

**Supplement Analysis**  
for the  
**Columbia River Basin Tributary Habitat Restoration**  
(DOE/EA-2126/SA-28)

**Simcoe Creek Passage Project**  
**BPA project number 1996-035-01**  
**BPA contract number 56662 REL 256**

Bonneville Power Administration  
Department of Energy



**Introduction**

In December 2020, Bonneville Power Administration (BPA) and the Bureau of Reclamation completed the *Columbia River Basin Tributary Habitat Restoration Programmatic Environmental Assessment* (DOE/EA-2126) (Programmatic EA). The Programmatic EA analyzed the potential environmental 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 effect of the proposed Simcoe Creek Passage Project (Project), which would implement many of the specific restoration actions assessed in the Programmatic EA in the Yakima River Basin in Yakima County, Washington. Project objectives include increasing fish passage through culverts, increasing the quantity and quality of available aquatic habitat for steelhead and lamprey, and improving channel and floodplain function to support long-term habitat complexity.

The SA analyzes the Project's site-specific impacts to determine if it is within the scope of the Programmatic EA's analysis. It also evaluates whether the Project presents significant new circumstances or information relevant to environmental concerns that the Programmatic EA did not address. The findings of this SA determine whether additional National Environmental Policy Act (NEPA) analysis is needed pursuant to 40 Code of Federal Regulations (C.F.R.) § 1502.9(d) and 10 C.F.R. § 1021 *et seq.*

**Proposed Activities**

BPA proposes to fund the Yakama Nation (YN) to complete the Project along a 0.4-mile-long segment of Simcoe Creek between river miles (RM) 10.9 and 11.3. The Project would support: (1) conservation of ESA-listed species considered in a 2020 ESA consultation between National Marine Fisheries Service and BPA, among other federal action agencies, on the operation, maintenance, and management of dam and reservoir projects comprising the Columbia River System; (2) BPA's commitments to the YN under the 2020 Columbia River Fish Accord Extension agreement; and (3) 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, 16 U.S.C. 839 *et seq.*

Simcoe Creek is approximately 30 RMs in length and situated entirely on tribal lands within the borders of the YN Reservation. Land adjacent to the Project area consists mostly rangeland habitat utilized for grazing up to the riparian zone associated with the creek. Within the project area, Simcoe Creek's flow is concentrated in the South Channel, while the North Channel contains flows during high water events. A paved county road, W. White Swan Road, crosses the project area where both the North and South channels of Simcoe Creek cross under the roadway via box culverts in two different locations.

The Project would include a culvert removal, bridge installation, channel/culvert aprons, large wood structure installations, channel reconstruction, and exclusion fence installation in order to reconnect the floodplain and remove fish passage barriers. Figure 1 depicts the location of the Project elements which are described further below.

YN would perform all fish salvage, dewatering, and in-water construction work between August and October, during the On-Reservation in-water work window. Final upland restoration, cattle exclusion, and fencing would be completed in the fall of 2022. YN would develop access routes along the proposed channels for use of heavy equipment, staging areas above the 100-yr floodplain or 150 feet from the channels for all materials and equipment, and work areas to minimize disturbance to existing vegetation and soils and avoid impacting existing on-site riparian zone. Excavated soil would be disposed of on site in spoil disposal areas where soils would be graded to match existing contours and revegetated upon project completion. Overall, the Project would disturb about 30.5 acres during construction.

