

Supplement Analysis
for the
Columbia River Basin Tributary Habitat Restoration
(DOE/EA -2126/SA-09)

Skinney Creek Restoration
BPA project number 2009-003-00
BPA contract number 56662 REL 226

Bonneville Power Administration
Department of Energy



Introduction

In December 2020, Bonneville Power Administration (Bonneville) and the Bureau of Reclamation completed the *Columbia River Basin Tributary Habitat Restoration Programmatic Environmental Assessment* (DOE/EA 2126) (Tributary Habitat EA). The Tributary Habitat EA analyzed the potential environmental impacts of implementing habitat restoration actions in the Columbia River Basin and its tributaries.

Consistent with the Tributary Habitat EA, this supplement analysis (SA) analyzes the proposed Skinney Creek Restoration Project (project) that would reconnect Skinney Creek with its historic floodplain along the former Highway 2 road alignment and enhance in-stream and floodplain habitat conditions for Endangered Species Act (ESA)-listed endangered Upper Columbia spring Chinook salmon (*Oncorhynchus tshawytscha*), bull trout (*Salvelinus confluentus*), and threatened summer steelhead (*Oncorhynchus mykiss*) near the confluence of Skinney Creek and Chiwakum Creek approximately six miles northwest of Leavenworth in Chelan County, Washington, on land managed by the US Forest Service (USFS) in the Okanogan-Wenatchee National Forest (OWNF). This SA analyzes the site-specific impacts of the project to determine if the project is within the scope of the analysis considered in the Tributary Habitat 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).

Proposed Action

The project area sits at an elevation of about 1,800 feet and is characterized by riparian vegetation such as cottonwood (*Populus*), Douglas-fir (*Pseudotsuga menziesii*), and Ponderosa pine (*Pinus ponderosa*). No wetlands have been identified at the site. State Highway 2 near Leavenworth, Washington was constructed in the late 1940s and caused Skinney Creek to become highly straightened and constrained. Recently, Highway 2 was moved and Skinney Creek resides between the current and historic road prisms. Skinney Creek is the only known tributary of Chiwakum Creek that supports salmonid spawning and rearing. All property within the project area is managed by the USFS, with approximately 200 feet of the upper alignment falling within the Washington Department of Transportation (WSDOT) easement for Highway 2.

This project would create up to 0.5 mile of steelhead spawning habitat and would also improve migratory and rearing habitat for spring Chinook and steelhead. Bonneville proposes to fund the Yakama Nation Fisheries to excavate approximately 31,000 cubic yards (CY) to realign the Skinney Creek stream channel into the old highway alignment, and remove about 3 acres of abandoned highway road prism and substrate and reshaping the floodplain. This realignment would increase the length of this portion of the creek by 700 linear feet. Existing log weirs that are being eroded or acting as fish passage barriers would be replaced. A total of 76 logs with root wads would be added to the stream system, and native woody and herbaceous vegetation would be planted through the project area following completion of construction work.

Construction would begin on June 14th, with in-water work from July 1st-July 29th. Equipment to be used would include bulldozers, excavators, track hoes, dump trucks, loaders, graders, skid steers, chain saws, hand-tools, backpack electro-fishers, and dip and seine nets. Site access would be gained via USFS road NF-7906 to the east of Skinney Creek. Spoils would be placed along the west bank of the excavated channel and on the east side of NF-7906 at the downstream end of the Skinney Creek project area. A temporary staging area would be set up on the downstream end of the Skinney Creek project area on the west side of NF-7906. All equipment, materials, and personnel would remain within the limits of disturbance. Upon project completion, roads and access routes would be cleaned, graded, and resurfaced to pre-project conditions per WSDOT standard specifications. All disturbed areas would be restored to pre-project condition or better.

