

# Pettit Lake Creek Weir Construction

Finding of No Significant Impact  
Bonneville Power Administration  
DOE/EA-2140  
July 2020

## INTRODUCTION

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Bonneville Power Administration (BPA) announces its environmental findings for its proposal to fund the Shoshone-Bannock Tribes of Fort Hall (SBT) to remove an existing weir and construct a new weir/fish trap on Pettit Lake Creek, in the Sawtooth Valley, in Blaine County, Idaho.

The Sawtooth National Recreation Area (SNRA), in cooperation with BPA, developed an environmental assessment (EA) evaluating the Proposed Action and the No Action Alternative. The proposal was presented to the public for a 30-day scoping period in February 2020. Four responses were received. They concerned aquatics, long-term monitoring and oversight, fisheries, ESA consultation, equipment staging, parking, visuals, removal of improvements when use of the weir ceases, and a weir modification action alternative. The SNRA responded to the comments in its release of the EA on June 26, 2020. Concerns related to long-term monitoring/oversight and the SBT's special use permit (SUP) were addressed by the SNRA committing to adding terms and conditions to their Special Use Authorization (permit) for decommissioning and removal of the weir, per special use permit authorization ID# NRA601802, following its use. To address concerns about aquatics, a condition to notify Idaho Department of Fish and Game (IDFG) and the SNRA of any aquatic invasive species observed would also be added to the permit. All other concerns were addressed within the EA. One comment raised during scoping stated that "already approved funding for the project by BPA illegally predetermines the outcome" of the analysis. This comment was addressed in Section 1.2, "Need for Action", of the EA, where BPA's need "to respond to the SBT's request for funds" makes clear that the SBT's funding request was still outstanding, and that funding was therefore not "already approved".

BPA hereby adopts the EA, and based on its analysis and public comments received, BPA has determined that the Proposed Action is not a major federal action significantly affecting the quality of the human environment, within the meaning of the National Environmental Policy Act (NEPA) of 1969 (42 United States Code [USC] 4321 *et seq.*). Therefore, the preparation of an environmental impact statement (EIS) is not required and BPA is issuing this Finding of No Significant Impact (FONSI) for the Proposed Action. The Proposed Action is not the type of action that normally requires preparation of an EIS and is not without precedent. The SNRA will issue its own agency-specific decision document concerning granting the permit to the SBT for construction of the weir.

Attached is a Mitigation Action Plan that lists all the mitigation measures that BPA and the project sponsor are committed to implementing.

## PUBLIC AVAILABILITY

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The FONSI will be posted on BPA's project website:  
<https://www.bpa.gov/efw/Analysis/NEPADocuments/Pages/Pettit-Lake-Creek-Weir-Construction.aspx>.

## PROPOSED ACTION

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Under the Proposed Action, BPA would fund the SBT to construct a weir fish trap on Pettit Lake Creek. This would entail the removal of the existing structure and the construction of a new weir in the same location. Additionally, the remaining abutments from the Idaho Department of Fish and Game (IDFG) rough fish barrier, upstream of the weir, would be removed.

The proposed new structure would be designed to meet SBT requirements for collection of juvenile and adult Snake River Sockeye salmon (*Oncorhynchus nerka*) at Pettit Lake Creek in support of IDFG's and National Marine Fisheries Service (NMFS') captive breeding program for this ESA-listed endangered species. The weir would be constructed consistent with criteria established by the NMFS for this type of structure. Construction would begin in summer 2020 and be in place for juvenile fish collections in the spring of 2021. Adult collections would begin when adult sockeye salmon migrations resume in future years.

## **SIGNIFICANCE OF POTENTIAL IMPACTS OF THE PROPOSED ACTION**

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To determine whether the Proposed Action has the potential to cause significant environmental effects, the SNRA in cooperation with BPA analyzed the potential impacts of the proposal on human and natural resources and presented them in Chapter 3 of the EA. The potential impacts associated with the Proposed Action are summarized below. The Proposed Action, with implementation of selected mitigation measures, would have no significant impacts. The following discussion provides a summary of the Proposed Action's potential impacts and the reasons these impacts would not be significant.

### **Vegetation**

Impacts to vegetation are not expected to be significant.

