Supplement Analysis
for the
Columbia River Basin Tributary Habitat Restoration Programmatic Environmental Assessment
(DOE/EA-2126/SA-84)

River Valley Ranch (Lower) Habitat Improvement Project – Phases 1 and 2
BPA project number 2010-072-00
BPA contract number 84063 REL 25

Bonneville Power Administration
Department of Energy

Introduction

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

Consistent with the Programmatic EA, this Supplement Analysis (SA) analyzes the effects of the River Valley Ranch (Lower) Habitat Improvement Project – Phases 1 and 2 Project (project). The project would implement specific restoration actions assessed in the Programmatic EA in the Pahsimeroi River watershed in Custer and Lemhi counties, Idaho. The objective of the project is to increase instream habitat complexity and riparian function to improve the quality and availability of habitat for Endangered Species Act (ESA)-listed juvenile Snake River Chinook salmon (*Oncorhynchus tshawytscha*), Snake River steelhead (*O. mykiss*), and bull trout (*Salvelinus confluentus*).

This SA also evaluates whether the proposed project presents substantial new circumstances or information about the significance of the adverse effects that bear on the analysis and that were not addressed by the EA.

Proposed Activities

BPA proposes funding Mount Hood Environmental (MHE) to complete the project located on the Pahsimeroi River, approximately 9 miles southeast of the town of Ellis in Custer County, Idaho (Figure 1). The Pahsimeroi River forms the border between Custer and Lemhi counties, and work would occur in both counties. The project extends approximately 1.6 river miles (RM), from RM 4.7 to RM 6.3, through a privately-owned working cattle ranch.

Restoration actions would include enhancing the existing mainstem channel, restoring and reconnecting existing side channels, creating new side channels, increasing hydraulic complexity, and improving floodplain connectivity.

Figure 1. Location of proposed action. Project area shown in orange. County line shown in blue.

Depending on site conditions, herbicide treatments for invasive weeds would be applied a few weeks prior to any ground disturbance to prevent distribution of seeds during construction. About 13,000 cubic yards of material would be excavated in the floodplain and main channel to create sinuosity in the main channel and create or reconnect side channels. Approximately 10,000 feet of new side channels would be excavated throughout the project area. Excavated materials would be used to fill areas in the floodplain and main channel to direct flows, create or stabilize banks, create islands, and stabilize wood structures. These project actions would occur across about 60 acres and directly impact about 5 acres.

Approximately 130 cubic yards of gravel would be imported to create gravel bars in seven locations throughout the main channel. The project would install a variety of engineered wood structures (about 280) across the floodplain and in channels, including some that would be partially buried into banks. Maximum excavation in the channel would be 2 feet deep before being backfilled or covered with local or imported streambed materials. Wood structures would range in size from one log to more complex, multiple log jam structures.

Five beaver dam analogs (BDAs) would be constructed, spanning the main or side channels and adjacent floodplains, ranging in length from 100 to 500 feet. Structures would be constructed by layering logs, slash woody material (shorter logs with a 4-inch-diameter or less), and streambed material to a height of about 1.5 feet. Logs would be buried at least 1 foot deep in the streambed or floodplain. Live willow cuttings would be planted across the structure, spaced about a foot apart. There would be breaks in the length of the BDAs to accommodate flows. Brush bank treatments would curve around the ends of the BDA at each break. Brush bank treatments would consist of live willow stakes, tops angled over the water, buried in a mud slurry and covered with slash material.

Thirty riffles would be constructed using imported materials (approximately 900 cubic yards) in the main and side channels, including in the breaks between the BDAs. Nineteen islands would be constructed in the main channel. One or more three-log wood structures would be installed on the upstream end of each island. Excavated material would be added over and behind the wood structure (up to 5 feet in

height) and willow stakes would be planted in the wood structure. Islands would be topped with salvaged sod or wetland sedge mats. Pre-vegetated coir logs and brush bank treatments would line the edges. Gravel may be added to the toe of banks in the project area, including island banks, for stability.

Willow weave fences would be constructed in the channels and floodplain in strategic locations to trap fine sediment and reduce flows. These structures would consist of several posts driven into the stream bed with willow cuttings and rootballs secured to them.

