EA and the preferred design alternative selected, specified tree removal is necessary to achieve selected setback levee alignment and best meets the project goals. The guideline is met.

B. At least half of any trees planted for screening purposes shall be species native to the River Bottomland setting. Public recreation developments are encouraged to maximize the percentage of planted screening vegetation native to this setting. Such species include black cottonwood, big leaf maple, red alder, Oregon white ash, Douglas-fir, western red cedar and western hemlock (west Gorge), and various native willow species.

C. At least one-quarter of any trees planted for screening purposes shall be coniferous for winter screening.

Finding: All plantings proposed for this project are native plantings and appropriate to the river bottomlands setting. The guideline is met.

Compatible Recreation Use Guidelines

Compatible recreation uses in this setting depend on the degree of natural resource sensitivity of a particular site. In the most critically sensitive River Bottomlands, very low-intensity uses that do not impair wetlands or special habitat requirements may be compatible.

In other River Bottomland areas, nodes of moderate-intensity and/or high-intensity recreation uses may be compatible, provided that: (1) their designs emphasize retention and/or

enhancement of native riparian communities, (2) structures and parking areas are visually subordinate, and (3) they are separated from other areas of concentrated recreation usage by stretches of natural-appearing shoreline and adjacent uplands.

Finding: The eastern half of the site is in the River Bottomlands landscape setting. Current use of the existing trail system is consistent the low to very-low use requirements for this setting. Recreation Intensity Class 1 (Very Low Intensity) allows for trails for hiking, pathways for pedestrians and wildlife/botanical viewing and nature study areas. No nodes of moderate or high intensity recreation use are proposed. Although some increased use is likely with the addition of the 0.9 miles of trail, it is unlikely that the use would increase to an amount incompatible with the River Bottomland setting and Recreation Intensity Class. The guideline is met.

Scenic Travel Corridors

1. For the purposes of implementing this section, the foreground of a scenic travel corridor shall include those lands within 1/4 mile of the edge of pavement of the scenic travel corridor roadway.

Finding: The proposal is within the foreground of SR14, a scenic travel corridors. However, Guidelines 2-7 are not applicable because there are no applicable developments or actions proposed within the CRGNSA boundary.

Signs

1. Except for signs allowed without review pursuant to "Uses Allowed Outright" (Part II, Chapter 7: General Policies and Guidelines), all new signs must meet the following guidelines unless these guidelines conflict with the Manual for Uniform Traffic Control Devices for public safety, traffic control or highway construction signs. In such cases, the standards in the Manual for Uniform Traffic Control Devices shall supersede these guidelines.

A. The support structure shall be unobtrusive and have low visual impact.

B. Lettering colors with sufficient contrast to provide clear message communication shall be allowed. Signs shall be colored to blend with their setting to the maximum extent practicable.

C. Backs of all signs shall be unobtrusive, non-reflective, and blend in with the setting.

D. Spotlighting of signs may be allowed where needed for night visibility. Backlighting is not permitted for signs.

E. Except for signs along public highways necessary for public safety, traffic control, or road construction and consistent with the Manual for Uniform Traffic Control Devices, the following signs are prohibited:

(1) Luminous signs or those with intermittent or flashing lights. These include neon signs, fluorescent signs, light displays, and other signs that are internally illuminated, exclusive of seasonal holiday light displays.

(2) New billboards.
(3) Signs with moving elements.
(4) Portable or wheeled signs, or signs on parked vehicles where the sign is the primary use of the vehicle.

Finding: No such signs are proposed.

2. Any sign that does not conform with a provision of these guidelines and has existed before their adoption is subject to the following provisions:

A. Alteration of existing nonconforming signs shall comply with these guidelines.

B. Any nonconforming sign used by a business must be brought into conformance concurrent with any expansion or change in use that requires a development permit.

Finding: Many signs currently located on the refuge are planned for salvage and reuse. Prior to re-installation, all signs must be brought to the standards as listed above in Guideline 1

Recommended Condition Of Approval:

- ***All signage, whether new or salvaged and reused, shall have support structures with low visual impact, be non-reflective, and colored to blend with the setting. Sign content, color, and materials must be approved by USFS-CRGNSA Scenic specialists prior to installation.***

E. Cultural Resources

The Management Plan, Part I, Chapter 2 (Cultural Resources), GMA Policies states:

3. A four-step process shall be used to protect cultural resources: performing cultural resource reconnaissance or historic surveys before proposed uses are authorized; assessing the effects of proposed uses on significant cultural resources; and preparing mitigation plans to avoid or minimize impacts to significant cultural resources.

14. Mitigation measures shall ensure that a proposed use would have no adverse effect on significant cultural resources. Uses that would adversely affect significant cultural resources shall be prohibited.

The Management Plan, Part I, Chapter 2 (Cultural Resources), GMA Guidelines states:

Determination of potential effects to significant cultural resources shall include consideration of cumulative effects of proposed developments that are subject to any of the following: 1) a reconnaissance or historic survey; 2) a determination of significance; 3) an assessment of effect; or 4) a mitigation plan. (Added: CRGC adoption 7/13/10; U.S. Sec. Ag. concurrence 11/1/10)

For federal or federally assisted undertakings, the reviewing agency shall complete its consultation responsibilities under Section 106 of the Historic Preservation Act of 1966 [36 CFR 800.2].

Finding:

BPA is the lead federal agency for the project-wide cultural resource survey, reporting and consultation requirements pursuant to Section 106 of the National Historic Preservation Act (NHPA). Two cultural resource survey reports entitled "Cultural Resources Inventory for the Proposed Steigerwald Floodplain Restoration Project, Clark County, Washington" (May 2017) and "Cultural Resource Survey Addendum for the Steigerwald Floodplain Restoration, Clark County, Washington" (January 2018) were prepared by archaeologists with Historic Research Associates, Inc. (HRA). The authors of the 2017 report are Zach L. Windler and Libby Provost and the 2018 report was drafted by Joshua Dinwiddie and Natalie Perrin. The principal investigators shall meet the required professional standards.

A cultural resource survey of the majority of Area of Potential Effect was conducted by HRA archaeologists. The APE totals 1,055 acres but access was not granted to 3.6 acres of private land within the APE. Therefore, the cultural resource survey covered 1,051.4 acres. The supplemental survey and associated addendum report pertain to 2.2 acres that were not accessible during the initial survey efforts. Subsurface sampling was also conducted as part of the survey efforts, in the form of 173 shovel probes. The contractor identified five previously unrecorded archaeological resources during the initial survey including three archaeological sites and two archaeological isolates. Additionally, four historic-period aboveground resources were assessed within the APE. One additional archaeological site was identified during the supplemental survey. HRA provided numerous recommendations in the two reports. In a January 2018 letter, Bonneville Power Administration (BPA) archaeologist Jenna Peterson provided an assessment of effect for the proposed project. To mitigate the effect, BPA finalized a Memorandum of Agreement (MOA) last fall. The stipulations in the MOA alleviate adverse effects.

USFS-Columbia River Gorge National Scenic Area Heritage Program Manager Chris Donnermeyer reviewed the cultural resource and other documentation, and concurs with the assessments, conclusions, recommendations, and MOA. With the implementation of the MOA, there are no anticipated adverse effects, including cumulative effects, to cultural resources.

Recommended Condition Of Approval:

- ***Should any historic or prehistoric cultural resources be uncovered during project activities, the applicant shall cease work and immediately notify the CRGNSA office and the Washington Office of Archeology and Historical Preservation. The applicant***

should also notify the Indian Tribal governments within 24 hours if the resources are prehistoric or otherwise associated with Native American Indians.

F. Natural Resources

The Management Plan, Part I, Chapter 3 (Natural Resources), Review Uses, states:

Wetlands

1. The following uses may be allowed in wetlands and wetland buffer zones, subject to compliance with guidelines for the protection of scenic, natural, cultural, and recreation resources and "Approval Criteria for Modifications to Serviceable Structures and Minor Water-Dependent and Water-Related Structures in Wetlands" in this section.

A. The modification, expansion, replacement, or reconstruction of serviceable structures, if such actions would not (1) increase the size of an existing structure by more than 100 percent, (2) result in a loss of wetlands acreage or functions, and (3) intrude further into a wetland or wetlands buffer zone.

New structures shall be considered intruding further into a wetland or wetlands buffer zone if any portion of the structure is located closer to the wetland or wetlands buffer zone than the existing structure.

Finding: The project modifies (by removal) several existing structures: Gibbons Creek water control structures, elevated canal, and fish ladder, and a portion of the existing levee. Based on a review of the information in the application and appendices, no existing structure would be increased in size by more than 100%, there would be no net loss of wetland acreage or functions, and remaining structures would not intrude further into wetlands or wetland buffer zones. The two new setback levees will be in wetland buffers, however the project will result in an overall reduction in the amount of levee intrusion into wetland boundaries than currently exists. As a whole the project will result in a notable increase in wetland area and wetland function.

B. The construction of minor water-related recreation structures that are available for public use. Structures in this category shall be limited to boardwalks; trails and paths, provided their surface is not constructed of impervious materials; observation decks; and interpretative aids, such as kiosks and signs.

Finding: The proposed trail and bridges are minor water-related recreation structures available for public use, and therefore are allowable review uses.

C. The construction of minor water-dependent structures that are placed on pilings, if the pilings allow unobstructed flow of water and are not placed so close together that they effectively convert an aquatic area to dry land. Structures in this category shall be limited to public and private docks and boat houses, and fish and wildlife management structures that are constructed by federal, state, or tribal resource agencies.

Finding: Not applicable – no such structures are proposed.

2. Except uses allowed outright and review uses in Guidelines 1A through 1C, above, proposed uses may be allowed in wetlands and wetlands buffer zones subject to compliance with guidelines for the protection of scenic, natural, cultural, and recreation resources and "Approval Criteria for Other Review Uses in Wetlands" in this section.

Finding:

The proposal is an allowable review use subject to compliance with relevant guidelines.

Site Plans For Review Uses In Wetlands

1. In addition to the information required in all site plans, site plans for proposed uses in wetlands or wetlands buffer zones shall include: a site plan map prepared at a scale of 1 inch equals 100 feet (1:1,200), or a scale providing greater detail; the exact boundary of the wetland and the wetlands buffer zone; and a description of actions that would alter or destroy the wetland.