- Approximately 0.5 acre of vegetation disturbance (damage or loss) would occur along a 300-foot-long reach of Pettit Lake Creek and within the location of the temporary access road and long-term access trail.
- All areas temporarily impacted would be replanted to upland or riparian vegetation as appropriate.
- After construction, operations of the completed weir would have no new additional loss on vegetation beyond the quantity disturbed by construction.

### **Geology and Soils**

Impacts to geology and soils are not expected to be significant.

- Soils would be displaced and compacted wherever heavy equipment would be operating, but mitigation measures are specified that limit the extent and locations of their operations.
- Soil horizons would be mixed to some degree, but mitigation measures require that topsoil be stockpiled, and not mixed with underlying soil horizons, to be available for use in site restoration.
- Operations would not further disturb soils, as operations would stay within the footprint of the current weir and of temporary construction impacts.

### **Water**

Impacts to streams are not expected to be significant.

- The stream would be temporarily rerouted through a bypass during construction.

- Re-watering of the dewatered section would create a short-term pulse of sediment. Turbidity would be anticipated to be high during this short period but would be anticipated to return to baseline within 200 to 400 feet of the source, given the higher concentration of sands and gravels over fines in this creek. Water conditions would be expected to return to pre-construction quality conditions within hours or days.
- There would be a low to no effect on water quality from the long-term operation of the weir.
- There would be no effect on water quantity: operations require only pass-through water use (no consumption).
- The project is consistent with the Sawtooth National Forest Plan direction for consistency with the Watershed and Aquatic Recovery Strategy.

### **Wetlands and Floodplains**

Impacts to wetlands, floodplains and groundwater are not expected to be significant.

- Two wetlands would be impacted by construction activities. These wetlands would be substantially impacted during construction but then restored to pre-project elevations and planted with aquatic and riparian vegetation sufficient for wetland function and condition once hydrologic function resumes in the first year following construction.
- Construction and operation of the new weir would not alter the existing functional condition of Pettit Lake Creek's limited (incised and narrowed) floodplain.

### **Fish and Aquatic Species**

Impacts to fish and aquatic species are not expected to be significant.

- Construction actions would temporarily eliminate aquatic habitat in a 300-foot-long reach of Pettit Lake Creek by the need to dewater that reach for construction activities. Fish salvage would be required and mitigation measures, such as following NMFS guidelines for fish handling and salvaging fish only when temperatures are low, would be implemented to minimize impacts to fish during this operation.
- Dewatering would prevent impacts to downstream aquatic species from the actions of heavy equipment during construction, but aquatic life in this reach would be lost for the duration of the dewatering. Aquatic life would likely be fully restored shortly after the following year's spring flows.
- Water velocities in the bypass pipes for the dewatered reach would prevent upstream movement of fish, but partial (downstream) passage of fish would still be possible during the single-season construction period.
- Re-watering would deliver a pulse of sediment downstream with short-term adverse effects to fish and other aquatic species, but turbidity monitoring and control measures would be applied to minimize these impacts.
- Very little riparian shade and cover exist now, and what is there would be removed with no substantial effect. Restoration plantings would mitigate for long-term losses that pre-project vegetation might have provided in terms of shade, cover, or food sources for aquatic species.
- Heavy equipment use would bring potential for fluid spill and small leaks, but only non-toxic hydraulic fluids would be allowed so that drips or spills would not measurably affect aquatic organisms. Mitigation measures require a spill prevention plan to be in place to minimize harm from any spill.

- Human presence and activity during operations would likely disturb fish, but this would be short-term and of minimal consequence. Both up and downstream passage is provided for all fish during spring trapping for juveniles (trap is design to sample the migration, not capture all fish).
- When adult trapping begins, downstream movement of adult salmonids would be prevented, but it would only be for the eight week trapping period; and non-target ESA-listed salmonids are not known to be migrating along this creek at this time. Upstream movement would be provided once non-target salmonids are captured and manually passed upstream.

### **Wildlife**

Impacts to wildlife are not expected to be significant.