The project is consistent with the actions considered in the Tributary Habitat EA categories of actions, which represent well-established aquatic and terrestrial restoration techniques that have been applied throughout the Basin and have been demonstrated to be effective in the support and restoration of aquatic and upland species and habitats:

1. Reestablishing and Improving Fish Passage
2. Improving River, Stream, Floodplain, and Wetland Habitat
3. Invasive Plant Control and Vegetation Management
4. Piling Removal
5. Road and Trail Erosion Control, Maintenance, Decommissioning, and Construction
6. In-Channel Nutrient Enhancement
7. Irrigation, Water Delivery, and Water Use Action
8. Fish, Hydrologic, Wildlife, and Geomorphic Surveys
9. Riparian and Upland Habitat Improvements and Structures
10. Artificial Pond Development and Operation

The project fulfills commitments under the 2020 National Marine Fisheries Service Columbia River System Biological Opinion. These actions would support conservation of ESA-listed species considered in the 2020 ESA consultation with the US Fish and Wildlife Service (USFWS) on the operation and maintenance of the Columbia River System.

The project would include the following elements, with the corresponding Tributary Habitat EA category of action noted next to each element.

Historic Channel Excavation and Floodplain Reshaping (Tributary Habitat EA Category 2)

The channel length of Skinney Creek would increase from 1,800 linear feet to 2,500 linear feet due to a dramatic increase in stream sinuosity to increase quantity and quality of rearing habitat for juvenile

steelhead and Chinook salmon. About 3 acres of abandoned highway road prism and substrate would be removed and converted to a complex mosaic of aquatic stream habitat with floodplain benches and riparian vegetation. Prior to earthwork activities, erosion control devices would be installed throughout the project areas. The stream would be diverted with an 18-inch diameter flexible pipe placed in the existing Skinney Creek and backfilled by spoils placement. If additional pumping were required to dewater during construction, pumped discharge would release sediment-laden water at an upland discharge location in a manner that does not cause erosion, contamination, or increase turbidity of surface waters. Log weirs that were installed by the WSDOT and were found by the Washington Department of Fish and Wildlife to cause fish passage issues for juvenile salmonids would be removed, and the channel substrate would be shaped into a more natural slope to aid in fish passage.

Large Wood Placement (Tributary Habitat EA Category 2)

76 root wad laden logs would be added to the stream system to improve fish rearing conditions. Riffle pools and log structures within the excavated channel would be composed of logs installed horizontally into the bank with roots extending into the pool and slash placed loosely against the bank. The pool would be excavated into the bank. Trees and shrubs within clearing limits would be salvaged and used as logs and slash in habitat structures. Haul trucks would be used for transporting wood from the staging areas to installation sites and for installing all mainstem large wood structures.

Riparian Revegetation (Tributary Habitat EA Category 9)

Extensive native woody and herbaceous riparian and transitional vegetation such as black cottonwood (*Populus trichocarpa*), coyote willow (*Salix exigua*), and small fruited bulrush (*Scirpus microcarpus*) would be planted throughout the project area after site excavation activities to create extensive new riparian/wetland habitats along the creek's periphery, protect against bank scouring, provide for long-term riparian resources, augment future large woody material recruitment and help provide shade to Skinney Creek. Herbaceous wetland plugs would also be installed along stream margins and in backwater alcoves in areas of appropriate habitat.

Environmental Effects

The typical environmental impacts associated with these actions are described in Chapter 3 of the Tributary Habitat EA, and are incorporated by reference and summarized in this document. Below is a description of the potential site-specific impacts of the Skinney Creek Restoration Project and an assessment of whether these impacts are consistent with those described in the Tributary Habitat EA.

1. Fish and Aquatic Species

The project would benefit ESA-listed endangered spring Chinook salmon and threatened summer steelhead by increasing the sinuosity of Skinney Creek, which would increase the quantity and quality of rearing habitat for juveniles, as well as provide complex off-channel habitat for all fish species during all flow conditions. Bull trout would also benefit from the project, which would provide shelter and protection by increasing habitat complexity. Skinney Creek is Designated Critical Habitat for bull trout, steelhead, and Chinook salmon. The project area is within the National Marine Fisheries Service's (NMFS) Upper Columbia sub-domain, a subset of the Interior Columbia Recovery Domain for anadromous ESA-listed salmon and steelhead in the Northwest Region. Both Skinney Creek and Chiwaukum Creek are considered essential fish habitat (EFH) under the Magnuson-Stevens Fishery Conservation and Management Act, because both provide habitat for Chinook salmon. Work area

isolation would be used in areas with water; no direct effects to salmonids as a result of construction are anticipated. Fish salvage, which could cause a direct effect to fish, would be performed prior to establishing the temporary cofferdams for the channel excavation.