Finding: Figure 1-6 in Appendix A shows wetlands, wetland buffers zones and proposed actions at a scale of at least 1:1,200. This site plan maps meet these requirements.

Approval Criteria For Modifications To Serviceable Structures And Minor Water Dependent And Water-Related Structures In Wetlands

1. The uses identified in Guideline 1 under "Review Uses," above, may be allowed only if they meet all of the following criteria:

A. Practicable alternatives for locating the structure outside of the wetland or wetland buffer zone and/or minimizing the impacts of the structure do not exist.

B. All reasonable measures have been applied to ensure that the structure will result in the minimum feasible alteration or destruction of the wetland's functions, existing contour, vegetation, fish and wildlife resources, and hydrology.

C. The structure will be constructed using best management practices.

D. Areas disturbed during construction of the structure will be rehabilitated to the maximum extent practicable.

E. The structure complies with all applicable federal, state, and local laws.

Finding: A Practical Alternatives Test (PAT) was conducted (see Practicable Alternative Test in section B of these Findings of Fact). The PAT sufficiently describes why the project cannot be located outside of the wetland and/or wetland buffer zone. The project application and the Environmental Assessment describe measures to minimize impacts, best management practices, and appropriate rehabilitation of disturbed areas. The project itself is a restoration project that will improve wetland function, reestablish more natural contours, and enhance vegetation, fish and wildlife resources, and

hydrology. The project Environmental Assessment describes compliance with applicable federal, state and local laws. (The project EA is available at https://www.bpa.gov/efw/Analysis/NEPADocuments/Pages/Steigerwald_Floodplain_Restoration.aspx)

Approval Criteria For Other Review Uses In Wetlands

1. The uses identified in Guideline 2 under "Review Uses," above, may be allowed only if they meet all of the following criteria:

A. The proposed use is water-dependent, or is not water-dependent but has no practicable alternative as determined by the practicable alternative test in this section.

B. The proposed use is in the public interest as determined by the public interest test in this section.

C. Measures will be applied to ensure that the proposed use results in the minimum feasible alteration or destruction of the wetland's functions, existing contour, vegetation, fish and wildlife resources, and hydrology.

D. Groundwater and surface-water quality will not be degraded by the proposed use.

E. Those portions of a proposed use that are not water-dependent or that have a practicable alternative will not be located in wetlands or wetlands buffer zones.

F. The proposed use complies with all applicable federal, state, and local laws.

G. Areas that are disturbed during construction of the proposed use will be rehabilitated to the maximum extent practicable.

Finding: A Practical Alternatives Test (PAT) was submitted by the applicant (see Practicable Alternative Test in section B of these Findings of Fact). The PAT sufficiently describes why the project cannot be located outside of the wetland and/or wetland buffer zone. See

A Public Interest Test (PIT) was also submitted by the applicant (see Public Interest Test in section B of these Findings of Fact). The PIT describes public benefits, including improvements to water quality and flood control, that will be associated with the project.

The PAT and PIT submitted by the applicant effectively describe the absence of practicable alternative locations and the public interest benefits of the project, and meet these guidelines.

Information included in both the application and the project Environmental Assessment describe mitigation measures that will be applied to minimize potential impacts during construction.

The project will result in a notable net increase in wetland, riparian, and floodplain function.

H. Unavoidable impacts to wetlands will be offset through the deliberate restoration, creation, or enhancement of wetlands. Wetlands restoration, creation, and enhancement are not alternatives to the guidelines listed above; they shall be used only as a last resort to offset unavoidable wetlands impacts.

Finding: The project itself is a floodplain restoration project that will also restore and enhance wetlands. Guideline H is not applicable.

WETLANDS BUFFER ZONES

1. The width of wetlands buffer zones shall be based on the dominant vegetation community that exists in a buffer zone.

2. The dominant vegetation community in a buffer zone is the vegetation community that covers the most surface area of that portion of the buffer zone that lies between the proposed activity and the affected wetland. Vegetation communities are classified as forest, shrub, or herbaceous.

A. A forest vegetation community is characterized by trees with an average height equal to or greater than 20 feet, accompanied by a shrub layer; trees must form a canopy cover of at least 40 percent and shrubs must form a canopy cover of at least 40 percent. A forest community without a shrub component that forms a canopy cover of at least 40 percent shall be considered a shrub vegetation community for purposes of the Management Plan.

B. A shrub vegetation community is characterized by shrubs and trees that are greater than 3 feet tall and form a canopy cover of at least 40 percent.

C. A herbaceous vegetation community is characterized by the presence of herbs, including grass and grasslike plants, forbs, ferns, and non-woody vines.

Finding: Guideline 1 and 2 are applicable. Four riparian communities are described in the project application, two of which are dominated by trees and two of which are dominated by shrubs.

3. Buffer zones shall be measured outward from a wetlands boundary on a horizontal scale that is perpendicular to the wetlands boundary.

The following buffer zone widths shall be required:

- Forest communities: 75 feet
- Shrub communities: 100 feet
- Herbaceous communities: 150 feet

Finding: The project proposal meets this guideline by applying a 100 feet buffer for wetlands within both the forest and shrub communities. The more conservative 100 feet was applied across the project area based on the project map.

4. Except as otherwise allowed, wetlands buffer zones shall be retained in their natural condition. When a buffer zone is disturbed by a new use, it shall be replanted with native plant species.

Finding: All disturbed buffer zones will be replanted with native species and restored to natural conditions. This guideline is met.

Rules For Delineating Wetlands Boundaries

1. The approximate location and extent of wetlands in the Scenic Area is shown on the National Wetlands Inventory (U.S. Department of the Interior 1987). In addition, the list of hydric soils and the soil survey maps shall be used as an indicator of wetlands. Some wetlands may not be shown on the wetlands inventory or soil survey maps. Wetlands that are discovered by the local planning staff during an inspection of a potential project site shall be delineated and protected.

2. The project applicant shall be responsible for determining the exact location of a wetlands boundary. Wetlands boundaries shall be delineated using the procedures specified in the Corps of Engineers Wetlands Delineation Manual (Wetlands Research Program Technical Report Y-87-1, on-line edition, updated through March 21, 1997.) All wetlands delineations shall be conducted by a professional who has been trained to use the federal delineation procedures, such as a soil scientist, botanist, or wetlands ecologist.

3. The local government may verify the accuracy of, and render adjustments to, a wetlands boundary delineation. If the adjusted boundary delineation is contested by the project applicant, the local government shall obtain professional services to render a final delineation, at the applicant's expense.

Finding: The project proposal meets guidelines 1-3. Appendix B of the application includes the *Steigerwald Wetland Delineation Report,* which describes wetland investigations that were conducted in the project area during the summer of 2015 and the spring of 2016. The document states that the wetland determinations were made using methods defined in the U.S. Army Corps of Engineers *Wetlands Delineation Manual* (Environmental Laboratory, 1987).

The delineated wetland boundaries are considered to be accurate, and there were no adjustments to the delineated wetland boundaries.

Practicable Alternative Test

1. An alternative site for a proposed use shall be considered practicable if it is available and the proposed use can be undertaken on that site after taking into consideration cost, technology, logistics, and overall project purposes. A practicable alternative does not exist if a project applicant satisfactorily demonstrates all of the following:

A. The basic purpose of the use cannot be reasonably accomplished using one or more other sites in the vicinity that would avoid or result in less adverse effects on wetlands.

B. The basic purpose of the use cannot be reasonably accomplished by reducing its proposed size, scope, configuration, or density, or by changing the design of the use in a way that would avoid or result in less adverse effects on wetlands.

C. Reasonable attempts were made to remove or accommodate constraints that caused a project applicant to reject alternatives to the proposed use. Such constraints include inadequate infrastructure, parcel size, and land use designations. If a land use designation or recreation intensity class is a constraint, an applicant must request a Management Plan amendment to demonstrate that practicable alternatives do not exist.

Finding: A practicable alternative test that meets these requirements was included in the application. See the Practicable Alternative Test in Section B of these Findings of Fact. .

PUBLIC INTEREST TEST

1. The following factors shall be considered when determining if a proposed use is in the public interest:

A. The extent of public need for the proposed use.

B. The extent and permanence of beneficial or detrimental effects that the proposed use may have on the public and private uses for which the property is suited.

C. The functions and size of the wetland that may be affected.

D. The economic value of the proposed use to the general area.

E. The ecological value of the wetland and probable effect on public health and safety, fish, plants, and wildlife.

Finding: A Public Interest Test that meets these requirements was included in the application. See the Public Interest Test in Section B of these Findings of Fact.

WETLANDS COMPENSATION PLANS

Guideline 1 is not applicable. No Wetlands Compensation Plan is required. The project as a whole will result in an increase in wetland and riparian habitat quantity and quality, and in floodplain functionality.

STREAMS, PONDS, LAKES, AND RIPARIAN AREAS

1. The following uses may be allowed in streams, ponds, lakes, and riparian areas, subject to compliance with guidelines for the protection of scenic, natural, cultural and recreation resources and "Approval Criteria for Modifications to Serviceable Structures and Minor Water-Dependent and Water-Related Structures in Aquatic and Riparian Areas" in this section.

A. The modification, expansion, replacement, or reconstruction of serviceable structures, provided that such actions would not (1) increase the size of an existing structure by more than 100 percent, (2) result in a loss of water quality, natural drainage, and fish and wildlife habitat, or (3) intrude further into a stream, pond, lake, or buffer zone. New structures shall be considered intruding further into a stream, pond, lake, or buffer zone if any portion of the structure is located closer to the stream, pond, lake, or buffer zone than the existing structure.

B. The construction of minor water-related recreation structures that are available for public use. Structures in this category shall be limited to boardwalks; trails and paths, provided their surface is not constructed of impervious materials; observation decks; and interpretative aids, such as kiosks and signs.

C. The construction of minor water-dependent structures that are placed on pilings, if the pilings allow unobstructed flow of water and are not placed so close together that they

effectively convert an aquatic area to dry land. Structures in this category shall be limited to public and private docks and boat houses, and fish and wildlife management structures that are constructed by federal, state, or tribal resource agencies.