A variety of structures would be installed along banks to provide vegetation, stability, and erosion control, including brush bank treatments, willow baffles (20-foot-long to 40-foot-long trenches filled with live willow cuttings, slash woody material, and soil), and soil wrapped in biodegradable fabric and topped with sod. Maximum bank excavation would be 8-feet-deep for incorporation of wood and vegetation structures before being backfilled and graded to match existing ground. The project area has existing fence to exclude cattle from the river, but approximately 1,500 feet of the existing jack-rail fence would be moved out of the floodplain to higher ground.

Implementation would occur in two phases, each covering about half of the project reach (about 0.8 RM) in successive years. There are two irrigation diversions and ditches in the project reach but there would be no changes to the point of diversion, the headgate structures, or ditches. These areas would be preserved and protected during construction.

Site access, staging, and sequencing would be established in year one and may be retained for use through the second phase. Six temporary equipment and material staging areas (about 2 acres total) and a 1-acre temporary spoil site to store materials would be established for the project. Access routes would be on existing farm roads or temporary access routes created for construction. Two existing culverts on farm roads would be improved to accommodate construction vehicles. Approximately 1,200 feet of an existing farm road would be abandoned in the floodplain. This road originated as a push up berm and is made of alluvium and silt (*i.e.,* no road mix materials were used to create the road). The project would leave a narrow segment of the road intact (about 2 feet wide) for a walking path. A new permanent farm road segment (about 900 feet long) would be created outside of the floodplain to connect the two ends of the existing road. This new segment would be constructed by adding fill from project excavations, compacting, and grading to match the existing road, and surfacing with rock excavated as part of the project or imported road mix. Temporary access routes (approximately 2 miles) would not require any road construction but would be created by clearing vegetation and driving on existing ground. Depending on site conditions at the time of construction, up to four temporary bridges would be installed to cross streams or irrigation ditches during construction and may require abutments on each end that would be partially buried (up to 4-feet-deep) on the banks. Otherwise, access routes going through saturated ground would be temporarily covered with stabilization measures, such as timber mats. Erosion controls and work area isolation would be implemented according to the design plans reviewed and approved under BPA's Habitat Improvement Program (HIP). Stranded aquatic organisms would be captured and moved out of isolated work areas prior to dewatering.

Disturbed areas and the decommissioned road segment around the walking path would be decompacted (up to 8 inches) and seeded with native seed mixes and mulched after construction. Wetland and riparian areas would also be planted with 1-gallon native plants, plugs, and live stakes. Protective fencing may be installed around plants to protect them from deer and elk browsing. Equipment to be used includes bulldozers, excavators, loaders, and a variety of service vehicles.

In-water work would occur during the approved period, July 1 – August 21. Work outside the channel may take place before or after. Some planting would take place immediately after all Phase 1 construction has been completed. Additional planting would occur when conditions are more favorable in the fall (around September to November when there is more rain and before snowfall) and the following spring (around March to June after snowmelt and before the dry season). Final planting would

occur immediately after all Phase 2 construction has been completed and after construction when conditions are more favorable in the fall and following spring.

The site would be monitored for several years after construction is complete. If failures in system function, structure function and integrity, or risks to infrastructure, riverscape processes, or fish passage occur, adaptive management procedures would be implemented. These procedures would include installation of new structures of the same type originally installed, modification of structures, or a combination of both. Adaptive management procedures (replanting, reseeding) may also be implemented if the native plant community is slow to establish or there is low survival in restored areas. If needed, additional herbicide applications would be applied in subsequent years if monitoring shows encroachment by invasive species.

Funding this project would fulfill commitments under the 2020 National Marine Fisheries Service (NMFS) Columbia River System Biological Opinion and the 2020 U.S. Fish and Wildlife Service (USFWS) Columbia River System Biological Opinion. These actions also support 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

Chapter 3 of the Programmatic EA, as summarized in relevant parts below, discusses typical environmental disturbances and impacts stemming from habitat restoration in the Columbia River Basin. The implementation of this project requires the use of construction crews and heavy equipment for excavating channels, adding fills to areas, constructing riffles and gravel bars, creating islands, creating a new road segment, installing wood and vegetation structures, and installing fencing. Implementation would also include use of herbicides. Actions would disturb and displace soil in and along the river, damage vegetation, create noise and vehicle emissions, and temporarily increase vehicle traffic and human activity in the project area. Below is a description of the potential site-specific impacts of the proposed project and an assessment of whether these impacts are consistent with those described in the Programmatic EA.