The project would conform to the NMFS-issued ESA Section 7 Programmatic Consultation Conference and Biological Opinion and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response for Reinitiation of Aquatic Restoration Activities in States of Oregon and Washington (USDC NMFS 2013) and the USFWS-issued ESA Section 7 Consultation Programmatic Biological Opinion for Aquatic Restoration Activities in the States of Oregon, Washington and portions of California, Idaho and Nevada (USDI FWS 2013). These two Biological Opinions are collectively known as "ARBO II". The effects to threatened and endangered species and the associated designated critical habitat were documented as part of the ARBO II consultation for stream restoration projects. The project is "likely to adversely affect, but not jeopardize (LAA)" in the short-term, but in the long-term, it would have beneficial effects for the following species: Upper Columbia River steelhead, Upper Columbia River spring-run Chinook salmon, and bull trout.

The short-term adverse effects of the project would expose, displace, reconfigure, or compact earth through the use of mechanized equipment along the stream, and likely create conditions where small amounts of sediment would be released for short periods of time. The disturbance of fish and aquatic organisms by the movement, sounds, and vibrations of human and mechanical activity during construction would disturb fish and likely displace them temporarily from their preferred habitat for as long as that movement, sound, and vibration were present. The project's long-term beneficial effects include creation of more complex habitats through the addition of wood structures; increased channel sinuosity, which would provide ideal spawning and rearing habitat for salmonids and improved migratory habitat for spring Chinook and steelhead; and improved fish passage due to the removal of log weirs.

Yakama Nation Fisheries would adhere to the conservation measures required under the ESA consultations with NMFS and the USFWS on the ARBO II to minimize impacts to bull trout, Chinook salmon, and steelhead during project implementation. These measures include staging vehicles, equipment and fuels 150 feet or more from any natural water body or wetland; placing sediment barriers prior to construction; minimizing the number and length of stream crossings; and re-stabilizing all disturbed areas. Dewatering of in-channel work areas would occur concurrently with fish rescue. All fish salvage efforts would be performed by a Yakama Nation Fisheries/aquatic biologist experienced with the collection and handling of salmonids from construction sites. All fish trapped in residual pools within the project area would be carefully collected by seine and/or dip nets and placed in clean transfer containers with adequate volume of fresh river water. Captured fish would immediately be released downstream of the project area.

Impacts to fish and aquatic species are consistent with the Tributary Habitat EA analysis in Sections 3.2.2 (Effects Specific to Category 2 - Improving River, Stream, Floodplain, and Wetland Habitat), 3.2.9 (Effects Specific to Category 9 – Riparian and Upland Habitat Improvements and Structures) and 3.3.1 (Effects to Resources by Resource Type – Fish and Aquatic Species). The analysis concludes that reconnecting channels with floodplains would not only increase floodplain connectivity, but also provide periodic delivery of water, nutrients, and sediment to floodplains; provide flood attenuation and reduced stream energy; and increase stream length and riparian vegetation corridors. In addition, the placement of large wood and boulders as part of these actions would increase habitat structure and complexity, thereby creating or restoring shade zones, resting pools, spawning grounds, rearing habitat, and refugia, all of

which are important components of aquatic species' habitats. Together, these results would produce more functional fish habitat. The long-term beneficial effects include restored riparian habitats, improved shade and cover for instream aquatic species; and increased food and nutrient inputs into stream courses. Improved shade would also help reduce stream temperatures and maintain those temperatures within desirable ranges for native aquatic species. Short-term adverse effects would be low. These effects include disturbance, injury, or inadvertent crushing as a result of with heavy equipment use. The mitigation measures noted above associated with the ESA consultations, would be implemented to limit the temporary negative impacts, which are consistent with those evaluated in the Tributary Habitat EA. In the short-term, the project is likely to adversely affect Upper Columbia River steelhead, Upper Columbia River spring-run Chinook salmon, and bull trout; however, in the long-term, it would have beneficial effects.

