Supplement Analysis
for the
Columbia River Basin Tributary Habitat Restoration
(DOE/EA-2126/SA-68)

Lower East Fork Hood River Phase 2
BPA project number 1998-021-00
BPA contract number 94506

Bonneville Power Administration
Department of Energy

Introduction

In December 2020, Bonneville Power Administration (BPA) completed the Columbia River Basin Tributary Habitat Restoration Programmatic Environmental Analysis (DOE/EA-2126) (Programmatic EA). The Programmatic EA analyzed the potential impacts of implementing habitat restoration actions in the Columbia River Basin and its tributaries.

Consistent with the Programmatic EA, this supplement analysis (SA) analyzes the proposed Lower East Fork Hood River Phase 2 Project that would implement some of the specific restoration actions assessed in the Programmatic EA in the Lower East Fork Hood River located in Hood River County, Oregon. The Project would improve juvenile rearing and adult holding and spawning habitat (quantity, quality and diversity, streamflow, channel stability, and sediment load) as primary factors limiting the natural production of Endangered Species Act (ESA)-listed spring Chinook salmon (*Oncorhynchus tshawytscha*), steelhead trout (*O. mykiss*), and coho salmon (*O. kisutch*).

This SA also evaluates whether the proposed Project presents substantial new circumstances or information about the significance of the adverse effects that bear on the analysis that were not addressed by the Programmatic EA. The findings of this SA determine whether additional National Environmental Policy Act (NEPA) analysis is needed under 10 C.F.R. § 1021 *et seq*.

Proposed Activities

The Project area includes 0.6 miles of Lower East Fork Hood River, 1.5 miles northwest of the town of Mount Hood in Hood River County in Oregon, exclusively on private property. In addition, the Project encompasses a smaller habitat project completed in 2019. The previous project addressed floodplain and side channel connectivity, and habitat quantity, diversity and complexity through the placement of Large Woody Debris (LWD) in the main channel, side channels, and floodplain.

Channel, riparian, and floodplain conditions in the Hood River have been impacted by high levels of channel dynamism and historical actions such as timber harvest, splash damming, and stream "clean outs." Through the 1940s, splash damming was used extensively to transport logs from harvest sites downstream to mills and railroads. Stream "clean outs" were encouraged in the 1960s

and 1970s and were believed to benefit fish passage[1]. (USFS, 1986) These activities have resulted in lowered habitat quantity and quality (channel incision, lower stream sinuosity, fewer pools, less gravel and cobble-sized sediment, and reduced in-stream wood volume), and the East Fork Hood River has eroded, resulting in the present-day conditions.

The Project area (Figure 1) primarily consists of floodplain with an overstory of deciduous species including red alder (*Alnus rubra*), vine maple (*Acer circinatum*), and cottonwood (*Populus balsamifera*). Upland terraces above the floodplain are dominated by coniferous species including Douglas fir (*Pseudotsuga menziesii*) and grand fir (*Abies grandis*). Emergent and scrub-shrub wetlands are present throughout the Project area, located in low elevation floodplains and side channels that are inundated during flood events. Within the Project area specifically, the channel has been impacted by clearing from logging and agricultural activities, residential and industrial development, and infrastructure and its construction such as Woodworth Drive Bridge. Upland areas adjacent to the river corridor include a mixture of intact upland forests and areas that have been impacted by historical and ongoing agricultural activities. Woodworth Drive Bridge at the upstream boundary of the Project area restricts channel migration and floodplain capacity, constraining downstream geomorphic processes. This has resulted in higher levels of sediment deposition upstream of the bridge and has impaired channel migration in the vicinity. The surrounding terrace has been impacted by clearing for agriculture and houses. Flooding events occurred historically and are expected to continue to occur within the Project area.

[1] USFS. 1996b. Mt. Hood National Forest. East Fork Hood River and Middle Fork Hood River Watershed Analysis. Mt. Hood-Parkdale, OR.