1. ***Fish and Aquatic Species***

The effects of invasive weed treatments, using mechanized equipment, and manually working in and along the Pahsimeroi River are consistent with the analysis in the Programmatic EA, Section 3.3.1.2 ("*Environmental Consequences for Fish and Aquatic Species*"), which describes overall low impacts to fish and aquatic species after considering moderate short-term adverse effects and beneficial long-term improvements.

ESA-listed Chinook salmon, steelhead, and bull trout, and their designated critical habitats are present within the project area. No other state species of concern or ESA-listed aquatic species are known to be present within the project area. BPA completed ESA Section 7 consultations on the effects of the project's actions on these species in its HIP programmatic consultations, which found that such actions 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 using mechanized equipment within and along the Pahsimeroi River and 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. When possible, excavation of the side channels, addition of fill, construction of riffles and gravel bars, installation of wood structures and BDAs, and addition of vegetation structures would be done before the area is exposed to flows from the river. Temporary sediment discharges would be expected from the introduction of first-time flows into these areas.

Excavation, construction of riffles, creation of islands, installation of wood structures and BDAs, and addition of vegetation structures proposed within an active channel would also produce temporary sediment discharges. Mitigation measures would be applied, such as isolating instream work areas from flows, installing temporary erosion controls before starting work, and working during the approved in-water work window to avoid impacts to fish life at critical life stages, as detailed in the Programmatic EA. Though the amount of sediment discharged would be elevated, turbidity levels would be below levels harmful to fish and at durations not anticipated to cause harm as evaluated in Section 3.3.1.2.1 of the Programmatic EA ("*Short-Term Effects to Fish and Aquatic Species from Construction Activities*"). Fence construction, excavation of the new irrigation ditch alignment, scarification of tussocks, and invasive weed treatments would have no potential to add sediment to the river.

Movement, noise, and vibrations from construction-related human and mechanical activity would likely temporarily disturb and displace fish and aquatic organisms from their preferred habitats for the duration of the project. Coffer dams would be used in areas that require work area isolation to separate part or all of the stream from flows and these areas would be dewatered prior to construction. Fish trapped in isolated areas would need to be salvaged and relocated to free-flowing portions of the river prior to dewatering. Fish salvage involves electroshocking, capture, and handling to relocate the fish. This is stressful for individual fish but avoids leaving the fish stranded in a dewatered location. Dewatering would also likely kill aquatic organisms (*e.g.,* invertebrates) not able to survive the temporary dewatering or be salvaged.

Invasive weed treatments would result in loss of vegetation and a reduction in cover near the river. The project area has limited vegetation and the amount of cover from invasive plants near the stream is not substantial, so loss of cover would be minimal near the river. Weed treatments also have the potential to transport herbicides to aquatic environments and affect aquatic species and their habitats. No herbicides would be applied in the river. Mitigation measures would be applied to reduce impacts of herbicide application near aquatic environments, including using an approved list of products and application methods, application by a licensed applicator, minimizing drift, and ensuring riparian buffers are maintained. Disturbed areas, including those treated by herbicides, would be seeded or planted with native plants after construction to support establishment of native plant communities and increased cover in the riparian area.

The anticipated amount of activity and aquatic species disturbance is consistent with the analysis in Sections 3.1.3.1, 3.3.1.2.1, and 3.3.1.2.2.3 of the Programmatic EA ("*Dewatering for Instream Work*", "*Short-Term Effects to Fish and Aquatic Species from Construction Activities*", and "*Invasive Plant Control and Vegetation Management (Category 3) Effects on Aquatic Species*," respectively). The Programmatic EA disclosed direct, harmful, and sometimes fatal impacts to aquatic species, including displacement of fish from their preferred habitat.

