

**Supplement Analysis**  
for the  
**Columbia River Basin Tributary Habitat Restoration**  
(DOE/EA-2126/SA-11)

**Finn Rock Floodplain Restoration**  
**BPA project number 2009-012-00**  
**BPA contract number 87689**

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.

Finn Rock Reach (FRR) comprises approximately 303 acres, including riparian forest, floodplain, and side channel habitat important to Endangered Species Act (ESA)-listed fish species. FRR contains a tract of riparian forest hosting several miles of McKenzie River side channel downstream from its confluence with Elk Creek and two miles of McKenzie River frontage. These habitats provide refuge for a wide diversity of aquatic, avian, plant, and terrestrial species. Focal species within this area include ESA-listed spring Chinook salmon (*Oncorhynchus tshawytscha*) and bull trout (*Salvelinus confluentus*); as well as resident rainbow trout (*Oncorhynchus mykiss*) and Oregon Sensitive and federal Species of Concern Pacific lamprey (*Lampetra tridentatus*) and western pond turtle (*Actinemys marmorata*).

Consistent with the Programmatic EA, this Supplement Analysis (SA) analyzes the effects of the Finn Rock Floodplain Restoration, which would restore floodplain processes and functions, habitat conditions, and water quality of approximately 83 acres of the McKenzie River floodplain. This SA analyzes the site-specific impacts of the Finn Rock Floodplain Restoration 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).

### **Proposed Action**

The Finn Rock Floodplain Restoration site is located within the southern portion of the FRR and can be described as a floodplain area with a main side channel of the McKenzie River running through it. The northeastern portion includes a large artificial gravel pond with two smaller connected ponds; the northwestern portion includes a small wetland-stream complex; and the southern portion is mostly a single thread side channel. The Holiday Farm Fire of 2020 burned through the project area and has affected portions in slightly different ways. In March of 2016 the McKenzie River Trust (MRT) took ownership of the FRR property and BPA holds a conservation easement on the property. The project site

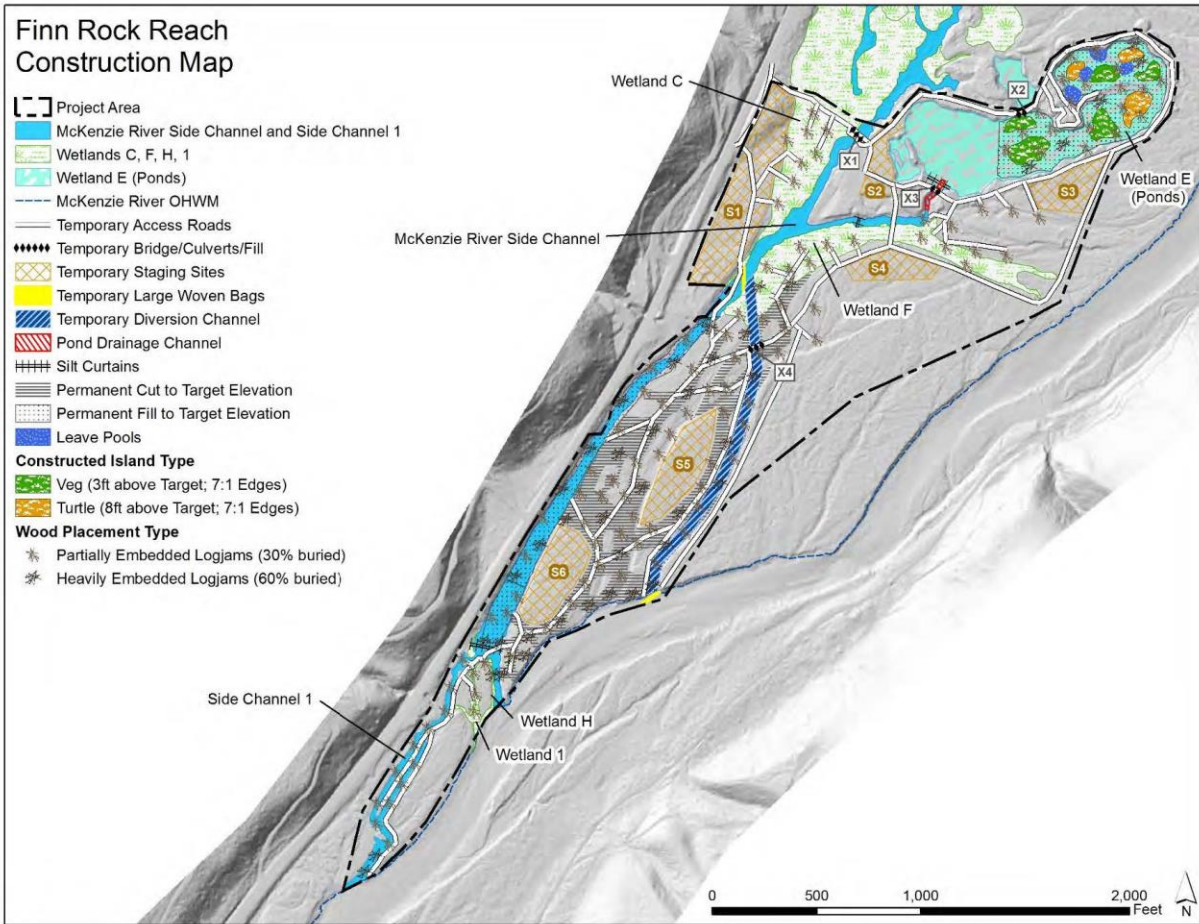
is not accessible to the public, but the McKenzie River has a substantial amount of fishing, boating, and recreational use. Just downstream of the project area, the Finn Rock Boat Landing is a popular launch point for day trips, that may include fishing, or going down the McKenzie River in a raft, kayak, or a drift boat.