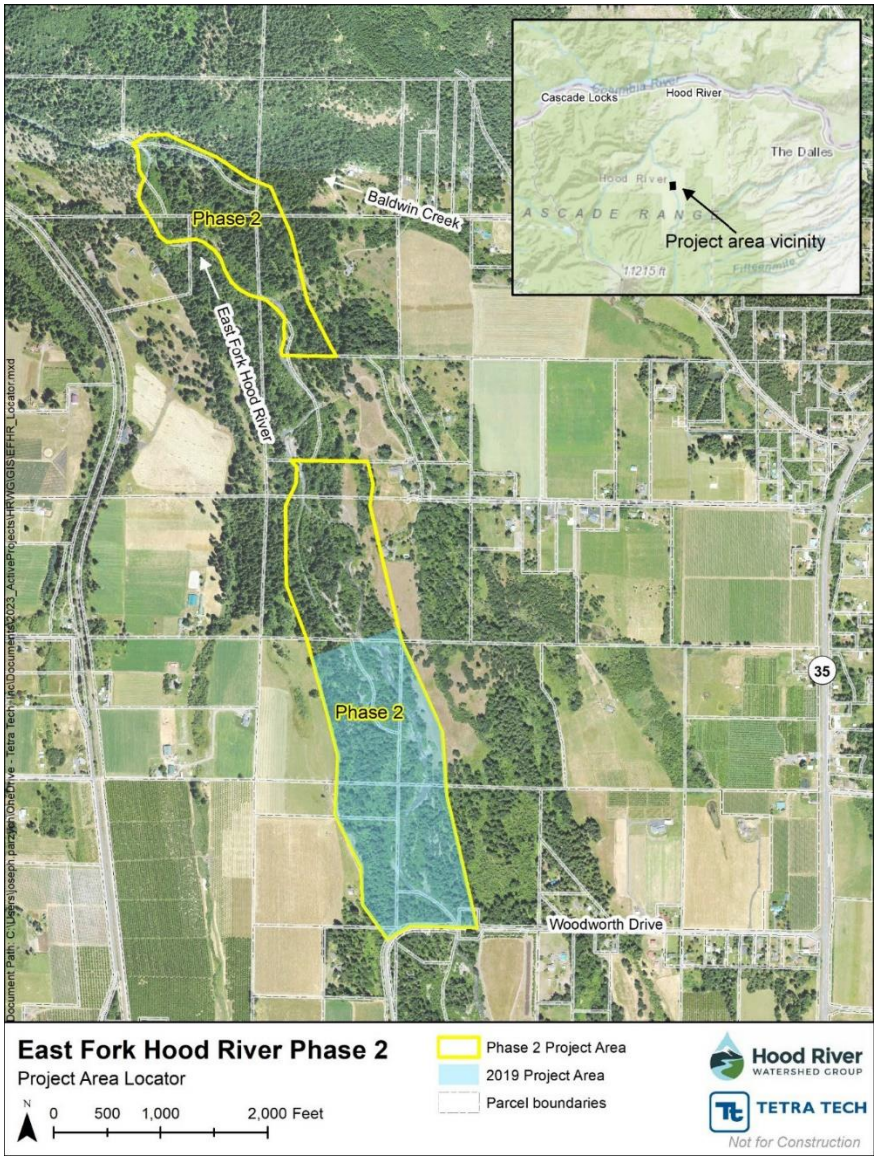

Figure 1. Lower East Fork Hood River Project Phase 2.

To improve juvenile rearing and adult holding and spawning habitat the Project would excavate 3,820 cubic yards (CY) of materials from the main channel (LWD installation) and floodplains (LWD installation and 1 mile side channel creation) to be relocated or reused as backfill within the Project site, and 340 logs (with and without root wads) used in 41 LWD structures (10 apex structures, two bar roughness structures, nine channel spanning post assisted log structures (PALS), 10 bank habitat structures, nine margin habitat structures, and one alluvial debris structure). The proposed construction sequence is provided below. Although work is expected to be completed in fall 2025, there may be additional work, as needed, to manage issues identified after construction that would be addressed in accordance with the Project's adaptive monitoring and management plan.[2]

[2] Actions that may be considered in the plan include, but are not limited to, additional large wood enhancement, additional excavation, gravel enhancement, supplemental riparian planting, additional browse protection, and additional noxious weed control.

Floodplain and Uplands Work: Prior to July 15, 2025

- Install temporary erosion and sediment controls (TESC), construction staking, flagging of sensitive areas, etc.;
- Mobilize equipment to site and staging; and
- Clearing and grubbing.

In-Water Work Window: July 15 – August 31, 2025

- Install block nets and salvage fish;
- Install work area isolation and dewater work areas;
- Construct side channels and LWD structures; and
- Remove work area isolation and remove block nets.

After In-Water Work Window: After August 31, 2025

- Complete any work remaining above ordinary high water;
- Seeding, mulching, and planting;
- Remove TESC; and
- Site cleanup and demobilization.