The project's long-term beneficial effects include the creation of more complex habitats through improvements to the main and side channels including constructed riffles, gravel bars, islands, and wood structures; an increase in floodplain access; and enhanced native riparian cover. Willow weave fences installed throughout the channels and floodplains would also help trap fine sediment. These beneficial effects are consistent with the analysis in Section 3.3.1.2.2 of the Programmatic EA ("*Effects to Fish and Aquatic Organisms unique to the Categories of Action*").

2. ***Water Resources***

The effects of invasive weed treatments, using mechanized equipment, and manually working in and along the Pahsimeroi River are consistent with the analysis in Section 3.3.2.3 of the Programmatic EA ("*Effects Conclusion for the Proposed Action on Water Resources*"), which describes overall low water quality impacts after considering short-term adverse effects and beneficial long-term effects. There would be no effect on water quantity from water withdrawals. There would, however, be the potential for improved water quantity from increased recharge of groundwater since the connection between

surface flows and the floodplain would be increased over both space and time. Approved diversion water rates at the two diversions within the project area would not change as a result of this project.

This project would create short-term, localized sediment inputs from using mechanized equipment along and within the river while excavating and filling areas around established channels, constructing riffles and islands, and installing wood and vegetation structures. Temporary sediment inputs would also be created when flows are introduced to newly excavated areas, such as side channels. Restoration actions would disturb lengths of stream or riverbank consistent with the analysis in Section 3.3.2.2.2.1 of the Programmatic EA ("*Sedimentation and Turbidity Effects*"), but resulting sediment discharges likely would not be greater than what occurs naturally during annual high-flow events. Short-term effects would be lessened by the application of mitigation measures, such as installing sediment barriers in all work areas, removing vegetation and soil from equipment before starting work, sealing fine materials into riffles, and staged rewatering to slowly introduce flows into dewatered areas, as detailed in Section 2.4 of the Programmatic EA ("*Mitigation Measures and Design Criteria*"). Invasive weed treatments also have the potential to transport herbicides to aquatic environments during or after application. Mitigation measures would be applied to reduce impacts of herbicide application, including using an approved list of products and application methods, application by a licensed applicator, minimizing drift, and ensuring riparian buffers are maintained. Consistent with the analysis in Section 3.2.3.2.2 of the Programmatic EA ("*Herbicide Applications and Contamination of Aquatic Habitats"),* effects would be moderate.

The project may also cause short-term increases in stream temperature due to construction-related disturbance of riparian vegetation and invasive weed treatments. The long-term effects of this project, however, would be improved distribution of stream flow and energy, increased floodplain interaction to improve water storage, and a reduction of summer stream temperatures from improved stream form and instream habitat structures, and increased native riparian vegetative cover. These long-term beneficial effects are consistent with those described in the Programmatic EA.

3. ***Vegetation***

The effects of using mechanized equipment, manually working in and along the Pahsimeroi River, and invasive weed treatments are consistent with the analysis in Section 3.3.3.3 of the Programmatic EA ("*Effects Conclusion for the Proposed Action on Vegetation*"), which describes overall moderate impacts to vegetation after considering moderate short-term adverse effects and beneficial long-term effects.

There are no state or ESA-listed plant species present in the project area. Project implementation, including excavation and fill activities, structure installation (wood, vegetation, fencing), invasive weed treatments, creation of a new road segment outside the floodplain, and establishment of staging areas and access routes would have moderate short-term impacts on vegetation. Invasive plants within the project area would be treated with herbicides to kill them and allow establishment of native plant communities. Other plants within the project area would be removed, graded over, and trampled during implementation. Direct impacts would be over about 5 acres in the project area. Disturbance to riparian areas would be minimized through implementation of mitigation measures, such as using existing access routes, seeding and planting native species in any disturbed areas, preventing the spread of noxious weeds by washing construction equipment, and minimizing drift or overspray of herbicides. Vegetation impacts would also be reduced by installing sod, brush banks, willow baffles, and willow weave fences throughout the floodplain and along banks and planting willows in wood structures. Increased floodplain inundation would improve water-tolerant vegetation diversity and density in the long-term. Thus, the overall effects of the project would be beneficial and moderate and would be consistent with the effects described in the Programmatic EA.

