

Supplement Analysis
for the
Columbia River Basin Tributary Habitat Restoration
(DOE/EA-2126/SA-29)

Yakama Nation's North Fork Manashtash Creek Ground Placement Project
BPA project number 1997-051-00
BPA contract number 56662 REL 252

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 effects of the Yakama Nation's *North Fork Manashtash Creek Ground Placement Project* that would implement many of the specific restoration actions assessed in the Programmatic EA in the Yakima River Basin in Kittitas County, Washington. The objectives are to increase in-stream habitat diversity, increase floodplain access, reduce water temperature, and improve riparian and floodplain vegetative diversity for the benefit of Endangered Species Act (ESA)-listed salmonids.

This SA analyzes the site-specific impacts of the *North Fork Manashtash Creek Ground Placement Project* to determine if the project is within the scope of the analysis considered in the Programmatic EA. It also evaluates whether the proposed project presents significant new circumstances or information relevant to environmental concerns that were not addressed by the EA. The findings of this SA determine whether additional National Environmental Policy Act (NEPA) analysis is needed pursuant to 40 Code of Federal Regulations (CFR) § 1502.9(d) and 10 CFR § 1021 *et seq.*

Proposed Activities

BPA proposes to fund the Yakama Nation to place large wood in an approximately 1.25-mile-long segment of North Fork (NF) Manashtash Creek and approximately 27 acres of adjacent floodplain in Kittitas County, Washington. The project area is managed by Washington Department of Fish and Wildlife (WDFW) and is within the LT Murray Wildlife Area. The project would include in-stream wood placement and floodplain wood placement that are targeted to improve fish habitat for ESA-listed middle Columbia steelhead, as well as cutthroat and rainbow trout.

NF Manashtash Creek is a tributary of Manashtash Creek which branches off of the Yakima River. The floodplain restoration site is located within a broad floodplain valley, near the top of the watershed, with channel incision ranging from one to ten feet throughout the site. The reduced groundwater elevations resulting from channel incision have left a sparse riparian corridor with limited overhead cover to shade the stream channel.

The proposed project would include the placement of large wood with heavy equipment using a hydraulic log loader or excavator (or both may be used). Large wood would be placed to increase channel complexity and help encourage more frequent floodplain inundation in the NF Manashtash Creek. The goal of the overall proposed project would be to reset the natural processes by adding high volumes of woody materials in strategic locations and to cause local backwatering to activate floodplains and side channels. Over the long-term, sediment would be transported from upstream and off of the floodplain and stored within the placed wood interstices, shifting the channel from an entrenched, single-thread, high-velocity channel, to a natural, multi-threaded reach. This would improve gravel sorting and increase the available habitat for juvenile fish species.

Yakama Nation would place approximately 1,400 cut trees and 240 cubic yards of slash using heavy equipment along 1.25 miles of stream and the adjacent floodplain to restore in-channel complexity, reverse channel incision, and re-engage the creek with its floodplain. Placed logs would be stacked in configurations spanning the channel and in the floodplain. Placed trees would be adjusted using manual and power tools, including grip hoists, chainsaws, and tractor skid winches to maximize benefits to the stream where necessary. Due to the small size of the creek, typical flows, and bank characteristics, logs would not be secured in place with ballast or installed into the stream banks. No ground excavation would be used for the wood placements.

Large woody material would be sourced from approximately 76 acres of uplands in an adjacent WDFW forest management area using a feller buncher and skidder. A harvest prescription was developed with a WDFW silviculturist to promote forest health and improve wildlife habitat. The forest prescription plan is designed to enhance potential Northern spotted owl habitat and mitigate for fire risk in the forest's harvest unit by selectively harvesting trees and collecting slash from the forested area.

All wood placement would be performed within the floodplain and stream channel. No in-stream excavation or dewatering is proposed. In-water wood placement would be conducted during the approved in-water work window for the stream reach (May-October 31st). Access routes, staging areas, and work areas in both the wood harvest and placement areas would be developed to minimize disturbance to existing vegetation and soils. Access from NF Manashtash Road to wood placement sites for heavy equipment would occur perpendicular to the valley bottom, to the greatest extent possible, to minimize impacts to vegetation and soils. Native grass seed would be spread in areas with exposed soil impacted by heavy equipment and log skidding. Reseeding activities would be followed up with mulching of areas with certified weed-free straw to increase seeding survival. Yakama Nation would be responsible for controlling weeds by means of mechanical or chemical removal where necessary.

