

Supplement Analysis
for the
Columbia River Basin Tributary Habitat Restoration
(DOE/EA-2126/SA-61)

Tieton River River Mile 4.3 Restoration Project
BPA project number 1997-051-00
BPA contract number 94116

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 proposed Tieton River River Mile (RM) 4.3 Restoration 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 spawning and rearing habitat for steelhead (*Oncorhynchus mykiss*) by increasing perennial channel length and wetted area, providing low-flow off-channel habitat, increasing shade and cover via riparian zone restoration, and improving floodplain function and connectivity 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 Confederated Tribes and Bands of the Yakama Nation (YN) to complete the Project along a 0.6-mile-long segment of Lower Tieton River between RMs 4.2 and 4.8. The project would support conservation of ESA-listed species considered in a 2020 ESA consultation between National Marine Fisheries Service (NMFS) and BPA, among other federal action agencies, on the operation, maintenance, and management of dam and reservoir projects comprising the Columbia River System. It would also support BPA's commitments to the YN under the 2022 Columbia River Fish Accord Extension agreement and 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.*

The lower Tieton River is approximately 21 miles in length and situated on private, public, and state-owned lands. The Project is proposed entirely on the Oak Creek Wildlife Area, in a portion that state owned and managed by the Washington State Department of Fish and Wildlife (WDFW). One of the project access routes crosses federally-owned land that is managed by the U.S. Bureau of Reclamation (BOR). All restoration actions would occur within the state-owned portion of the wildlife area. Land adjacent to the Project area consists mostly of riparian and shrubsteppe utilized for recreation activity, including hiking, fishing, hunting, wildlife viewing, and rock climbing. Within the project area, the Tieton River's flow is concentrated in the mainstem channel, while relic side channels are no longer activated at normal flows due to flow regulation of the Rimrock Dam. The Tieton River pushes up against the paved U.S. Highway 12 which has helped create a more singled threaded channel.

The Project would include side channel inlet excavation, an engineered boulder riffle at a side channel inlet, a sediment nourishment bar (supplemental gravel), and an apex engineered logjam at the side channel inlet in order to expand the floodplain and reengage the relic side channels. Attachment 1 depicts the location of the Project elements which are described further below.

YN would perform all in-water construction work between January 1 and April 15, during the approved in-water work window. This in-water work window was approved by both NMFS and WDFW in order to allow excavation of the side channel and avoid icing post-construction. YN would develop access routes along existing disturbed trail locations and along the relic side channel for use of heavy equipment, use of a staging area above the 100-year floodplain or 150 feet from the channels for all materials and equipment, and to minimize work area disturbance to existing riparian vegetation and soils.

Improve Secondary Channel

The Project would involve excavating approximately 880 feet/3,045 cubic yards of material along a relic side channel to encourage flow from the mainstem Tieton River onto the southern floodplain. Once flow is rerouted through the enhanced relic side channel, it would flow approximately 0.5 miles before reentering the mainstem Tieton River.

Install Habitat-Forming Instream Structures

YN proposes to install an engineered boulder riffle within the mainstem of the Tieton River spanning a portion of the side channel inlet and directly downstream of the side channel inlet. The goal of the engineered riffle would be to locally raise the water surface elevation and deflect flow into the side channel.

YN proposes to install one apex engineered log jam (ELJ) at the side channel inlet, which would be placed at the apex between the side channel and the boulder riffle, on the right bank of the Tieton River. The ELJ would be a hard point in the channel to split the mainstem flow into the side channel inlet. Live plantings would be established behind the ELJ for long-term stability and creation of shade and cover. The ELJ would be comprised of wood, boulders, and native fill materials from the side channel excavation for ballast and stability.

Install Habitat-Forming Gravels

YN proposes to install a lateral sediment nourishment bar along the right back of the Tieton River. Approximately 1,090 cubic yards of native material from the side channel excavation would be sorted and placed on the right bank of the mainstem channel immediately downstream of the side channel inlet. The nourishment bar would measure approximately 600 feet in length and 25 feet in width. This material would gradually enter the Tieton River as flows fluctuate, providing smaller gravels and sands to the downstream reach.

Riparian and Wetland Vegetation Planting

YN would revegetate areas disturbed by construction activities with native planting using seed mixes and live plants (potted, plugs, and stakes). Additionally, a 25-foot riparian buffer would be planted with native plants to assist in the creation of channel shade of the newly enhanced side channel. The riparian seed mix would include Bluebunch wheatgrass (*Pseudoroegneria spiccata*), Sandberg's bluegrass (*Poa secunda*), Thickspike wheatgrass (*Elymus lanceolatus*), Bottlebrush squirreltail (*Elymus elymoides*), Idaho fescue (*Festuca idahonensis*), and Great Basin wildrye (*Leymus cinereus*). The riparian live plants would include Cottonwood (*Populus trichocarpa*), Mountain alder (*Alnus incana* ssp. *tenuifolia*), Red Osier dogwood (*Cornus stolonifera*), Choke cherry (*Prunus virginiana*), Golden currant (*Ribes aureum*), Showy milkweed (*Asclepias speciosa*), Coyote willow (*Salix exigua*), and Pacific willow (*Salix lucida* ssp. *lasianдра*).

