

Supplement Analysis
for the
Columbia River Basin Tributary Habitat Restoration
Programmatic Environmental Assessment
(DOE/EA 2126/SA-37)

Pahsimeroi River 2023 Restoration Projects
Bonneville project number 2010-072-00
Bonneville contract number 84063 rel 3

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) (SA-34) that found that island creation and expansion actions did not represent a substantial change to the proposal evaluated in the Programmatic EA and were not significant new circumstance or information relevant to the environmental concerns that were not addressed by the Programmatic EA.

Consistent with the Programmatic EA, this SA analyzes the effects of the Pahsimeroi River 2023 Restoration Projects, which are two proposed projects Bonneville is proposing to provide funds to the Idaho Department of Fish and Game (IDFG) that 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 two proposed projects 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 Pahsimeroi River 2023 Restoration Projects to determine if the projects are within the scope of the analysis considered in the Programmatic EA. It also evaluates whether the proposed projects present 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 Actions

This SA analyzes the effects of two distinct projects: *Last Chance Ranch Upper Pahsimeroi Phase (Last Chance)* and *Patterson Big Springs (Patterson)*. These two projects share the same objectives; would be geographically close together; would impact aquatic, riparian, and floodplain environments that are very similar in their existing condition; and would implement many of the same habitat restoration actions.

The *Last Chance* project would be located in the lower end of the Pahsimeroi Valley between Ellis and May, Idaho. Five miles up the valley, above May, Idaho (an unincorporated community with a post

office and seven residences), to the southeast is the *Patterson* project. Both of these project areas would be located on small streams that have been heavily grazed and are now over-widened and lacking in riparian vegetation such as willows and cottonwoods; and lacking in-stream habitat features such as rocks, logs, beaver dams, and overhanging vegetation or undercut vegetatively-stabilized banks.



The two projects (See Appendices A and B) would build in-stream islands; place large wood habitat structures (single or multiple whole trees) in the river; construct in-stream pools; construct and extend river banks into existing channels to narrow stream widths; reinforce those extended banks with native sedge mats and willow clumps; install in-stream brush mattresses (woven brush branches atop a wooden frame at the water surface to provide cover for young fish); install post-line wicker weaves (artificial beaver-dam-like structures) that fully or partially span the river; and revegetate the projects' riparian areas with native plantings and seeding.

The **Last Chance project** would be along 0.6 mile of the Pahsimeroi River. It would extend across an area of approximately 26 acres but with actions directly impacting less than four acres. The project's primary action would be the augmentation of an existing woody debris and rock "plug" in the mainstem of the river that would function with constructed rock riffles upstream to direct river flows into two re-opened

and reconstructed side channels to increase both the river's linear length and its edge habitat. A backwater alcove would be formed below the "plug" on the downstream end above its confluence with one of the side channels. Other proposed actions include the installation of large and small wood structures (about 41 large wood jam structures and 23 small log structures, 15 post-assisted log structures (PALs) for fish habitat in the existing and re-opened channels; the creation of pool and island complexes (about 15); construction of three willow benches (each about 50 feet long by 25 feet wide); the construction of 11 engineered riffles to slow water velocities and raise the water surface elevation to increase floodplain and side channel connectivity; and the re-shaping of steep banks on outside bends at three locations (580 linear feet total). Two additional small connections from the main channel would be developed above the "plug" to provide juvenile fish access to an interwoven network of small side channels with a relic beaver pond complex that would provide diverse, high quality, rearing habitat. Riparian plant species would be planted at a high density following all construction work and fencing of some planted areas would be erected for protection from ungulate browsing for about five years until plants become established. Construction access would require approximately one mile of temporary access route (cross-country travel on a designated route with no temporary or permanent road construction) and the placement of one temporary bridge.

The **Patterson project** would occur along approximately 1.4 miles of Patterson Big Springs Creek. It would extend across an area of approximately 39 acres but with actions directly impacting less than five acres. It would re-activate up to five side channels within the project to create a braided side-channel network; construct 36 instream wood structures, two riffles, and 12 islands; excavate 11 pools; place nearly 300 individual logs in the channel, and another 23 atop a nearly one-acre reconnected floodplain; install 21 post-line wicker-weave structures and ten brush mattresses; and construct nine willow banks and nine sedge benches over about 1500 linear feet of stream bank. Willows would be planted vertically on the banks and laid down horizontally in the channel throughout the project area where individual logs would be placed or in excavated areas.