2. Water Resources

Three categories of water quality are of concern for fish and wildlife habitats: toxic pollutants, temperature, and sedimentation. The project would change stream channels and the conditions of the bed, bank, and floodplain through which water may flow through the Skinney Creek reach. Realigning the channel would not only increase floodplain connectivity by decreasing stream velocity, but also provide periodic delivery of water, nutrients, and sediment to floodplains. Construction activities would be the primary factor affecting water quality, with sedimentation, turbidity, and temperature being the primary variables of concern. Short-term inputs of sediment would result from instream structure placement, stream reconstruction, and other activities that occur inside the bankfull channel. Proper design of channel capacity, form, gradient, and grade control structures, and the establishment of vegetation would limit the amount of erosion and turbidity created as the project's stream reach seeks equilibrium with the channel network. Another concern would be the potential fuel and fluid leaks from heavy equipment, but the probability of such an event is low, and the extent of any leak would likely be small given the mitigation measures that would be implemented for these actions.

Impacts to water resources are consistent with the Tributary Habitat EA analysis in Sections 3.2.2 (Effects Specific to Category 2 - Improving River, Stream, Floodplain, and Wetland Habitat), 3.2.9 (Effects Specific to Category 9 – Riparian and Upland Habitat Improvements and Structures) and 3.3.2 (Effects to Resources by Resource Type – Water Resources). The analysis concludes that overall, tributary restoration actions would create short-term, localized, sediment inputs from the actions of heavy equipment in and along streams (though not in amounts greater than what occurs naturally during annual, natural, high flow events); and the removal of riparian vegetation could cause small increases in water temperature in the short term (but would be offset to a degree by shade from new instream structures and deepened streams and pools). These are short-term effects and would also be lessened by the application of mitigation measures such as phased rewatering, existing vegetation protection, minimizing areas to be impacted, and replanting. The long-term effects of these actions, however, would be a decreased potential for unnatural sediment inputs, an increased potential of the floodplain to effectively manage its sediment loads, and a reduction of stream temperatures from stream form, instream habitat structure, and increased riparian vegetative cover. When the short-term, temporary effects are considered in the context of the long-term benefits of the project, the overall effects on water quality would be low and would be consistent with those evaluated in the Tributary Habitat EA.

3. Vegetation

Vegetation in the project area is consistent with that of the OWNF, primarily comprised of riparian vegetation such as cottonwood, Douglas-fir, and Ponderosa pine, as well as red osier dogwood (*Cornus*

sericea) bushes. The project area has the potential to contain habitat for ESA-listed showy stickseed (*Hackelia venusta*) (USFWS Information for Planning and Consultation (IPaC), 2021), but due to a lack of habitat and occurrence in the project area, the project would have no effect on federally-listed plant species. If threatened or endangered plants were discovered during implementation, they would be protected/avoided.

Tree species removed for construction would temporarily be stockpiled within the limits of disturbance and reincorporated into the finished project. Any removed vegetation greater than 6-inches in diameter and 15--feet long would be incorporated into log structures. Smaller debris would be placed in log structures or on disturbed surfaces. All trees removed within clearing limits would be removed whole with the rootwad attached and utilized in the project construction.

Revegetation would use native plant species, and the area would be monitored and treated for invasive plants until native vegetation were re-established. Best management practices (BMPs) to protect native vegetation include cleaning equipment and materials, including soil, gravel, mulch, and seed, prior to entering USFS land to ensure that they are weed-free; treating and monitoring invasive plants for three years; and replanting if revegetation were not successful.

The effect of construction activities on soils and vegetation could be severe in the short term and limited to the project area by actions that require the use of heavy equipment such as backhoes, bulldozers, and loaders. During this time, plant communities would be impacted by heavy equipment turning soil and plants being uprooted, buried, torn apart, etc. Disturbance to plants would only occur when absolutely necessary either to reach a site or during excavation activities. Riparian and upland vegetative communities would be restored through seeding and planting native species in disturbed areas following project implementation. Trees removed during construction would be saved to be used during placement of large wood structures.

