

Supplement Analysis
for the
Columbia River Basin Tributary Habitat Restoration
Programmatic Environmental Assessment
(DOE/EA-2126/SA-91)

Johnson Creek Restoration
BPA project number 1984-021-00
BPA contract number 84041 REL 69

Bonneville Power Administration
Department of Energy



Introduction

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

Consistent with the Programmatic EA, this supplement analysis (SA) analyzes the proposed Johnson Creek Restoration Project (project), which would implement specific restoration actions addressed in the Programmatic EA in the Johnson Creek watershed in Grant and Wheeler counties, Oregon. Project objectives include increasing in-stream and floodplain habitat diversity and complexity, increasing the rate of channel evolution, and improving riparian vegetation diversity and health to benefit Endangered Species Act (ESA)-listed steelhead trout (*Oncorhynchus mykiss*).

This SA analyzes site-specific impacts of the proposed project to determine if they are within the scope of the analysis considered in the Programmatic EA. The 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 and that were not addressed by the Programmatic EA.

Proposed Activities

BPA proposes to fund the Oregon Department of Fish and Wildlife (ODFW) to implement stream restoration activities along Johnson Creek near the unincorporated community of Kimberly, Oregon (Figure 1). The project would occur on property that is owned by Longview Ranch LLC and managed for sustainable forestry and livestock grazing. U.S. Fish and Wildlife Service (USFWS) is a project partner.

Johnson Creek is a tributary of the John Day River that is designated critical habitat for ESA-listed Threatened Middle Columbia River (MCR) steelhead trout. Johnson Creek flows into the John Day River approximately one mile upstream of the North Fork John Day River confluence (Figure 1). Historical impacts to the project area's hillslopes and valley floor include livestock grazing, timber harvest, removal of riparian vegetation and instream wood, and direct alteration of the channel and floodplain. These actions have degraded the channel and reduced habitat suitability for ESA-listed MCR steelhead.

Primary limiting factors affecting steelhead in the lower mainstem John Day River and its tributaries include degraded channel structure and complexity (habitat quantity and diversity), altered sediment routing, water temperature, and altered hydrology. The project would involve habitat restoration actions to accelerate riverscape evolution to create a more complex, dynamic, and resilient riverscape for steelhead spawning and rearing.



Figure 1. Johnson Creek Restoration Project Location.

The project would occur along a 0.8-mile length of Johnson Creek and include the following elements:

1. Removing relic boulder/gravel berms to address legacy constraints on natural fluvial processes (flooding, lateral channel migration, vegetation recruitment). Approximately 500 linear feet and 1,200 cubic yards of berm material would be removed. Boulder/gravel materials would be repurposed for the construction of in-stream habitat structures.
2. Adding large wood material and boulders to the creek channel at a high density to accelerate natural fluvial processes including wood accumulation, sediment sorting, lateral channel migration, vertical channel aggradation, and wood and vegetation recruitment. This includes installing approximately 10 mid-channel engineered log jams (ELJs), 4 bank-attached ELJs, 142 machine-placed rootwads, and 76 habitat boulders in Johnson Creek.
 - ELJs: The mid-channel ELJs would consist of two whole trees placed in the middle of the channel with the rootwads facing upstream. Habitat boulders would provide ballast by bracing against the downstream side of each rootwad. Wood piles driven crosswise over each tree stem would provide additional structural support. Native alluvium material sourced from the berm removal would be placed on top of the jams to encourage island formation and salmonid spawning. The bank-attached ELJs would consist of one whole tree placed along the streambank toe with stem/branches interacting with the stream channel. Rootwads with stems would be placed directly on top of the whole tree and trenched into the streambank to ballast the underlying tree in a stable position. Two boulders would be placed on top of the whole tree, bracing against the downstream side of each rootwad.