Approximately 2.5 miles of temporary access routes (as in the Last Chance project described above). Three temporary bridges would be needed for this project to cross Patterson Creek. There would also be a need for construction access across two saturated locations in the project site which would require about 50 feet of stabilization at each to prevent rutting. Stabilization would also be required on over 1,000 feet of the northern project access route. This stabilization would be accomplished using non-woven geotextile fabric (covering soil with vegetation intact) beneath a 12-inch layer (minimum) of wood chips. All material would be removed following completion of the project.

Excavated material from the project site would be used to construct the islands and the willow and riparian bench structures. Sedge material would be salvaged from access routes and excavated areas, and would be planted immediately at the sedge bench and island locations. Large and small logs would be acquired commercially. Workplace isolation would be applied where excavation is required for the pools and where fill is required for the riffles.¹ Twelve-inch biodegradable vegetated coir logs would be placed on the banks around the perimeter of each installed log structure to minimize turbidity impacts downstream. Grubbed out areas for temporary access and staging would be roughened and replanted with native species after construction.

¹ Isolation and fish salvage (where necessary) would adhere to the conservation measures identified in Bonneville's Habitat Improvement Program 4 (HIP) Endangered Species Act Section 7 consultation with US Fish and Wildlife Service and National Marine Fisheries Service.

Project construction would take place within the approved in-water work window (July 1 through late August) with revegetation planting and protective fencing occurring the following spring.

Both project 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 these projects would benefit Snake River spring/summer Chinook salmon, Snake River Basin steelhead, and bull trout and would thus fulfill commitments under the 2020 National Marine Fisheries Service Columbia River System Biological Opinion (2020 NMFS CRS BiOp). These proposed activities also support conservation of ESA-listed species considered in the 2020 U.S. Fish and Wildlife Service Columbia River System Biological Opinion (2020 FWS 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 these projects requires the use of excavators and small track-mounted machines such as a skid steer, or a rubber-tired backhoe, for shaping banks, building islands, moving sod, and installing large wood structures. The construction of willow mattresses and post-line wicker weaves (PLWWs); placement of sedge mats; and plantings of individual willows and containerized plants would be conducted by hand. All of 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 areas. The typical effects associated with the environmental disturbances created by these two projects 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 Last Chance and Patterson projects, and an assessment of whether these effects are consistent with those described in the Programmatic EA. These projects are 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 and Patterson Creek 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.

Three species listed under the Endangered Species Act 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."² No other listed species of concern are present. Consultation under the Endangered Species Act on the effects of these projects on these species was completed under Bonneville's programmatic HIP consultation with the conclusion that the projects

² 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>

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 projects would expose, displace, reconfigure, or compact earth through the use of mechanized equipment along the Pahsimeroi River, Patterson Creek, and their small tributary spring creeks. They would likely create conditions where small amounts of sediment could be released for short periods of time. The amount of sediment anticipated from the projects would be moderate because there would be some in-stream excavation (for constructed pools, islands, and riffles). There would, however, be no large-scale dewatering/rewatering of river or stream channels for reconstruction, side channel creation and reactivation would be done “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, and would have minimal potential for triggering the behavioral and physiological effects from elevated water temperatures as described therein.

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 areas have limited vegetation that would screen human activity during work activities within and along the streams. 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 stream. Fish salvage involves electro-shocking, capture, and handling to relocate the fish. This is very stressful on individual fish, but less so than not doing it and 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.

The projects’ long-term beneficial effects include creation of more complex habitats through the addition of pools, islands, wood structures, and woody streamside vegetation to streams and riparian areas (where none currently exist); 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, Patterson Creek, and their short tributary spring channels 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 balancing moderate short-term adverse effects against highly beneficial long-term effects. There would be no effect to water quantity, as these projects would make no water withdrawals. There would, however, be the potential for increased recharge of ground water since the connection between surface flows and the floodplain would be increased over both space and time.