These actions would support conservation of ESA-listed species considered in the 2020 ESA consultations with National Marine Fisheries Service on the operations and maintenance of the Columbia River System and Bonneville's commitments to the Yakama Nation under the 2020 Columbia River Fish Accord Extension agreement, while also supporting ongoing efforts to mitigate for effects of the FCRPS 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

The implementation of this project would require the use of heavy equipment for harvesting and placing woody materials. These restoration actions would disturb and displace soil in and along the creek; damage vegetation; create noise and vehicle emissions; temporarily displace wildlife; and temporarily increase vehicle traffic and human activities in the project area.

The typical effects associated with the environmental disturbances are described in Chapter 3 of the Programmatic EA, and are incorporated by reference and summarized in this document. Below is a description of the potential site-specific effects of the *NF Manashtash Creek Ground Placement Project*, and an assessment of whether these effects are consistent with those described in the Programmatic EA.

1. Fish and Aquatic Species

In the short-term, wood placement activities would expose soil, displace fish, and compact travel routes from heavy equipment within and along NF Manashtash Creek and likely release minor amounts of sediment when placing wood in the stream channel. Movement, minor increases in turbidity, sounds, and vibrations of human and mechanical activity during wood placement would disturb fish and temporarily displace them from their preferred habitat for as long as that movement, turbidity, sound, and vibration are present. All wood placement within the channel would occur during the in-water work window designated for the NF Manashtash Creek reach, which coincides with low flows within the project reach.

ESA-listed middle Columbia River (MCR) steelhead and state-sensitive species Pacific lamprey and rainbow trout are the focal species in the project area. Consultation on the potential effect of the project on ESA-listed species was completed under BPA's programmatic Section 7 Fish and Wildlife Habitat Improvement Program (HIP) biological opinion. HIP conservation measures, which would reduce project-related impacts to both ESA-listed and state-sensitive species, would be applied during project implementation. Overall, short term impacts to fish and other aquatic species would be low, consistent with the analysis to the Programmatic EA, Section 3.3.1.2.1 Short-term Effects of Fish and Aquatic Species from Construction Activities.

Implementation of the project would result in long-term beneficial effects to fish and aquatic species from increased stream complexity, enhanced riparian cover and protection along NF Manashtash Creek, increased available floodplain access and flows, and expected reduction in summer water temperatures.

Project impacts to fish and aquatic species are consistent with the Programmatic EA analysis in Sections 3.2.2 (Effects Specific to Category 2 - Improving River, Stream, Floodplain, and Wetland Habitat), and 3.3.1 (Effects to Resources by Resource Type – Fish and Aquatic Species). The level of effect would be low, consistent with the effect level described in the Programmatic EA.

2. Water Resources

Project construction would temporarily expose, displace, reconfigure, or compact earth through the use of mechanized equipment and logplacement along NF Manashtash Creek. Small amounts of sediment from placing wood along the channel could be released for short periods of time. Impacts would be minimal because no in-stream excavation, dewatering, or new channel construction is proposed, and mitigation measures (detailed in the Programmatic EA Section 2.4, Mitigation Measures and Design Criteria) would be applied. Upland soil disturbance associated with wood harvesting activities would be stabilized and revegetated to reduce the potential of erosion entering NF Manashtash Creek. Overall, these temporary effects to water resources would be low.

The project would result in long-term increased floodplain complexity by increasing sediment storage potential. The project is expected to result in a long-term reduction in stream temperatures from improved stream form, an increase in instream habitat structure, and increased riparian vegetative cover and protection. These long-term beneficial effects are consistent with those described in the Programmatic EA.

Impacts to water quality would be low and there would be no impacts to water quantity, as no water withdrawals are proposed, which is consistent with the Programmatic EA analysis in Sections 3.2.2 (Effects Specific to Category 2 - Improving River, Stream, Floodplain, and Wetland Habitat), and 3.3.2 (Effects to Resources by Resource Type – Water Resources).