4. ***Wetlands and Floodplains***

The effects of using mechanized equipment, manually working in and along the Pahsimeroi River, and invasive weed treatments are consistent with the analysis in Section 3.3.4.3 of the Programmatic EA ("*Effects Conclusion for the Proposed Action on Wetlands and Floodplains*"), which concluded that overall impacts to wetlands and floodplains would be low after considering short-term, adverse effects and beneficial long-term effects.

The project area contains approximately 24 acres of wetlands. By design, proposed construction activities would occur in riparian wetlands and floodplains that would temporarily impact about 2 acres of wetlands. There would be adverse impacts in the short term from invasive weed treatments and modification of river and wetland habitats with construction equipment. The project would obtain a required permit issued by the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act and a Section 401 water quality certification from Idaho Department of Environmental Quality. The project would adhere to all requirements and prescriptions set forth in the permit and certification.

Consistent with the Programmatic EA, there would be long-term beneficial effects on wetlands and floodplains from implementation of the project. It is estimated that the project area would support over 30 acres of wetlands after construction is complete and the area recovers from short-term effects of construction and weed treatments. There would be increased connectivity among the main and new side channels and their adjacent floodplains. Floodplain grading and vegetation structure placement would improve capture and desired deposition of sediment. Removing invasive weeds would allow native plant communities to become established. This level of effect would be low, as stated in the Programmatic EA.

5. ***Wildlife***

The effects of invasive weed treatments, using construction equipment, and manually working in and along the Pahsimeroi River are consistent with the analysis in Section 3.3.5.3 of the Programmatic EA ("*Effects Conclusion for the Proposed Action on Wildlife"*). The Programmatic EA describes low impacts overall to wildlife after considering certain short-term adverse effects to individual wildlife species, such as potential construction-related mortality, and beneficial long-term effects from improved habitat.

No ESA-listed or state-listed wildlife species are known to be present within the proposed project area. The USFWS Information for Planning and Conservation (IPaC) tool lists the North American wolverine (*Gulo gulo luscus*), ESA-listed Threatened, as having the potential to occur in the project area. There is no designated critical habitat for wolverine and no confirmed presence in the project area. The monarch butterfly (*Danaus plexippus*), ESA-proposed Threatened, and Suckley's cuckoo bumble bee (*Bombus suckleyi*), ESA-proposed Endangered, also have the potential to be present in the project area, but there is no designated critical habitat within the project area. Due to current agricultural land use practices and nearby residences, desired habitat conditions and sufficient food sources for ESA-listed and proposed species are not abundant in the project area and it is unlikely these species would be present in the project area. Therefore, the project would have no effect on ESA-listed wildlife species.

Bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*) can be found in Lemhi and Custer counties year-round. There is no confirmed presence of nests or previously used nest sites for either species in the project area. If a nest is observed in the project area, MHE would employ protection measures (*e.g.,* timing and distance restrictions) as necessary to ensure eagles would not be harmed as a result of the project. Bald and golden eagles could benefit from the project in the long-term from an increased source of food coming from improved fish and wildlife habitats in the area. Therefore, the project would have no adverse impacts to bald and golden eagles.

The short-term effects from this project 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. Human presence would cause sound and movement that temporarily disturbs or

displaces local wildlife. Construction activities would destroy the habitats of small animals but would only temporarily displace medium-sized or larger animals from their preferred habitats during construction. These animals would likely re-occupy the site once human activity has moved or ceased.

Effects to wildlife from herbicide application in the project area would be moderate, consistent with the analysis in Section 3.2.3.2.1 of the Programmatic EA ("*Herbicide Applications and Terrestrial Species")*. Invasive weed treatments could result in direct contact with herbicides for small animals still in the project area when work is performed. Medium and large-sized animals would likely leave the area before any treatments. Indirect contact with herbicides (*e.g.,* dermal contact with sprayed vegetation, ingestion of contaminated vegetation) is possible but it is unlikely exposures would be lethal. Effects would be minimized by following mitigation measures, such as using an approved list of products and application methods, application by a licensed applicator, and minimizing drift.