2. Except uses allowed outright and review uses in Guidelines 1.A through 1.C, above, proposed uses may be allowed in streams, ponds, lakes, and riparian areas, subject to compliance with guidelines for the protection of scenic, natural, cultural, and recreation resources and "Approval Criteria for Other Review Uses in Aquatic and Riparian Areas" in this section.

Finding: See the findings for Wetlands, above.

Site Plans For Review Uses In Aquatic And Riparian Areas

1. In addition to the information required in all site plans, site plans for proposed uses in streams, ponds, lakes, and their buffer zones shall include: a site plan map prepared at a scale of 1 inch equals 100 feet (1:1,200), or a scale providing greater detail; the exact boundary of the ordinary high watermark or normal pool elevation and the prescribed buffer zone; and a description of actions that would alter or destroy the stream, pond, lake, or riparian area. Approval Criteria for Modifications to Serviceable Structures and Minor Water-Dependent and Water-Related Structures in Aquatic and Riparian Areas.

Finding: This project proposal meets this guideline, Figure 1-6 in Appendix A shows Gibbons Creek and stream buffers zones, as well as proposed actions at a scale of at least 1:1,200.

Approval Criteria For Modifications To Serviceable Structures And Minor Water-Dependent And Water-Related Structures In Aquatic And Riparian Areas

1. The uses identified in Guideline 1 under "Review Uses," above, may be allowed only if they meet all of the following criteria:

A. Practicable alternatives for locating the structure outside of the stream, pond, lake, or buffer zone and/or minimizing the impacts of the structure do not exist.

B. All reasonable measures have been applied to ensure that the structure will result in the minimum feasible alteration or destruction of water quality, natural drainage, and fish and wildlife habitat of streams, ponds, lakes, and riparian areas.

C. The structure will be constructed using best management practices.

D. Areas disturbed during construction of the structure will be rehabilitated to the maximum extent practicable.

E. The structure complies with all applicable federal, state, and local laws.

Finding: This proposal meets this guideline. No practicable alternative exists outside of buffer zones because this project is focused on aquatic restoration. Setback levees are proposed to protect developed land on either side of the project that will allow the maximum practicable area of reconnected floodplain. Best management practices and mitigation measures are described in the NEPA Environmental Assessment (EA)

document for this project. The proposal includes rehabilitating and revegetating disturbed areas. The EA for this project describes compliance with the applicable federal, state, and local laws.

Approval Criteria For Other Review Uses In Aquatic And Riparian Areas

1. The uses identified in Guideline 2 under "Review Uses," above, may be allowed only if they meet all of the following criteria:

A. The proposed use is water-dependent, or is not water-dependent but has no practicable alternative. A local government may conclude that a practicable alternative to the proposed use does not exist if the "Practicable Alternative Test" in the "Wetlands" section of this chapter is satisfied, substituting the term "stream, pond, lake, or riparian area" as appropriate.

Finding: There is no practicable alternative outside of an aquatic buffer zones, since the purpose of this project is aquatic restoration.

B. The proposed use is in the public interest. In determining if a proposed use is in the public interest, the guidelines under "Public Interest Test" in the "Wetlands" section of this chapter shall be considered, substituting the term "stream, pond, lake, or riparian area" as appropriate.

Finding: This project completed a Public Interest Test included at the beginning of these findings of fact.

C. Measures have been applied to ensure that the proposed use results in minimum feasible impacts to water quality, natural drainage, and fish and wildlife habitat of the affected stream, pond, lake, and/or buffer zone. As a starting point, the following mitigation measures shall be considered when new uses are proposed in streams, ponds, lakes, and buffer zones:

(1) Construction shall occur during periods when fish and wildlife are least sensitive to disturbance. In Oregon, work in streams, ponds, and lakes shall be conducted during the periods specified in Oregon Guidelines for Timing of In-Water Work to Protect Fish and Wildlife Resources (Oregon Department of Fish and Wildlife 2000), unless otherwise coordinated with and approved by the Oregon Department of Fish and Wildlife. In Washington, the Washington Department of Fish and Wildlife shall evaluate specific proposals and specify periods for in-water work.

(2) All natural vegetation shall be retained to the greatest extent practicable, including aquatic and riparian vegetation.

(3) Nonstructural controls and natural processes shall be used to the greatest extent practicable.

(4) Bridges, roads, pipeline and utility corridors, and other water crossings shall be minimized and should serve multiple purposes and properties.

(5) Stream channels shall not be placed in culverts unless absolutely necessary for property access. Bridges are preferred for water crossings to reduce disruption to streams, ponds,

lakes, and their banks. When culverts are necessary, oversized culverts with open bottoms that maintain the channel's width and grade should be used.

(6) Temporary and permanent control measures shall be applied to minimize erosion and sedimentation when riparian areas are disturbed, including slope netting, berms and ditches, tree protection, sediment barriers, infiltration systems, and culverts.

Finding: The project proposal is consistent with these guidelines. The applicant is required to work with the Washington Department of Fish and Wildlife to determine the appropriate in-water work period. The EA states that key factors of the construction sequence are identifying work that only can be conducted within the in-water work window (June 1 – October 15). Temporary losses of some riparian vegetation would occur during implementation; however, the project will create more riparian areas than it would affect. The overall effect of the project will be a net increase in natural processes across the project area. Structural developments have been minimized The EA also states that the project will "prepare and implement a stormwater pollution prevention plan and an erosion control plan, consistent with National Pollutant Discharge Elimination System requirements and Section 401 consultation."

D. Groundwater and surface water quality will not be degraded by the proposed use.

Finding: The proposal meets this guideline. By restoring floodplain connection to Gibbons Creek, groundwater and surface water quality should be improved relative to the existing condition.

E. Those portions of a proposed use that are not water-dependent or that have a practicable alternative will be located outside of stream, pond, and lake buffer zones.

Finding: There is no practicable alternative for this project that is located outside of stream, pond, or lake buffer zones.

F. The proposed use complies with all applicable federal, state, and local laws.

Finding: The proposal is consistent with this guideline. The Environmental Assessment (EA) for this project describes compliance with the applicable federal, state, and local laws.

G. Unavoidable impacts to aquatic and riparian areas will be offset through rehabilitation and enhancement. Rehabilitation and enhancement shall achieve no net loss of water quality, natural drainage, and fish and wildlife habitat of the affected stream, pond, lake, and/or buffer zone. When a project area has been disturbed in the past, it shall be rehabilitated to its natural condition to the maximum extent practicable. When a project area cannot be completely rehabilitated, such as when a boat launch permanently displaces aquatic and riparian areas, enhancement shall also be required. The following rehabilitation and enhancement guidelines shall apply:

(1) Rehabilitation and enhancement projects shall be conducted in accordance with a rehabilitation and enhancement plan.

(2) Natural hydrologic conditions shall be replicated, including current patterns, circulation, velocity, volume, and normal water fluctuation.

(3) Natural stream channel and shoreline dimensions shall be replicated, including depth, width, length, cross-sectional profile, and gradient.

(4) The bed of the affected aquatic area shall be rehabilitated with identical or similar materials.

(5) Riparian areas shall be rehabilitated to their original configuration, including slope and contour.

(6) Fish and wildlife habitat features shall be replicated, including pool-riffle ratios, substrata, and structures. Structures include large woody debris and boulders.

(7) Stream channels and banks, shorelines, and riparian areas shall be replanted with native plant species that replicate the original vegetation community.

(8) Rehabilitation and enhancement efforts shall be completed no later than 90 days after the aquatic area or buffer zone has been altered or destroyed, or as soon thereafter as is practicable.

(9) Three years after an aquatic area or buffer zone is rehabilitated or enhanced, at least 75 percent of the replacement vegetation must survive. The project applicant shall monitor the replacement vegetation and take corrective measures to meet this guideline.

Finding: Any impacts to aquatic buffers would be temporary and the goal of this proposal is to restore stream and floodplain function, which would improve conditions within the aquatic buffer zones; therefore, a rehabilitation and enhancement plan is not required for this project. The project itself is a rehabilitation and enhancement project that will result in an improvement over current conditions. .

STREAM, POND, AND LAKE BUFFER ZONES

1. Buffer zones shall generally be measured landward from the ordinary high watermark on a horizontal scale that is perpendicular to the ordinary high watermark. On the main stem of the Columbia River above Bonneville Dam, buffer zones shall be measured landward from the normal pool elevation of the Columbia River. The following buffer zone widths shall be required:

A. Streams used by anadromous or resident fish (tributary fish habitat), special streams, intermittent streams that include year-round pools, and perennial streams: 100 feet.

B. Intermittent streams, provided they are not used by anadromous or resident fish: 50 feet.

C. Ponds and lakes: Buffer zone widths shall be based on the dominant vegetative community and shall use the same guidelines as in the "Wetlands Buffer Zones" section of this chapter, substituting the term "pond or lake" as appropriate.

Finding: Buffer zones in this project proposal are consistent with this guideline.

2. Except as otherwise allowed, buffer zones shall be retained in their natural condition. When a buffer zone is disturbed by a new use, it shall be replanted with native plant species.

Finding: This proposal includes replanting all disturbed areas with native plant species.

3. The project applicant shall be responsible for determining the exact location of the ordinary high watermark or normal pool elevation. The local government may verify the accuracy of, and render adjustments to, an ordinary high watermark or normal pool delineation. If the adjusted boundary delineation is contested by the project applicant, the local government shall obtain professional services to render a final delineation, at the project applicant's expense.

Finding: The proposal includes accurate identification of the ordinary high watermark.

Rehabilitation and Enhancement Plans

1. Rehabilitation and enhancement plans shall be prepared when a project applicant is required to rehabilitate or enhance a stream, pond, lake, and/or buffer zone. They shall satisfy the following guidelines:

Finding: The project in itself will result in an improvement over current conditions. No rehabilitation and enhancement plan is required. These guidelines are not applicable

Wildlife Habitat

1. Except uses allowed outright, proposed uses may be allowed within 1,000 feet of a sensitive wildlife area or site, subject to compliance with guidelines for the protection of scenic, natural, cultural, and recreation resources and "Approval Criteria for Review Uses Near Sensitive Wildlife Areas and Sites" in this section. Updated lists of species included in sensitive wildlife sites can be found on the websites for the Washington Department of Fish and Wildlife (Species of Concern list) and the Wildlife Division of Oregon Department of Fish and Wildlife. A list also is maintained by the USDA Forest Service – Scenic Area Office and available at the Gorge Commission office and on its website.