Impacts to vegetation are consistent with the Tributary Habitat EA analysis in Sections 3.2.2 (Effects Specific to Category 2 - Improving River, Stream, Floodplain, and Wetland Habitat), 3.2.9 (Effects Specific to Category 9 – Riparian and Upland Habitat Improvements and Structures) and 3.3.3 (Effects to Resources by Resource Type – Vegetation). The analysis concludes that although the effects on vegetation from construction actions may be moderate in the short term, the long-term beneficial effects of increased riparian habitats and restored or improved vegetative conditions would be high, thus when the short- and long-term effects are considered together, the overall effects of this project would be moderate and would be consistent with those evaluated in the Tributary Habitat EA.

4. Wetlands and Floodplains

No wetlands were identified on-site as documented in the “Skinney Creek Wetland Assessment” (Inter-Fluve, August 2017) and there would be no impact on wetlands. Ordinary high water (OHW) lines were determined by Inter-Fluve based upon analysis, modeling, and best professional judgement. Floodplain reconnection would occur as a result of the LWD placement and increased channel sinuosity. The YN would obtain Regional General Permit #8 (US Forest Service Pacific Northwest Region 6 Aquatic Restoration Program Within the State of Washington) for restoration activities affecting navigable waters of the United States (WOTUS) and discharges of dredged or fill material into WOTUS. This would satisfy US Army Corps of Engineers Clean Water Act Section 404 requirements and Washington Department of Ecology Section 401 Water Quality Certification requirements.

Impacts to floodplains are consistent with the Tributary Habitat EA analysis in Sections 3.2.2 (Effects Specific to Category 2 - Improving River, Stream, Floodplain, and Wetland Habitat), 3.2.9 (Effects Specific to Category 9 – Riparian and Upland Habitat Improvements and Structures) and 3.3.4 (Effects to Resources by Resource Type – Wetlands and Floodplains). The analysis concludes that reconnecting a stream to its floodplain would create conditions for that floodplain's flood response to be closer to historical condition by increasing water storage capacity and slowing the flow of flood waters. Other actions with no construction activity (e.g. planting) would have no or inconsequential short-term adverse effects, but would provide some long-term beneficial effect. The overall effects of this project would be low and consistent with those evaluated in the Tributary Habitat EA.

5. Wildlife

The project area has the potential to contain habitat for ESA-listed Canada lynx (*Lynx canadensis*), gray wolf (*Canis lupus*), yellow-billed cuckoo (*Coccyzus americanus*), marbled murrelet (*Brachyramphus marmoratus*), and Northern spotted owl (*Strix occidentalis caurina*) as well as Northern spotted owl designated critical habitat (USFWS IPaC, 2021). These species and their critical habitats are not present in the project area; therefore, the project would have no effect on ESA-listed wildlife.

The effects of the project are consistent with the USFS National Forest Management Act and the Forest Plan. The project would not contribute to a negative trend in viability of any wildlife Management Indicator Species (MIS).

Wildlife may be disturbed by sound, movement, and shadows caused by human presence. Larger, more mobile species, such as birds and small mammals, may be temporarily displaced from their home territories. This would be sustainable for the short term if individuals could return to their former habitats once the human disturbance had passed. Other types of disturbance can affect wildlife apart from the restoration site. These include noise, turbidity, smells, etc., which can temporarily disrupt wildlife behavior and displace their habitats. Vegetation removal could cause temporary or permanent displacement as it may take three to ten growing seasons for desired habitat conditions to be restored. Riparian vegetation removal could also affect non-mobile species such as invertebrates and amphibians that could not escape for the duration of the activity, as there would be unavoidable disturbance and changes in habitat structure. Additional impacts to non-mobile species could include stress (disrupted feeding, breeding, hiding, etc.) and mortality from crushing by heavy equipment. It is highly unlikely that migratory birds would be present during project implementation due to the lack of suitable habitat, and there are no USFWS Birds of Conservation Concern in the project area; therefore, no impacts to migratory bird species are anticipated.

The adverse effects described above would be short-term; however, the resulting condition of the restoration action would be habitat conditions that would be restored over what had been there previously, with the intended vegetative conditions having a higher carrying capacity for both dependent and generalist wildlife than current conditions. Long-term benefits include increased plant species richness and diversity, increased habitat structural diversity, increased habitat heterogeneity, and increased extent of riparian habitat.