Abundant similar wildlife habitat is present adjacent to the project area, effects from invasive weed treatments and construction activities would be limited in duration, and there would be long-term beneficial improvement of wildlife habitat and no long-term negative changes to wildlife habitat. This level of effect would be low, consistent with the Programmatic EA.

6. ***Geology and Soils***

The effects of invasive weed treatments, using mechanized equipment, and manually working in and along the Pahsimeroi River are consistent with the analysis Section 3.3.6.3 of the Programmatic EA ("*Effects Conclusion for the Proposed Action on Geology and Soils*"). The Programmatic EA describes moderate overall effects after accounting for mitigation measures and long-term benefits.

The short-term effects from this project would be less than those analyzed in the Programmatic EA because the planned restoration actions here would have far less impacts to soils. Though heavy machinery would impact soils during construction and herbicides may have impacts to biological components of soils, treated areas would be relatively small and the project would be implemented with mitigation measures designed to reduce adverse effects. These mitigation measures include minimizing the area of impact, applying erosion control measures, site decompaction and seeding after construction, using an approved list of herbicides and application methods, and application of herbicides by a licensed applicator.

Long-term improvement to soils is expected once disturbed surfaces are seeded and riparian plantings are established to help stabilize the soil surface. Long-term improvement to sediment transport and floodplain access within the project reach would restore natural sediment-forming processes. This level of effect would be moderate, consistent with the analysis in the Programmatic EA.

7. ***Transportation***

The effects of this project in and along the Pahsimeroi River are consistent with the analysis in Section 3.3.7.3 of the Programmatic EA ("*Effects Conclusion for the Proposed Action on Transportation*"), which describes low impacts to transportation.

The main effect the proposed restoration action would have on transportation would be vehicles transporting workers and equipment to the project site sharing local roads with other traffic. Project vehicles would access the site via Custer Road on the west side of the river. No public roads would be closed; none would be temporarily blocked; none would be relocated. Temporary access routes would be on existing private farm roads or pasture land. A segment of an existing farm road in the floodplain would be abandoned (about 1,200 feet) and replaced with a new segment (about 900 feet) outside the floodplain to reconnect the two ends of the road. This level of impact would be low, as stated in the Programmatic EA.

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

Impacts to land use and recreation are consistent with the analysis in Section 3.3.8.3 of the Programmatic EA ("*Effects Conclusion for the Proposed Action on Land Use and Recreation*"), which concludes that land use practices at underlying project sites would remain unchanged in most cases; and recreation impacts would most likely occur on public lands and include adverse impacts related to construction activities that would be observed and heard and those that would cause traffic delays. The project is located on privately-owned lands used for agriculture. Existing exclusion fencing keeps cattle out of the river and riparian areas on both sides of the river. Exclusion fencing on the west side of the river would be moved farther away from the river to accommodate new channel excavation and floodplain structures, resulting in a minor change in land use from pasture to restored river and floodplain (less than one acre). There are no public recreational opportunities or public access to the project area and this would not change after the project is implemented. Thus, there would be no impact to recreation.

*9. **Visual Resources***

The effects of the proposed project in and along the Pahsimeroi River is consistent with the analysis in Section 3.3.9.3 ("*Effects Conclusion for the Proposed Action on Visual Resources*"), which describes low impacts to visual resources.

The project would have short-term, minor visual impacts from construction activities, vehicles accessing the site, and removal of invasive weeds. The proposed project is less than a mile away from the nearest public roads (Custer Road to the west and Pahsimeroi Road to the east), so road users may see some construction activity. There are four nearby residences that are within 0.5 miles of the project and residents would likely see and hear construction activity. Construction noise levels would not be likely to exceed typical noise from agricultural operations near these residences and would only occur during daytime hours. In the long term, road users and residents may see new wood and vegetation structures across the floodplain. After vegetation re-establishment, the project area would have a natural appearance and would not visually detract from the area. This level of impact would be low, consistent with the analysis 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 Section 3.3.10.3 of the Programmatic EA ("*Effects Conclusion for the Proposed Action on Air Quality, Noise, and Public Health and Safety*"). This section describes low impacts to air quality, noise, and public health and safety.