3. Vegetation

No ESA-listed or state-listed plant species are present within the project area. Proposed tree harvest would follow the approved Forest Prescription Plan developed by Yakama Nation in partnership with WDFW. Tree harvest would be consistent with fire management practices of the forest. Short-term impacts to vegetation from compacting or crushing would occur during project implementation from the use of heavy equipment, log skidding, and log placement within the project area.

The effects of using heavy equipment and manually working in and along the NF Manashtash Creek are consistent with the analysis in the Programmatic EA. The Programmatic EA, Section 3.3.3, describes overall moderate impacts to vegetation after considering moderate short-term adverse effects against highly beneficial long-term effects. The project is anticipated to have less impact than that described in the Programmatic EA. There would be no earthmoving, with its associated vegetative loss. Disturbed areas would be reseeded, with native seed mix, post-construction to mitigate for the use of heavy equipment, log skidding, and vegetation compaction, and help reestablish native plant diversity.

Project impacts to vegetation are consistent with the Programmatic EA analysis in Sections 3.2.2 (Effects Specific to Category 2 - Improving River, Stream, Floodplain, and Wetland Habitat), and 3.3.3 (Effects to Resources by Resource Type – Vegetation). The project would have an overall low effect on vegetation, which would be consistent with the Programmatic EA.

4. Wetlands and Floodplains

The effects of using heavy equipment and manually working in and along the NF Manashtash Creek are consistent with the analysis in the Programmatic EA. The Programmatic EA describes overall low impacts to wetlands and floodplains because although there would be short-term adverse effects the long-term effects would be beneficial. This project, however, is anticipated to have less impact than the effects described in the Programmatic EA. With this project, there would be less short-term adverse effects to floodplains and wetlands: there would be no earth-moving; heavy equipment operations would be used to place wood along the floodplain while minimizing routes taken and moving parallel to the canyon bottom; and no temporary dewatering of stream channels, whereas the Programmatic EA evaluated more extensive impacts to wetlands and the floodplain from the actions of more construction equipment and complete dewatering and rerouting of rivers and streams.

Consistent with the Programmatic EA, there would be long-term beneficial effects from implementation of the project. There would be increased connectivity between the existing channel and the floodplains from the newly installed logs. There would also be some flow redirection as wood structures would facilitate more natural lateral movement and sinuosity of channels, and this would slow water velocities, facilitate more effective connection between the channel and the floodplain, and provide for more efficient sediment movement and retention in the floodplain.

The project would have fewer short-term effects and the same beneficial long-term effects as those described in the Programmatic EA. (Effects Specific to Category 2 - Improving River, Stream, Floodplain, and Wetland Habitat), and 3.3.4 (Effects to Resources by Resource Type – Wetlands and Floodplains). The project would have an overall low effect on wetlands and floodplains.

5. Wildlife

No ESA-listed or state-listed terrestrial species are known to exist within the proposed project area and there would be no effect to ESA-listed species. The forest prescription plan for wood harvest factors in potential Northern spotted owl habitat, however there are no known populations within 6 miles of the harvest unit or project area. In the long term, the wood harvest may help promote more suitable Northern spotted owl habitat and would also reduce fuel loading to reduce wildfire risk in the project area.

Local wildlife may be temporarily disturbed by sound and movement caused by human and equipment presence. Mobile species such as birds and small mammals may be temporarily displaced during wood harvest and placement, but could return once activity has moved or ceased. Smaller, less mobile species could lose habitat and be harassed, harmed, or killed during construction activities. However, abundant similar wildlife habitat is present adjacent to the project area, project effects would be limited in duration, and there would be no long-term negative changes to wildlife habitat. \

Impacts to wildlife are consistent with the Programmatic EA analysis in Sections 3.2.2 (Effects Specific to Category 2 – Improving River, Stream, Floodplain, and Wetland Habitat), and 3.3.5 (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 wildlife that may only be temporarily displaced from construction-affected habitats. In the long-term, the proposed project would restore habitats beyond existing conditions. Long-term benefits include increased plant species richness and diversity, increased habitat structural diversity, increased habitat heterogeneity, and increased extent of riparian habitat. 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, wood placement, heavy equipment use, and log skidding, would temporarily increase localized soil erosion potential and would compact soils. The project has no excavation or earth-moving activities proposed. Impacts would be mitigated by the wood placement since it would act as a catch for loose sediment. Further, mitigation measures and best management practices, such as work area minimization and reseeded, would all be applied as described in the Programmatic EA, Section 2.4, Mitigation Measures and Design Criteria, to minimize impacts and maintain long-term productivity of soils and prevent excessive erosion.