- **Rootwads:** Machine-placed rootwads would consist of large juniper trees with rootwads intact, provided by Longview Ranch LLC and sourced from upland locations on the ranch property. These trees would be placed low in the channel without anchoring (e.g., no ballast, piles, or mechanical stabilization) to maximize saturation of wood. Some of the pieces may shift in place or rack on downstream structures during flood events, thereby increasing complexity in the restored reach. Nine additional rootwads would be placed in a high-flow channel off of the main Johnson Creek channel, to promote high-water refugia, increase floodplain roughness, and promote deposition of sediment.
 - **Boulders/Gravel:** Approximately 1,200 cubic yards of boulders and gravel from berm removal would be placed in homogenous sections of the channel. Boulder cluster configurations would vary to maximize low-flow habitat diversity. Gravel placement would be field-fit near habitat structures and in channel segments that are dry during the in-water work period to limit turbidity.
3. Seeding temporary disturbance areas with native riparian and upland plant species immediately after construction, followed by live stake and container plant installations in the year or two following construction. The seeding and planting would cover approximately 0.8 acres of riparian area and 1.6 acres of adjacent upland area. Herbicides would be applied to remove non-native invasive species from planting areas to promote survival of native species.

Construction equipment may include excavators, skid steer loaders, and haul trucks and/or trailers. Proposed access points are strategically located to make use of existing permanent access routes and stream crossings and minimize disturbance to existing vegetation. Three existing stream crossings that are well-armored would be used for truck and equipment access, and one temporary stream crossing would be created. Most work to construct the log jams would be completed from the bank with an excavator, with personnel in the channel hand-placing some material. All equipment staging and fueling would be located more than 150 feet from the stream and wetlands. Fish would be herded from instream work segments prior to in-water disturbance, and block nets may be set up at the upstream and downstream ends of specific work areas to prevent fish from entering those areas while work is occurring. ODFW personnel would be on-site to perform the fish exclusion.

Areas of temporary construction disturbance would be roughened, seeded, and mulched during construction, then seeded and planted with native species afterward. Following construction, monitoring and adaptive management would occur over a 5-year period; this would include monitoring habitat structure effectiveness, making repairs as needed, and ensuring fish passage is maintained throughout the project reach.

The proposed action would support conservation of ESA-listed species considered in the 2020 ESA consultation with the National Marine Fisheries Service (NMFS) on the operation and maintenance of the Columbia River System. This action would also support ongoing efforts to mitigate for the 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. (USC) 839 et seq.).

Environmental Effects

Chapter 3 of the Programmatic EA, as summarized in relevant parts below, discusses typical environmental disturbances and impacts stemming from habitat restoration in the Columbia River basin. Below is a description of the potential site-specific impacts of the Johnson Creek Restoration Project and an assessment of whether these impacts are consistent with those described in the Programmatic EA.

1. Fish and Aquatic Species

The effects of using mechanized equipment and working in and along Johnson Creek are consistent with the analysis in the Programmatic EA, Section 3.3.1 (*"Fish and Aquatic Species"*). The Programmatic EA describes overall low impacts to fish and aquatic species after considering moderate short-term adverse effects and beneficial long-term improvements.

Johnson Creek provides spawning and rearing habitat and is designated critical habitat for ESA-listed MCR steelhead trout. Steelhead spawning in Johnson Creek occurs in the spring (March – June), and juvenile rearing occurs year-round. Johnson Creek is also year-round habitat for resident redband trout and may occasionally be used by juvenile Chinook salmon (*Onchornynhus tshawytscha*) from the John Day River, although Chinook salmon use is expected to be infrequent. Pacific lamprey may also use Johnson Creek, but their presence in the creek has not been confirmed. BPA completed ESA Section 7 consultation on the effects of the project actions on ESA-listed fish species in its Habitat Improvement Program (HIP) programmatic consultation with NMFS, which found that such actions would likely adversely affect MCR steelhead trout and their designated critical habitat in the short term, but would not be likely to result in jeopardy to the species or result in destruction or adverse modification of their designated critical habitat.