Impacts to wildlife are consistent with the Tributary Habitat EA analysis in Sections 3.2.2 (Effects Specific to Category 2 - Improving River, Stream, Floodplain, and Wetland Habitat), 3.2.9 (Effects Specific to Category 9 – Riparian and Upland Habitat Improvements and Structures) and 3.3.5 (Effects to Resources by Resource Type – Wildlife). The analysis concludes that the short-term effects on small wildlife species may be moderate to high for individuals that are harmed or killed by construction activities, but effects

would be comparatively minor for larger animals that may only be displaced from habitats rendered unsuitable for occupancy for a period of time. The long-term effects on wildlife populations, however, would be beneficial 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 Tributary Habitat EA.

6. Geology and Soils

Impacts to soils would result from temporary construction activities, including vegetation clearing, grading, and compaction of soils by heavy equipment during construction. Clearing and grading would remove both vegetation and topsoil. Compaction from heavy equipment degrades soil structure, reducing pore space needed to retain moisture and promote gas exchange.

Short-term construction-related impacts would include a temporary increase in soil erosion or temporarily elevated suspended sediments in Skinney Creek. These impacts would be mitigated by the use of erosion and sediment control devices such as silt fencing, drainage relief, and prompt, effective rehabilitation of disturbed sites, which would serve to maintain connectivity, hydrologic, and sediment regimes. All exposed soils would be protected from erosion by mulching, hydroseed covering, or other approved measures within three days of grading. Excavated material would be placed in a spoils area. An Erosion and Sediment Control Plan would be provided by the contractor prior to project implementation.

Over the long term, soil impacts associated with restored sediment transport would be beneficial due to the restoration of the natural soil-forming process, sediment flushing, and floodplain function. Furthermore, the Skinney Creek floodplain would stabilize due to the installation of native plantings.

Impacts geology and soils are consistent with the Tributary Habitat EA analysis in Sections 3.2.2 (Effects Specific to Category 2 - Improving River, Stream, Floodplain, and Wetland Habitat), 3.2.9 (Effects Specific to Category 9 – Riparian and Upland Habitat Improvements and Structures) and 3.3.6 (Effects to Resources by Resource Type – Geology and Soils). The analysis concludes that the effects of the proposed action on geology and soils would be moderate to high in the short-term, but with implementation of mitigation measures and the long-term benefits, the overall effects would be moderate. The overall effects of this project would be consistent with those evaluated in the Tributary Habitat EA.

7. Transportation

The project site would be reached via NF-7906, which runs along the eastern boundary of the project area parallel to Skinney Creek. From there, off-road access would be gained using temporary paths across which equipment would be driven. No actions are proposed that would alter, relocate, or decommission existing roads that are in use, or create new roads. The most effect the proposed restoration actions would have on transportation would be that vehicles transporting workers and equipment to project sites would be sharing local roads with other traffic during construction. The project would not modify the channel structure and hydraulic characteristics of Skinney Creek in such a way that changed flow conditions would affect downstream road prisms, culverts, or bridges.

Impacts to transportation are consistent with the Tributary Habitat EA analysis in Sections 3.2.2 (Effects Specific to Category 2 - Improving River, Stream, Floodplain, and Wetland Habitat), 3.2.9 (Effects Specific to Category 9 – Riparian and Upland Habitat Improvements and Structures) 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. The overall effects of this project would be consistent with those evaluated in the Tributary Habitat EA.

8. Land Use and Recreation

The project area is accessible to the public; however, no specific recreational land uses were identified. Skinny creek is too narrow to support recreational boating. It is not anticipated that the underlying land use would change as a result of the project.

Impacts to land use and recreation are consistent with the Tributary Habitat EA analysis in Sections 3.2.2 (Effects Specific to Category 2 - Improving River, Stream, Floodplain, and Wetland Habitat), 3.2.9 (Effects Specific to Category 9 – Riparian and Upland Habitat Improvements and Structures) and 3.3.8 (Effects to Resources by Resource Type – Land Use and Recreation). The Tributary Habitat EA analysis concludes that land use practices underlying project sites would not be changed for most projects, which would be the case for the Skinny Creek Restoration Project. The overall effects of this project on land uses and recreation are expected to be no to low and would be consistent with those evaluated in the Tributary Habitat EA.

