

Supplement Analysis
for the
Columbia River Basin Tributary Habitat Restoration
Programmatic Environmental Assessment
(DOE/EA 2126/SA-50)

Last Chance Ranch Phase 1 Modification
Bonneville project number 2010-072-00
Bonneville contract number 84063 rel 10

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) (Programmatic EA). The Programmatic EA analyzed the potential environmental impacts of implementing habitat restoration actions in the Columbia River Basin and its tributaries. In May of 2023, Bonneville completed a Supplement Analysis (SA) for the *2023 Last Chance Ranch Upper Pahsimeroi Phase 1* project (SA-34) that found that in-stream fish habitat improvements actions such as stream bank reshaping and log structure installations in the Pahsimeroi River did not represent a substantial change to the proposal evaluated in the Programmatic EA and did not rise to the level of significant new circumstances or information relevant to the environmental concerns that were not addressed by the Programmatic EA. The actions analyzed in this SA would occur within the area previously analyzed in SA-34.

Consistent with the Programmatic EA, this SA analyzes the effects of the *Last Chance Ranch Phase 1 Modification* project, for which Bonneville is proposing to provide funds to the Idaho Department of Fish and Game (IDFG). This project would implement many of the specific restoration actions assessed in the Programmatic EA in the lower Pahsimeroi River Valley in Lemhi and Custer counties, Idaho (the Pahsimeroi River is the county line). The objectives of the proposed project are to increase in-stream habitat diversity; reduce water temperatures; and improve riparian and floodplain vegetative diversity for the benefit of Endangered Species Act-listed salmonids. This SA analyzes the site-specific impacts of the Last Chance Ranch Phase 1 Modification project to determine if its effects are 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 Action

This proposed action would modify constructed features and aquatic habitats within the area of the *2023 Last Chance Ranch Upper Pahsimeroi Phase 1* project. That project was completed in 2023 having improved juvenile salmonid winter and summer rearing habitat in approximately 0.8 mile of the

Pahsimeroi River. The current proposal would adjust features constructed in that project based on the results of first-year monitoring. This monitoring revealed a need for project adjustment to achieve its intended function (e.g., adding fill or increasing excavation to achieve intended elevations, rearrangement of placed logs to better direct flows for pool scour, addition of logs to constructed log features to increase their fish habitat values, etc.). IDFG would construct features planned for that project but not implemented in 2023; and would construct additional features to improve habitat conditions for anadromous fish in the project area.

The *Last Chance Ranch Phase 1 Modification* project (herein after “Modification project”) would be located in the lower end of the Pahsimeroi Valley between Ellis and May, Idaho (Figure 1).

Figure 1 - Location of proposed action.



The proposed action would be along 0.8 mile of the Pahsimeroi River. It would extend across an area of approximately 26 acres but with actions directly impacting less than two acres. Features include bank recontouring in two areas totaling 2,200 square feet; five small areas of fill totaling 1,100 square feet to narrow the channel in those five areas; construction of two riparian grass and sedge sod benches (500 square feet and 350 square feet in size) to improve the river’s connection to its floodplain in those two separate areas; two instream gravel riffles at about 400 square feet each; construction of a new 50-foot-long by 5-foot-wide side channel; and placement of 40 single logs, two multi-log structures, one channel-spanning multi-willow clump structure, and 12 single willow clumps (all with rootwads attached) among these features. Two separate floodplain areas between bends of the river (2,000 square feet and 6,000 square feet in size) would be laced with willow baffles to intercept and slow overland flow to facilitate sediment deposition and groundwater recharge in those floodplain areas.

The features requiring excavation in the river and along the banks would require the use of temporary bulk-bag cofferdams to isolate those work areas from active river flows to reduce turbidity impacts. Fish within these isolated work areas would be captured and relocated (salvaged) by experienced and permitted personnel before construction in those areas begins.

This Modification project would require approximately one mile of temporary access routes (cross-country travel on designated routes with no temporary or permanent road construction) along the same alignments as those used in the 2023 project. Two temporary bridge crossings are proposed for construction access. One would be removed following this Modification project's activities, the other would be left in place to serve a future project (the *Last Chance Ranch Phase 2* project) scheduled for implementation immediately following these modifications. The bridge would be removed following the Last Chance Ranch Phase 2 project. Proposed staging, stockpile, and refueling areas would be the same two areas (5,200 square feet and 2,300 square feet in size) used in construction of the Phase 1 project, each farther than 150 feet from the river.