- The work area is concentrated to a small area that does not currently house a large concentration of wildlife, and the construction period is outside the nesting season for migratory birds in this area.
- Operation of the new weir is not expected to substantially influence wildlife in the area as staff would only access the facility once a day and use only the disturbed areas for operations.
- There would be no effect to lynx or wolverine since their preferred habitat features are not found in the project area, and the animals themselves are likely not present because of high levels of human activity throughout the area.

### **Land Use, Recreation and Transportation**

Impacts to land use, recreation and transportation are not expected to be significant.

- The proposed action is consistent with the 2012 Sawtooth National Forest Plan (Forest Plan) as amended.
- The project's location along Pettit Lake Creek is within an eligible wild and scenic river segment, with a scenic classification, and fish are listed as the outstanding remarkable value. The project's design would help ensure that the eligible status of this river reach is being maintained. In addition, the weir's continued operation would help support fish research and recovery efforts.
- There would be disturbance to recreation and transportation during construction due to the shared use of the Pettit Lake road, but these effects would be low because traffic halts for construction needs would be limited to a maximum of ten minutes each. Operations would have no effect on recreation or transportation.

### **Cultural and Historical Resources**

Impacts to cultural resources are not expected to be significant.

- Cultural resource surveys were conducted and no historical or cultural resources were identified within the project area. There would be no effect on known cultural resources from this action.
- Mitigation measures establish protocols to protect historical or cultural resources should they be identified during construction.

### **Public Health and Safety**

Impacts to public health and safety are not expected to be significant.

- No effects on public health or safety from current conditions would occur from the project.

## Visual Resources

Impacts to visual quality are not expected to be significant.

- There would be no changes to any landforms, or land uses, thus there would be no effect to the visual character of the area.
- Though the new weir would be larger than the one it would replace, vegetative screening would be provided to improve the visual character.
- Following construction, the surrounding area would be rehabilitated and the removal of the rough fish barrier abutments would further enhance the visual character of the area.

## DETERMINATION

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Based on the information in the EA, as summarized here, BPA determines that the Proposed Action is not a major federal action significantly affecting the quality of the human environment within the meaning of NEPA (42 USC 4321 *et seq.*). Therefore, an EIS will not be prepared and BPA is issuing this FONSI for the Proposed Action.

Issued in Portland, Oregon.

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SCOTT G. ARMENTROUT  
Executive Vice President  
Environment, Fish and Wildlife

## Pettit Lake Creek Weir Mitigation Action Plan

Minimization and Mitigation Measures to be applied to this action are included in two tables below. The first includes those measures to be applied before, during, and after construction activities. The second table includes measures to be applied during the ongoing operations of the facility.

Minimization and Mitigation Measures for Construction Activities	Implementation
<b>Vegetation</b>	
Place construction fencing to identify the boundaries of the construction area to maintain existing vegetation and prevent construction activities from creeping outside of proposed disturbance footprint.	Before construction
Coordinate with the Sawtooth National Forest Invasive Plant Species program manager for proper noxious weed treatment of project areas. Notify IDFG and SNRA immediately if aquatic invasive species are observed during construction.	Before, during and after Construction
All equipment would be pressure-washed and inspected prior to entering the forest and after leaving the forest to remove vegetation and soil that may contain noxious weed seeds. Care would be taken to inspect and clean equipment undercarriages. If equipment leaves the project area, it would be inspected and cleaned upon return to the project.	Before and during construction
Gravel for road maintenance would come from a certified weed-free source approved by the SNRA.	Before and during construction
To prevent the invasion of noxious weeds, the disturbed areas would be seeded with a native seed mix that would provide wildlife benefit and erosion control. This seed mix would be approved, in advance, by an SNRA botanist.	After Construction
Disturbed areas would be replanted upon project completion using native plant species approved by a SNRA botanist.	After Construction
Project rehabilitation monitoring and evaluation would occur for two years. Monitoring shall focus on 75% recovery of desired vegetative cover in riparian habitats and 70% recovery of desired native perennial vegetation in uplands. If vegetative cover is not achieved within two years additional rehabilitation measures would be required of the permittee.	After Construction
Replace planted shrubs and trees that are not surviving with similar, suitable native species approved by a SNRA botanist.	After Construction
<b>Geology and Soils</b>	
<p>The contractor would develop an adequate, site specific spill prevention plan which would include:</p> <ul style="list-style-type: none"> <li>• site plan and narrative describing methods of erosion/sediment control</li> <li>• methods for confining/removing/disposing of excess construction materials and measures for equipment washout facilities</li> <li>• a spill prevention plan with measures to reduce/recycle hazardous and non-hazardous wastes; the plan would include the following: <ul style="list-style-type: none"> <li>○ notification procedures</li> <li>○ specific cleanup and disposal instructions for different products</li> <li>○ quick response containment and cleanup measures</li> </ul> </li> </ul>	Before construction