Overall, the tributary restoration projects would create short-term, localized, sediment inputs from the impacts of mechanized equipment along the streams in the process of shaping banks, building islands, moving sod, installing large wood structures, and transplanting willow clumps. Restoration actions

would disturb lengths of stream or river bank consistent with, but more often less than, the Programmatic EA (which evaluated actions that would disturb 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 projects are complete. The long-term effects of these projects, 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, Patterson Creek, and their short tributary spring channels 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 balancing moderate short-term adverse effects against highly beneficial long-term effects. No plant species listed by the state or Federal governments as endangered, threatened, or of concern are present within these project areas.

These projects are anticipated to produce impacts consistent with or less than those described in the Programmatic EA. There would be no large-scale earthmoving, with its associated vegetative loss, but there are many constructed features in close proximity with likely overlapping impact areas. Each of these project features would impact less than 1,000 square feet and would generally be separated from other similar features by up to 50 feet which is less than 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); by the cutting of willow branches to construct willow mattresses and PLWWs (from which the willows are anticipated to recover fully); and by the transplanting of entire willow clumps from existing large willow patches not providing instream habitat benefits to streamside areas where they would. 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 and Patterson Creek 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 taking into account high short-term adverse effects against highly beneficial long-term effects.

Wetlands in both project areas were inventoried and assessed by the Bureau of Reclamation in 2022. Nearly 21 acres of wetlands were identified within the Patterson project area and about 16 acres in the Last Chance project area, with most of the wetland acres dominated by vegetation with no surface water. The projects are restoring 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 projects would ultimately expand the acres that would be classified as wetlands, and in some cases modifying 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.

These projects, however, are anticipated to have less impact than those described in the Programmatic EA. With these projects, there would be less short-term adverse effects to floodplains and wetlands than described in the EA: there would be less extensive earth-moving, mostly from the use of small equipment such as skid steers and backhoes; and heavy equipment use in the Patterson project would likely be limited to island and pond creation 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 these projects. There would be increased connectivity among the existing channels and the floodplains from re-activated or augmented side channels. 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 and Patterson Creek are consistent with the analysis in the Programmatic EA, Section 3.3.5, "*Wildlife.*" The Programmatic EA, Section 3.3.5.3, describes overall low impacts to wildlife after taking into account high short-term adverse effects against highly beneficial long-term effects. No wildlife species listed under the Endangered Species Act or by the State of Idaho are present within these project areas.

The short-term effects from these projects 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 and Patterson Creek 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 these projects 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. Light equipment such as a skid steer or backhoe would be the primary size of equipment in use, so there would be some localized soil compaction and disturbance as these machines travel across the area and maneuver at each construction site; but these machines have much less impact than the larger and heavier excavators and dump trucks that were considered in the

Programmatic EA. Mitigation measures designed to minimize adverse effects, such as minimizing the area of impacts and applying erosion control measures, would be applied. The level of effect from these machines as they install large wood structures and reshape islands or riverbanks would be low to moderate.

7. Transportation

The effects of these projects in and along the Pahsimeroi River and Patterson Creek 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 most effect the proposed restoration actions would have on transportation would be that vehicles transporting workers and equipment to project sites would be sharing local roads with other traffic. 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 these proposed projects. Land uses would not change; and public recreational opportunities on these private lands (of which there is none because the lands are 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 projects in and along the Pahsimeroi River and Patterson Creek are 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 actions in the Pahsimeroi Valley are far from any major highway or other potential viewpoint and thus, would not be visible to any other people than the private land owners. 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 projects in and along the Pahsimeroi River and Patterson Creek 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 in the Pahsimeroi Valley 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 work sites. Air quality and noise would be affected by operations and emissions from the machinery to be used during placement of wood structures or construction of islands and banks. 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 burden on emergency services (e.g., police, fire, ambulance). This level of impact would be low, as stated in the Programmatic EA.

11. Cultural Resources

The effects of these restoration actions in and along the Pahsimeroi River and Patterson Creek 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 each of the areas potentially affected by the two projects proposed. The results of those surveys and consultations are displayed in the table below.

Project	Survey finds	Eligibility for National Register of Historic Places	Section 106 Status*
Last Chance project	Halloran Ditch/PBSC-01	eligible for listing in the National Register of Historic Places (NRHP) under Criteria A	No Adverse Effect
Patterson project	Cutler Irrigation Ditch	Determined to be not eligible	No historic properties affected

*Letters from Idaho SHPO regarding these conclusions are on file at Bonneville headquarters, Portland, OR.