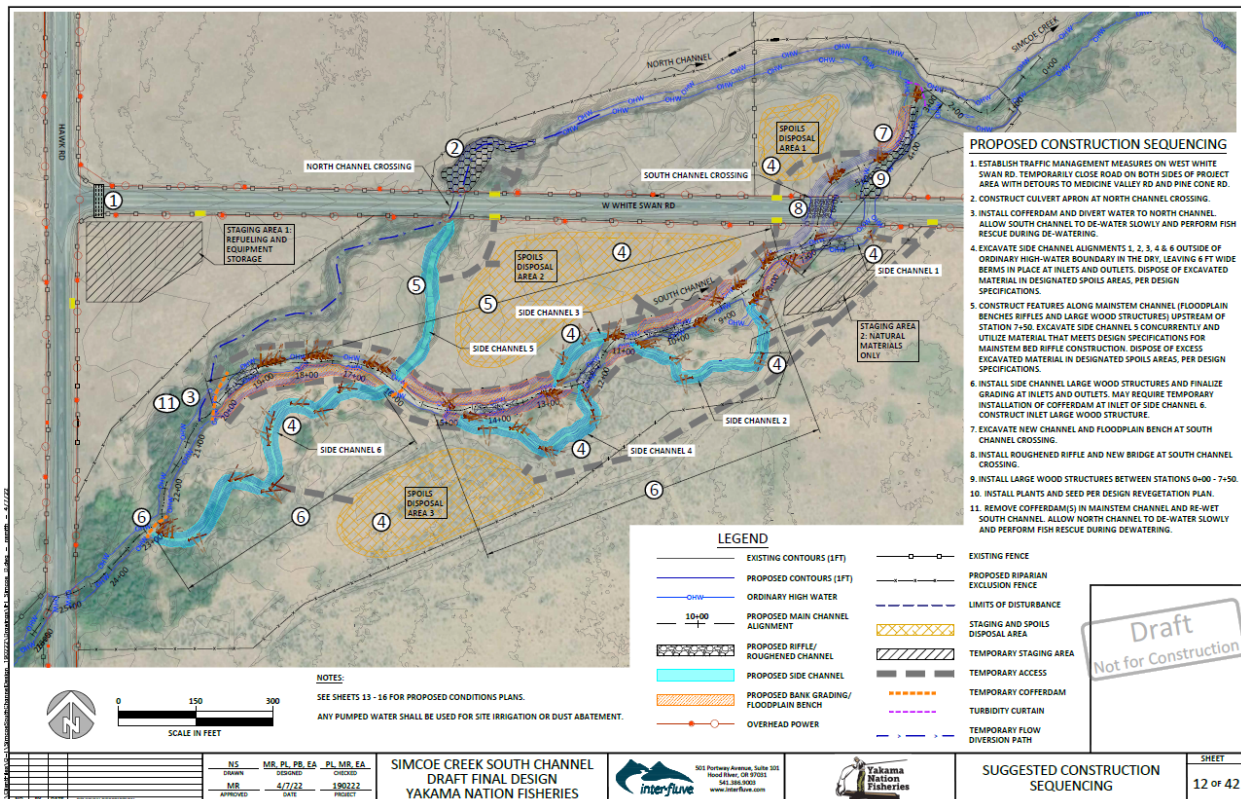


Figure 1: Simcoe Creek Passage Project Components

### ***Side Channel Reconstruction***

The Project would involve excavating about 0.5 mile (2,500 linear feet) and 4,780 cubic yards at five historical channel scars, and reconnect them to the mainstem channel. The Project would also convert the existing mainstem flow route through the south channel culvert crossing into a high-flow side channel, while maintaining the existing North Channel as a high-flow flood channel. Side channel features would increase the quantity and quality of available rearing habitat in the Project area, improve floodplain connectivity, and increase high-flow and flood-event conveyance in the Project area compared to the existing single-thread incised channel. The constructed side channels would activate annually during average daily March to June estimated discharges.

### ***New Bridge with Fish Passage Roughened Channel***

YN proposes removing a concrete box culvert under W. White Swan Road, at the South channel of Simcoe Creek, and replacing it with a 50-foot-wide pre-fabricated bridge. YN would install traffic barriers along the reconstructed road in the vicinity of the new bridge according to Yakima County's standards. Under the bridge, YN would install a stream simulation bed, approximately 200 feet in length, in order to realign this segment of creek and to facilitate fish passage upstream and downstream of the bridge crossing.

### ***Culvert Aprons***

YN would construct about 200 feet of roughened rock channel aprons at the two box culverts under W. White Swan Road at the North Channel of Simcoe Creek to improve passage conditions and provide grade control. This proposed apron would include a rock riffle along the downstream side of the North Channel culverts. The riffle would add additional protection against headcut formation leading to the mainstem and would be activated at high-flow conditions.