Finding: The project is within 1000 feet of several sensitive fish and wildlife areas or sites. The Wildlife Habitat guidelines apply.

Site Plans And Field Surveys For Review Uses Near Sensitive Wildlife Areas And Sites

1. In addition to the information required in all site plans, site plans for uses within 1,000 feet of a sensitive wildlife area or site shall include a map prepared at a scale of 1 inch equals 100 feet (1:1,200), or a scale providing greater detail.

Finding: The proposal meets this guideline.

2. A field survey to identify sensitive wildlife areas or sites shall be required for (1) land divisions that create four or more parcels, (2) recreation facilities that contain parking areas for more than 10 cars, overnight camping facilities, boat ramps, or visitor information and

environmental education facilities, (3) public transportation facilities that are outside improved rights-of-way, (4) electric facilities, lines, equipment, and appurtenances that are 33 kilovolts or greater, and (5) communications, water and sewer, and natural gas transmission (as opposed to distribution) lines, pipes, equipment, and appurtenances and other project related activities, except when all of their impacts will occur inside previously disturbed road, railroad or utility corridors, or existing developed utility sites, that are maintained annually.

Field surveys shall cover all areas affected by the proposed use or recreation facility. They shall be conducted by a professional wildlife biologist hired by the project applicant. All sensitive wildlife areas and sites discovered in a project area shall be described and shown on the site plan map.

Finding: Not applicable. The project does not fall into these categories.

Approval Criteria For Review Uses Near Sensitive Wildlife Areas And Sites

1. Uses that are proposed within 1,000 feet of a sensitive wildlife area or site shall be reviewed by the Oregon Department of Fish and Wildlife or the Washington Department of Fish and Wildlife. The approximate locations of sensitive wildlife areas and sites are shown in the wildlife inventory. State wildlife biologists will help determine if a new use would adversely affect a sensitive wildlife area or site.

Finding: The project proposal was reviewed by biologists from the Washington State Department of Wildlife (WDFW) and the US Forest Service.

2. The local government shall submit site plans to the Oregon Department of Fish and Wildlife or Washington Department of Fish and Wildlife. State wildlife biologists shall review the site plan and their field survey records. They shall (1) identify/verify the precise location of the wildlife area or site, (2) ascertain whether the wildlife area or site is active or abandoned, and (3) determine if the proposed use may compromise the integrity of the wildlife area or site or occur during the time of year when wildlife species are sensitive to disturbance, such as nesting or rearing seasons. In some instances, state wildlife biologists may conduct field surveys to verify the wildlife inventory and assess the potential effects of a proposed use.

Finding: The proposal meets this guideline. An environmental assessment has been completed for the project, and was submitted in draft form to WDFW and the USFS to review. The project applicants consulted with WDFW, and a hydraulic project approval has been submitted to the WDFW.

3. The following factors may be considered when site plans are reviewed:

A. Biology of the affected wildlife species.

B. Published guidelines regarding the protection and management of the affected wildlife species. The Oregon Department of Forestry has prepared technical papers that include management guidelines for osprey and great blue heron. The Washington Department of Fish and Wildlife has prepared similar guidelines for a variety of species, including the

western pond turtle, the peregrine falcon, and the Larch Mountain salamander (Rodrick and Milner 1991).

C. Physical characteristics of the subject parcel and vicinity, including topography and vegetation.

D. Historic, current, and proposed uses in the vicinity of the sensitive wildlife area or site.

E. Existing condition of the wildlife area or site and the surrounding habitat and the useful life of the area or site.

Finding: It was determined that the following sensitive wildlife species or designated critical habitat are within 1000 feet of the project area: Columbia River Critical Habitat for bull trout; steelhead; chinook, sockeye, chum, and coho salmon; Pacific eulachon; and Pacific lamprey. Individual slender-billed white-breasted nuthatch may be impacted by removal of nesting habitat (oaks) but this would not affect populations. Purple martin nesting structures would be moved away from project activities prior to the start of project activities, and replaced after construction is complete, so there would no lasting effect to purple martins. Bald eagles may be temporarily displaced from foraging sites along the existing levee during project activities. Similarly, great blue heron as well as osprey and other raptors may be temporarily disturbed from foraging areas by project activities. The requirement to operate within the dry summer season operating season will minimize potential negative impacts associated with project construction activities.

Because the project will result in a substantial increase in functioning river-adjacent habitat and in riparian and wetland habitat, and based on overall habitat availability in the general vicinity, agency biologists determined that there may be short term negative effects to sensitive aquatic species (fish and lamprey) due to turbidity plumes during active construction, and that there would be long-term benefits to these species and habitats. Steigerwald NWR is part of the functioning Columbia mainstem, so improving habitat in the refuge will benefit all designated fish critical habitats in the mainstem in the long term.

4. The wildlife protection process may terminate if the local government, in consultation with the state wildlife agency, determines (1) the sensitive wildlife area or site is not active, or (2) the proposed use would not compromise the integrity of the wildlife area or site or occur during the time of year when wildlife species are sensitive to disturbance.

Finding: USFS biologists in consultation with WDFW biologists have determined that the proposed use would not compromise the integrity of the wildlife habitat in the project area. The project will result in a net increase of enhanced habitat for sensitive wildlife species. The wildlife protection process may terminate. The remaining guidelines in this section are not applicable.

Wildlife Management Plans

1. Wildlife management plans shall be prepared when a proposed use is likely to adversely affect a sensitive wildlife area or site. Their primary purpose is to document the special characteristics of a project site and the habitat requirements of affected wildlife species. This information provides a basis for the project applicant to redesign the proposed use in a manner that protects sensitive wildlife areas and sites, maximizes his/her development options, and mitigates temporary impacts to the wildlife area or site and/or buffer zone.

Findings: Because the proposed project is not likely to adversely affect sensitive wildlife, a wildlife management plan is not required.

Approval Criteria For Fences In Deer And Elk Winter Range

Finding: This section is not applicable to the project because the project area is not in WDFW designated deer or elk winter range.

Rare Plants

1. Except uses allowed outright, proposed uses may be allowed within 1,000 feet of a sensitive plant, subject to compliance with guidelines for the protection of scenic, natural, cultural, and recreation resources and "Approval Criteria for Review Uses Near Sensitive Plants" in this section. Updated lists of sensitive plant species can be found on the websites for the Oregon or Washington Natural Heritage Program. A list also is maintained by the USDA Forest Service – Scenic Area Office and available at the Gorge Commission office and on its website.

Finding: The proposal is within 1,000 feet of intentionally-planted experimental populations of federally listed (threatened) plant populations. These guidelines are applicable.

Site Plans And Field Surveys For Review Uses Near Sensitive Plants

1. In addition to the information required in all site plans, site plans for uses within 1,000 feet of a sensitive plant shall include a map prepared at a scale of 1 inch equals 100 feet (1:1,200), or a scale providing greater detail.

Finding: Known sites are included in site plan map (Appendix K, USFWS Biological Evaluation).

2. A field survey to identify sensitive plants shall be required for (1) land divisions that create four or more parcels; (2) recreation facilities that contain parking areas for more than 10 cars, overnight camping facilities, boat ramps, or visitor information and environmental education facilities; (3) public transportation facilities that are outside improved rights-of-way; (4) electric facilities, lines, equipment, and appurtenances that are 33 kilovolts or greater; and (5) communications, water and sewer, and natural gas transmission (as opposed to distribution) lines, pipes, equipment, and appurtenances and other project related activities, except when all of their impacts will occur inside previously disturbed road, railroad or utility corridors, or existing developed utility sites, that are maintained annually.

Field surveys shall cover all areas affected by the proposed use or recreation facility. They shall be conducted by a person with recognized expertise in botany or plant ecology hired by the project applicant. Field surveys shall identify the precise location of the sensitive plants and delineate a 200-foot buffer zone. The results of a field survey shall be shown on the site plan map.

Finding: Not applicable. The project does not fall into these categories.

Approval Criteria For Review Uses Near Sensitive Plants

1. Uses that are proposed within 1,000 feet of a sensitive plant shall be reviewed by the Oregon or Washington Natural Heritage Program. The approximate locations of sensitive plants are shown in the rare plant species inventory. State heritage staffs will help determine if a new use would invade the buffer zone of sensitive plants.

Finding: Some project activities are within 1000 feet of introduced populations of two rare plant species planted by the USFWS. These guidelines apply. Based on state and federal data and on the information submitted by the applicant, there are no other rare plants known to be within 1000 feet of the project area. 2. The local government shall submit site plans to the state heritage program. The state heritage staffs will review the site plan and their field survey records. They will identify the precise location of the affected plants and delineate a 200-foot buffer zone on the project applicant's site plan. If the field survey records of the state heritage program are inadequate, the project applicant shall hire a person with recognized expertise in botany or plant ecology to ascertain the precise location of the affected plants.

Finding: The applicant consulted with the relevant federal and state agencies, and delineated a 200-foot buffer zone for known rare plant sites.

3. The rare plant protection process may conclude if the local government, in consultation with the state heritage program, determines that the proposed use would be located outside of a sensitive plant buffer zone.

Finding: The applications states that the Nelson's checkermallow site within the project activity area would be fenced to prohibit any project activities from entering the buffer. Fenced as described, there would be no activities within the sensitive plant buffer zone. 4. New uses shall be prohibited within sensitive plant species buffer zones, except for those uses that are allowed outright.

Finding: No new uses are proposed within the rare plant buffer.

5. If a proposed use must be allowed within a sensitive plant buffer zone in accordance with the provisions in "Variances for Setbacks and Buffers" in Part II, Chapter 7: General Policies and Guidelines, the project applicant shall prepare a protection and rehabilitation plan that complies with the guidelines in "Protection and Rehabilitation Plans" in this section.

Finding: Not applicable.