In the short term, the project would expose, displace, reconfigure, or compact earth by using mechanized equipment within and along Johnson Creek, likely causing moderate, temporary sediment discharges. Project actions would be subject to the conservation measures from BPA's HIP programmatic biological opinions, such as installing temporary erosion and sediment controls before starting work, locating equipment fueling areas at least 150 feet from the creeks, and working during the approved in-water work window to avoid impacts to fish at critical life stages. Though the amount of sediment discharged would temporarily be elevated above background levels, turbidity is expected to be below levels harmful to fish and at durations not anticipated to cause harm, consistent with Section 3.3.1.2.1 of the Programmatic EA (*"Short-Term Effects to Fish and Aquatic Species from Construction Activities"*).

Some aquatic organisms that are not large enough to be salvaged from instream work areas (e.g., invertebrates) may be killed by ELJ, rootwad, and boulder/gravel installations. Fish exclusion from active work areas with the use of herding techniques and block nets may be stressful for individual fish, but it would avoid exposing fish to more harmful effects of habitat structure and boulder/gravel installation. The newly constructed stream environment would be quickly recolonized by fish and other aquatic organisms. The anticipated amount of activity and aquatic species disturbance is consistent with the analysis in Section 3.3.1.2.1 (*"Short-Term Effects to Fish and Aquatic Species from Construction Activities"*). The Programmatic EA disclosed direct, harmful, and sometimes fatal impacts to aquatic species, including displacement of fish from their existing habitat during periods of isolation and from movement, sounds, and vibrations from human and mechanical activity.

Project implementation would have beneficial long-term effects on fish and aquatic species due to the improvements to the creek's floodplain connection, increased quantity and quality of instream habitat, and enhanced riparian vegetation over time. The 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, the project would have moderate short-term adverse effects on fish and aquatic species and beneficial long-term improvements, consistent with those described in the Programmatic EA.

2. Water Resources

The effects of the project on water resources are consistent with the analysis in Section 3.3.2 of the Programmatic EA (*"Water Resources"*), which describes overall low water resources impacts after considering moderate short-term adverse effects and beneficial long-term effects.

Construction in Johnson Creek would occur in early fall during a period of typically low flows. Dewatering is not proposed and flows would be maintained through the project section of Johnson Creek. Through the proposed berm removal, wood structure installation, and boulder/gravel placement, the constructed project would increase the frequency and duration of stream flows accessing the floodplain and increase groundwater recharge in the floodplain in the long term.

Short-term adverse water quality impacts in the form of elevated suspended sediment and turbidity levels may occur as a result of ELJ and rootwad installation and boulder/gravel placement in the stream. Ground disturbance from berm removal and equipment access would increase the potential for sediment mobilization when disturbed soils are exposed to precipitation, especially prior to vegetation reestablishment. Such effects are consistent with the analysis in Section 3.3.2.2.1 of the Programmatic EA

(*"Sedimentation and Turbidity Effects"*). In-water work elements would be constructed with best management practices designed to minimize the severity and duration of temporary water quality impacts in accordance with the conditions of the U.S. Army Corps of Engineers (USACE) Clean Water Act Section 404 Permit (Nationwide Permit 27 for Aquatic Ecosystem Restoration, Enhancement, and Establishment Activities) and a permit issued by the Oregon Department of State Lands (DSL) under Oregon's Removal-Fill Law (Permit No. 63227-RF).

Over the long term, the project would increase floodplain connectivity, promote on-site sediment retention in the floodplain, and support diverse native vegetation establishment – all of which may benefit water quality in Johnson Creek. Considered together, the overall effects of the project on water resources would be low and consistent with the effects described in the Programmatic EA. Overall, the project would have moderate short-term adverse effects and beneficial long-term improvements on water resources, consistent with those described in the Programmatic EA.