Construction would require one or two track-mounted excavators, one or two haul trucks, and a log truck for woody material transport. Excavated material would be utilized on site where fill areas are proposed, and excess material would be disposed of in an upland location and graded to match natural contours. Sedge material would be salvaged from areas to be impacted by these actions and immediately transplanted to revegetate areas that would be graded or filled. Large woody material would be purchased from commercial sources and small woody material (e.g., willows) would be sourced from existing plant concentrations on site. Areas impacted for temporary access and staging would be scarified and replanted with native species.

The proposed project would be constructed during the in-water work window (July 1 – August 24) of 2024 and would comply with relevant conservation measures specified in Bonneville's Habitat Improvement Program (HIP) programmatic Endangered Species Act (ESA) consultation.

Disturbed areas would be planted with containerized native shrubs, hydroseeded, treated for invasive plants, and be restricted from cattle grazing through fencing, grazing plans, or conservation easement conditions.

Funding this project would benefit Snake River spring/summer Chinook salmon, Snake River Basin steelhead, and bull trout and would fulfill commitments under the 2020 National Marine Fisheries Service Columbia River System Biological Opinion (2020 NMFS CRS BiOp). These proposed activities also support commitments specified in the 2020 U.S. Fish and Wildlife Service Columbia River System Biological Opinion (2020 USFWS CRS BiOp) while also supporting ongoing efforts to mitigate for effects of the Federal Columbia River Power System on fish and wildlife in the mainstem Columbia River and its tributaries pursuant to the Pacific Northwest Electric Power Planning and Conservation Act of 1980 (Northwest Power Act) (16 U.S.C. (USC) 839 *et seq.*).

Environmental Effects

The implementation of this project requires the use of construction equipment and hand work which would disturb and displace soil in and along the streams; damage vegetation; produce 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 summarized in this document.

Below is a description of the potential site-specific effects of the Modification project, 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 small equipment and manually working in and along the Pahsimeroi River 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 consideration of moderate short-term adverse effects and highly beneficial long-term effects.

Three species listed under the ESA are present in the project area: Snake River spring/summer Chinook salmon (part of the Upper Salmon Major Population Group), Snake River steelhead (part of the Salmon River Major Population Group), and bull trout. The State of Idaho lists spring/summer Chinook salmon as "critically imperiled" and Snake River steelhead as "imperiled," but lists bull trout as "not rare and apparently secure."¹ No other ESA-listed species of concern are present. Consultation under the ESA on the effects of this project on these species was completed under Bonneville's programmatic HIP consultation with the conclusion that the project would likely adversely affect these species and their designated 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 designated 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 Pahsimeroi River. It would likely create conditions where small amounts of sediment could be released for short periods of time. The amount of sediment anticipated from the project would be moderate because there would be some in-stream excavation (for constructed riffles and the new channel). There would, however, be no large-scale dewatering/rewatering of entire river or stream channels for complete reconstruction and the new side channel and riffles would be constructed "in the dry" (no exposure to stream flows), and mitigation measures as detailed in the Programmatic EA would be applied. The sediment inputs would be typical of the amounts that fish and other aquatic species naturally encounter in their environment, but well below the moderate to high amounts evaluated in the Programmatic EA at Section 3.3.1.2.1. These effects would have minimal potential for triggering the behavioral and physiological effects described therein from high suspended sediment concentrations and the elevated water temperatures they can produce by absorbing and transferring solar energy into the water.

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 are present. The project area has limited vegetation that would screen human activity during work activities within and along the river. Some work sites would require isolation (the damming of waterflows around a work area or across the stream to effectively de-water the site). These would generally dewater only a portion of the stream rather than damming the entire width. At some sites, however, fish could be trapped in the area to be dewatered and may thus need to be "salvaged" and relocated to free-flowing portions of the river. Fish salvage involves electro-shocking, capture, and handling to relocate the fish. This is very stressful for individual fish, but avoids leaving the fish to be stranded in a dewatered location. The anticipated amount of activity and the level of aquatic species disturbance, however, is consistent with the analysis in the Programmatic EA found at Section 3.3.1.2.1.