6. The local government shall submit a copy of all field surveys and protection and rehabilitation plans to the Oregon or Washington Natural Heritage Program. The state heritage program will have 20 days from the date that a field survey is mailed to submit written comments to the local government. The local government shall record and address any written comments submitted by the state heritage program in its development review order.

Based on the comments from the state heritage program, the local government will make a final decision on whether the proposed use would be consistent with the rare plant policies and guidelines. If the final decision contradicts the comments submitted by the state heritage program, the local government shall justify how it reached an opposing conclusion.

Finding: There are three ESA-listed plant species that historically may have occurred in the project area: Bradshaw's lomatium (*Lomatium bradshawii*), golden paintbrush (*Castilleja levisecta*), and Nelson's checkermallow (*Sidalcea nelsoniana*). Of the three, only Bradshaw's lomatium is believed to have occurred naturally within the project boundary, however, there are no known populations on the project site.

Both golden paintbrush and Nelson's checkermallow were introduced by the USFWS as experimental populations on the Refuge. The golden paintbrush locations and one of the Nelson's checkermallow locations are not within 1000 feet of the project or within the area of influence of the changed hydrology after project completion.

Planting locations of Nelson's checkermallow that are within 200 feet of project activities will be fenced off during construction to prevent construction impacts.

With the change in hydrologic regime after the project is completed, Columbia River flows entering the Refuge will periodically inundate locations where the USFWS previously planted experimental populations of Nelson's checkermallow. To compensate for the potential of loss of the experimental populations of Nelson's checkermallow, the Refuge proposes to replace the plants that are likely to be affected. Beginning in 2016 the Refuge began seed collection from mature specimens and began propagation at their nursery. Although they expect that only 113 individual plants would be impacted, 350 new plugs will be replanted north of SR 14 to account for any initial plant out losses.

Sensitive Plant Buffer Zones

1. A 200-foot buffer zone shall be maintained around sensitive plants. Buffer zones shall remain in an undisturbed, natural condition.

Finding: A 200-foot buffer zone has been identified for an experimentally plnated population of Nelson;s checkermallow. This buffer zone will be fenced off during project activities and will remain undisturbed.

2. Buffer zones may be reduced if a project applicant demonstrates that intervening topography, vegetation, manmade features, or natural plant habitat boundaries negate the need for a 200-foot radius. Under no circumstances shall the buffer zone be less than 25 feet.

Finding: No request was made to reduce any sensitive plant buffer zone. Guidelines 3 and 4 do not apply.

PROTECTION AND REHABILITATION PLANS

1. Protection and rehabilitation plans shall minimize and offset unavoidable impacts that result from a new use that occurs within a sensitive plant buffer zone as the result of a variance. All plans shall meet the following guidelines:

A. Protection and rehabilitation plans shall be prepared by a professional botanist or plant ecologist hired by the project applicant.

B. Construction, protection, and rehabilitation activities shall occur during the time of year when ground disturbance will be minimized and protection, rehabilitation, and replacement efforts will be maximized.

C. Sensitive plants that will be destroyed shall be transplanted or replaced, to the maximum extent practicable. Replacement is used here to mean the establishment of a particular plant species in areas of suitable habitat not affected by new uses. Replacement may be accomplished by seeds, cuttings, or other appropriate methods. Replacement shall occur as close to the original plant site as practicable. The project applicant shall ensure that at least 75 percent of the replacement plants survive 3 years after the date they are planted.

D. Sensitive plants and their surrounding habitat that will not be altered or destroyed shall be protected and maintained. Appropriate protection and maintenance techniques shall be applied, such as fencing, conservation buffers, livestock management, and noxious weed control.

E. Habitat of a sensitive plant that will be affected by temporary uses shall be rehabilitated to a natural condition.

F. Protection efforts shall be implemented before construction activities begin. Rehabilitation efforts shall be implemented immediately after the plants and their surrounding habitat are disturbed.

Finding: With the change in hydrologic regime after the project is completed, Columbia River flows entering the Refuge will periodically inundate locations where the USFWS previously planted experimental populations of Nelson's checkermallow. To compensate for the potential of loss of the experimental populations of Nelson's checkermallow, the Refuge proposes to replace the plants that are likely to be affected. Beginning in 2016 the Refuge began seed collection from mature specimens and began propagation at their nursery. Although they expect that only 113 individual plants would be impacted, 350 new plugs will be replanted north of SR 14 to account for any initial plant out losses.

Recommended condition of approval:

To compensate for the potential of loss of the experimental populations of Nelson's checkermallow by periodic inundation adter the project is complete, new plantings will be installed outside of the area that will be periodically inundated.

2. Protection and rehabilitation plans shall include maps, photographs, and text. The text shall:

A. Describe the biology of sensitive plant species that will be affected by a proposed use.

B. Explain the techniques that will be used to protect sensitive plants and their surrounding habitat that will not be altered or destroyed.

C. Describe the rehabilitation and enhancement actions that will minimize and offset the impacts that will result from a proposed use.

D. Include a 3-year monitoring, maintenance, and replacement program. The project applicant shall prepare and submit to the local government an annual report that documents milestones, successes, problems, and contingency actions.

Finding: The proposed mitigation plan for the Nelson's checkermallow sites that will be periodically inundated meets these guidelines. The refuge has an existing annual management and monitoring effort. Plant biology, protection measures and action to minimize impacts are described in appendix K, ESA biological evaluation.

G. Recreation Resources

The Management Plan, Part I, Chapter 4 (Recreation Resources), GMA Guidelines, Allowable Uses, states:

The following uses are allowable, subject to compliance with the "Approval Criteria for Recreation Uses" and "Facility Design Guidelines For All Recreation Projects" in this section.

1. Recreation Intensity Class 1 (Very Low Intensity)

A. Parking areas for a maximum of 10 cars for any allowed uses in Recreation Intensity Class 1.
B. Trails for hiking, equestrian, and mountain biking use.
C. Pathways for pedestrian and bicycling use.
D. Trailheads (with provisions for hitching rails and equestrian trailers at trailheads accommodating equestrian use).
E. Scenic viewpoints and overlooks.
F. Wildlife/botanical viewing and nature study areas.
G. River access areas.
H. Simple interpretive signs and/or displays, not to exceed a total of 50 square feet.
I. Entry name signs, not to exceed 10 square feet per sign.
J. Boat docks, piers, or wharfs.

K. Picnic areas.
L. Restrooms/comfort facilities.

2. Recreation Intensity Class 2 (Low Intensity)

A. All uses permitted in Recreation Intensity Class 1.
B. Parking areas for a maximum of 25 cars, to serve any allowed uses in Recreation Intensity Class 2. Parking spaces for campground units are to be included in this number.
C. Simple interpretive signs and displays, not to exceed a total of 100 square feet.
D. Entry name signs, not to exceed 20 square feet per sign.
E. Boat ramps, not to exceed two lanes. F. Campgrounds for 20 units or less, tent sites only.

3. Recreation Intensity Class 3 (Moderate Intensity)

A. All uses permitted in Recreation Intensity Classes 1 and 2.
B. Parking areas for a maximum of 75 cars, to serve any allowed uses in Recreation Intensity Class 3. Parking spaces for campground units are to be included in this number.
C. Interpretive signs, displays and/or facilities.
D. Visitor information and environmental education signs, displays, or facilities.
E. Entry name signs, not to exceed 32 square feet per sign.
F. Boat ramps, not to exceed three lanes.
G. Concessions stands, pursuant to applicable policies in this chapter
H. Campgrounds for 50 individual units or less, for tents and/or recreational vehicles, with a total density of no more than 10 units per acre (density to be measured based on total size of recreation facility and may include required buffer and setback areas). Class 3 campgrounds may also include one group campsite area, in addition to the allowed individual campground units or parking area maximums.

4. Recreation Intensity Class 4 (High Intensity)

A. All uses permitted in Recreation Intensity Classes 1, 2, and 3
B. Parking areas for a maximum of 250 cars, to serve any allowed uses in Recreation Intensity Class 4. Parking spaces for campground units are to be included in this number.
C. Horseback riding stables and associated facilities.
D. Entry name signs, not to exceed 40 square feet per sign.
E. Boat ramps.
F. Campgrounds for 175 individual units or less, for tents and/or recreational vehicles, with a total density of no more than 10 units per acre (density to be measured based on total size of recreation facility and may include required buffer and setback areas). Class 4 campgrounds may also include up to three group campsite areas, in addition to allowed individual campsite units or parking area maximums.

Finding: Most lands within the project area are designated RIC Class 1 (Very low Intensity). Proposed trail development (0.9-mile extension of the Columbia River Dike Trail) and reconstruction of two scenic overlooks are allowable uses on lands designated as RIC 1.

A small portion of the project area (NW corner where existing parking lot is located) is designated RIC Class 3 (Moderate Intensity). No new development is proposed on lands designated RIC Class 3. There will be a reduction in development as the proposal is to move the existing parking area adjacent, and outside of the CRGNSA boundary.

Within lands designated RIC Class 1, interpretive signs and/or displays are not to exceed a total of 50 square feet. The guidelines are met.

Approval Criteria For Recreation Uses

1. For all proposed recreation projects outside of Public or Commercial Recreation designations, project applicants shall demonstrate compliance with the following criteria (if applicable) as a condition of project approval:

A. Compliance with all applicable guidelines in this Management Plan for the protection of scenic, cultural, recreation, and natural resources. Cumulative effects of proposed recreation projects on landscape settings shall be based on the "Compatible Recreation Use Guideline" for the landscape setting in which the proposed project is located (see Part I, Chapter 1: Scenic Resources).

Finding: The finding of fact outlines compliance with all applicable guidelines for the protection of scenic, cultural, recreation and natural resources. Compatible recreation use guidelines for the River Bottomlands landscape setting depend on the degree of natural resource sensitivity of the particular site (Page I-1-27). Compatible recreation use guidelines for the Pastoral landscape setting are recreation uses of very low or low intensity (Page I-1-15) and impacts to scenic resources are described in the findings above. The proposed developments occur in Recreation Intensity Class 1 and 2, which allows for trail development and use

B. For proposed recreation projects in or adjacent to lands designated Large-Scale or Small-Scale Agriculture, Commercial Forest Land, or Large or Small Woodland, compliance with the following:

(1) The use would not seriously interfere with accepted forest or agricultural practices on surrounding lands devoted to forest or farm uses. Provision of onsite buffers may be used to partially or fully comply with this criterion, depending upon project design and/or site conditions.