3. Vegetation

The effects of the project on vegetation are consistent with the analysis in Section 3.3.3 of the Programmatic EA (*"Vegetation"*), which describes overall moderate impacts to vegetation after considering moderate short-term adverse effects and highly beneficial long-term effects.

U.S. Fish and Wildlife Service's (USFWS's) Information for Planning and Conservation (IPaC) tool indicates no Federal ESA-listed plant species with ranges known or expected to overlap the project area. There are also no documented occurrences of state-listed plant species in the project area.

There would be some disturbance of vegetation in areas where equipment moves to stream work areas from nearby existing access roads. The riparian band of black cottonwood trees that lines Johnson Creek would remain intact, and upland temporary vegetation disturbance areas consist mostly of grasses and sagebrush. The project includes seeding of temporary disturbance areas with native species after construction for stabilization, with native willow stakes and containerized plants planned for installation in the year or two after construction. The seeding and planting areas would cover approximately 0.8 acres of riparian area and 1.6 acres of adjacent upland area.

The long-term effects of the project on vegetation would be beneficial, as the improvements to the stream floodplain connection, increases in fine sediment retention, and vegetation plantings would all support native vegetation establishment and higher vegetative diversity than under the existing conditions. Taken together, the overall effects of the project on vegetation would be moderate in the short term until revegetation is established and beneficial in the long term as native vegetation is established. These effects would be less in spatial scale (a total of only 2.4 acres of disturbance) and otherwise consistent with the types of effects described in the Programmatic EA.

4. Wetlands and Floodplains

Project activities would have impacts on wetlands and floodplains that are consistent with the analysis in Section 3.3.4 of the Programmatic EA (*"Wetlands and Floodplains"*), which describes low overall impacts to wetlands and floodplains after considering short-term adverse effects and beneficial long-term effects.

By design, some of the proposed construction activities would occur in riverine wetlands and floodplain areas adjacent to Johnson Creek. Minor temporary impacts to the riverine wetlands would result from construction access and installation of the log jams and rootwads, but the gravel/cobble substrates in these areas are not expected to experience substantial compaction or disturbance.

Wetland fill from wood placement over 0.01 acres is authorized under a permit issued by the USACE pursuant to Section 404 of the Federal Clean Water Act (Nationwide Permit 27) and a Removal-Fill Permit from Oregon DSL (DSL Permit No. 63227-RF). Additionally, the Wheeler County Planning Department issued a Floodplain Development Permit (Permit No. FDP-26-001) for the project due to the site's location within a Special Flood Hazard Area, as designated on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) panel 4102450275B. Construction activities would be managed in accordance with permit conditions to minimize the area and duration of wetland and floodplain impacts.

The project would have long-term benefits to floodplain functions and wetlands adjacent to Johnson Creek. The increased floodplain engagement during seasonal high flows and increase in habitat quality that would result from wood structure placement in the creek and floodplain may expand wetland area and should enhance wetland functions over time. Considering the short-term adverse effects and beneficial long-term improvements, the overall effects of the project on wetlands and floodplains would be low and consistent with the effects described in the Programmatic EA.

5. Wildlife

Potential wildlife impacts of the proposed project are consistent with the analysis in Section 3.3.5 of the Programmatic EA ("*Wildlife*"), which describes overall low impacts to wildlife after considering short-term adverse effects and beneficial long-term effects.

The project area is within the general geographic range of the ESA-listed Endangered gray wolf (*Canis lupus*). However, the project is not within an ODFW-identified area of known wolf activity or near documented gray wolf occurrences, and it is not within gray wolf designated critical habitat. The likelihood of wolves encountering project construction activity is expected to be extremely low, and the project does not involve permanent elements that would negatively impact wolf habitat (e.g., increasing road/trail densities). The project is therefore expected to have no effect on gray wolf.