¹ State of Idaho "Species Conservation Status" website at <https://idfg.idaho.gov/species/taxa/list?category=5&usesa%5B%5D=Endangered&srnk=2&grnk=All&sgcn=All>

The project's long-term beneficial effects include creation of more complex habitats through the addition of a new channel, narrowed/deepened channels, wood structures, and woody streamside vegetation to streams and riparian areas (where little currently exists); reduction of long-term sediment inputs by streamside stabilization and streamside plantings (where only grasses and sedges now dominate); and the enhancement of in-stream habitat complexity over time by providing overhanging vegetation and undercut streambanks enabled by in-channel root systems (where none now exist). 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 small equipment and manually working in and along the Pahsimeroi River are consistent with the analysis in the Programmatic EA in Section 3.3.2, "*Water Resources*." The Programmatic EA, Section 3.3.2.3, describes overall low impacts to water quality after consideration of moderate short-term adverse effects and highly beneficial long-term effects. There would be no effect to water quantity from water withdrawals. There would, however, be the potential for increased recharge of groundwater since the connection between surface flows and the floodplain would be increased over both space and time.

Overall, this tributary restoration project would create short-term, localized, sediment inputs from the impacts of mechanized equipment along the river in the process of shaping banks, constructing a new side channel, moving sod, and installing large wood structures and willow clumps. Restoration actions would disturb lengths of stream or river bank consistent with, but much less than, the Programmatic EA (which evaluated actions that would disturb many hundreds of feet of river bank); and the sediment produced from these restoration actions is not anticipated to be greater than what occurs naturally during annual, natural, high flow events. As in the Programmatic EA, these are short-term effects which would be lessened by the application of mitigation measures such as protection of existing vegetation, minimization of areas to be impacted, and revegetation when the project is complete. The long-term effects of this project, 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 improved stream form, instream habitat structure, and increased riparian vegetative cover. These long-term beneficial effects are consistent with those described in the Programmatic EA.

3. Vegetation

The effects of using small equipment and manually working in and along the Pahsimeroi River are consistent with the analysis in the Programmatic EA Section 3.3.3, "*Vegetation*." The Programmatic EA, Section 3.3.3.3, describes overall moderate impacts to vegetation after consideration of moderate short-term adverse effects and highly beneficial long-term effects. No plant species listed by the state or Federal governments as endangered, threatened, or of concern are present within this project area.

This project is anticipated to produce impacts to vegetation consistent with or less than those described in the Programmatic EA. There would be no large-scale earthmoving with its associated vegetative loss, and there are few constructed features with only a couple having areas of overlapping impact. Most of these project features would impact less than 1,200 square feet each and would generally be separated from other similar features by hundreds of feet. This is less than is described in the Programmatic EA in Section 3.3.3.2, "*Environmental Consequences for Vegetation*," which evaluated constructed features that could disturb up to 50 acres. Impacts to vegetation would be limited to some damage or elimination of herbaceous vegetation by construction equipment and human foot traffic (from which the vegetation would be anticipated to recover quickly) and by the translocation of willow clumps from

existing large willow patches not providing in-stream habitat benefits to streamside areas where they are needed to provide such benefits. This level of effect would be low to moderate.

4. Wetlands and Floodplains

The effects of using small equipment and manually working in and along the Pahsimeroi River 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 low impacts to wetlands and floodplains after considering high short-term adverse effects and highly beneficial long-term effects.

Wetlands in the project area were inventoried and assessed by the Bureau of Reclamation in 2022. Nearly 16 acres of wetlands were identified within the Last Chance project area, with most of the wetland acres dominated by vegetation with no surface water. The project would restore river and wetland habitats and thus, by design, would be implemented in and around the inventoried wetlands, and any work would be completed according to permits issued by the US Army Corps of Engineers under the Clean Water Act before ground-disturbing actions begin. The project would ultimately expand the acres that would be classified as wetlands, and in some cases modify them from those with surface water to those dominated by vegetation (since many project actions would narrow the streams' cross sections in reaches that had been overly-widened by grazing livestock). There would be adverse impacts in the short term, but improved wetland conditions following project completion.