BPA proposes to fund the MRT to lower selected floodplain areas and reshape side channels to increase hydrologic connectivity and improve secondary channel and floodplain interactions within the FRR. BPAs funds would only cover a portion of the total cost for this action and there would be several other funding agencies; including the U.S. Forest Service, Willamette National Forest, and McKenzie Watershed Council. The project site is located within the southern portion of the FRR and can be described as a floodplain area with a main side channel of the McKenzie River running through it. The environmental effects of these types of restoration actions were evaluated in the Programmatic EA.

The Finn Rock Floodplain Restoration project would include a suite of restoration actions to: (1) restore surface water connectivity to the floodplain; (2) redistribute sediment to equilibrate the floodplain elevations and maximize hydrologic connectivity in order to reactivate a complex network of channels and wetlands; (3) use floodplain terrace sediments to partially fill remnant artificial gravel ponds and convert part of the pond to a wetland complex with islands; (4) add up to 1,540 pieces of large woody material to slow stream velocities and create complex habitat for native plant, fish, and wildlife species. The work would occur in both in uplands, and in wetlands and below the Ordinary High Water (OHW). Project work areas are depicted in Figure 1-1.

BPA would contribute funding for about 10 percent of the overall project construction costs; going toward limited earthwork activities associated with channel reconstruction. Specifically, BPA funds would contribute to the following actions: (1) redistribution of sediment (fill and removal; about 21 acres), (2) temporary construction of access roads, stream and wetland crossings, and staging areas (about 1.3 acres), (3) temporary excavation to partially drain the pond (about 300 cubic yards), (4) temporary construction of an about 1,700-foot-long water diversion channel to dewater and isolate fill zones, including collection and relocation of fish and other aquatic organisms, (5) temporary diversion of partial flow at the head of the side channel to reduce flows entering the project area, and (6) temporary placement of woven sacks filled with onsite alluvium to reduce water entering cut zones from the mainstem McKenzie River. Other funding partners would fund the remainder of the project, and be responsible for long-term maintenance of the restoration project at the site.

These actions are consistent with the actions considered in the Programmatic EA; specifically Category 2.1 Improve Secondary Channel and Floodplain Interactions. The total project area would be about 92 acres that surrounds a two-mile stretch of the McKenzie River. All work would be done between June and September 2021; with all the in-water work occurring during the in-water work period of 1 July – 15 August (MRT has requested an extension to Oregon Department of Fish and Wildlife (ODFW) to allow work through 31 August).



**Figure 1-1: Finn Rock Floodplain Restoration Map**

**Environmental Effects**

The implementation of this project requires the use of large excavators and bulldozers to clear vegetation, excavate the designated Cut Zones to the target elevation, and push fill into the designated Fill Zones. These restoration actions would disturb and displace soil in and along the streams; damage vegetation; create noise and vehicle emissions; and temporarily increase vehicle traffic and human activity in the project area. The typical effects associated with the environmental disturbances created by this project 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 Finn Rock Floodplain Restoration, and an assessment of whether these effects are consistent with those described in the Programmatic EA. This project is designed to improve both aquatic and riparian habitats for the long term, so the adverse effects from soil and vegetation disturbance, and from human and mechanical activity, as detailed below, would be short term only.