The project area is not within the range of other federal ESA-listed wildlife species. The pallid bat (*Antrozous pallidus*), an Oregon state sensitive species, has been documented near the rural community of Kimberly, which is less than one mile from the project site. The project would not disturb typical roosting habitat for pallid bats, which includes crevices in cliffs, caves, mines, bridges, and occasionally buildings.

In the short term, construction activity could destroy the habitats of small animals (e.g., mice and moles) and temporarily displace and deter larger wildlife (e.g., deer and coyote) from using the project area, due to noise and physical and visual disturbance from equipment operation and human activity. Any wildlife temporarily displaced by construction activity would likely reoccupy the site once construction is complete and vegetation in disturbed areas is reestablished. In the long term, the proposed project would expand and improve wildlife habitat conditions in riparian areas through the increased frequency and duration of floodplain activation, the added wood structures, and vegetation plantings, all of which would promote a wider, wetter riparian corridor with increased habitat structure and vegetation diversity. This could benefit some wildlife including birds and amphibians, although the goal of the project is to improve in-stream habitat conditions for fish. Considering the short-term adverse effects and beneficial long-term improvements, the overall effect of the project on wildlife would be low and consistent with the effects evaluated in the Programmatic EA.

6. Geology and Soils

The effects of the proposed project are consistent with the analysis in Section 3.3.6 of the Programmatic EA ("*Geology and Soils*"), which describes moderate to high short-term effects but low overall effects after accounting for mitigation measures and long-term benefits. Project construction activities – including berm removal and habitat structure installation – would temporarily increase localized soil erosion potential. However, use of erosion and sediment control measures as proposed, including revegetation after construction, would mitigate these impacts.

Long-term improvements to site soil conditions may be expected from the project with the slowing and spreading of high flows onto the floodplain and restoring more natural stream processes. These actions are expected to increase the amount of fine sediment in the floodplain, which is expected to help promote more successful establishment of vegetation, including woody riparian vegetation which would support soil stability. Considering the moderate short-term adverse effects and long-term beneficial effects, the overall effects of the project on geology and soils would be low and consistent with the effects described in the Programmatic EA.

7. Transportation

The project's transportation impacts are consistent with the analysis in Section 3.3.7 of the Programmatic EA (*"Transportation"*), which describes low impacts given the temporary nature of any effects on roads. Access to the Longview Ranch property and project area from Oregon Highway 19 to the east is via private gravel roads. Construction vehicles and equipment would access the site and work areas from these roads. No closure of public roads is anticipated for construction, and any impacts to road traffic as construction equipment is entering or leaving the site would be minor and temporary. The overall effects of the project on transportation would be low and consistent with the effects described in the Programmatic EA.

8. Land Use and Recreation

Impacts to land use and recreation are consistent with the analysis in Section 3.3.8 of the Programmatic EA (*"Land Use and Recreation"*), which concludes that land use practices at underlying project sites would remain unchanged in most cases and that overall effects to land use and recreation would be low to moderate. The project would not change the use of the property as a working ranch with portions used for livestock grazing and sustainable forestry for carbon credits. The project area is entirely on private land and is not used for public recreation.

The project was reviewed by both the Wheeler County and Grant County land use planning departments. Wheeler County issued a land use approval for the project (FPD-26-001) in August 2026, noting in its findings that the project is aligned with Wheeler County Comprehensive Plan goals and policies, specifically Goal 3(j), which seeks to encourage farming practices which would conserve and protect fish and wildlife and enhance riparian habitat. Grant County's planning director provided a land use compatibility statement for the project in June 2026 that noted the proposed stream restoration is not subject to land use review under Grant County's land use regulations. Considered together, the overall effects of the project on land use and recreation would be low and consistent with the effects described in the Programmatic EA.

9. Visual Resources

The effects of the proposed project on visual resources are consistent with the analysis in Section 3.3.9 of the Programmatic EA (*"Visual Resources"*), which describes the effects on scenic values to be low. The proposed ELJs and rootwads, berm removal, boulder/gravel placement, and plantings are located along the Johnson Creek riparian corridor, in an area where vegetation is generally dominated by black cottonwood trees with grasses and sagebrush beyond. Johnson Creek is not designated as a national or state scenic waterway.