BPA would fund the Confederated Tribes of the Warm Springs (CTWS) Reservation of Oregon and the Hood River Watershed Group to implement the Project. BPA funding of the proposed activities supports conservation of ESA-listed species considered in the 2020 National Marine Fisheries Service 2020 Columbia River System Biological Opinion. They also support BPA's commitments to the CTWS in the 2008 Columbia River Fish Accords Memorandum of Agreement, as amended, while also supporting ongoing efforts to mitigate for effects of the Federal Columbia River Power System on fish and wildlife in the mainstem Columbia River and its tributaries pursuant to the Pacific Northwest Electric Power Planning and Conservation Act of 1980 (Northwest Power Act) (16 U.S.C. §§ 839 *et seq*.).

Environmental Effects

The typical environmental impacts associated with the Project are described in Chapter 3 of the Programmatic EA. Implementation of this Project would require the use of heavy equipment for staging, hauling, and excavation, and placement of large wood structures. Restoration actions during construction would disturb and displace soil in and along the stream, damage vegetation, create noise and vehicle emissions, stress fish, and temporarily increase vehicle traffic and human activity in the Project area. Below is a description of the potential site-specific impacts of the Lower East Fork Hood River Phase 2 and an assessment of whether these impacts are consistent with those described in the Programmatic EA. Because the Project is designed to improve both aquatic and riparian habitats for the long term, adverse effects from soil and vegetation disturbance and human and mechanical activity would be short-term effects only.

1. Fish and Aquatic Species

The effects of using mechanized equipment and manually working in and along Lower East Fork Hood River are consistent with the analysis in Section 3.3.1 of the Programmatic EA ("Fish and Aquatic Species"). Section 3.3.1.3 of the Programmatic EA ("Effects Conclusion for the Proposed Action on Fish and Aquatic Species") describes overall low impacts to fish and aquatic species after considering moderate short-term adverse effects and beneficial long-term effects.

Chinook salmon, steelhead, and coho are listed as threatened under the ESA and are present within the Project area. There is no known designated critical habitat for these species or any other aquatic species within the Project area. Consultation on the effects of this action on these species was completed in accordance with the Habitat Improvement Program Biological Opinion (NMFS, WCRO-2020-00102) which concluded that the Project would likely adversely affect each of these species in the short term but would not likely result in jeopardy to the species. The Pacific lamprey (*Entosphenus tridentatus*) is also present; however, no other aquatic species listed under the ESA or other state-listed or sensitive aquatic species are within the Project area.

In the short term, the Project would expose, displace, reconfigure, or compact earth through the use of mechanized equipment within and along Lower East Fork Hood River and likely create conditions where sediment would be released for a short period of time following construction activities. Only a moderate amount of sediment is anticipated to be released by the Project because there would be instream excavation, dewatering, and reintroduction of flows over newly exposed soils and gravels. However, mitigation measures detailed in Appendix B of the Programmatic EA for work area isolation and fish salvage would be applied, minimizing these impacts. The sediment inputs would be consistent with the amounts evaluated in Section 3.3.1.2.1 of the Programmatic EA ("Short-Term Effects to Fish and Aquatic Species from Construction Activities").

The work area isolation, fish salvage, dewatering, and instream construction activity would displace fish from the work area until it is re-watered. Small aquatic organisms that could not be practically salvaged would likely be destroyed. The newly constructed in-stream environment would be re-colonized by fish and other aquatic organisms, with nearly all fish likely returning in a matter of hours to days, and with full returns likely following the seasonal flushing flows. The anticipated amount of activity and the level of aquatic species disturbance, however, is consistent with the analysis in Sections 3.1.3.1 and 3.3.1.2.1 of the Programmatic EA ("Dewatering for Instream Work" and "Short-Term Effects to Fish and Aquatic Species from Construction Activities," respectively). Specifically, those sections of the Programmatic EA disclosed direct, harmful, and sometimes fatal impacts to aquatic species, including displacement of fish from their existing habitat during periods of movement, sounds, and vibrations from human and mechanical activity. The Project's long-term beneficial effects include creation of more complex habitats through the addition of pools and woody vegetation to the stream and adjacent riparian areas and the enhancement of in-stream habitat complexity over time by providing large wood structures and overhanging vegetation (tree transplants). These beneficial effects are consistent with the analysis in Section 3.3.1.2.2.2 of the Programmatic EA ("River, Stream, Floodplain, and Wetland Restoration and Channel Reconstruction (Category 2) Effects on Aquatic Species").