### ***Engineered Large Wood Structures***

For both the mainstem and reconstructed side channels, YN proposes to install 40 engineered large wood structures (ELJ) of various sizes and configurations that would be ballasted via partial bank burial and pilings. The ELJs were designed to provide aquatic habitat, hydraulic roughness and routing, and support geomorphic complexity within the limitations of the existing infrastructure. Adjacent to the ELJs installed in the main channel, YN would excavate scour pools about the lateral width of the ELJs.

### ***Floodplain Bench and Bank Grading***

YN would install about 1,100 feet of narrow floodplain benches and subtle laid-back vertical banks at six locations in optimal areas along the mainstem channel to support the establishment of a riparian zone, create connected floodplain features, and increase flow conveyance during high-flow events. In these areas, excavators would pull back the existing steep banks to provide benching and a more gradual bank leading to the adjacent upland areas.

### ***Headcut and Incision Control***

YN would install five constructed rock riffles in the mainstem channel to address ongoing channel incising and widening resulting from historic channel confinement and simplification. YN would position the riffles to address incision and provide grade control to water surface elevations to initiate side channel activation. YN would key the constructed riffles into the banks and set them to elevations consistent with an in-situ gravel and cobble substrate layer.

## **Revegetation**

YN would revegetate areas disturbed by construction activities with native planting using seed mixes and live plants (potted, plugs, and stakes). The riparian seed mix would include Blue wildrye (*Elymus glaucus*), Thickspike wheatgrass (*Elymus lanceolatus*), and Bluejoint reedgrass (*Calamagrostis canadensis*). The upland seed mix would include Bluebunch wheatgrass (*Pseudoroegneria spicata*), Sandberg bluegrass (*Poa secunda*), Basin wildrye (*Leymus cinereus*), and Idaho fescue (*Festuca idahoensis*). The riparian live plants would include Black cottonwood (*Populus trichocarpa*), Red osier dogwood (*Cornus sericea*), Red alder (*Alnus rubra*), Douglas hawthorn (*Crataegus douglasii*), Coyote willow (*Salix exigua*), Pacific willow (*Salix lucida* spp. *lasiandra*), and Peach leaf willow (*Salix amygdaloides*). The upland live planting would include Big sagebrush (*Artemisia tridentata* spp. *wyomingensis*).

## **Exclusion Fencing**

YN would construct a five-strand barbed-wire fence with wooden posts around the Project area to exclude livestock. Three drop gates would provide seasonal access for YN staff while also excluding cattle. Three stream crossings with suspended fences would allow crossing cattle to access adjacent grazing units. YN would situate one crossing on the mainstem and the downstream end of the Project area and the other two crossings across a side channel to provide seasonal water access for cattle. YN manages adjacent grazing lots and holds all grazing management plans with the lessees.

## **Environmental Effects**

Chapter 3 of the Programmatic EA, incorporated by reference into this document and summarized in relevant part below, discusses typical environmental disturbances and impacts stemming from habitat restoration in the Columbia River basin. Below is a description of the Project's potential site-specific impacts and an assessment of whether these impacts are consistent with those described in the Programmatic EA.

### **1. Fish and Aquatic Species**

In the short term, the Project would expose, displace, reconfigure, or compact earth through the use of mechanized equipment within and along Simcoe Creek 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 preferred habitat during periods of movement, sounds, and vibrations from human and mechanical activity.

ESA-listed middle Columbia steelhead and their critical habitat are present within the Project area, as are Pacific lamprey. BPA completed Section 7 consultation on the potential effect of the Project on ESA-listed species under BPA's programmatic Fish and Wildlife Habitat Improvement Program (HIP) biological opinion. The Project would include implementation of HIP conservation measures. Overall, short-term impacts to fish and aquatic species would be low, consistent with the analysis in Section 3.3.1.2.1 of the Programmatic EA ("Short-term Effects of Fish and Aquatic Species from Construction Activities").

Project implementation would have beneficial long-term effects on fish and aquatic species as a result of increased stream complexity, enhanced riparian cover, improved passage and protection along Simcoe Creek, increased available floodplain access and flows, and an expected reduction in summer water temperatures. These beneficial effects are consistent with the analysis in Section 3.3.1.2.2 of the Programmatic EA ("Effects to Fish and Aquatic Organisms unique to the Categories of Action").