On February 16, 2023, Bonneville consulted with the Shoshone Bannock Tribes of the Fort Hall Reservation, Nez Perce Tribe of Idaho, and the Idaho SHPO on the effects of the Patterson project based on an intensive cultural resource survey and exploratory subsurface shovel probing of the 67-acre area of potential effect (APE). The inventory identified one resource, the Cutler Irrigation Ditch, within the proposed project APE. The ditch was determined ineligible by Bonneville for listing in the National Register of Historic Places (NRHP) (BPA CR Project No.: ID 2023 004). SHPO concurred and concluded that the proposed project actions would result in no historic properties affected (36 CFR 800.4(d)) (SHPO Rev. No.: 2023-284). No response was received from the Shoshone Bannock Tribes of the Fort Hall Reservation or the Nez Perce Tribe of Idaho.

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 project based on an intensive cultural resource survey and exploratory subsurface shovel probing of the 22.7-acre APE. 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 the NRHP 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 these consultations were that the projects would not affect historic properties or would not adversely affect such properties, if present. 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, and in consultation with the appropriate consulting parties.

12. Socioeconomics and Environmental Justice

The effects of these restoration projects in and along the Pahsimeroi River and Patterson Creek 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 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. These projects would not displace people or eliminate residential suitability from lands being restored, or from lands near restoration project sites. The projects 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 environmental justice populations elsewhere.

13. Climate Change

The effects of these projects in and along the Pahsimeroi River and Patterson Creek 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.

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 projects 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 *Pahsimeroi River 2023 Restoration Projects* 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.

/s/ Robert W Shull

Robert W. Shull

Contract Environmental Protection Specialist

Cor-Source Technology Group

Reviewed by:

/s/ Dave Kennedy

Dave Kennedy

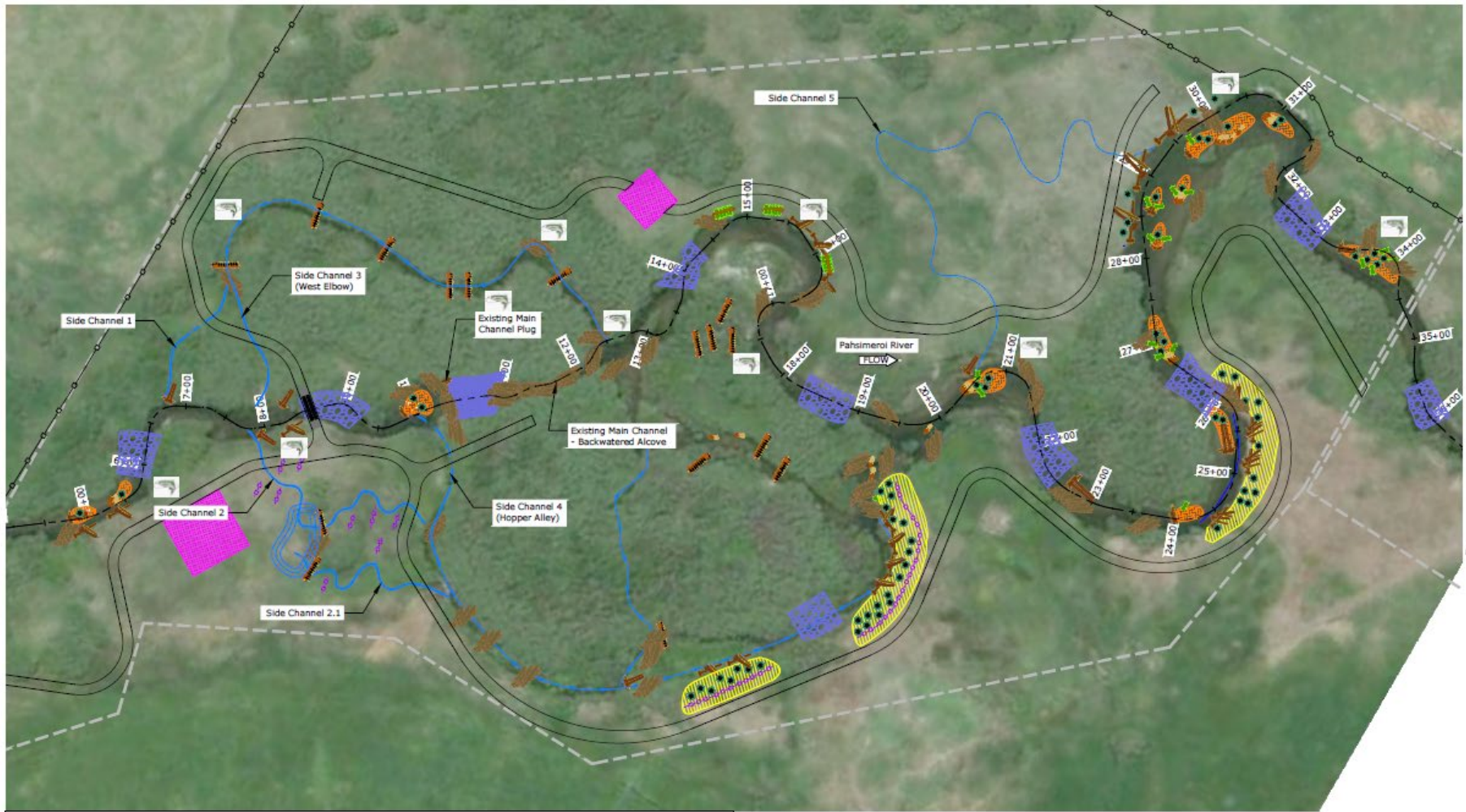
Supervisory Environmental Protection Specialist