(2) A declaration has been signed by the project applicant or owner and recorded with county deeds and records specifying that the applicant or owner is aware that operators are entitled to carry on accepted forest or farm practices on lands designated Large-Scale or Small-Scale Agriculture, Commercial Forest Land, or Large or Small Woodland.

Finding: A portion of the proposed multi-use trail (located in eastern half of project area) would occur on lands designated Large Scale Agriculture. All proposed recreation improvements will be located on lands owned and managed by the USFWS and will not interfere with accepted forest or agricultural practices on surrounding lands devoted to farm or farm uses.

C. For proposed projects including facilities for outdoor fires for cooking or other purposes, or for proposed campgrounds, compliance with the following:

(1) The project applicant shall demonstrate that a sufficient quantity of water necessary for fire suppression (as determined pursuant to applicable fire codes or the county fire marshall) is readily available to the proposed facility, either through connection to a community water system or onsite wells, storage tanks, sumps, ponds or similar storage devices. If connection to a community water system is proposed, the project applicant shall demonstrate that the water system has adequate capacity to meet the facility's emergency fire suppression needs without adversely affecting the remainder of the water system with respect to fire suppression capabilities.

(2) To provide access for firefighting equipment, access drives shall be constructed to a minimum of 12 feet in width and a maximum grade of 12 percent. Access drives shall be maintained to a level that is passable to firefighting equipment.

Finding: This guideline is not applicable.

D. For proposed trail or trailhead projects, compliance with applicable trails policies in the Management Plan.

Finding: Proposal meets guideline. GMA objectives for trails and pathways include 1) providing trails that link urban areas to recreational opportunities, 2) establishing trail systems along the Columbia River, and 3) increasing trail opportunities on the WA side of the Scenic Area (Page I-4-10). The proposed trail system will improve recreational opportunities near the community of Washougal, WA and encourage shared use by compatible multiple-use groups.

E. For proposed projects providing boating or windsurfing access to the Columbia River or its tributaries, compliance with applicable "River Access and Protection of Treaty Rights" objectives in this chapter.

Finding: This guideline is not applicable.

F. For proposed projects on public lands or proposed projects providing access to the Columbia River or its tributaries, compliance with guidelines for protection of tribal treaty rights in Part IV, Chapter 3: Indian Treaty Rights and Consultation.

Finding: This project will comply with all federal laws and regulations as identified through the environmental assessment, including treaty rights. This assessment also included a review of the completed consultation with treaty tribes.

G. For proposed projects that include interpretation of natural or cultural resources, demonstration that the interpretive facilities will not adversely affect natural or cultural

resources and that appropriate and necessary resource protection measures shall be employed.

Finding: All proposals have been reviewed for consistency with the natural and cultural resources and have included resource protection measures to protect and enhance applicable resources.

H. For proposed Recreation Intensity Class 4 projects (except for projects predominantly devoted to boat access), demonstration that the project accommodates provision of mass transportation access to the site. The number and size of the mass transportation facilities shall reflect the physical capacity of the site. This requirement may be waived upon a demonstration that providing such facilities would result in overuse of the site, either degrading the quality of the recreation experience or adversely affecting other resources at the site.

Finding: Not applicable. Proposed activities will occur on lands designated Recreation Intensity Class 1 and Recreation Intensity Class 3.

Facility Design Guidelines For All Recreation Projects

Finding: Facility design Guidelines are not applicable. There are no proposed recreational facilities within the CRGNSA. The proposed facilities will be located outside of the National Scenic Area on lands owned by the Port of Camas – Washougal.

H. Conclusion

The proposed resource enhancement project to restore floodplain habitat and natural riverine processes within the Steigerwald Lake National Wildlife Refuge and surrounding properties are consistent with the National Scenic Area Management Plan Policy and Guidelines provided they meet the criteria and conditions listed in the Findings of Fact and Consistency Determination.

MEMORANDUM OF AGREEMENT
BETWEEN BONNEVILLE POWER ADMINISTRATION
AND
THE WASHINGTON STATE HISTORIC PRESERVATION OFFICER
REGARDING THE STEIGERWALD RESTORATION PROJECT IN CLARK COUNTY, WASHINGTON

WHEREAS, the Bonneville Power Administration (BPA) is proposing to fund the Steigerwald Restoration Project of the Lower Columbia Estuary Partnership to restore approximately 1,000 acres of historic Columbia River floodplain in Clark County, Washington (the Undertaking). The Undertaking includes the removal of a segment of the Columbia River Levee; and

WHEREAS, BPA determined Columbia River Levee is eligible for listing in the National Register of Historic Places and the Washington State Historic Preservation Officer (SHPO) concurred; and

WHEREAS, BPA determined that the Undertaking will have an adverse effect on a historic property and SHPO concurred; and

WHEREAS, BPA consulted with the SHPO in accordance with Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations (36 CFR 800) to resolve adverse effects of the Undertaking on historic property; and

WHEREAS, BPA has consulted with the : the Port of Camas-Washougal, the Confederated Tribes and Bands of the Yakama Nation, Confederated Tribes of the Umatilla Indian Reservation, Nez Perce Tribe, Confederated Tribes of the Warm Springs Reservation of Oregon, Cowlitz Indian Tribe, the Confederated Tribes of the Grande Ronde, the US Corps of Engineers, the US Fish and Wildlife Service (USFWS), and the Columbia Gorge National Scenic Area and has provided an opportunity to sign this agreement as concurring parties and they have declined to participate in the consultation; and

WHEREAS, the U.S. Army Corps of Engineers, Portland District (USACE) will evaluate a permit application for the Undertaking for the alteration of a Civil Works project (33 USC § 408) and the issuance of a permit under that statute will be a federal action associated with the Undertaking that requires compliance with Section 106 of the NHPA, and USACE has designated the BPA to serve as lead federal agency for Section 106 of the NHPA compliance pursuant to 36 CFR 800, and USACE is an Invited Signatory to this MOA;

WHEREAS, in accordance with 36 CFR 800.6(a)(1), BPA has notified the Advisory Council on Historic Preservation (Council) of its adverse effect determination with specified documentation and the Council has chosen not to participate in the consultation.

NOW, THERFORE, BPA and the SHPO agree that upon BPA's decision to proceed with the Undertaking, BPA will ensure that the following stipulations are implemented to resolve the adverse effects of the Undertaking and that these stipulations shall govern the Undertaking and all of its parts until this Memorandum of Agreement (Agreement) expires or is terminated.

STIPULATIONS

BPA shall ensure that the following measures are carried out:

I. PROFESSIONAL QUALIFICATION
BPA will use Federal, contract staff, or contractors who meet the Secretary of Interior's Professional Qualification Standards in the required disciplines, in ensuring compliance with this agreement.

II. BPA shall complete a Multiple Property Documentation (MPD) form concerning levees along the tidally influenced portions of the Columbia River and its tributaries. The final document shall conform to the format and requirements for completing the MPD as defined in the National Register Bulletin: How to Complete the National Register Multiple Property Documentation Form (https://www.nps.gov/nr/publications/bulletins/pdfs/nrb16b.pdf). The document shall be completed by a person(s) meeting the Professional Qualifications Standards as found in 36 CFR Part 61 in the Architectural Historian or Historian areas of expertise. BPA shall afford the SHPO to review and comment on at least one draft of levee MPD before acceptance and scheduling for review by the State Washington State Advisory Council on Historic Preservation.

III. BPA shall create one full color public interpretive panel. At least one draft of the panel's layout and content will be provided to DAHP for review and comment, prior to fabrication. DAHP will provide comment within 30 days of receipt of the draft interpretive panel materials. Once DAHP has approved the draft, or, if no comments are received, BPA will move forward with installation of the panel.

a. BPA shall ensure that the interpretive panel discusses the historic context and significance of the Columbia River Levee.
b. BPA shall ensure that the sign is installed in a publicly access location that offers a visual perspective of the levee and that has been cleared as having no effect on archaeological resources.

IV. **INADVERTENT DISCOVERIES**
In the event that previously unidentified archaeological resources are discovered during implementation of the Undertaking, the procedures outlined in BPA's Inadvertent Discovery of Cultural Resources Procedure, Appendix A, shall be followed.

V. **DURATION**
This Agreement will remain in effect for five years from the date of its execution. If the terms of this Agreement are not completely fulfilled within those five years, BPA may seek annual extensions with the Agreement of the signatory parties, which may be evidenced by electronic communication or other written agreement.

VI. **DISPUTE RESOLUTION**
Should any signatory to this Agreement object at any time to any actions proposed or the manner in which the terms of this Agreement are implemented, BPA shall consult with such party within 30 days of notification to resolve the objection. If BPA determines that such objection cannot be resolved, BPA will:

A. Forward all documentation relevant to the dispute, including the BPA's proposed resolution, to the Council. The Council shall provide BPA with its advice on the resolution of the objection within 30 days of receiving adequate documentation. Within 30 days of receipt of advice or comment from Council, BPA shall prepare a document that considers all advice and comments from the Council, signatories and concurring parties and includes BPA's final decision. BPA may then proceed according to its final decision.

B. If the Council does not provide its advice regarding the dispute within the 30 day time period, BPA may make a final decision on the dispute and proceed accordingly. Prior to reaching such a final decision, BPA shall prepare a written response that takes into account any timely comments regarding the dispute from the signatories to this Agreement, and provide them and the Council with a copy of such written response.

C. BPA will carry out all other actions subject to the terms of this Agreement that are not the subject of the dispute and remain unchanged.

IX. AMENDMENTS

This Agreement may be amended when agreed to in writing by both signatories. Any signatory wishing to amend this Agreement must submit the text of the proposed amendment in writing to all signatories. Signatories shall have 30 days to either agree to the amendment in writing or provide written comments describing their objections to the amendment. The amendment will be effective on the date of the final signature on the amendment.