Overall, Project impacts would be consistent with Section 3.3.1.3 of the Programmatic EA ("Effects Conclusion for the Proposed Action on Fish and Aquatic Species"), which describes low impacts to fish and aquatic species after considering moderate short-term adverse effects from construction and beneficial long-term effects.

## **2. Water Resources**

Several aspects of Project construction—including mechanized equipment operation, channel reconstruction, bridge installation, and ELJ development along Simcoe Creek—would temporarily expose, displace, reconfigure, or compact earth. In-stream excavation, dewatering, and new channel reconstruction could briefly cause plumes of sediment discharge during de-watering and re-watering activities, for which YN would apply mitigation measures as detailed in Section 2.4 of the Programmatic EA ("Mitigation Measures and Design Criteria"). With the implementation of the mitigation measures and the extent and duration of any resultant turbidity plume, the Project's anticipated impact to water quality would be low, consistent with the analysis in Section 3.3.2 of the Programmatic EA ("Water Resources. Project implementation"), and it would have no impact on water quantity as no water withdrawals are proposed.

The Project would result in a long-term decrease in unnatural sediment inputs by halting ongoing bank erosion and incision in the Project reach, and by increasing sediment storage potential and increased floodplain access. The Project is expected to result in long-term reduction in stream temperatures from improved stream form, an increase in instream habitat structures, and increased riparian vegetative cover and protection. These long-term beneficial effects are consistent with those described in the Programmatic EA.

Section 3.3.2.2 of the Programmatic EA ("Environmental Consequences for Water Resources"), describes overall low impacts to water quality after considering moderate short-term adverse effects during construction and the Project's beneficial long-term effects. The Project would be consistent with these effects.

## **3. Vegetation**

No ESA-listed or state-listed plant species are present within the Project area. Project implementation, including the stream bank restoration work, bridge replacement, establishment of overland access routes, staging and spoil disposal areas, would have moderate short-term impacts on vegetation. YN would remove, grade, or trample vegetation within project work areas. Temporary access routes, staging areas, and spoil disposal areas would be established to minimize impacts to the floodplain, and

YN would minimize disturbance to riparian areas during construction to the extent practicable. Any trees or woody material removed during Project construction would be used for in-stream habitat structures. After construction, YN would revegetate temporary work areas. YN would expand the limited existing riparian corridor by re-seeding and planting using native stock. Increased floodplain inundation would improve vegetation diversity and density in the long-term.

The effects of using construction equipment and manually working in and along Simcoe Creek are consistent with the analysis in Section 3.3.3 of the Programmatic EA (“Vegetation”), which concludes that although construction may have moderate short-term impacts on vegetation, the Project’s long-term benefits would include more riparian habitats and restored or improved vegetative conditions. Thus, the overall effects of this Project would be moderate. The Project would be consistent with the effects described in the Programmatic EA.

#### **4. Wetlands and Floodplains**

The sole wetland delineated within the Project area totals 0.01 acres and is classified as riverine. Earth-moving activities during Project construction would have a short-term impact. There would be short-term negative effects to the wetland present by Project activities, but the long-term impacts would outweigh these negative effects. Construction activities would require excavation in portions of the wetland during Project activities which would cause short-term negative impacts. The YN obtained a permit from the U.S. Army Corps of Engineers (NWS-2022-0260) under Nationwide Permit 27 to conduct excavation and fill in this wetland pursuant to Section 404 of the Clean Water Act. The YN would adhere to all requirements and prescriptions set forth in the Army Corps permit for activities occurring within the wetland

In the long-term, the Project could increase wetland acreage and improve floodplain conditions. Added in-stream roughness, side channel activation, and wood placement would slow stream flows and increase floodplain inundation potential. Wetland quality would improve due to the restoration of natural flow patterns and the replacement of invasive species with native plants. With greater floodplain connectivity at the site, wetland hydrology would likely improve, potentially expanding the wetland area and re-establishing native vegetative communities.