The visual conditions of the project area would be temporarily altered during construction by the presence of equipment and increased human activity, and for a short period following construction when some exposed soils from berm removal and temporary access routes would be visible, until vegetation reestablishes. After vegetation is reestablished following construction, the project area would have a more natural riverine corridor appearance that would be compatible with existing site features and the visual character of the area. The project area is entirely on a large private property, and project construction activities and completed project features would not be highly visible to the public or interfere with any scenic views. There would be no long-term adverse effects on visual resources. Overall, the project's effects on visual resources would be low, consistent with those described in the Programmatic EA.

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

The effects of the project are consistent with the analysis in Section 3.3.10 of the Programmatic EA (*"Air Quality, Noise, and Public Health and Safety"*), which describes low impacts to air quality, noise, and public health and safety.

Air quality impacts from dust and exhaust emissions from construction vehicles and equipment would be temporary and localized in nature, with no short- or long-term violations of state air quality standards expected. Construction equipment operations would temporarily elevate noise above background levels during daylight hours while work is occurring. The proposed work area is on a privately owned rural ranch

property and is not adjacent to sensitive noise receptors such as residential neighborhoods, schools, or hospitals.

The privately owned project property is not accessible to the general public, and the project would not create public health and safety hazards. Temporary safety hazards typical of stream restoration activities would be expected from worker operation of equipment and tools used to construct the project. Overall, the effects of the project on air quality, noise, and public health and safety would be low and consistent with the effects described in the Programmatic EA.

11. Cultural Resources

The effects of the project on cultural resources are consistent with the analysis in Section 3.3.11 of the Programmatic EA (*"Cultural Resources"*). The Programmatic EA 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 and USFWS agreed that USFWS, which is providing permitting and technical assistance for the project through its Partners for Fish and Wildlife Program, would take the role of lead federal agency for compliance with Section 106 of the National Historic Preservation Act (NHPA). On December 18, 2025, USFWS sent letters initiating consultation with the Confederated Tribes of the Warm Springs and the Burns-Paiute Tribe. USFWS sent a letter to the Oregon State Historic Preservation (SHPO) on December 19, 2025, requesting consultation and concurrence with the Area of Potential Effects (APE) boundary. SHPO acknowledged receipt of the letter on December 19, 2025, with no comments on the APE boundary (SHPO Case No. 25-2335). USFWS conducted background research and completed a field survey of the APE, finding no cultural resources. USFWS determined that the project would have no historic properties affected. No further responses from SHPO or the consulting Tribes were received.

12. Socioeconomics

The effects of the project are consistent with the analysis in Section 3.3.13 of the Programmatic EA (*"Socioeconomics and Environmental Justice"*), which describes low socioeconomic impacts. The project is located on privately owned land and would be implemented by ODFW employees. The project would not result in requirements for additional permanent employees or for individuals to leave the local area or relocate within it, nor would it affect housing availability for local populations, displace people, or eliminate residential suitability of any lands. Overall, the effects of the project on socioeconomics would be low and consistent with the effects described in the Programmatic EA.

13. Climate Change

The effects of the project 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 expected to be low. The minimal contribution to climate change from construction-related emissions would be offset to some degree by the improvements to floodplain engagement and function, including potential increases in carbon sequestration from improved wetland habitat, and potentially decreased stream temperatures from improved riparian vegetation success over time. Overall, the effects of the project on climate change would be low and consistent with the effects described in the Programmatic EA.

Findings

BPA finds that the types of actions and the potential impacts related to the proposed Johnson Creek Restoration Project 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 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 EA's Proposed Action or its impacts within the meaning of NEPA and the DOE NEPA Implementing Procedures. Therefore, no further NEPA analysis or documentation is required.

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