Tieton Nature Trail Improvements

YN would utilize the Tieton Nature Trail for access to the Project site. This trail, post-construction, would be relocated and constructed to improved conditions. The current trail meanders through the proposed Project site, which includes the existing floodplain and wetlands, and therefore the trail would be rerouted to the base of the existing slope to avoid crossing through existing and newly inundated floodplains or wetlands. The new trail would be raised in elevation between 0.5 feet and 5 feet from the old trail to ensure the trail would remain viable and dry for use in the future. This change in elevation would require approximately 660 cubic yards of native fill material.

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 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

The effects of using construction equipment in and along the Tieton River are consistent with the analysis in Section 3.3.1 of the Programmatic EA ("Fish and Aquatic Species"). Section 3.3.1.3 of the Programmatic EA describes overall low impacts to fish and aquatic species after considering moderate short term effects.

ESA-listed Middle Columbia River steelhead (*O. mykiss*) and their designated 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 moderate, 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").

The short term adverse effects of the Project would include exposing, displacing, reconfiguring, or compacting earth with mechanized equipment within and along the Tieton River, likely causing moderate, temporary sediment discharges, primarily from the introduction of first time flows into newly constructed channel. These impacts would be minimized because new excavations would be accomplished "in the dry" with no exposure to new flows wherever possible while applying conservation measures from BPA's HIP ESA consultation upon wetting the newly excavated channel. Though the amount of sediment discharged would be elevated, turbidity levels would be less than that which they would encounter annually during natural high flow events as discussed in Section 3.3.2.3 in the

Programmatic EA, and below levels harmful to fish and at durations not anticipated to cause harm as evaluated in Section 3.3.1.2.1 of the Programmatic EA (“Short-Term Effects to Fish and Aquatic Species from Construction Activities”). As described therein, these durations would have a low potential for triggering the behavioral and physiological effects from elevated water temperatures induced by high suspended sediment concentrations absorbing and transferring solar energy into the water.

Movement, sounds, and vibrations from construction-related human and mechanical activity would likely, temporarily disturb and displace fish and aquatic organisms from their preferred habitats for the duration of the disturbance. This sound and vibratory disturbance would be minimized as the new channel would be constructed in the dry, but some work in the existing channel would require work area isolation. The work area isolation and instream construction activity would displace fish from the work area until it is reintroduced to river flows. 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 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”) which describes such work area isolation and the associated effects.

Project implementation would have beneficial long term effects on fish and aquatic species as a result from increased stream complexity, enhanced riparian cover, improved protection along the Tieton River, increased 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, side channel reconstruction, ELJ development, and boulder riffle installation along the Tieton River – would temporarily expose, displace, reconfigure, or compact earth. In-stream construction, work area isolation, and side channel reconstruction could briefly cause plumes of sediment discharge during work area isolation and reintroduction to flow 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 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 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 special-status listed plant species are present within the Project area. Project implementation, including the side channel reconstruction, relocation of the Tieton nature trail, 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 re-established. 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 the Tieton River 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 adverse short term impacts on vegetation from construction and highly beneficial long term benefits from increased riparian habitat and restored or improved vegetative conditions. Consistent with the Programmatic EA, the overall effects of this Project would be moderate.

4. Wetlands and Floodplains

The two wetlands delineated within the Project area total 0.79 acres and are classified as depressional and riverine. The short term effects on wetlands would be moderate and temporary from the crushing and removal of wetland vegetation and soils through the use of heavy equipment operations in and around the identified wetlands. The long term beneficial effects on wetlands from improved wetland and floodplain connectivity, and from the removal of the nature trail from the wetland and floodplain would outweigh the negative short term effects. Construction activities would require excavation for the new side channel in and adjacent to wetlands during Project activities which could cause short term negative impacts. The YN obtained a permit from the U.S. Army Corps of Engineers (NWS-2023-131) 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. The engineered boulder riffle, 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 areas and re-establishing native vegetative communities.

Flow redirection from the mainstem ELJ would facilitate more natural lateral movement into the re-established side 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 3.2.2, 3.2.9, and 3.3.4 of the Programmatic EA (respectively entitled “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 Tieton River mainstem channel and its floodplain.