Flow redirection from ELJs would facilitate more natural lateral movement and sinuosity within the stream mainstem channel, which would slow velocities, facilitate more effective connection between the mainstem channel, side channels, and floodplain, and provide more efficient sediment movement and retention in the floodplain. Impacts to wetlands and floodplains are consistent with the analysis in Sections 3.2.1, 3.2.2, 3.2.9, and 3.3.4 of the Programmatic EA (respectively entitled “Effects Specific to Category 1 – Fish Passage Restoration,” “Effects Specific to Category 2 – Improving River, Stream, Floodplain, and Wetland Habitat,” “Effects Specific to Category 9 – Riparian and Upland Habitat Improvements and Structures,” and “Effects to Resources by Resource Type – Wetlands and Floodplains”). Consistent with the Programmatic EA, there would be long-term beneficial effects from increased connectivity between the existing Simcoe Creek mainstem channel and its floodplain.

#### **5. Wildlife**

No ESA-listed or state-listed terrestrial species are known to exist within the proposed Project area. In the short term, human presence may cause sound and movement that temporarily disturbs local wildlife. Specifically, construction and vegetation removal may temporarily displace mobile species such as birds and small mammals for the duration of such activity, while harassing, harming, or killing smaller, less mobile species and/or depriving them of habitat. However, abundant similar wildlife habitat is present adjacent to the project area, these effects would be limited in duration, and there would be no long-term negative changes wildlife habitat. In the long term, the proposed Project would increase the

richness and diversity of plant species as well as the extent, heterogeneity, and structural diversity of riparian habitat.

Potential wildlife impacts are consistent with the analysis in Sections 3.2.1, 3.2.2, 3.2.9, and 3.3.5 of the Programmatic EA (respectively entitled “Effects Specific to Category 1 – Fish Passage Restoration,” “Effects Specific to Category 2 – Improving River, Stream, Floodplain, and Wetland Habitat,” “Effects Specific to Category 9 – Riparian and Upland Habitat Improvements and Structures,” and “Effects to Resources by Resource Type – Wildlife”), which anticipates moderate-to-high short-term effects on small wildlife species such as potential construction-related mortality, but comparatively minor impacts on larger animals that may only be temporarily displaced from construction-affected habitats. In the long term, however, wildlife populations would benefit from the increased habitat quality and carrying capacity resulting from the Project. The overall effects of this Project would be low to moderate and consistent with those evaluated in the Programmatic EA.

## **6. Geology and Soils**

Project construction activities—including vegetation clearing, channel excavation, dewatering actions, and soil compaction by heavy equipment—would temporarily increase localized soil erosion potential and decrease soil structure. However, use of erosion and sediment control devices, coupled with post-construction site-restoration activities—including site decompaction and re-seeding—would mitigate these impacts.

Long-term improvement to soils is expected once disturbed surfaces are re-seeded and riparian plantings are established and stabilize the soil surface. Long-term improvement to sediment transport and floodplain access within the Project reach would restore natural sediment-forming processes.

Impacts to geology and soils are consistent with the analysis in Sections 3.2.1, 3.2.2, 3.2.9, and 3.3.6 of the Programmatic (respectively entitled “Effects Specific to Category 1 – Fish Passage Restoration,” “Effects Specific to Category 2 – Improving River, Stream, Floodplain, and Wetland Habitat,” “Effects Specific to Category 9 – Riparian and Upland Habitat Improvements and Structures,” and “Effects to Resources by Resource Type – Geology and Soils”), which anticipates moderate-to-high short-term effects but low overall effects after accounting for mitigation measures and long-term benefits. The overall effects of this Project would be consistent with those evaluated in the Programmatic EA.

## **7. Transportation**

The Project area is accessible via Hawk Road and W. White Swan Road, which runs along the eastern extent of the Project area and over its northern section. Temporary access routes developed during Project mobilization would provide off-road access. Temporary closing of W. White Swan Road, would detour traffic to Hawk Road, Medicine Valley Road, and Pinecone Road for about two weeks during the construction of the bridge on W. White Swan Road. Once construction is completed, YN would reopen W. White Swan Road with full access. Yakima County and the Washington State Department of Transportation evaluated and agreed upon all bridge activities and road closures. Overall, the Project would have a low effect on transportation due to the short duration of bridge work and the availability of detours around the work areas.