X. TERMINATION

If either signatory to this Agreement determines that its terms will not or cannot be carried out, that party shall immediately consult with the other party to attempt to develop an amendment per stipulation X, above. If within 30 days the parties have not agreed to an amendment, either signatory may terminate the Agreement upon written notification to the other signatory.

XI. EXECUTION

Execution of the Agreement by BPA and SHPO and the implementation of its stipulations constitute evidence that BPA has taken into account the effects of the Undertaking on historic properties, as required by Section 106 of the NHPA, and documented the historic properties as required by Section 110 of the NHPA.

MEMORANDUM OF AGREEMENT **REGARDING THE STEIGERWALD RESTORATION PROJECT**

Signatories:

Bonneville Power Administration

Date: 9/24/18

Peter T. Cogswell
Vice-President, Environment, Fish and Wildlife, Acting

MEMORANDUM OF AGREEMENT **REGARDING THE STEIGERWALD RESTORATION PROJECT**

Washington Department of Archaeology and Historic Preservation

By:_____ Date: 9/21/18

Allyson Brooks, Ph.D.
State Historic Preservation Officer

HYDRAULIC PROJECT APPROVAL

Washington Department of
Fish & Wildlife
PO Box 43234
Olympia, WA 98504-3234
(360) 902-2200

Issued Date: January 17, 2019
Project End Date: January 16, 2024

Permit Number: 2019-5-8+01
FPA/Public Notice Number: N/A
Application ID: 16699

PERMITTEE	AUTHORIZED AGENT OR CONTRACTOR
Lower Columbia Estuary Partnership	Wolf Water Resources
ATTENTION: Debrah Marriott	ATTENTION: Darlene Siegel
811 SW Naito Pkwy #410	1001 SE Water Ave, Ste 180
Portland, OR 97204	Portland, OR 97214

Project Name: Steigerwald Floodpain Restoration Project

Project Description: The Lower Columbia Estuary Partnership (Estuary Partnership) proposes to implement floodplain restoration actions at the Steigerwald National Wildlife Refuge, and neighboring properties. The site includes over 1,000 acres of floodplain and wetland habitat. The Columbia River forms the southern boundary of the site.

Floodplain restoration will be achieved by removing the FDR levee within the project boundary and excavating connection channels between the Refuge and the river. Wetland areas within the floodplain will be re-created restore aquatic habitat. Other project measures include placing woody debris in floodplain channels to enhance aquatic habitat. The trail system along the remnant levee will be reconfigured and will include two pedestrian bridge crossings along the primary connection channels. Wetlands and riparian areas within the project area will be revegetated with native plant species and invasive species will be removed, where practicable.

New (setback) levees will be constructed at the east and west extents of the project to maintain flood protection for the Port and other adjacent properties and infrastructure. Material excavated from the existing levee, channel excavation, and wetland re-creation areas will be used as fill for the construction of the setback levees, as deemed suitable. Additional cut material will be graded within the refuge to expand upland habitat. Overall, the project will balance excavation and fill on site.

Gibbons Creek and its alluvial fan will be restored through the removal of the diversion structure, the elevated canal, and the culvert and fish ladder at the downstream end of the creek.

PROVISIONS

TIMING - PLANS - INVASIVE SPECIES CONTROL

1. TIMING LIMITATION: Work below the ordinary high water line must only occur between June 1st and October 15th of calendar years 2019, 2020, 2021, 2022, 2023, and 2024. Work above the ordinary high water line may occur any time during the term of this permit. Fish passage must be restored no later than October 1st of each year construction activities occur below the ordinary high water line.

2. RE-VEGETATION: You must complete re-vegetation by no later than November March 30, 2022, and you must monitor the success of the re-vegetation through January 16, 2024.

3. APPROVED PLANS: You must accomplish the work per all plans and specifications submitted with the application and approved by the Washington Department of Fish and Wildlife, entitled except as modified by this Hydraulic Project

Approval. You must have a copy of these plans available on site during all phases of the project construction.

4. INVASIVE SPECIES CONTROL: Follow Level 1 Decontamination protocol for low risk locations. Thoroughly remove visible dirt and organic debris from all equipment and gear (including drive mechanisms, wheels, tires, tracks, buckets and undercarriage) before arriving and leaving the job site to prevent the transport and introduction of invasive species. Properly dispose of any water and chemicals used to clean gear and equipment. For contaminated or high risk sites please refer to the Level 2 Decontamination protocol. You can find this and additional information in the Washington Department of Fish and Wildlife's "Invasive Species Management Protocols", available online at http://wdfw.wa.gov/publications/search.php?Cat=Aquatic Invasive Species.

NOTIFICATION REQUIREMENTS

5. PRE-, DURING, AND POST-CONSTRUCTION NOTIFICATION: You, your agent, or contractor must contact the Washington Department of Fish and Wildlife by e-mail at HPAapplications@dfw.wa.gov; mail to Post Office Box 43234, Olympia, Washington 98504-3234; or fax to (360) 902-2946 at least three business days before starting work, one day before removing the temporary bypass and again within seven days after completing the work. The notification must include the permittee's name, project location, starting date for work or date the work was completed, and the permit number. The Washington Department of Fish and Wildlife may conduct inspections during and after construction; however, the Washington Department of Fish and Wildlife will notify you or your agent before conducting the inspection.

6. FISH KILL/ WATER QUALITY PROBLEM NOTIFICATION: If a fish kill occurs or fish are observed in distress at the job site, immediately stop all activities causing harm. Immediately notify the Washington Department of Fish and Wildlife of the problem. If the likely cause of the fish kill or fish distress is related to water quality, also notify the Washington Military Department Emergency Management Division at 1-800-258-5990. Activities related to the fish kill or fish distress must not resume until the Washington Department of Fish and Wildlife gives approval. The Washington Department of Fish and Wildlife may require additional measures to mitigate impacts.

STAGING, JOB SITE ACCESS, AND EQUIPMENT

7. Establish staging areas (used for equipment storage, vehicle storage, fueling, servicing, and hazardous material storage) in a location and manner that will prevent contaminants such as petroleum products, hydraulic fluid, fresh concrete, sediments, sediment-laden water, chemicals, or any other toxic or harmful materials from entering waters of the state.

8. Design and locate new temporary access roads to prevent erosion and sediment delivery to waters of the state.

9. Clearly mark boundaries to establish the limit of work associated with site access and construction.

10. Remove soil or debris from the drive mechanisms (wheels, tires, tracks, etc.) and undercarriage of equipment prior to operating the equipment waterward of the ordinary high water line.

11. If wet or muddy conditions exist, in or near a riparian zone or wetland area, use equipment that reduces ground pressure.

12. Check equipment daily for leaks and complete any required repairs in an upland location before using the equipment in or near the water.

13. Use environmentally acceptable lubricants composed of biodegradable base oils such as vegetable oils, synthetic esters, and polyalkylene glycols in equipment operated in or near the water.

IN-WATER WORK AREA ISOLATION USING BLOCK NETS

14. Isolate fish from the work area by using block nets.

15. Install block nets at an angle to the direction of flow (not perpendicular to the flow) to avoid entrapping fish in the nets.

16. Install a downstream block net if fish may reenter the work area from downstream.

17. To anchor block nets, place bags filled with clean round gravel along the bottom of the nets.

18. Secure block nets along both banks and the channel bottom to prevent failure from debris accumulation, high flows, and/or flanking.

19. To keep fish out of the job site, leave block nets in place until the work is complete and conditions are suitable for fish.

IN-WATER WORK AREA ISOLATION USING A COFFERDAM STRUCTURE

20. Use a cofferdam, dike, or similar structure to exclude water from the work area.

21. Maintain water quality when installing and removing the cofferdam, dike or similar structure.

22. Install the cofferdam, dike or similar structure and remove fish prior to the start of other work in the wetted perimeter.

23. Sequence the work to minimize the duration of dewatering.

FISH LIFE REMOVAL

24. All persons participating in capture and removal must have training, knowledge, and skills in the safe handling of fish life.

25. A person with electrofishing training must be on-site to conduct or direct all electrofishing activities.

26. If personnel are available, the Washington Department of Fish and Wildlife and affected tribes may help capture and move fish life from the job site.

27. Place block nets upstream and downstream of the in-water work area before capturing and removing fish life.

28. Capture and safely move fish life from the work area to the nearest suitable free-flowing water.

29. All persons removing fish life from a job site must follow the protocol outlined on Sheet G1.4 of the design set submitted with the application.

30. Detailed protocol for the salvage of lamprey ammocoetes will be submitted to the WDFW for approval before construction operations begin.

CHANNEL RELOCATION AND REALIGNMENT

31. During construction, isolate the new channel from the flowing watercourse.

32. Before water is diverted into a permanent new channel(s), install approved habitat components and bed and bank protection materials to prevent erosion as shown in the approved plan.

33. Use fir, cedar, or other coniferous species (except as noted in the plans) to construct log or rootwad fish habitat structure(s).

34. Place the fish habitat structures in the low flow channel.

35. Size streambed material to mimic the gradation found in nearby reference channel reaches. The material must be well-graded (includes all size classes), non-porous, with 5-10% fines with sieve size U.S. No. 200 to prevent subsurface flow. Create a low-flow channel and a high-flow bench on both sides of the channel. Angular rock is not permitted within the channel.

36. The Habitat Biologist listed below or their representative must inspect and approve the new channel before the stream is diverted into the channel.

37. Diverting the flow into the new channel:
a. First remove the downstream plug.
b. Face the stream side of the plug with a sandbag or similar device.
c. Partially remove the upstream plug to allow 1/3 to 1/2 of the flow into the new channel for a minimum of 10 hours.

Do not allow the old channel to dewater.
d. Remove the remainder of the upstream plug if the new channel has flow throughout the entire length.
e. Close the upstream end of the old channel and securely armor the entrance of the old channel to prevent re-entry of any flow. Armor material must consist of clean, angular rock installed to withstand the ADD TEXT HERE – year peak flow.

LARGE WOODY MATERIAL

38. When placing, repositioning, or removing large woody material, station equipment on the bank.

39. When you cannot suspend large woody material above the bed and banks, use skid logs or similar methods to avoid bank damage. Avoid damage to stream banks and vegetation when removing skid logs after completing the yarding operation, and restore the bank to preproject condition.

