

**Supplement Analysis**  
for the  
**Columbia River Basin Tributary Habitat Restoration**  
(DOE/EA-2126/SA-41)

**Couse Creek Project Area 78 Fish Habitat Restoration**  
**BPA project number 1994-018-05**

Bonneville Power Administration  
Department of Energy



**Introduction**

In December 2020, Bonneville Power Administration (BPA) and the Bureau of Reclamation (BOR) 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 habitat restoration actions in the Columbia River Basin and its tributaries.

Consistent with the Programmatic EA, this supplement analysis (SA) analyzes the proposed Couse Creek Project Area 78 Fish Habitat Restoration Project (Project). The Project would implement many of the specific restoration actions that the Programmatic EA assessed in the Snake River Basin in Asotin County, Washington. Project objectives include increasing fish habitat by increasing the quantity and quality of available aquatic habitat for steelhead, chinook, and bull trout, 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 Asotin County Conservation District (ACCD) to complete the Project along a 1.3-mile-long segment of Couse Creek between river miles (RM) 0.1 and 1.4. The Project would support the conservation of ESA-listed species considered in a 2020 ESA consultation with National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS) on the operation, maintenance, and management of the Columbia River Power System. Funding the project would also support ongoing efforts to mitigate for effects for 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.*

The Project is located along Couse Creek approximately 12 miles south of Asotin, Washington along Couse Creek Road. The Project would begin at the Snake River Road bridge crossing and RM 0.1 and would end near an unnamed ephemeral tributary at RM 1.4. Couse Creek at this section is considered a minor spawning area for steelhead and a priority restoration reach in the Snake River Salmon Recovery



a range of flows, including low flows. Anchor logs buried in the streambank and fill would be placed in compaction layers (lifts) and compacted with vibratory compaction equipment. No hardware would be used to anchor these structures. Structures would be partially buried in the banks where site conditions allowed or wedged between log posts or live trees.

Log structure installation in the mainstem would occur during the in-water work window in the wetted channel. The proposed areal extent for habitat and key structures would be about 200 and 900 square feet, respectively. The Project would include nine non-channel-spanning and 26 channel-spanning in-stream structures. Key structures would require work on both sides of the channel to secure key pieces. Disturbance to the channel bottom would be minimized to the extent possible. Construction equipment would complete one in-water crossing to the opposite bank at each key structure installation site. After log structure installation, disturbed areas would be roughened and hydroseeded.

### **Persuasion Channel**

Short segments of channels would be excavated to create connected high-flow paths between the main channel and the relic side channels on the floodplain. These persuasion channels would be intended to connect side channels at the two-year flow event and would not be excavated down to the main channel bed depth. Persuasion channel dimensions would match that of the existing side flow channel, and it is anticipated to allow access at flows as low as 5 cfs and provide a variety of flows when side channels are connected.

Persuasion channel work would occur within the in-water work window. The persuasion channel's areal extent is approximately 8550 square feet (0.2 acre). Excavation and hauling would occur overland in the floodplain during this implementation and could negatively impact vegetation. The contractor would be required to preserve and protect native vegetation marked by the engineer, and haul routes would be adjusted accordingly. Disturbed areas would be roughened and hydroseeded.

### **Sediment Augmentation**

Approximately 40 cubic yards of sediment excavated from the persuasion channel would be placed in the main channel for use in the large wood ballasts and geomorphic habitat forming processes. Sediment used would have the correct gradation and angularity for use in the main channel. Sediment augmentation for the main channel would be proposed for immediately downstream of the persuasion channel entrances and in the wood structures for stability. Placing the sediment downstream of the persuasion channel entrances would help increase the water surface elevation locally and push water in the persuasion channel.

Sediment augmentation work would be accomplished within the in-water work window, and concurrent to persuasion channel excavation. The areal extent of the sediment augmentation would be approximately 1100 square feet. The contractor would be required to preserve and protect native vegetation marked by the engineer, and haul routes would be adjusted accordingly. Disturbed areas would be roughened and hydroseeded.

### **Floodplain Roughness**

The existing floodplain contains roughness in the form of boulders and, in some locations, riparian vegetation. Logs and slash would be added to increase the structural elements on the floodplain and would be oriented at leaning angles to flow paths to trap fine sediment. Slash and floodplain logs would be cut to lengths less than 15 feet (75 percent of the length of the Snake River Road bridge opening) to ensure passage if material becomes mobilized. Floodplain logs would be placed in the high-flow side channels to help spread flows on the floodplain. Logs placed on the floodplain that have a diameter greater than 12 inches would be stabilized by live trees or log posts.