The Project’s transportation impacts are consistent with the analysis in Sections 3.2.1, 3.2.2., 3.2.9, and 3.3.7 of the Programmatic EA (respectively entitled “Effects Specific to Category 1 – Fish Passage Restoration,” “Effects Specific to Category 2 - Improving River, Stream, Floodplain, and Wetland Habitat,” “Effects Specific to Category 9 – Riparian and Upland Habitat Improvements and Structures,” and “Effects to Resources by Resource Type – Transportation”), which anticipates a low impact overall given the temporary nature of any effects on roads.

## **8. Land Use and Recreation**

The Project is located on YN Reservation land previously used as rangeland for cattle grazing, a practice that continues on adjacent land that the YN leases. In the short term, construction activities would require relocation of the lessees' cattle to another grazing allotment for the duration of construction. In the longer term, cattle grazing in the riparian zone—though currently allowed—would be restricted. Changes to cattle grazing in the area would not be a major effect on the overall quantity of land available due to the plentitude of adjacent grazing areas. Further, the changes in grazing use in the project area would be consistent with the YN's objectives in managing this area (i.e., improving fish passage, fish populations, and species diversity, and restoring riparian habitats, among other goals). Recreation is not currently—nor planned to be—a primary use of this land.

Impacts to land use and recreation are consistent with the analysis in Sections 3.2.1, 3.2.2., 3.2.9, and 3.3.8 of the Programmatic EA (respectively entitled “Effects Specific to Category 1 – Fish Passage Restoration,” “Effects Specific to Category 2 - Improving River, Stream, Floodplain, and Wetland Habitat,” “Effects Specific to Category 9 – Riparian and Upland Habitat Improvements and Structures,” and “Effects to Resources by Resource Type – Land Use and Recreation”), which concludes that land use practices underlying Project sites would remain unchanged in most cases. Although some small acreages along stream course areas may revert from grazing uses back to the wetland and riparian conditions from which they historically were converted, the Project's overall effects on land uses and recreation would likely be low to moderate, consistent with those evaluated in the Programmatic EA.

## **9. Visual Resources**

The proposed Project is not within a visually sensitive area, but users of W White Swam Road and Hawk Road would be able to see Project activities. Road users would see heavy equipment during Project activities, then after implementation road users would see large wood structures across the floodplain and within channels, temporary exposed soil until vegetation is re-established. After vegetation re-establishment, the Project area would have a natural appearance and would not visually detract from the area.

Impacts to visual resources are consistent with the analysis in Sections 3.2.1, 3.2.2., 3.2.9, and 3.3.9 of the Programmatic EA (respectively entitled “Effects Specific to Category 1 – Fish Passage Restoration,” “Effects Specific to Category 2 - Improving River, Stream, Floodplain, and Wetland Habitat,” “Effects Specific to Category 9 – Riparian and Upland Habitat Improvements and Structures,” and “Effects to Resources by Resource Type – Visual Resources.” The analysis concludes that the effects on scenic values from the Project would be low. The overall effects of this Project on visual resources are expected to be low and would be consistent with those evaluated in the Programmatic EA.

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

Air quality impacts from exhaust and dust emissions from construction equipment would be temporary and localized in nature, with no long or short-term violations of state air quality standards expected as a result of Project implementation.

Although construction, transportation, and site-rehabilitation activities would temporarily elevate ambient noise levels at the construction site, the Project would not result in long-term changes to noise levels.

Adequate signage and other routine safeguards would minimize risks to worker and public safety—including on W. White Swan and Hawk Roads—for the duration of construction and site restoration.



Impacts to air quality, noise, and public health and safety are consistent with the analysis in Sections 3.2.2., 3.2.9, and 3.3.10 of the Programmatic EA (respectively entitled “Effects Specific to Category 1 – Fish Passage Restoration,” “Effects Specific to Category 2 - Improving River, Stream, Floodplain, and Wetland Habitat,” “Effects Specific to Category 9 – Riparian and Upland Habitat Improvements and Structures,” and “Effects to Resources by Resource Type – Air Quality, Noise, and Public Health and Safety”), which found the Project’s noise effects—and the restoration program’s effects on air quality, public health, and safety—to be low. The Project’s overall effects would be consistent with those evaluated in the Programmatic EA.