<ul style="list-style-type: none"> <li>○ proposed methods of disposal of spilled materials</li> <li>○ employee training on spill containment</li> </ul>	
Vehicle staging, cleaning, maintenance, refueling, and fuel storage would only occur in the designated staging area (EA Section 2.1.2) where best management practices (BMPs) would be observed and appropriate spill containment systems established.	During construction
Materials for spill containment and cleanup would be available, onsite, during pre-construction, construction, and restoration phases of the project.	Before and during construction
All silt, excess dirt, or overburden resulting from this project, would be deposited above the limits of floodwater in an SRA-approved upland disposal site off NFS lands.	During and after construction
Appropriate containers for proper disposal of construction materials and debris would be maintained in the staging areas before being taken to an approved facility off NFS lands	Before and during construction
Topsoil from the locations of the new temporary access road and the new abutment construction sites would be stockpiled within range of use for site restoration following construction activities.	During construction
Inspect machinery daily to identify and resolve fuel/lubricant leaks before commencing work activities.	Before and during construction
Disturbed areas and areas of soil spoils would be graded; mechanical equipment would be used to de-compact the soil; barriers would be installed to prevent off-road vehicle use; and slash and organic debris (duff and twigs) would be redistributed to aid in organic soil recovery and minimize visual unsightliness.	After construction
Any large wood, native vegetation, weed-free topsoil, or native material displaced during construction would be stockpiled for use in site restoration.	During construction
All temporary erosion controls would be in place, and appropriately installed downslope of applicable project activities, until site restoration is complete.	During construction
<b>Water</b>	
Comply with established Clean Water Act requirements for discharge to waters of the U.S. as administered by the U.S. Army Corps of Engineers.	Before and during construction
<p>Use sediment barriers such as filter fabric fences; weed-free straw matting/bales or fiber wattles, as necessary, downslope of all work areas sloping toward Pettit Lake Creek, to intercept any surface flow that might transport sediment to the stream channel. Sediment barriers would be biodegradable and removed when no longer needed.</p> <ul style="list-style-type: none"> <li>• Prior to starting work, a temporary filter fabric fence would be installed between all streamside disturbances and the creek.</li> <li>• Accumulated sediments would be removed during the project and prior to removing the filter fence after completion of work.</li> <li>• The type of filter fabric used would be based on soil conditions at the site: for soils that would pass U.S. standard sieve 200, the equivalent opening size (EOS) would be selected to retain 85% of the soil; for all other soil types, the EOS would be no larger than U.S. standard sieve 100.</li> <li>• For standard-strength filter fabric, a wire mesh support fence would be fastened securely, to the upslope side of the posts, and the fabric stapled or wired to the mesh. If extra-strength fabric is used, the wire mesh fence may be eliminated.</li> </ul>	Before and during construction
Flows and weather conditions would be monitored daily for events that may cause extremely high flows. In such events, all equipment would be removed from the work site until flows have abated.	Before and during construction
Uncured concrete and form materials would be treated as a hazardous material, with measures taken to avoid contact with the active stream channel. Concrete must be	During construction