The Project's long-term beneficial effects include the enhancement of instream and floodplain habitat complexity. These beneficial effects are consistent with the analysis in Section 3.3.1.2.2.2 of the Programmatic EA ("River, Stream, Floodplain, and Wetland Restoration and Channel Reconstruction (Category 2) Effects on Aquatic Species"). The effects to fish species from Project activities would be adverse in the short term and beneficial in the long term. The overall effects on fish from Project activities would therefore be low, consistent with the Programmatic EA.

2. **Water Resources**

The effects of using mechanized equipment and manually working in and along Lower East Fork Hood River are consistent with the analysis in Section 3.3.2 of the Programmatic EA ("Water Resources"). Section 3.3.2.3 of the Programmatic EA ("Effects Conclusion for the Proposed Action

on Water Resources") describes overall low impacts to water quality after considering moderate short-term adverse effects and beneficial long-term effects. Section 3.3.2.2.1 of the Programmatic EA analyzes effects on water quantity describes no impact to water quantity.

Overall, the Project would create localized short-term sediment inputs from reintroducing stream flows onto recently excavated areas. This would be a temporary impact that may last a few hours. As described in the Programmatic EA, this impact would be lessened by the application of mitigation measures such as slow or metered placement of materials and monitoring. One long-term effect of the Project, however, would be increased floodplain connectivity associated with improved water quality and habitat for salmonids. The short-term adverse effects and long-term beneficial effects are consistent with those described in the Programmatic EA, and the overall effects on water quality would be low. This Project would not involve water withdrawals; however, there may be the potential for increased recharge of groundwater as the floodplain regains functionality. Overall, this would likely be a low effect to water quantity.

3. **Vegetation**

The effects of using mechanized equipment and manually working in and along Lower East Fork Hood River are consistent with the analysis in Section 3.3.3 of the Programmatic EA ("Vegetation"). Section 3.3.3.3 of the Programmatic EA ("Effects Conclusion for the Proposed Action on Vegetation") describes overall moderate impacts to vegetation after considering moderate short-term adverse effects and beneficial long-term effects. No ESA-listed or other sensitive plant species are present within the Project area.

The Project is anticipated to produce impacts to vegetation consistent with or less than those described in the Programmatic EA. There would be no large-scale earthmoving with its associated vegetative loss. Project implementation, including excavation activities, structure installation, and establishment of staging areas and access routes would have moderate short-term impacts on vegetation. The Project would directly impact approximately 3 acres of vegetation, which is much less than is described in the Programmatic EA in Section 3.3.3.2, "Environmental Consequences for Vegetation," which evaluated constructed features that could disturb up to 50 acres. Impacts to vegetation would be limited to some damage or elimination of herbaceous vegetation by construction equipment and human foot traffic (from which the vegetation would be anticipated to recover quickly naturally and via replanting). Revegetation would occur via plantings and seeding according to the planting plan upon completion of construction. This level of effect would be low to moderate.

4. **Wetlands and Floodplains**

The effects of using mechanized equipment and manually working in and along Lower East Fork Hood River are consistent with the analysis in Section 3.3.4 of the Programmatic EA ("Wetlands and Floodplains"). Section 3.3.4.3 of the Programmatic EA ("Effects Conclusion for the Proposed Action on Wetlands and Floodplains") describes overall low impacts to wetlands and floodplains after considering short-term adverse effects and beneficial long-term effects.

The Project is anticipated to have impacts similar to those described in the Programmatic EA. Emergent and scrub-shrub wetlands are present throughout the Project area, located in low elevation floodplains and side channels that are inundated during flood events. Specifically, there would be short-term (i.e., weeks-long) adverse effects to wetlands and floodplains, as there would be earthmoving. Consistent with the Programmatic EA, Project implementation would also have

long-term beneficial effects. It would create conditions in this stream reach with increased connectivity to the floodplain and more diverse wetland vegetative conditions. These would increase the amount and quality of wetlands in the Project area. Appropriate Clean Water Act permitting would be obtained by the Hood River Watershed Group prior to any actions that may discharge to regulated waterbodies. This level of effect would be low after considering short-term adverse effects and beneficial long-term effects, as stated in the Programmatic EA.