**1. Fish and Aquatic Species**

The effects of using heavy equipment in and along streams in FRR are consistent with the analysis in the Programmatic EA, “Fish and Aquatic Species”, Section 3.3.1. The Programmatic EA, Section 3.3.1.3,

describes overall low impacts to fish and aquatic species after balancing moderate short-term adverse effects against highly beneficial long-term effects.

Two species listed under the ESA are present in the project area: Upper Willamette River spring Chinook salmon and bull trout. Consultation on the effects of this project on these species was completed under the U.S. Army Corps of Engineers (USACE) programmatic Standard Local Operating Procedures for Endangered Species (SLOPES); with the conclusion that the project would likely adversely affect these species and their critical habitat in the short term but, would not likely result in jeopardy to the species or result in destruction or adverse modification of their critical habitat.

The short-term adverse effects of the project would expose, displace, reconfigure, or compact earth through the use of mechanized equipment along the channels, and likely create conditions where small amounts of sediment would be released for short periods of time. The project would implement work area isolation to dewater fill zones and allow work to be conducted in the dry to reduce turbidity. This includes the construction of a temporary diversion channel, draining the existing ponds, and use of woven sacks, pumps, and silt curtains. The sediment inputs would not exceed the moderate to high amounts evaluated in the Programmatic EA at Section 3.3.1.2.1, and would have minimal potential for triggering the behavioral and physiological effects from elevating water temperatures as described therein.

Prior to any construction, fish and aquatic organisms would be salvaged from each wetland or waterbody impacted. The salvage protocols would follow Oregon Department of Fish and Wildlife (ODFW), U.S. Fish and Wildlife Service, and National Marine Fisheries Service guidelines to minimize impacts to listed fish and other organisms and would be accomplished in coordination with ODFW. This would include a 3 to 5 day window with either a slow drawdown period and/or a partial diversion in order to allow for natural fish escapement and fish salvage activities to occur. Before returning water to the fill zones, fish and other aquatic organisms would be similarly captured and relocated from the temporary diversion channel. The anticipated disturbance to fish and aquatic organisms are consistent with those considered in Section 3.3.1.2.1 of the Programmatic EA.

The Proposed Action's long-term beneficial effects would include increased low flow surface water connectivity within the floodplain and restoring natural floodplain processes which would ultimately benefit plant, fish, and wildlife species that utilize habitat at the project site. These beneficial effects are consistent with the analysis in the Programmatic EA found at Section 3.3.1.2.2.

## **2. Water Resources**

The effects of using heavy equipment in and along streams in FRR are consistent with the analysis in the Programmatic EA, "*Water Resources*", Section 3.3.2. The Programmatic EA, Section 3.3.2.3, describes overall low impacts to water quality after balancing moderate short-term adverse effects against highly beneficial long-term effects.

Overall, the project would create short-term, localized, sediment inputs from the impacts of mechanized equipment along the streams, as well as dewatering and rewatering the fill zones. Side-channel restoration would expose these areas to flow and result in sediment plumes during initial water flows or during the first high flows. As in the Programmatic EA, these are short-term effects which would be lessened by the application of mitigation measures such as turbidity monitoring, erosion and sediment control Best Management Practices (BMPs), and minimization of areas to be impacted. Additionally, the project would result in stabilization and decreased natural fire-related sediment inputs. The long-term effects of this project, however, would be a decreased potential for sediment inputs, an increased potential of the floodplain to effectively manage its sediment loads, and a reduction of stream

temperatures from improved stream form and floodplain connectivity. These long-term beneficial effects are consistent with those described in the Programmatic EA.

### **3. Vegetation**

The effects of using heavy equipment in and along streams in FRR are consistent with the analysis in the Programmatic EA, “*Vegetation*”, Section 3.3.3. The Programmatic EA, Section 3.3.3.3, describes overall moderate impacts to vegetation after balancing moderate short-term adverse effects against highly beneficial long-term effects. No sensitive plant species or those listed under the ESA are present within the project area.

The project would have short-term adverse effects on the local vegetation. The Holiday Farm Fire burned intensely through this area and has resulted in little live vegetation, so little disturbance of existing vegetation would occur as a result of this project. However, the use of heavy equipment and human activity throughout the project site may result in minimal impacts to the remaining vegetation; additionally the Cut Zones would be cleared of all vegetation. The long-term effects of the project would result in a restored riparian floodplain forest that would allow for native vegetation to re-establish within the project site.