sufficiently cured or dried (48-72 hours depending on temperature) before encountering stream flow.	
All heavy equipment would be washed prior to entry onto National Forest System lands. Equipment used for this project would be free of external petroleum-based products. Accumulations of soil or debris would be removed from the drive mechanisms (wheels, tires, tracks, etc.) and undercarriage of equipment prior to its use within 150 feet of any water body.	Before and during construction
All stationary power equipment, such as generators, cranes, or stationary drilling equipment operated within 150 feet of any water body, would be diapered to prevent leaks unless suitable containment is provided to prevent potential spills from entering the water.	Before and during construction
Extreme care would be taken during both removal of the existing structure and new construction, to ensure that no petroleum products, hydraulic fluid, fresh cement, sediments, sediment-laden water, chemicals, or any other toxic or deleterious materials can enter or leach into the water bodies.	During construction
Cover and stockpile excess excavated materials away from the creek and flank with sediment fencing to minimize fine sediment release into Pettit Lake Creek.	During construction
Bank stabilization material (i.e. willow clumps, revetment, root wads) would be immediately installed following completion of work at disturbed areas upstream and downstream of the weir to withstand 100-year peak flows. Stream gravels, round cobbles, and rip rap would not be used as exterior armor. Damaged banks would be restored to a natural slope pattern and profile that is suitable for establishment of permanent wood vegetation.	After construction
Upon completion of work, return displaced substrates to the pre-disturbance condition (slope, composition, etc.).	After construction
<p>Turbidity monitoring would be conducted as follows:</p> <ul style="list-style-type: none"> <li>• Conduct upstream turbidity monitoring prior to construction to determine baseline turbidity. Baseline data would be compared to turbidity measurements recorded during construction.</li> <li>• Conduct turbidity monitoring downstream of construction activities as a condition of the Clean Water Act Section 401 Water Quality Certification to be obtained for the project.</li> <li>• Install a temporary downstream turbidity monitoring station approximately 600 feet downstream during construction to record instantaneous turbidity measurements, as required for the Clean Water Act Section 404 permit/401 certification, as well as ESA Section 7 consultation documents.</li> <li>• When reintroducing streamflow to the dewatered stream reach or conducting near stream/instream work, turbidity would be monitored every 30 minutes at the fully mixed zone. If turbidity level exceeds 50 NTUs over background levels work must cease immediately and measures taken to reduce turbidity before continuing to reintroduce streamflow or work within the stream channel.</li> </ul>	Before and during construction
<b>Wetlands and Floodplains</b>	
Operate machinery, to the extent feasible from the top of the stream bank along adjacent uplands and previously cleared areas.	During construction
<b>Fish and Aquatic Species</b>	
Equipment used for this project operating with hydraulic fluid would use only those fluids certified as non-toxic to aquatic organisms.	Before and during construction

When pumping from a water source, use screened intakes with openings $\leq 3/32$ -inch and with approach velocities $< 0.40$ feet per second to meet NMFS Pump Intake Screen Criteria (NMFS 1996b) to prevent intake of juvenile fish when pumping from if source contains fish.	During construction
Conduct instream work only during the 12-week work window v authorized by NMFS and Idaho Department of Fish and Game (IDFG) and described in Section 2.1.4.2, Instream Work Window.	During construction
Conduct excavation for installation of the weir abutments and adult trap/holding box from below the Ordinary High Water Mark in the dry (since construction site would be dewatered and construction would occur during base flows). Operate machinery for instream construction from within the de-watered streambed or from previously compacted road and parking surfaces only.	During construction
No equipment would operate in active stream flow.	During construction
Implement fish salvage and release operations prior to dewatering, for construction of instream project elements, as follows: <ul style="list-style-type: none"> <li>• Ensure safe handling of all fish by using the SBT fisheries biologist, experienced with work area isolation, to conduct or supervise any required capture and release operation.</li> <li>• Guide adult fish from the area behind the cofferdams to areas upstream, or downstream, of the construction area.</li> <li>• Use beach seines (herding) and sanctuary nets (solid-bottomed) to herd, or capture and release (water to water transfer), all fish observed in the area.</li> <li>• Electrofishing equipment would be used for fish salvage, and NMFS electrofishing guidelines would be followed.</li> <li>• Record species and lengths, using a fishery biologist, of any ESA-listed fish mortalities encountered, and provide those data to USFWS and NMFS.</li> </ul>	During construction
Dewater the work area as follows: <ul style="list-style-type: none"> <li>• Place cofferdam materials (1-yard soil sacks or a water-filled bladder dam) using an excavator, working from the right stream bank and stockpiling cofferdam materials on top of the bank.</li> <li>• Tether soil sacks, if used, to prevent cofferdam failure should high water flow occur during implementation.</li> <li>• Install cofferdams over several hours to allow streamflow to be reduced and re-watered gradually.</li> <li>• Use diesel or electric sump pumps, if needed, to capture seepage flow from cofferdam areas. Pumps would be screened as per NMFS criteria to avoid intake of juvenile fish.</li> <li>• Capture leakage under the cofferdam, if possible, from the internal, upstream face of the cofferdam (using a small, caged pump, or a trailer-mounted pump with a screened intake, to prevent juvenile fish intake). Water would be pumped to a temporary settling basin, a bermed pond, a Baker tank or similar structure, or geotextile bags. Biofiltration materials would be used to return pumped water to the creek (e.g., filtration through straw bales). The settling pond, or tank, would be located at a site approved by the SNRA.</li> <li>• Route silt-laden seepage water that is not feasibly captured to a settling system prior to discharge back into the creek.</li> </ul>	During construction