Air quality impacts from vehicle and equipment exhaust, dust, and herbicide applications would be temporary and localized in nature, with no long or short-term violations of state air quality standards expected as a result of project implementation. Although construction, transportation, and site rehabilitation activities would temporarily elevate ambient noise levels at the construction site, activities would take place during daylight hours only and the project would not result in long-term changes to noise levels.

Routine safeguards would minimize risks to worker and public safety for the duration of construction and site restoration. Operating construction vehicles and equipment inherently carries potential safety risks to operators, however, staff training and implementing best management practices, such as daily on-site safety precautions, would minimize that risk during construction activities. Herbicide applications would follow mitigation measures to reduce risks to workers and the public, including having a licensed applicator that would develop an herbicide transportation and safety plan before transporting or applying any herbicides, making the risk from herbicides insignificant. This level of impact would be low, consistent with the analysis 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 Section 3.3.11.3 of the Programmatic EA ("*Effects Conclusion for the Proposed Action on Cultural Resources*"). The Programmatic EA 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.

A cultural resources survey and consultation with the Shoshone Bannock Tribes of the Fort Hall Reservation and the Idaho State Historic Preservation Office (SHPO) were completed for the area potentially affected by the project.

BPA sent a letter to consulting parties initiating consultation and sharing the project's Area of Potential Effects (APE) on June 17, 2025 (BPA Cultural Resources No.: ID 2025 006). On June 25, 2025, BPA received SHPO concurrence on the APE. On February 17, 2026, BPA sent a letter to consulting parties along with a survey report and summary of historic properties. BPA made a finding of No Adverse Effect to historic properties with the condition that specific areas with known historic properties be avoided.

Avoidance areas have been added to design plans and MHE would ensure protective fencing is installed around avoidance areas prior to construction. On March 10, 2026, SHPO concurred with BPA's determination. No response was received from the Shoshone-Bannock Tribes of the Fort Hall Reservation within the 30-day response period.

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, BPA would require that work be halted in the vicinity of the finds until they can be inspected and assessed by BPA in consultation with the appropriate consulting parties.

12. ***Socioeconomics***

The effects of this restoration project in and along the Pahsimeroi River are consistent with the analysis in Section 3.3.13.3 of the Programmatic EA ("*Effects Conclusion for the Proposed Action on Socioeconomics and Environmental Justice*"), which describes low impacts to socioeconomics.

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.

13. ***Climate Change***

The effects of this project in and along the Pahsimeroi River are consistent with the analysis in Section 3.3.14.3 of the Programmatic EA ("*Effects Conclusion for the Proposed Action on Climate Change*"), which describes low impacts to climate change.

Due to the short duration of construction activities and the relatively small number of vehicles and equipment involved, project-related greenhouse gas emissions are anticipated to be low. This minimal contribution to climate change via temporary greenhouse gas generation would be offset to some degree by the increased functioning of the floodplain including increased water table inputs, increased carbon sequestration in expanded and improved wetland habitats, and potentially, decreased water temperatures from improved instream and riparian habitat conditions.

Findings

BPA finds that the types of actions and the potential impacts related to the proposed River Valley Ranch (Lower) Habitat Improvement Project – Phases 1 and 2 Project are similar to those analyzed in the *Columbia River Basin Tributary Habitat Restoration Programmatic Environmental Assessment* (DOE/EA-2126) and Finding of No Significant Impact. There are no substantial changes in the EA's Proposed Action and no substantial new circumstances or information about the significance of the adverse effects that bear on the analysis in the EA's Proposed Action or its impacts within the meaning of NEPA and the DOE NEPA Implementing Procedures. Therefore, no further NEPA analysis or documentation is required.

JACQUELYN SCHEI

Digitally signed by JACQUELYN SCHEI
Date: 2026.05.05 12:48:50 -07'00'

Jacquelyn Schei
Environmental Protection Specialist

Concur:

KATEY GRANGE

Digitally signed by KATEY GRANGE
Date: 2026.05.05 12:51:50 -07'00'

Katey Grange
NEPA Compliance Officer