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

The effects of using heavy equipment in and along streams in FRR are consistent with the analysis in the Programmatic EA, “*Wetlands and Floodplains*”, Section 3.3.4. The Programmatic EA, Section 3.3.4.3, describes overall low impacts to wetlands and floodplains after balancing high short-term adverse effects to individual wetlands within work areas against highly beneficial long-term effects.

The project would result in short-term impacts to wetlands and floodplains due to the use of heavy equipment and earth-moving actions in the wetland, as well as the temporary dewatering of stream channels. The project would have about 128,000 cubic yards of permanent fill that would convert about 6 acres of pond into stream and floodplain islands. The project would also remove about 61,000 cubic yards of fill to convert about 12 acres of upland into stream. Additionally, there would be about 4,000 cubic yards of temporary fill to create access roads within the wetlands and below the OHW and about 1,200 cubic yards of temporary removal to create the work area isolation by draining the pond and creating the water diversion channel. Consistent with the Programmatic EA, there would be long-term beneficial effects from implementation of this project. There would be increased connectivity between the existing channels, new side-channels, and the floodplain; and a net gain of about 18 acres of stream-wetland complex. There would also be some flow redirection that 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. Overall, the long-term beneficial effects would outweigh the negative effects, as is stated in the Programmatic EA.

### **5. Wildlife**

The effects of using heavy equipment in and along streams in FRR are consistent with the analysis in the Programmatic EA, “*Wildlife*”, Section 3.3.5. The Programmatic EA, Section 3.3.5.3, describes overall low impacts to wildlife after balancing short-term adverse effects against highly beneficial long-term effects. One species listed under the ESA is present in the project area, the Northern spotted owl (*Strix occidentalis caurina*), and two Oregon Sensitive species: western pond turtles (*Actinemys marmorata*, sensitive) and western painted turtles (*Chrysemys picta*). Northern spotted owl critical habitat is mapped as occurring 0.7 miles from the project area and no project impacts would affect any nests within critical habitat. Northern spotted owls may fly through the project area while migrating or foraging but are not

anticipated to be present during construction activities. Enough water would be left in the pond for turtles and other native aquatic organisms to survive through construction.

The short-term effects from this project would be consistent with those analyzed in the Programmatic EA. Impacts would be primarily from disturbance of wildlife by the temporary presence and activity of humans and heavy equipment. This could temporarily displace them during construction and they would likely re-occupy the site once human activity has moved or ceased. The long term effects of this project would be a more natural habitat in the project area, which is currently used by a variety of wildlife species such as beavers, river otters, songbirds, deer, elk, and bears. Specifically, converting the pond to a stream-wetland complex would benefit the native species that inhabit it, namely turtles, which are riverine species that have much greater habitat needs than the pond can provide. This level of effect would be low, as is stated in the Programmatic EA.

## **6. Geology and Soils**

The effects of using heavy equipment in and along streams in FRR are consistent with the analysis in the Programmatic EA, "*Geology and Soils*", Section 3.3.6. The Programmatic EA, Section 3.3.6.3, describes moderate impacts to geology and soils.

The project would have short-term impacts to geology and soils due to the use of heavy equipment and earth-moving actions. Heavy equipment can result in widespread mixing of soil horizons or severe compacting of soils. The use of larger and heavier excavators and dump trucks was considered in the Programmatic EA. These impacts would be limited to the project site and mitigation measures designed to minimize adverse effects would be applied; such as minimizing the area of impact and applying erosion control measures. The long term effects of this project would improve soil stability post fire, as well as improve soil quality and productivity by using either erosion control fabric, mulch, and/or seeding and replanting with native vegetation following project implementation.

## **7. Transportation**

The effects of this restoration project in and along streams in FRR are consistent with the analysis in the Programmatic EA, "*Transportation*", Section 3.3.7. The Programmatic EA, Section 3.3.7.3, describes low impacts to transportation.

Project work areas would not intersect any roads, either open or closed, public or private. No roads would be closed; none would be temporarily blocked; none would be relocated. The most effect the proposed restoration actions would have on transportation would be that vehicles transporting workers and equipment to the project site would be sharing local roads with other traffic. Although project actions may impact roads for a short period, this level of impact would be low, as is stated in the Programmatic EA.