Concur:

Katey Grange

NEPA Compliance Officer

Appendix A: Last Chance Ranch Upper Pahsimeroi Phase proposed project actions

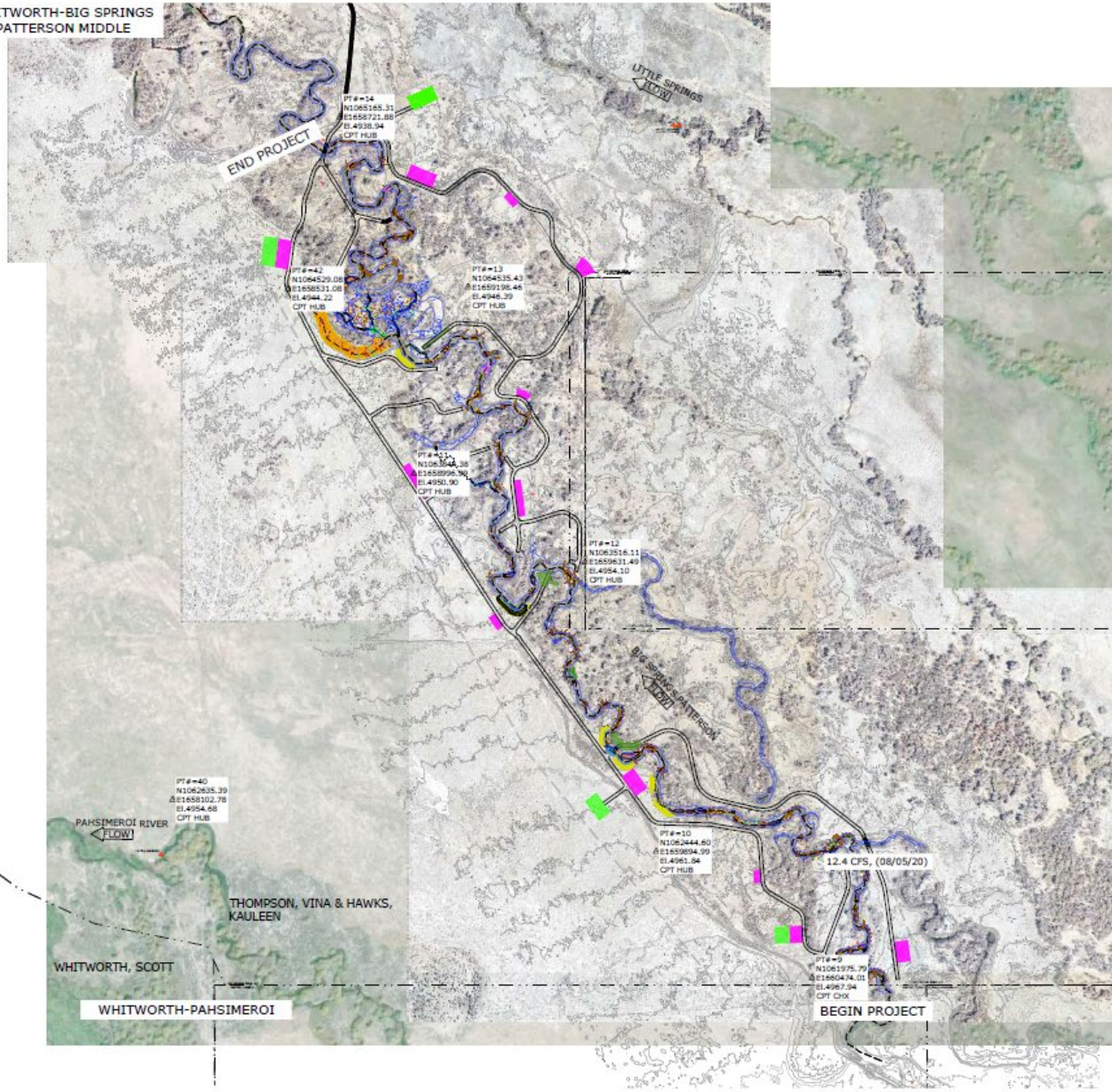


LEGEND			
	Existing Major Contour		Activated Existing Channel Centerline
	Existing Minor Contour		New Side Channel Centerline
	Proposed Major Contour		Willow Baffle
	Proposed Minor Contour		Constructed Riffle
	Thalweg		Constructed Island
	Ordinary High Water (OWH)		Staging Area
	Property Line		Equipment Staging Area
	Existing Foot/Rail Exclusion Fence		Grading (Reduce Bank Height)
	Activated Existing Channel Centerline		Temporary Access Route
	New Side Channel Centerline		Temporary Bridge
	Willow Baffle		Identified Potential Trout Fishing Location
	Activated Existing Channel Centerline		Cover Willow Clump
	New Side Channel Centerline		Vertical/Horizontal Transplant Live Willow Clump
	Willow Baffle		Willow Bank
	Constructed Riffle		PLWW
	Constructed Island		Apex Jam
	Staging Area		Three Log Structure
	Equipment Staging Area		Cover Log Structure
	Grading (Reduce Bank Height)		
	Temporary Access Route		
	Temporary Bridge		
	Identified Potential Trout Fishing Location		



Appendix B: Patterson Big Springs proposed project actions

WHITWORTH-BIG SPRINGS
PATTERSON MIDDLE



LEGEND

	Elev	Existing Contour Major
	Elev	Existing Contour Minor
	Elev	Proposed Contour Major
	Elev	Proposed Contour Minor
	OHW	Ordinary High Water (OHW)
		Proposed Inundation Extents
		Limits of Disturbance
		Approximate Property Lines (Lemhi County Parcel Data)