The dewatered area would be pre-washed to settle fine sediment prior to re-watering the work site to reduce downstream turbidity impacts.	During construction
Remove cofferdams over several hours to allow streamflow to be reduced and re-watered gradually.	During construction
<b>Wildlife</b>	
Plant stream banks with species approved by the SNRA botanist in areas where riparian shrubs have been disturbed or removed.	After construction
<b>Land Use, Recreation, and Transportation</b>	
No camping or overnight use is allowed at the construction site unless authorized by the permit administrator.	Before and during construction
Wheeled motorized access to the project site is limited to the dates the road is open to the public for wheeled motorized travel, May 1 through November 30.	Before and during construction
To avoid disturbance to recreationists, work may not occur before 8 am or after 8 pm without prior authorization.	During construction
Limit traffic delays on Forest Road 208 to 10 minutes or less.	During construction
The access road to the staging area would be barricaded at the junction of roads 208 and 362 following construction activities.	After construction
<b>Cultural and Historic Resources</b>	
<p>Protect any unanticipated cultural resources discovered during construction as follows:</p> <ul style="list-style-type: none"> <li>• Stop work in the immediate vicinity of the discovery and protect the find in place.</li> <li>• Notify Tribes Project Manager, SNRA Archaeologist, and BPA Environmental Compliance Lead immediately.</li> <li>• Implement mitigation or other measures as needed in consultation with the Tribes, BPA, SNRA, and Idaho State Historic Preservation Office.</li> </ul>	During construction
<b>Public Health and Safety</b>	
Use water trucks daily to apply water to the construction area for dust abatement; use only SNRA-approved water sources.	During construction
Work is limited to weekdays; no work may be conducted on weekends or holidays.	During construction
Signs providing information or warning the public shall be posted where the public may be exposed to project activities.	During construction
Upon completion of all construction activities, all temporary structures, devices, materials, or equipment, would be completely removed from the site. Excess spoils, or waste materials, would be properly disposed of in compliance with federal, state, and local regulations.	After construction
<b>Visual Quality</b>	
Work with the SNRA landscape architect to develop a plan to mitigate visual impacts.	Before and during construction
Transport surplus excavated materials off site to an approved receiving location, to be determined by the contractor and approved by the SNRA.	During construction

Protect existing riparian vegetation to the greatest extent possible. Mature and older trees, and other suitable vegetation, within the project area would be maintained as screening between the weir and Forest Road 208, to the greatest extent possible. If a large tree must be removed, it would be uprooted and left in the floodplain with root wad attached. (One large tree is authorized for removal along the access road to the staging area to the south of the project area.)	During construction
Fencing, gates, and all above-water weir components would be treated/coated to reduce reflection and colored to blend into the characteristic landscape according to SNRA requirements	During construction

<b>Minimization and Mitigation Measures for Operations</b>	
Routine maintenance to the weir facility would be conducted during low flow periods in the summer, primarily August, when high instream temperatures are likely to minimize use by fish species.	
If non-routine maintenance is necessary outside of the low flow periods, the SBT would consult with the SNRA, NMFS, and USFWS as necessary to ensure compliance with state, federal and local regulations for instream work.	
Operations would comply with terms and conditions of the SNRA special use permit.	