DEMOBILIZATION AND CLEANUP

40. Before the end of the in-water work period specified in the “timing limitations” provision, abandon temporary roads in wet or flood-prone areas.

41. Upon completion of the project, restore the disturbed bed, banks, and riparian zone to preproject condition to the extent possible.

42. To prevent fish from stranding, backfill trenches, depressions, and holes in the bed that may entrain fish during high water or wave action.

43. To minimize sediment delivery to the stream or stream channel, do not return in-stream flows to the work area until all in-channel work is completed and the bed and banks are stabilized.

44. Seed areas disturbed by construction activities with a native seed mix suitable for the site that has at least one quick-establishing plant species, unless the use of quick establishment seeds are not consistent with the Gorge National Scenic Area direction.

45. Replant the job site with the plant species composition and planting densities as provided in the revegetation Plan (Design Sheets L5.*) submitted with the application.

46. Complete replanting of riparian vegetation during the first dormant season (late fall through late winter) after project completion per the approved plan. Maintain plantings for at least three years to ensure at least eighty percent of the plantings survive. Failure to achieve the eighty percent survival in year three will require you to submit a plan with follow-up measures to achieve requirements or reasons to modify requirements.

47. Upon completion of the project, remove all materials or equipment from the site and dispose of all excess spoils and waste materials in an upland area above the limits of anticipated floodwater.

48. Return water flow slowly to the in-water work area to prevent the downstream release of sediment laden water. If necessary, install silt fencing above the bypass outlet to capture sediment during re-watering of the channel.

49. Remove temporary erosion and sediment control methods after job site is stabilized or within three months of project completion, whichever is sooner.

LOCATION #1:	Site Name: Gibbons Creek and Columbia River , Washougal, WA 98671		
WORK START:	January 17, 2019	WORK END:	January 16, 2024
WRIA	Waterbody:		Tributary to:
28 - Salmon - Washougal	Columbia River		Pacific Ocean

HYDRAULIC PROJECT APPROVAL

Washington Department of
Fish & Wildlife
PO Box 43234
Olympia, WA 98504-3234
(360) 902-2200

Issued Date: January 17, 2019
Project End Date: January 16, 2024

Permit Number: 2019-5-8+01
FPA/Public Notice Number: N/A
Application ID: 16699

1/4 SEC:	Section:	Township:	Range:	Latitude:	Longitude:	County:
	15	01 N	04 E	45.5653	-122.30359	Clark
Location #1 Driving Directions						
Take State Highway 14 East from Washougal, for 2.1 miles to the Steigerwald Lake National Wildlife Refuge.						

APPLY TO ALL HYDRAULIC PROJECT APPROVALS

This Hydraulic Project Approval pertains only to those requirements of the Washington State Hydraulic Code, specifically Chapter 77.55 RCW. Additional authorization from other public agencies may be necessary for this project. The person(s) to whom this Hydraulic Project Approval is issued is responsible for applying for and obtaining any additional authorization from other public agencies (local, state and/or federal) that may be necessary for this project.

This Hydraulic Project Approval shall be available on the job site at all times and all its provisions followed by the person (s) to whom this Hydraulic Project Approval is issued and operator(s) performing the work.

This Hydraulic Project Approval does not authorize trespass.

The person(s) to whom this Hydraulic Project Approval is issued and operator(s) performing the work may be held liable for any loss or damage to fish life or fish habitat that results from failure to comply with the provisions of this Hydraulic Project Approval.

Failure to comply with the provisions of this Hydraulic Project Approval could result in a civil penalty of up to one hundred dollars per day and/or a gross misdemeanor charge, possibly punishable by fine and/or imprisonment.

All Hydraulic Project Approvals issued under RCW 77.55.021 are subject to additional restrictions, conditions, or revocation if the Department of Fish and Wildlife determines that changed conditions require such action. The person(s) to whom this Hydraulic Project Approval is issued has the right to appeal those decisions. Procedures for filing appeals are listed below.

HYDRAULIC PROJECT APPROVAL

Issued Date: January 17, 2019
Project End Date: January 16, 2024
Permit Number: 2019-5-8+01
FPA/Public Notice Number: N/A
Application ID: 16699

MINOR MODIFICATIONS TO THIS HPA: You may request approval of minor modifications to the required work timing or to the plans and specifications approved in this HPA unless this is a General HPA. If this is a General HPA you must use the Major Modification process described below. Any approved minor modification will require issuance of a letter documenting the approval. A minor modification to the required work timing means any change to the work start or end dates of the current work season to enable project or work phase completion. Minor modifications will be approved only if spawning or incubating fish are not present within the vicinity of the project. You may request subsequent minor modifications to the required work timing. A minor modification of the plans and specifications means any changes in the materials, characteristics or construction of your project that does not alter the project's impact to fish life or habitat and does not require a change in the provisions of the HPA to mitigate the impacts of the modification. If you originally applied for your HPA through the online Aquatic Protection Permitting System (APPS), you may request a minor modification through APPS. A link to APPS is at http://wdfw.wa.gov/licensing/hpa/. If you did not use APPS you must submit a written request that clearly indicates you are seeking a minor modification to an existing HPA. Written requests must include the name of the applicant, the name of the authorized agent if one is acting for the applicant, the APP ID number of the HPA, the date issued, the permitting biologist, the requested changes to the HPA, the reason for the requested change, the date of the request, and the requestor's signature. Send by mail to: Washington Department of Fish and Wildlife, PO Box 43234, Olympia, Washington 98504-3234, or by email to HPAapplications@dfw.wa.gov. You should allow up to 45 days for the department to process your request.

MAJOR MODIFICATIONS TO THIS HPA: You may request approval of major modifications to any aspect of your HPA. Any approved change other than a minor modification to your HPA will require issuance of a new HPA. If you originally applied for your HPA through the online Aquatic Protection Permitting System (APPS), you may request a major modification through APPS. A link to APPS is at http://wdfw.wa.gov/licensing/hpa/. If you did not use APPS you must submit a written request that clearly indicates you are requesting a major modification to an existing HPA. Written requests must include the name of the applicant, the name of the authorized agent if one is acting for the applicant, the APP ID number of the HPA, the date issued, the permitting biologist, the requested changes to the HPA, the reason for the requested change, the date of the request, and the requestor's signature. Send your written request by mail to: Washington Department of Fish and Wildlife, PO Box 43234, Olympia, Washington 98504-3234. You may email your request for a major modification to HPAapplications@dfw.wa.gov. You should allow up to 45 days for the department to process your request.

APPEALS INFORMATION

If you wish to appeal the issuance, denial, conditioning, or modification of a Hydraulic Project Approval (HPA), Washington Department of Fish and Wildlife (WDFW) recommends that you first contact the department employee who issued or denied the HPA to discuss your concerns. Such a discussion may resolve your concerns without the need for further appeal action. If you proceed with an appeal, you may request an informal or formal appeal. WDFW encourages you to take advantage of the informal appeal process before initiating a formal appeal. The informal appeal process includes a review by department management of the HPA or denial and often resolves issues faster and with less legal complexity than the formal appeal process. If the informal appeal process does not resolve your concerns, you may advance your appeal to the formal process. You may contact the HPA Appeals Coordinator at (360) 902-2534 for more information.

A. INFORMAL APPEALS: WAC 220-660-460 is the rule describing how to request an informal appeal of WDFW actions taken under Chapter 77.55 RCW. Please refer to that rule for complete informal appeal procedures. The following information summarizes that rule.

Washington Department of
Fish & Wildlife
PO Box 43234
Olympia, WA 98504-3234
(360) 902-2200

HYDRAULIC PROJECT APPROVAL

Issued Date: January 17, 2019
Project End Date: January 16, 2024

Permit Number: 2019-5-8+01
FPA/Public Notice Number: N/A
Application ID: 16699

A person who is aggrieved by the issuance, denial, conditioning, or modification of an HPA may request an informal appeal of that action. You must send your request to WDFW by mail to the HPA Appeals Coordinator, Department of Fish and Wildlife, Habitat Program, PO Box 43234, Olympia, Washington 98504-3234; e-mail to HPAapplications@dfw.wa.gov; fax to (360) 902-2946; or hand-delivery to the Natural Resources Building, 1111 Washington St SE, Habitat Program, Fifth floor. WDFW must receive your request within 30 days from the date you receive notice of the decision. If you agree, and you applied for the HPA, resolution of the appeal may be facilitated through an informal conference with the WDFW employee responsible for the decision and a supervisor. If a resolution is not reached through the informal conference, or you are not the person who applied for the HPA, the HPA Appeals Coordinator or designee may conduct an informal hearing or review and recommend a decision to the Director or designee. If you are not satisfied with the results of the informal appeal, you may file a request for a formal appeal.

B. FORMAL APPEALS: WAC 220-660-470 is the rule describing how to request a formal appeal of WDFW actions taken under Chapter 77.55 RCW. Please refer to that rule for complete formal appeal procedures. The following information summarizes that rule.

A person who is aggrieved by the issuance, denial, conditioning, or modification of an HPA may request a formal appeal of that action. You must send your request for a formal appeal to the clerk of the Pollution Control Hearings Boards and serve a copy on WDFW within 30 days from the date you receive notice of the decision. You may serve WDFW by mail to the HPA Appeals Coordinator, Department of Fish and Wildlife, Habitat Program, PO Box 43234, Olympia, Washington 98504-3234; e-mail to HPAapplications@dfw.wa.gov; fax to (360) 902-2946; or hand-delivery to the Natural Resources Building, 1111 Washington St SE, Habitat Program, Fifth floor. The time period for requesting a formal appeal is suspended during consideration of a timely informal appeal. If there has been an informal appeal, you may request a formal appeal within 30 days from the date you receive the Director's or designee's written decision in response to the informal appeal.

C. FAILURE TO APPEAL WITHIN THE REQUIRED TIME PERIODS: If there is no timely request for an appeal, the WDFW action shall be final and unappealable.

Habitat Biologist	Charles.Stambaugh-Bowey@dfw.wa.gov		for Director
Chuck Stambaugh-Bowey	360-906-6764		WDFW