		Fuzzy Riffle (see sheet -62726)
		Constructed Riparian Bench (see sheet -62720)
		Constructed Island (see sheet -62721)
		Channel Fill
		Inset Riparian Bench (see sheet -62720)
		Staging Areas
		Equipment Staging Areas
		Sod Salvage (see sheet -62733)
		Temporary Access Routes
		Stabilized Access (see sheet -6290)
		Temporary Bridge (see sheet -62731)
		Cover Willow Clump (CW)
		Horizontal Transplanted Live Willow Clump (HW)
		Willow Bank (see sheet -62722)
		Channel Spanner (see sheet -62723)
		9"-12" DBH, 35'± Cover Log (CL)
		9"-12" DBH, 35'± Floodplain Roughness (see sheet -62732)
		Brush Mattress (see sheet -62719)
		PLWW (see sheet -62724)
		Willow Trench (see sheet -62728)
		Brush Bank (see sheet -62729)
		Pool
		Set 5/8" Iron Pin with Cap
		Set Hub and Tack

NOTES

1. Temporary access routes are approximate. Some routes are existing roads. Others are shown as potential routes and subject to approval by the CO.
2. Control dust throughout duration of the construction period. Spray access routes with water as needed to prevent dust generation.
3. Where access routes cross depressions or wet areas 6"-10" logs, wood chips or other woody debris will be used to stabilize the access routes.
4. At project completion, temporary access routes and staging areas shall be rehabilitated in accordance with notes 5 and 7 on sheet -62683.
5. See note 7 on sheet -62685 for allowable uses of staging/stockpile areas and construction equipment storage/fueling areas.