9. Visual Resources

The project area is adjacent to Highway 2 to the west and NF-7906 to the east and is visible to traffic. To the north, south, and east are unoccupied lands. During project implementation, the visual quality of the project area would decrease temporarily from construction activities adding vehicles and equipment as well as upturned earth; however, excavation of the channel would increase channel sinuosity, which in turn would increase hydrologic floodplain connectivity. The improved floodplain area would be seeded and planted with native woody riparian vegetation, resulting in a more natural-looking environment.

Impacts to visual resources are consistent with the Tributary Habitat EA analysis in Sections 3.2.2 (Effects Specific to Category 2 - Improving River, Stream, Floodplain, and Wetland Habitat), 3.2.9 (Effects Specific to Category 9 – Riparian and Upland Habitat Improvements and Structures) and 3.3.9 (Effects to Resources by Resource Type – Visual Resources). The analysis concludes that the effects on scenic values from the proposed action 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 Tributary Habitat EA.

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

Air Quality. Construction equipment would emit some carbon monoxide, nitrogen oxide, unburned hydrocarbons, and particulates from tailpipe emissions and cause dust during ground disturbance and travel along unpaved access roads. These could affect air quality locally for short durations. Impacts from site-specific restoration actions would primarily occur from construction and 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 long-term or short-term violations of state air quality standards.

Noise. Noise can be a concern when actions are located near sensitive receptor sites, such as schools or hospitals. The project, however, would be implemented on public lands far from schools or hospitals, and these sensitive receptor sites would not be an issue. The project would involve the use of heavy equipment for short periods. The ambient noise level for the project area is estimated to be between 45-50 dBA (A-weighted decibel scale). Construction activities would elevate that level to between 80-100 dBA at the construction site. Such noise would come from construction, transportation, and site rehabilitation activities and the associated equipment (noted in the project description). High noise

levels would not be constant, and while construction actions may produce extended periods of excessive noise, these would be hundreds of feet from the nearest residence. Over the long term, people living, working, or recreating near restoration sites would likely experience a decrease in human-created noise coming from restoration sites and an increase in natural sounds associated with restored riparian habitats.

Impacts to air quality, noise, and public health and safety are consistent with the Tributary Habitat EA analysis in Sections 3.2.2 (Effects Specific to Category 2 - Improving River, Stream, Floodplain, and Wetland Habitat), 3.2.9 (Effects Specific to Category 9 – Riparian and Upland Habitat Improvements and Structures) and 3.3.10 (Effects to Resources by Resource Type – Air Quality, Noise, and Public Health and Safety). The analysis concludes that the effects of noise from the proposed action on the human environment would be low and that the effects of the restoration program on air quality, public health, and safety would be low. The overall effects of this project would be consistent with those evaluated in the Tributary Habitat EA.

11. Cultural Resources

Consultation under Section 106 of the National Historic Preservation Act has been completed for this project. A cultural resource inventory report was completed by Willamette Cultural Resource Analysts (CRA) in 2018 and provided to the USFS for review. The inventory recorded two historical archaeological sites and three isolates. Both historic sites were historic debris scatters. The USFS and Willamette CRA recommended that the archaeological sites not be eligible for the National Register of Historic Places (NRHP) and that the Skinney Creek project work continue as planned. The USFS sent the inventory report and associated site records for consultation in 2019. Consulting parties included the Confederated Tribes and Bands of the Yakama Nation, the Confederated Tribes of the Colville Reservation, and the Washington Department of Archaeology and Historic Preservation (WA DAHP) (DAHP Log No.: 2018-12-09899-USFS-OK-WEN). All consulting parties concurred with the USFS determination that no historic properties would be affected during project implementation.

On June 3, 2020, Bonneville sent a letter to the WA DAHP notifying the office of Bonneville's involvement in the project (BPA CR Project No. WA 2020 166). Bonneville designated the USFS OOWNF as lead federal agency throughout the life of the project.

A copy of the USFS inadvertent discovery plan would be on site during construction. If archaeological or historic materials were discovered during project activities, work in the immediate vicinity would stop, the area would be secured, and the Wenatchee River Ranger District and the consulting parties would be notified. If the discovery were determined to be eligible for listing on the NRHP and avoidance during project implementation were not possible, site-specific mitigation would be developed by the USFS Forest Archaeologist in consultation with the WA DAHP and the Tribal Historic Preservation Officers (THPO) for the Confederate Tribes and Bands of the Yakama Nation and the Confederated Tribes of the Colville Reservation.