## **11. Cultural Resources**

Following a National Historic Preservation Act (NHPA) Section 106 consultation with the Confederated Tribes and Bands of the YN and the YN Tribal Historic Preservation Office (THPO), BPA determined on June 13, 2022 that no historic properties would be affected. YN THPO concurred with this determination on July 13, 2022.

Potential cultural resource impacts are consistent with the analysis in Sections 3.2.1, 3.2.2, and 3.2.9 of the Programmatic EA (respectively entitled “Effects Specific to Category 1 – Fish Passage Restoration,” “Effects Specific to Category 2 - Improving River, Stream, Floodplain, and Wetland Habitat,” “Effects Specific to Category 9 – Riparian and Upland Habitat Improvements and Structures,” and “Effects to Resources by Resource Type – Cultural Resources”), which anticipated that such impacts would be low because construction would avoid cultural resources. The Project would have no effect to historic properties, which would be less of an effect than that discussed in the Programmatic EA.

## **12. Socioeconomics and Environmental Justice**

The Project would have small, temporary, but beneficial socioeconomic impacts by providing jobs for construction workers and boosting purchases of food, fuel, lodging, and materials for construction and restoration from local businesses in smaller communities. Improvements to natural scenery and recreational enjoyment could have longer term socioeconomic benefits.

Consistent with the analysis in Sections 3.2.2., 3.2.9, and 3.3.13 of the Programmatic EA (respectively entitled “Effects Specific to Category 1 – Fish Passage Restoration,” “Effects Specific to Category 2 - Improving River, Stream, Floodplain, and Wetland Habitat,” “Effects Specific to Category 9 – Riparian and Upland Habitat Improvements and Structures,” and “Effects to Resources by Resource Type – Socioeconomics and Environmental Justice”), the Project is anticipated to have low socioeconomic and environmental justice impacts in the Columbia River Basin due to the small scale and dispersed nature of the work involved. Overall, no permanent adverse effects to environmental justice populations are expected. The overall effects of this Project would be consistent with those evaluated in the Programmatic EA.

## **13. Climate Change**

Due to the short duration of construction activities and the relatively small number of vehicles involved, Project-related greenhouse gas emissions are anticipated to fall well below the Environmental Protection Agency’s reporting threshold of 25,000 metric tons of carbon. This minimal contribution to climate change would largely result from motorized equipment operation during implementation of the restoration actions and would be offset to some degree by the ameliorating effects of restored floodplain function such as increased water table inputs, increased carbon sequestration in expanded and improved wetland habitats, and decreased water temperatures from improved instream and riparian habitat conditions. The overall effects on climate change would be low.

Impacts to climate change are consistent with the analysis in Sections 3.2.1., 3.2.2., 3.2.9 and 3.3.14 of the Programmatic EA (respectively entitled “Effects Specific to Category 1 – Fish Passage Restoration, “Effects Specific to Category 2 - Improving River, Stream, Floodplain, and Wetland Habitat,” “Effects Specific to Category 9 – Riparian and Upland Habitat Improvements and Structures,” and “Effects to Resources by Resource Type – Climate Change”), which found that the Project’s overall effects on climate change would be low.

**Findings**

BPA finds that the types of actions and the potential impacts related to the Project have been examined, reviewed, and consulted upon and are similar to those analyzed in the *Columbia River Basin Tributary Habitat Restoration Programmatic Environmental Assessment* (DOE/EA-2126) and Finding of No Significant Impact. There are no substantial changes in the EA’s Proposed Action and no significant new circumstances or information relevant to environmental concerns bearing on the EA’s Proposed Action or its impacts within the meaning of 10 C.F.R. § 1021.314(c)(1) and 40 C.F.R. § 1502.9(d). Therefore, no further NEPA analysis or documentation is required.

/s/ Catherine Clark

Catherine Clark

Environmental Protection Specialist

Concur:

---

Katey Grange  
NEPA Compliance Officer