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 Programmatic EA analysis in Sections 3.2.2 (Effects Specific to Category 2 – Improving River, Stream, Floodplain, and Wetland Habitat) and 3.3.6 (Effects to Resources by Resource Type – Geology and Soils), which anticipates moderate-to-high short-term effects, but low overall effects after accounting for mitigation measures and long-term benefits. The overall effects of the project would be less than those evaluated in the Programmatic EA.

7. Transportation

The project area would be accessed via Manashtash Road, which runs along the northern boundary of the project area and parallel to NF Manashtash Creek. The project would not result in the closure of Manashtash Road. The largest effect the project would have on transportation would be that vehicles transporting workers and equipment to the project site would be sharing the road with other traffic during construction. Manashtash Road is a two-tracked road which is not heavily trafficked; therefore, project-related traffic increases would have a minimal impact to area transportation.

Impacts to transportation are consistent with the Programmatic EA analysis in Sections 3.2.2 (Effects Specific to Category 2 - Improving River, Stream, Floodplain, and Wetland Habitat) and 3.3.7 (Effects to Resources by Resource Type – Transportation). The analysis concludes that, although project actions may impact roads for a short period, the overall effect on transportation would be low.

8. Land Use and Recreation

The project is located on WDFW-managed LT Murray Wildlife Area property. LT Murray Wildlife Area is primarily used for hunting, fishing and public access. Construction activities would result in short-term displacement of recreational users from the immediate project area. Recreational users could instead utilize any of the public access areas throughout the 54,000-acre LT Murray Wildlife Area. Long-term changes to land use would make it harder for recreational users to traverse the landscape due to expanded floodplain and large wood structures. These long-term project-related changes to land use would be consistent with the goals and objectives identified in WDFW's LT Murray Wildlife Area Management Plan¹, which specifies plans for improved fish populations, species diversity, and restoration of riparian habitats, among other goals.

Impacts to land use and recreation are consistent with the Programmatic EA analysis in Sections 3.2.2 (Effects Specific to Category 2 - Improving River, Stream, Floodplain, and Wetland Habitat) and 3.3.8 (Effects to Resources by Resource Type – Land Use and Recreation). The analysis concludes that land use practices underlying project sites would not be changed for most projects. The overall effects of this project on land use and recreation are expected to be low and would be consistent with those evaluated in the Programmatic EA.

9. Visual Resources

The proposed project is not within a visually sensitive area. The tree harvest area would be thinned and would remain in a forested state. The placement of the logs in the floodplain and stream channel would change the visual characteristics of the project area, but the return to a more natural state would be consistent with the overall visual character of the wildlife area. Any visual changes associated with exposed soils would be temporary and would be alleviated in the long term by reseeded and revegetating the disturbance area.

Impacts to visual resources are consistent with the Programmatic EA analysis in Sections 3.2.2 (Effects Specific to Category 2 - Improving River, Stream, Floodplain, and Wetland Habitat) and 3.3.9 (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

Impacts to air quality from construction equipment exhaust and dust emissions would be temporary and localized in nature and would not have long-term impacts on air quality. Implementation of this project is not expected to generate any violations of state air quality standards.

The project would temporarily elevate ambient noise levels at the construction site. Such noise would come from construction, transportation, and site rehabilitation activities. Long-term changes to noise levels are not expected to result from the proposed project.

Short-term construction activities would not increase risk to workers and the public during construction. Adequate signage, flagging, and other routine safeguards for worker and public safety would be used to

¹ Washington Department of Fish and Wildlife. 2006. L.T. Murray Wildlife Area Management Plan. Wildlife Management Program, Washington Department of Fish and Wildlife, Olympia. 100 pp.

minimize risk to public safety at the implementation sites. Yakama Nation personnel would be on site during implementation to act as a point of contact for the public. WDFW would post notification of project activities and location on their public facing webpages.