Floodplain roughness features are intended to break up flow paths, help reestablish native vegetation, and promote sediment accumulation on the floodplain. Floodplain roughness would be located on floodplain areas disturbed by construction including temporary construction access and haul routes, small disturbed areas next to log structures, and on persuasion channel banks. This action's areal extent would be approximately one acre.

### **Weed Control and Revegetated Areas**

Areas disturbed during construction and areas lacking native vegetation would be planted with native riparian species to enhance and replenish riparian vegetation on the Project site. Weed control efforts would be supported to enhance riparian health. Invasive species would be excavated as part of the revegetation and weed control plan. All invasive species that are excavated would be hauled offsite to a disposal facility.

Hydroseeding would occur in conjunction with live plantings to help prevent non-native weedy species from reoccupying the disturbed areas. Additional revegetation in the form of plantings would occur post-construction for multiple years after implementation to maintain native vegetation establishment in the project area. Approximately 2.5 acres of the Project area would be revegetated.

### **Staging Area and Spoils**

Equipment, materials, and refueling would all occur on site of the Project. Staging of equipment and materials, and refueling activities would occur in a previously-disturbed cattle corral. This staging area would be West of the adjacent Couse Creek Road and beyond 150 feet from the nearest waterbody, Couse Creek.

The Project has the potential to create spoils from excess materials excavated that cannot be reused in the restoration activities proposed. All excess spoils would be disposed of in predesignated areas above the 100-year floodplain.

### **Environmental Effects**

Chapter 3 of the Programmatic EA, 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 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 Couse Creek and likely create conditions where sediment would be released for a short period of time during construction activities. Only a moderate amount of sediment is anticipated to be released by the Project because of bank excavation for installation of key and habitat log structures. 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 instream construction activity would displace fish from the work area until implementation is completed. Small aquatic organisms that are not salvaged would likely not survive. 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 is consistent with the analysis in Section 3.3.1.2.1 of the Programmatic EA ("Short-Term Effects to Fish

and Aquatic Species from Construction Activities”). Specifically, those sections of the Programmatic EA disclosed direct, harmful, and sometimes fatal impact 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 Snake River Chinook and steelhead and their critical habitat are present within the Project area. 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 Couse Creek, increased available floodplain access and flows, and an expected reduction in summer water temperatures. 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, 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 the Project construction—including mechanized equipment operation, persuasion channel excavation, floodplain roughness, and log structure development along Couse Creek— would temporarily expose, displace, reconfigure, or compact earth. During Project implementation, in-stream excavation, improved secondary channel connection, and log structure installation could briefly discharge plumes of sediment, which ACCD would mitigate using the measures as detailed in Section 2.4 of the Programmatic EA (“Mitigation Measures and Design Criteria”). Based on implementation of the mitigation measures and the extent duration of any resultant turbidity plume, the Project’s anticipated impact to water quality and quantity would be low, consistent with the analysis in Section 3.3.2 of the Programmatic EA (“Water Resources. Project Implementation”).

The Project would result in a long-term decrease in unnatural sediment inputs 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 in the Project area. Project implementation—including construction of the persuasion channel, installation of log structures, establishment of overland access routes, and creation of staging and spoil disposal areas—would have moderate short-term impacts on vegetation. ACCD would remove, grade, and trample vegetation within the Project work areas. Temporary access routes, staging areas, and spoil disposal areas would be established to

minimize impacts to the floodplain, and ACCD 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 instream habitat structures. After construction, ACCD would revegetate temporary work areas. ACCD 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 Asotin 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 the Project would be moderate and would be consistent with the effects described in the Programmatic EA.

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

The Project is anticipated to have impacts similar to those described in the Programmatic EA. There would be short-term (i.e., weeks long) adverse effects on floodplains due to earthwork along the Couse Creek and its connected floodplain. The effects of using heavy equipment and manually working in Couse Creek would be consistent with the Programmatic EA. Because there are no delineated wetlands within the Project area, the Project is expected to have no impact to wetland areas. In the long-term, the Project could increase floodplain acreage and improve floodplain conditions. Added in-stream roughness, side channel activation, and wood placement would slow stream flows and increase floodplain inundation potential. Appropriate Clean Water Act permitting would be obtained by ACCD prior to any waterbody disturbance and any mitigation measures requested as part of the Clean Water Act permitting would be followed.