5. **Wildlife**

The effects of using mechanized equipment and manually working in and along Lower East Fork Hood River are consistent with the analysis in Section 3.3.5 of the Programmatic EA ("Wildlife"). Section 3.3.5.3 of the Programmatic EA ("Effects Conclusion for the Proposed Action on Wildlife") describes overall low impacts to wildlife after considering short-term adverse effects and beneficial long-term effects. There are two ESA-listed species, the endangered Gray wolf (*Canis lupus*) and the threatened northern spotted owl (*Strix oxidentalis caurina*), and one proposed for listing as threatened, the monarch butterfly (*Danaus plexippus*) that have the potential to occur in Hood River County (US Fish and Wildlife Service Information for Planning and Consultation, 2025). Designated critical habitat is not located within or near the Project site, and the Project would thus have no effect on ESA-listed wildlife species. No other ESA-listed, state-listed, or other sensitive wildlife species are present within the Project area.

The Project's short-term effects would be less than those analyzed in the Programmatic EA. The actions of humans and machines in this area would temporarily displace wildlife from their preferred locations and prevent them from reoccupying the site until construction activity has ceased. After construction, the habitat would be more hydrologically diverse but vegetatively similar. This level of effect would be low after considering short-term adverse effects and beneficial long-term effects, as stated in the Programmatic EA.

6. **Geology and Soils**

The effects of using mechanized equipment and manually working in and along Lower East Fork Hood River are consistent with the analysis in Section 3.3.6 of the Programmatic EA ("Geology and Soils"). Section 3.3.6.3 of the Programmatic EA ("Effects Conclusion for the Proposed Action on Geology and Soils") describes moderate impacts to geology and soils.

The Project is anticipated to have impacts consistent with those described in the Programmatic EA. Staging, hauling, and constructing large wood structures along Lower East Fork Hood River would cause soil displacement, compaction, and the mixing of soil horizons. Design criteria, mitigation measures, and best management practices, such as use of mulching, mats, and straw wattles for erosion control, would all be applied as described in Section 2.4 of the Programmatic EA ("Mitigation Measures and Design Criteria") to minimize impacts and maintain long-term productivity of soils.

The Project does not specifically target soils for restoration or enhancement (as it does fish habitat and hydrologic functions), but the proposed actions could result in maintaining and improving soil properties and functions as hydrologic function is restored within the floodplain. The level of beneficial effect would be moderate, consistent with the effect level described in the Programmatic EA.

7. **Transportation**

The Project's effects in and along Lower East Fork Hood River are consistent with the analysis in Section 3.3.7 of the Programmatic EA ("Transportation"). Section 3.3.7.3 of the Programmatic EA ("Effects Conclusion for the Proposed Action on Transportation") describes low impacts to transportation.

No roads would be closed, temporarily blocked, or relocated, nor would any work be conducted from the highway or its shoulders. Access to the Project would be obtained via existing roads, and vehicles transporting workers and equipment to Project sites would share local roads with other traffic during construction, which would last less than four weeks. This level of impact would be low, as stated in the Programmatic EA.

8. **Land Use and Recreation**

The effects of the proposed Project in and along Lower East Fork Hood River are consistent with the analysis in the Programmatic EA, Section 3.3.8, "Land Use and Recreation." The Programmatic EA, Section 3.3.8.3, states that overall effects on land uses and recreation would be low to moderate.

There would be no effect on land use or recreation from the Project. The Project is located on private property and has no public recreational opportunities. However, landowner access to the river would be temporarily limited during construction resulting in a low impact. This level of effect is consistent with that described in Section 3.3.8.3 of the Programmatic EA ("Effects Conclusion for the Proposed Action on Land Use and Recreation"), which states that "land use practices underlying project sites would not be changed for most projects", and the overall effects on land uses and recreation would be low.

9. **Visual Resources**

The Project's effects in and along Lower East Fork Hood River would be consistent with the analysis in Section 3.3.9 of the Programmatic EA ("Visual Resources"). Section 3.3.9.3 of the Programmatic EA ("Effects Conclusion for the Proposed Action on Visual Resources") describes low impacts to visual resources.

The proposed restoration actions are immediately adjacent to Woodworth Road, and some activities would be readily visible to travelers along this route. As described in Section 3.3.9.2 of the Programmatic EA ("Environmental Consequences for Visual Resources"), Project-related construction would result in some short-term visual impacts, including some disturbance that detracts from the view and the visible presence of newly planted grasses, forbs, and shrubs. However, these visual impacts would last for only a few weeks during staging, construction, and replanting. When construction is complete, the river would gradually appear less disturbed as the newly planted seeded grasses and forbs grow. Within a year or two, the matured vegetation would provide the same natural scenery that can be seen elsewhere along this road. This level of impact would be low, as stated in the Programmatic EA.