This project, however, is anticipated to have less impact than that described in the Programmatic EA. With this project, there would be less short-term adverse effects to floodplains and wetlands than described in the EA: there would be less extensive earth-moving and heavy equipment use would be limited to small areas of grading and fill rather than wholesale reshaping of floodplains and river channels as described in the EA. The Programmatic EA evaluated more extensive impacts to wetlands from the actions of larger and heavier 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 this project. There would be increased connectivity between the river and its floodplain from riparian bench construction and river bank recontouring. There would also be some flow redirection as channel-spanning tree and willow structures would facilitate more natural lateral movement and sinuosity of channels. 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. This level of effect would be low, as stated in the Programmatic EA.

5. Wildlife

The effects of using construction equipment and manually working in and along the Pahsimeroi River are consistent with the analysis in the Programmatic EA, Section 3.3.5, "*Wildlife*." The Programmatic EA, Section 3.3.5.3, describes low impacts to wildlife after considering high short-term adverse effects and highly beneficial long-term effects. No wildlife species listed under the ESA or by the State of Idaho are present within these project areas.

The short-term effects from this project in the Pahsimeroi Valley would be less than those analyzed in the Programmatic EA, because the planned restoration actions would have far less impact to soils and vegetation, and thus, to wildlife habitat. There would be no large-scale earthmoving, with its associated vegetative loss and small animal impacts. Impacts would be primarily from disturbance of wildlife by the temporary presence and activity of humans and the use of construction equipment in the riparian habitats. This could temporarily displace them from their preferred habitats during construction (a few

days within any one reach), and they would likely re-occupy the site once human activity has moved or ceased. This level of effect would be low, as stated in the Programmatic EA.

6. Geology and Soils

The effects of using small equipment and manually working in and along the Pahsimeroi River 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 short-term effects from this project in the Pahsimeroi Valley would be less than those analyzed in the Programmatic EA because the planned restoration actions here would have far less impacts to soils. There would be no large-scale earthmoving, and thus, no widespread mixing of soil horizons or severe compacting of soils. Though heavy machinery would impact soils where fill and recontouring would occur, these areas are generally less than 1,200 square feet each, widely spaced, and implemented with mitigation measures designed to reduce adverse effects, such as minimizing the area of impacts and applying erosion control measures. The level of effect from the proposed action would be low to moderate.

7. Transportation

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

The main effect the proposed restoration action would have on transportation would be that vehicles transporting workers and equipment to the project site would be sharing local roads with other traffic. No roads would be closed; none would be temporarily blocked; none would be relocated. This level of impact would be low, as stated in the Programmatic EA.

8. Land Use and Recreation

There would be no effect on land use or recreation from this proposed project. Land uses would not change; and public recreational opportunities on this private land (of which there is none because the land is not open to public use) would not change. 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 the proposed project in and along the Pahsimeroi River is consistent with the analysis in the Programmatic EA Section 3.3.9, "*Visual Resources*." The Programmatic EA, Section 3.3.9.3, describes low impacts to visual resources.

The proposed restoration action in the Pahsimeroi Valley is far from any major highway or other potential viewpoint and thus, would not be visible to any other people than the private landowners. As discussed above under "*Vegetation*," there would be no large-scale soil or vegetation disturbance (as was assessed for some projects in the Programmatic EA), and changes to the visual landscape would thus be minor, and nearly undetectable to most viewers. This level of impact would be low, as stated in the Programmatic EA.

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

The effects of the proposed project in and along the Pahsimeroi River is 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 action in the Pahsimeroi Valley is far from any major population center or public use area; thus, it would not have any potential to directly impact the public, other than when sharing the roads when workers travel to and from work sites. Air quality and noise would be affected by operations and emissions from the machinery to be used during placement of wood structures, fill, and bank re-contouring. But this is very short-term, and 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 long-term burden on emergency services (e.g., police, fire, ambulance). Though there could be a need for emergency services from injuries related to construction, such impacts would be minimized through the implementation of construction safety best management practices and would likely be low and short-term. This level of impact would be low, as stated in the Programmatic EA.