Impacts to air quality, noise, and public health and safety are consistent with the Programmatic EA analysis in Sections 3.2.2 (Effects Specific to Category 2 - Improving River, Stream, Floodplain, and Wetland Habitat) and 3.3.10 (Effects to Resources by Resource Type – Air Quality, Noise, and Public Health and Safety). The Programmatic EA analysis concludes that the effects of noise on the human environment would be low and that the effects on air quality, public health, and safety would be low. The overall effects of this project would be consistent with those evaluated in the Programmatic EA.

11. Cultural Resources

BPA conducted National Historic Preservation Act (NHPA) Section 106 consultation with the Washington Department of Archaeology and Historic Preservation (DAHP), Confederated Tribes and Bands of the Yakama Nation, Confederated Tribes of the Colville Reservation (CTCR), Washington Department of Fish and Wildlife (WDFW), and Washington Department of Natural Resources (WDNR). BPA made a determination of *No Historic Properties Affected*, pending a 100-ft (30m) exclusion zone around previously identified sites and all work around these sites be monitored by a professional archaeologist, on May 10th, 2022. BPA received a response on May 10, 2022 from the CTCR indicating the proposed undertaking was not within their traditional territory; on May 10, 2022 from DAHP acknowledging receipt of information, but indicating no additional comment at this time; on May 17, 2022 from Yakama Nation indicating there was no concerns regarding the proposal pending monitoring by a professional archaeologist; on May 23, 2022 from WDNR indicating the proposal was not located on WDNR property; no other responses were received from consulting parties.

Impacts to cultural resources are consistent with the Programmatic EA analysis in Sections 3.2.2 (Effects Specific to Category 2 - Improving River, Stream, Floodplain, and Wetland Habitat) and 3.3.11 (Effects to Resources by Resource Type – Cultural Resources). That is, the effect on cultural resources from the project would be none to low because cultural resources would be avoided during project construction. The overall effects of this project would be consistent with those evaluated in the Programmatic EA.

12. Socioeconomics and Environmental Justice

The project would result in small, temporary, beneficial impacts to socioeconomics by providing jobs for construction workers, and by creating short-term beneficial economic effects for local businesses in smaller communities through purchases of food, fuel, lodging, and materials associated with construction and restoration actions. Long-term benefits could result from improvements to natural scenery and recreational enjoyment.

Impacts to socioeconomics and environmental justice are consistent with the Programmatic EA analysis in Sections 3.2.2 (Effects Specific to Category 2 - Improving River, Stream, Floodplain, and Wetland Habitat) and 3.3.13 (Effects to Resources by Resource Type – Socioeconomics and Environmental Justice), the project is anticipated to have low socioeconomics and environmental justice impacts in the Columbia River Basin due to the small scale and dispersed nature of the work involved. Overall, no permanent adverse effects to environmental justice populations are expected because this is WDFW-managed land and although construction activities may exclude use temporarily, other areas would be accessible. 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 construction vehicles, temporary emissions associated with project construction activities are anticipated to be well below the Environmental Protection Agency's reporting threshold of 25,000 metric tons of carbon. Therefore, the project would have a low level of greenhouse gas production and would have a low contribution to climate change from short-term emissions from motorized equipment operations during implementation of the restoration actions. Greenhouse gas 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 wetland habitats, and decreased water temperatures from improved instream and riparian habitat conditions. The overall effects on climate change would be low.

Impacts to climate change are consistent with the Programmatic EA analysis in Sections 3.2.2 (Effects Specific to Category 2 - Improving River, Stream, Floodplain, and Wetland Habitat) and 3.3.14 (Effects to Resources by Resource Type – Climate Change). The analysis concludes that the overall effects of this project on climate change would be low.

Findings

BPA finds that the types of actions and the potential impacts related to the proposed *Yakama Nation's North Fork Manashtash Creek Ground Placement 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.

/s/ Catherine Clark

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Concur:

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