10. **Air Quality, Noise, and Public Health and Safety**

The Project's effects in and along Lower East Fork Hood River would be consistent with the analysis in Section 3.3.10 of the Programmatic EA ("Air Quality, Noise, and Public Health and Safety"). Section 3.3.10.3 of the Programmatic EA ("Effects Conclusion for the Proposed Action on Air Quality, Noise, and Public Health and Safety") describes low impacts to air quality, noise, and public health and safety. In the short term, although landowners immediately adjacent to the Project may

hear some construction noise during the few weeks of construction activities, this would only occur during normal working hours. Residents of the small town of Odell, Oregon—located approximately two miles from the Project area—would be too far away for construction-related noise, dust, or exhaust to affect them. In the longer term, the Project would not result in any new sources of emissions or noise. Although some potential safety impacts are anticipated from workers sharing roads when travelling to and from work sites, the potential impacts to public safety infrastructure (e.g., roads, telecommunications equipment, etc.) and emergency services (e.g., police, fire, and emergency medical services) would be low, as stated in the Programmatic EA.

11. **Cultural Resources**

The Project's effects are consistent with the analysis in Section 3.3.11 of the Programmatic EA ("Cultural Resources"). Section 3.3.11.3 of the Programmatic EA ("Effects Conclusion for the Proposed Action on Cultural Resources") describes low impacts to cultural resources, with any potential effects being amenable to resolution through the Section 106 consultation process under the National Historic Preservation Act.

BPA initiated consultation with the CTWS and Oregon State Historic Preservation Office (SHPO) on November 24, 2024, and received responses from the SHPO on December 30, 2024, concurring with the Area of Potential Effects (APE) and from the CTWS Tribal Historic Preservation Office on January 10 and January 23, 2025 recommending an archaeological survey be completed.

Based on the results of that survey, BPA determined that no historic properties would be affected and sent a letter with this determination to consulting parties on March 28, 2025. SHPO concurred in a letter dated April 22, 2025. On April 29, 2025, the 30-day response period expired. No other comments were received.

12. **Socioeconomics**

The effects of this restoration Project along Lower East Fork Hood River would be consistent with the analysis in Section 3.3.13 of the Programmatic EA ("Socioeconomics and Environmental Justice"). Section 3.3.13.3 of the Programmatic EA ("Effects Conclusion for the Proposed Action on Socioeconomics and Environmental Justice") describes low socioeconomic impacts.

As described in the Programmatic EA, the Project is located exclusively on private property and would not require additional permanent employees, nor would it require individuals to leave or relocate to the local area. There would also be no effect on housing available for local populations, as the Project would not displace people or eliminate residential suitability of lands in or near the Project area. The Project would generate short-term employment for those directly implementing the restoration actions and would provide small short-term cash inputs to local businesses for fuel, equipment, and meals. This degree of effect would be low.

13. **Climate Change**

The effects of Project activities on climate change are consistent with the analysis in Section 3.3.14 of the Programmatic EA ("*Climate Change*"), which describes overall low effects to climate change. Due to the short duration of construction activities and the relatively small number of vehicles and equipment involved, Project-related greenhouse gas emissions are anticipated to be low. This minimal contribution to climate change would be offset to some degree by the increased functioning of the floodplain including increased water table inputs, increased carbon sequestration

in expanded and improved wetland habitats, and potentially decreased water temperatures from improved instream and riparian habitat conditions.

Findings

BPA finds that the types of actions and the potential impacts related to the proposed Lower East Fork Hood River Phase 2 are similar to those analyzed in the Columbia River Basin Tributary Habitat Restoration Programmatic EA (DOE/EA-2126) and Finding of No Significant Impact. There are no substantial changes in the Programmatic EA's Proposed Action and no substantial new circumstances or information about the significance of the adverse effects that bear on the analysis in the Programmatic EA's Proposed Action or its impacts within the meaning of 10 CFR § 1021.314 and 40 CFR § 1502.9.[3] Therefore, no further NEPA analysis or documentation is required.

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Katey Grange
NEPA Compliance Officer

[3] BPA is aware that the Council on Environmental Quality (CEQ), on February 25, 2025, issued an interim final rule to remove its NEPA implementing regulations at 40 C.F.R. Parts 1500–1508. Based on CEQ guidance, and to promote completion of its NEPA review in a timely manner and without delay, in this SA BPA is voluntarily relying on the CEQ regulations, in addition to DOE's own regulations implementing NEPA at 10 C.F.R. Part 1021, to meet its obligations under NEPA, 42 U.S.C. §§ 4321 et seq.