Flow redirection from wood structures 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 channel, 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 "Effect of Fish Passage Restoration (Category 1)," "Improving River, Stream, Floodplain, and Wetland Habitat (Category 2)," "Riparian and Upland Habitat Improvements and Structures (Category 9)," and "Wetlands and Floodplains"). Consistent with the Programmatic EA, there would be long-term beneficial effects from increased connectivity between the existing Couse 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 to 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 of Fish Passage Restoration (Category 1)," "Effects of Improving River, Stream, Floodplain, and Wetland Habitat (Category 2)," "Effects of Actions for Riparian

and Upland Habitat Improvements and Structures (Category 9),” and “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 and would ultimately 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 persuasion channel excavation, log structure installation, 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 EA (respectively entitled “Effects of Fish Passage Restoration (Category 1),” “Effects of Improving River, Stream, Floodplain, and Wetland Habitat (Category 2),” “ Effects of Actions for Riparian and Upland Habitat Improvements and Structures (Category 9)” and “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 Couse Creek Road, which runs adjacent to the northern extent of the Project area. Temporary access routes developed during Project mobilization would provide off-road access. Couse Creek Road would not be blocked or closed during the scheduled implementation, though congestion may occur for short periods as vehicles and machinery are brought into the Project Area. Overall, the Project would have a low effect on transportation due to the short duration of vehicle congestion near the work area.

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 of Fish Passage Restoration (Category 1),” “Effects of Improving River, Stream, Floodplain, and Wetland Habitat (Category 2),” “Effects of Actions for Riparian and Upland Habitat Improvements and Structures (Category 9),” and “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 private land previously used as rangeland for cattle grazing, a practice that continues on adjacent land on either side of the Project area. In the short-term, construction activities would require the landowner to avoid the project site for safety. In the long-term, cattle grazing in the riparian zone would continue to be restricted. Changes to cattle grazing in the area would not have a major effect on the overall quality of land due to the plentitude of adjacent grazing areas. 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 of Fish Passage Restoration (Category 1),”

“Effects of Improving River, Stream, Floodplain, and Wetland Habitat (Category 2),” “Effects of Actions for Riparian and Upland Habitat Improvements and Structures (Category 9),” and “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 located within a visually sensitive area, but users of Couse Creek Road would be able to see Project activities. Road users would see heavy equipment during Project activities, then after implementation road users would see log 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 of Fish Passage Restoration (Category 1),” “Effects of Improving River, Stream, Floodplain, and Wetland Habitat (Category 2),” “Effects of Actions for Riparian and Upland Habitat Improvements and Structures,” and “Visual Resources”), which concludes that the effect on scenic values from the Project would be low. The overall effects of the 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 to result from 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 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 3.2.1, 3.2.2, 3.2.9, and 3.3.10 of the Programmatic EA (respectively entitled “Effects of Fish Passage Restoration (Category 1),” “Effects of Improving River, Stream, Floodplain, and Wetland Habitat (Category 2),” “Effects of Actions for Riparian and Upland Habitat Improvements and Structures (Category 9),” and “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 Department of Archaeology and Historic Preservation (DAHP), Nez Perce Tribe (NPT), the Confederated Tribes and bands of the Yakama Nation (YN), the Confederated Tribe of the Umatilla Indian Reservation (CTUIR), the Confederated Tribes of the Colville Reservation (CTCR), and Washington Department of Fish and Wildlife (WDFW), BPA determined on April 6<sup>th</sup> 2023 that no historic properties would be affected. DAHP concurred with this determination on April 7<sup>th</sup> 2023. No other consulting parties’ responses were received.



Potential cultural resource impacts are consistent with the analysis in Sections 3.2.1, 3.2.2, 3.2.9, and 3.3.11 of the Programmatic EA (respectively entitled “Fish Passage Restoration (Category 1),” “Improving River, Stream, Floodplain, and Wetland Habitat (Category 2),” “Riparian and Upland Habitat Improvements and Structures (Category 9),” and “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 that 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 long-term socioeconomic benefits.

Consistent with the analysis in Sections 3.2.1, 3.2.2, 3.2.9, and 3.3.13 of the Programmatic EA (respectively entitled “Effects of Fish Passage Restoration (Category 1),” “Effects of Improving River, Stream, Floodplain, and Wetland Habitat (Category 2),” “Effects of Actions for Riparian and Upland Habitat Improvements and Structures (Category 9),” and “Socioeconomics and Environmental Justice”), the Project is anticipated to have low socioeconomic and environmental justice impacts in the Snake 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 be low. This minimal contribution to climate change would largely result from motorized equipment operation during implementation of the restoration actions, but these 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 riparian habitats, and decreased water temperatures from improved instream and riparian habitat conditions.

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 of Fish Passage Restoration (Category 1),” “Improving River, Stream, Floodplain, and Wetland Habitat (Category 2),” “Riparian and Upland Habitat Improvements and Structures (Category 9),” and “Climate Change”), which found that the Project’s overall effects on climate change would be low.

## **Findings**

The types of actions and the potential impacts related to the proposed 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 CFR § 1021.314 and 40 CFR §1502.9(d). Therefore, no further NEPA analysis or documentation is required.

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