11. Cultural Resources

The effects of this restoration action in and along the Pahsimeroi River are consistent with the analysis in the Programmatic EA, Section 3.3.11, “*Cultural Resources*.” The Programmatic EA, Section 3.3.11.3, describes low impacts to cultural resources because cultural resources would be avoided by project construction and effects would be appropriately resolved through the National Historic Preservation Act Section 106 consultation process.

Cultural resources surveys were conducted, and consultations with the Idaho State Historic Preservation Office (SHPO) and two affected Tribes (the Shoshone Bannock Tribes of the Fort Hall Reservation, and the Nez Perce Tribe of Idaho) were completed for the area potentially affected by the project proposed.

On April 2, 2023, Bonneville consulted with the Shoshone Bannock Tribes of the Fort Hall Reservation, Nez Perce Tribe of Idaho, and Idaho SHPO on the effects of the Last Chance Ranch project’s Phase 1 area based on an intensive cultural resource survey and exploratory subsurface shovel probing of the 22.7-acre Area of Potential Effect. This consultation was fully inclusive of all areas and actions proposed in this Modification project. The inventory report identified a segment of the Halloran Ditch/PBSC-01 within or adjacent to the project area. Bonneville determined that this agricultural waterway was eligible for listing on the National Register of Historic Places but that the proposed undertaking would not adversely affect the character-defining attributes that make the historic property eligible (BPA CR Project No.: ID 2023-005). On April 19, 2023, Idaho SHPO concurred with Bonneville’s determination and concluded that the proposed work would have no adverse effect to historic properties (SHPO Rev. No.: 2023-412). No response was received from the Shoshone Bannock Tribes of the Fort Hall Reservation or the Nez Perce Tribe of Idaho.

As described in the Programmatic EA, the results of this consultation were that the project would not adversely affect historic properties. In the unlikely event that cultural material is inadvertently encountered during the implementation of this project, Bonneville would require that work be halted in the vicinity of the finds until they can be inspected and assessed by Bonneville in consultation with the appropriate consulting parties.

12. Socioeconomics and Environmental Justice

The effects of this restoration project in and along the Pahsimeroi River are consistent with the analysis in the Programmatic EA, "*Socioeconomics and Environmental Justice*," Section 3.3.13. The Programmatic EA, Section 3.3.13.3, 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 and the actions would not result in a requirement for 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 adversely affected, as this project and its short-term adverse impacts are limited to the private land on which it is located, and no offsite effects are anticipated that could adversely impact environmental justice populations elsewhere. The project, however, would benefit anadromous fish populations and has potential to increase fish numbers that could benefit environmental justice populations that fish for sustenance along the Salmon, Snake, and Columbia rivers.

13. Climate Change

The effects of this project in and along the Pahsimeroi River are consistent with the analysis in the Programmatic EA, Section 3.3.14, "*Climate Change*." The Programmatic EA, Section 3.3.14.3, describes low impacts to climate change.

Due to the short duration of construction activities and the relatively small number of vehicles involved, project-related greenhouse gas emissions are anticipated to be low. 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, but these would be offset to some degree by the ameliorating effects of restored floodplain function such as increased water table inputs, increased carbon sequestration in expanded and improved riparian wetlands, and decreased water temperatures from improved instream and riparian habitat conditions. The overall effects on climate change would be low.

Findings

The types of restoration actions and the potential impacts related to the proposed *Last Chance Ranch Phase 1 Modification* project are similar to those analyzed in the *Columbia River Basin Tributary Habitat Restoration Programmatic Environmental Assessment* (DOE/EA 2126) and Finding of No Significant Impact. There are no substantial changes in the EA's Proposed Action and no significant new circumstances or information relevant to environmental concerns bearing on the EA's Proposed Action or associated impacts within the meaning of 10 CFR § 1021.314 and 40 CFR §1502.9(d). Therefore, no further NEPA analysis or documentation is required.

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Appendix A: Last Chance Ranch Pahsimeroi Phase 1 Modifications Project Actions