Impacts to cultural resources are consistent with the Tributary Habitat EA analysis in Sections 3.2.2 (Effects Specific to Category 2 - Improving River, Stream, Floodplain, and Wetland Habitat), 3.2.9 (Effects Specific to Category 9 – Riparian and Upland Habitat Improvements and Structures) and 3.3.11 (Effects to Resources by Resource Type – Cultural Resources). The effect on cultural resources from the proposed action would be low because cultural resources would be avoided by project construction and effects have been appropriately resolved through the Section 106 consultation process. The overall effects of this project would be consistent with those evaluated in the Tributary Habitat EA.

12. Socioeconomics and Environmental Justice

The project would result in small, temporary, beneficial impacts to socioeconomics by providing jobs for construction workers. It would not require individuals to leave the local area, or relocate within it. There would therefore be no effect on housing available for local populations. This project would not displace people or eliminate residential suitability from lands being restored or from lands near restoration project sites. Implementation of the project would likely create 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 natural scenery. The project would not displace residents or degrade residential suitability; nor would it cause changes to the tax base.

Impacts to socioeconomics and environmental justice are consistent with the Tributary Habitat EA analysis in Sections 3.2.2 (Effects Specific to Category 2 - Improving River, Stream, Floodplain, and Wetland Habitat), 3.2.9 (Effects Specific to Category 9 – Riparian and Upland Habitat Improvements and Structures) and 3.3.13 (Effects to Resources by Resource Type – Socioeconomics and Environmental Justice). The analysis concludes that effects to the socioeconomics of the Basin as a whole with the implementation of the proposed action would be low due to the small scale and dispersed nature of the projects. Overall, no permanent adverse effects to populations where environmental justice would be a consideration are expected. The overall effects of this project would be consistent with those evaluated in the Tributary Habitat EA.

13. Climate Change

Greenhouse gas emissions associated with the project (primarily carbon dioxide, methane, and nitrous oxide) would be localized and temporary. These short-term emissions would be generated by construction equipment, off-road vehicles, on-road vehicles (including worker commuting and material delivery), and dust from ground-disturbing activities. Given the short construction duration and low number of vehicles and equipment, temporary emissions associated project construction would be well below EPA's reporting threshold of 25,000 metric tons of carbon dioxide equivalent per year during construction. The impact from greenhouse gas emissions would be low and, therefore, the potential for the project to accelerate climate change would be low. The project would provide for an increase of long-term water table inputs through restoring floodplain function and increasing connectivity of streams and rivers to their floodplains. It would also increase riparian shading of streams and rivers. Both of these results from the project would help lower water temperatures, thereby ameliorating the effects of climate change on aquatic species.

Impacts to climate change are consistent with the Tributary Habitat EA analysis in Sections 3.2.2 (Effects Specific to Category 2 - Improving River, Stream, Floodplain, and Wetland Habitat), 3.2.9 (Effects Specific to Category 9 – Riparian and Upland Habitat Improvements and Structures) and 3.3.14 (Effects to Resources by Resource Type – Climate Change). The analysis concludes that the short-term effects of emissions from motorized equipment operations during construction or implementation of the proposed activities would be offset to some degree by the ameliorating effects of restored floodplain function with increased water table inputs and water temperature decreases from improved instream and riparian habitat conditions. The overall effects of the proposed action on climate change would be low. The overall effects of this project would be consistent with those evaluated in the Tributary Habitat EA.

Findings

Bonneville finds that the types of actions and the potential impacts related to the proposed Skinney Creek Restoration Project have been examined, reviewed, and consulted upon and are similar to those analyzed in the Columbia River Basin Tributary Habitat EA (DOE/EA-2126) and FONSI. There are no substantial changes in the proposed action and no significant new circumstances or information relevant to environmental concerns bearing on the proposed action or its impacts within the meaning of 10 CFR § 1021.314(c)(1) and 40 CFR §1502.9(d). Therefore, no further NEPA analysis or documentation is required.

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