## **8. Land Use and Recreation**

There would be no effect on land use or recreation from the proposed project. The project site is on private land, owned by MRT upon which BPA holds a conservation easement. The floodplain and riparian natural area land use would not change; the site is currently not accessible to the public and the McKenzie River side channel is not accessible by boat due to a large logjam at the head of it. The Finn Rock Boat Landing would remain open for public access throughout the duration of the project.

This level of effect is consistent with that described in the Programmatic EA at Section 3.3.8.3 which states that land use practices underlying project sites would not be changed for most projects.

### **9. Visual Resources**

The effects of this restoration project in and along streams in FRR are consistent with the analysis in the Programmatic EA, "*Visual Resources*", Section 3.3.9. The Programmatic EA, Section 3.3.9.3, describes low impacts to visual resources.

The proposed restoration site is located just east of Oregon State Highway-126 and certain areas of the project may be seen from the highway. During the project there would be short-term visual impacts related to construction, but long-term there would be beneficial impacts associated with changing the visual condition to a more natural landscape. This level of impact would be low, is stated in the Programmatic EA.

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

The effects of this restoration project in and along streams in FRR are consistent with the analysis in the Programmatic EA, "*Air Quality, Noise, and Public Health and Safety*", Section 3.3.10. The Programmatic EA, Section 3.3.10.3, describes low impacts to air quality, noise, and public health and safety.

The proposed restoration actions are far from any major population center or public use area, thus they would not have any potential to directly impact the public, other than when sharing the roads when workers travel to and from the work site. Air quality and noise would be affected by operations and emissions from the machinery to be used during the project. But this is very short-term, would not exceed air quality standards, and likely too far from any population area to be heard or seen; no long-term source of emissions or noise would be created. No restoration action proposed has potential to impact public safety infrastructure (e.g. roads, telecommunications) or place a burden on emergency services (police, fire, ambulance). This level of impact would be low, as is stated in the Programmatic EA.

### **11. Cultural Resources**

The effects of this restoration project in and along streams in FRR are consistent with the analysis in the Programmatic EA, "*Cultural Resources*", Section 3.3.11. The Programmatic EA, Section 3.3.11.3, describes low impacts to cultural resources because cultural resources would either be avoided by project construction, effects would be appropriately resolved through the Section 106 consultation process.

By agreement with BPA, USACE served as the lead federal agency for National Historic Preservation Act Section 106 compliance for this project. Cultural resources surveys were conducted by USACE and consultations with the Oregon State Historic Preservation Office, the Confederated Tribes of Grand Ronde, the Cow Creek Band of Umpqua Tribe of Indians, the Confederated Tribes of Warm Springs, the Confederated Tribes of Siletz Indians of Oregon, and the Confederated Tribes of Coos, Lower Umpqua, and Siuslaw Indians were completed. There were no historic sites identified within the Area of Potential Effect and the USACE determined that there would be no effect to historic properties. As described in the Programmatic EA, the results of this consultation was that sites, if present, would be avoided by design and have no adverse effect.

## **12. Socioeconomics and Environmental Justice**

The effects of this restoration project in and along streams in FRR are consistent with the analysis in the Programmatic EA, "*Socioeconomics and Environmental Justice*", Section 3.3.10. The Programmatic EA, Section 3.3.10.3, describes low impacts to socioeconomics and environmental justice.

As described in the Programmatic EA, none of the restoration actions would generate a requirement for additional permanent employees nor would they require individuals to leave the local area, or relocate within it. There would 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 the restoration project site. The project would generate short-term employment for those directly implementing the restoration actions and would provide small short-term cash inputs to local businesses for fuel, equipment, and meals. This degree of effect would be low.

There are no environmental justice populations present that could be affected, as these projects and their impacts are limited to the private lands on which they are located, and no offsite effects are anticipated that could impact such populations elsewhere.

## **13. Climate Change**

The effects of this restoration project in and along streams in FRR are consistent with the analysis in the Programmatic EA Section 3.3.10, "*Climate Change*". The Programmatic EA, Section 3.3.10.3, describes low impacts to climate change.

The project would have a low level of effect on climate change from short-term emissions from motorized equipment operations during implementation of the restoration actions. Due to the short duration of construction and the relatively small number of construction vehicles, temporary emissions associated with project construction are anticipated to be well below 25,000 tons of CO<sub>2</sub>e during construction. 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 effects on climate change would be low.

## **Findings**

BPA finds that the types of actions and the potential impacts related to the proposed *Finn Rock Floodplain Restoration* 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 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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Concur:

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