5. Wildlife

No ESA-listed or state special-status 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 3.3.5 of the Programmatic EA (respectively entitled “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 and consistent with those evaluated in the Programmatic EA.

6. Geology and Soils

The short term effects from this Project’s construction activities would be moderate due to the proposed vegetation clearing, channel excavation, boulder riffle construction, work area isolation actions, and soil compaction by heavy equipment which were considered in the Programmatic EA. These impacts 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 3.3.6 of the Programmatic (respectively entitled “Effects to Resources by Resource Type – Geology and Soils”), which anticipates overall moderate impacts to geology and soils after considering moderate-to-high short term adverse and 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 U.S. Highway 12, which runs along the north western extent of the Project area. Temporary access routes developed during Project mobilization would provide off-road access. Temporary increases in road congestions may occur due to increased construction equipment along Highway 12 when staging at the Project site occurs; however, equipment once on site would not need to utilize U.S. Highway 12. Staging and storage of equipment would occur at the Tieton River Nature Trail Access Point. Further, roadway users would be able to access other local roads around the

Project area. Overall, the Project would have a low effect on transportation due to the short duration of the Project and the availability of detours around the work areas.

The Project's transportation impacts are consistent with the analysis in Sections 3.3.7 of the Programmatic EA (respectively entitled "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 WDFW and BOR owned and managed lands. The Project area would be located in an area primarily utilized for recreational purposes; once the project is completed, the area would continue to be primarily utilized for recreational purposes. In the short term, construction activities would have an adverse effect to recreation due to the required temporary closing of the Tieton River Nature Trail for the duration of construction and forcing land users to move to adjacent public lands for activities like hiking, hunting, and fishing. In the long term, the Tieton River Nature Trail would be relocated outside of the floodplain and at the toe of the adjacent hill slope and the project area would be reopened for recreational use. Changes to the trail in the area would not be a major effect on the overall quantity of available trail since it will be still continue to be accessible post-construction and there is ample adjacent recreational lands for use during the construction period. Recreation would continue to be the primary use of this land.

Impacts to land use and recreation are consistent with the analysis in Sections 3.3.8 of the Programmatic EA (respectively entitled "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 a small area of the side channel would be reconnected and rewetted, therefore causing the need to relocate the existing trail, the Project's overall effects on land uses and recreation would be low, consistent with those evaluated in the Programmatic EA.

9. Visual Resources

The proposed Project is not within a visually sensitive area, but users of the Tieton River Nature Trail and U.S. Route 12 would be able to see Project activities. Trail users would be unable to utilize the trail during implementation due to potential human health and safety risks. Trail and road users (users) would see heavy equipment during Project activities, then after implementation users would see a large wood structure within the channel, temporarily 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 3.3.9 of the Programmatic EA (respectively entitled "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.

Noise levels for users of the wildlife area would be affected by operation of, construction machinery during excavation and placement of wood structure and gravel placement. This temporary effect, however, would be minor as it would be generated by a small number of additional vehicles and

equipment for a short period of time. Further, it is expected that noise levels would be attenuated and wildlife area users would use alternate nearby locations that would be subject to less noise. 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 U.S. Route 12 and at the Teton Nature Trail access point, 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 3.3.10 of the Programmatic EA (respectively entitled “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 the YN, BOR, WDFW, and the Washington Department of Archaeology and Historic Properties (DAHP), BPA determined on May 1, 2023 that the implementation of the Project would result in no historic properties affected. DAHP concurred with this determination on May 1, 2023, and no additional comments were received from consulting parties.

Potential cultural resource impacts are consistent with the analysis in Sections 3.2.2, 3.2.9, and 3.3.11 of the Programmatic EA (respectively entitled “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 3.3.13 of the Programmatic EA (respectively entitled “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, there would be no permanent adverse effects and this Project would be consistent with those evaluated in the Programmatic EA.

13. Climate Change

Due to the short duration of construction and the relatively small number of construction vehicles that would be involved, the Project-related greenhouse gas emissions are anticipated to be low. The Project would have a low level of greenhouse gas production and its contributions to climate change would be correspondingly minimal, consisting of short-term emissions from motorized equipment operations during implementation of the restoration actions. Further, these emissions 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 wetlands, and decreased water

temperatures from improved instream and riparian habitat conditions. The overall contribution to climate change and greenhouse gas production would be low.

Impacts to climate change are consistent with the analysis in Sections 3.2.2, 3.2.9 and 3.3.14 of the Programmatic EA (respectively entitled “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 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 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 10 CFR § 1021.314 and 40 CFR § 1502.9. Therefore, no further NEPA analysis or documentation is required.

Catherine Clark
Environmental Protection Specialist

Concur:

Katey Grange
NEPA Compliance Officer

Attachment 1: Tieton River Habitat Restoration Project Components

