

**Supplement Analysis**  
for the  
**Columbia River Basin Tributary Habitat Restoration**  
**Programmatic Environmental Assessment**  
(DOE/EA 2126/SA-14)

**SEF-16 Fish Screen and Access Bridge Reconstruction**  
Bonneville project number 2007-399-00  
Bonneville contract number 87055

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.

Consistent with the Programmatic EA, this Supplement Analysis (SA) analyzes the effects of the *SEF-16 Fish Screen and Access Bridge Reconstruction* project, which would implement three of the specific actions assessed in the Programmatic EA (irrigation diversion replacement, fish screen replacement, and bridge construction). The project's objective is to replace an existing irrigation diversion and fish screen (SEF-16) on the East Fork Salmon River (East Fork) to improve fish passage at the diversion for Endangered Species Act-listed salmonids and to prevent them from potential entrainment within the SEF-16 irrigation ditch. The project would also replace an existing deteriorating bridge with one that would be longer and capable of supporting heavier loads to eliminate the need for heavy equipment to ford the river.

**Proposed Action**

The *SEF-16 Fish Screen and Access Bridge Reconstruction* project (project) is located on the East Fork on private land approximately 16 miles upstream of the confluence of the East Fork and the Salmon River in Custer County, Idaho in Section 11, Township 9 North, Range 17 East.

The project area is located on private land in an upland site, elevated slightly above the sub-irrigated floodplains that characterize other areas along the East Fork. The project area is very heavily grazed, with nearly all shrubs and small trees eliminated. There are no shrubs or trees in any of the proposed work sites.

The existing fish screen is located on the east side of East Fork approximately 290 feet downstream of the current point of the SEF-16 irrigation ditch diversion, which is 900 feet downstream of the existing bridge. These would be removed, and the sites reshaped and replanted. A new diversion would be constructed 200 feet upstream of the bridge location, and 900 feet of new irrigation ditch would be constructed to reconnect to the SEF-16 ditch. A new fish screen (a concrete structure with drum paddlewheel) would be constructed in the new irrigation ditch 190 feet downstream of the new diversion. See Figure 1.

A 420-ft. buried fish bypass pipe (used to redirect fish from the fish screen back to the river) would be installed from the new fish screen to a location 800 feet downstream of the bridge. Topsoil and gravels excavated in the course of construction activities would be used to help construct the new features and then placed to restore all sites to near-natural contours when completed.

The existing 44-ft. bridge and its log abutments would be removed. New abutments would be constructed 75 feet apart on each side of the river (far enough up each bank that no in-water work, dewatering, or fish salvage would be required). The new 90-ft. long by 10.5-ft. wide rail-car bridge would be placed atop the new abutments.

**Figure 1 Elements of the SEF-16 Fish Screen and Access Bridge Reconstruction project**



Access for these construction actions would be by existing roads or wheel tracks. River crossings would use both the old and new bridge, and a ford across the river for the concrete trucks; the weight of which would be too much for both old and new bridges. The site-specific work area for this action would be approximately 4.5 acres, which would include the construction sites, access routes, and staging areas where supplies, equipment, and fuel would be located.

The project would take approximately eight weeks to complete, and would be started in early July, prior to the Idaho Department of Fish and Game-established instream work window of July 7 through August 15. The new bridge would be constructed first, followed by the fish screen, irrigation ditch, and then the new irrigation diversion. Work would be sequenced to minimize the number of river ford crossings, conduct work that might produce sediment during the time when spawning salmon are least likely to be present, and to isolate flows for in-water work areas when flows are likely to be low.

The Proposed Action fulfills commitments under the 2020 National Marine Fisheries Service Columbia River System Biological Opinion. These actions would also support conservation of Endangered Species Act-listed species considered in the 2020 Endangered Species Act consultation with the U.S. Fish and Wildlife Service on the operation and maintenance of the Columbia River System.

## **Environmental Effects**

The implementation of these actions requires the use of heavy equipment (e.g. excavator and dump truck) to remove the existing irrigation diversion, fish screen, bridge, and bridge abutments. This same equipment, along with a cement truck and small bulldozer, would be used to construct the irrigation ditch, construct the new irrigation diversion and fish screen, and then re-contour the site following construction. These actions would disturb and displace soil on the banks of the East Fork where the old bridge abutments would be removed, where the new irrigation diversion would be constructed, and where the old irrigation diversion would be removed. These actions would produce sediment into the East Fork for a short period of time. The removal of the old log abutments and the old diversion would be of very short term and low amounts of sediment are anticipated from these actions. No work-area isolation for these actions is proposed since the stream disturbance and sediment produced from the work-area isolation action would likely be more disruptive and produce more sediment than would proceeding without it. Work-area isolation is only proposed where the new diversion would be constructed, in which case a horseshoe-shaped coffer dam would be erected along the bank, fish salvaged from within it, and water pumped from it during construction actions. Rewatering of this area following construction would re-introduce river flows onto newly exposed soils with moderate, though short-term sediment production.

Construction of the new fish screen and irrigation ditch, and removal of the old fish screen, would all occur on dry land with no potential to affect the East Fork. At these sites, heavy equipment operations would disturb only upland soils and herbaceous vegetation (there is no woody vegetation at any construction site).

Together, these actions would reshape the East Fork river bank in four small locations, exposing soil that could be carried downstream as sediment when stream flows contact newly exposed soils following construction actions; damage herbaceous vegetation; create noise and vehicle emissions; and temporarily increase vehicle traffic and human activity in the project area. These actions and the typical effects associated with the environmental disturbances created by them are consistent with those described in Chapter 3 of the Programmatic EA at Section 3.1, “*Effects Common to Construction Activities*”, Section 3.2.1, “*Effects of Fish Passage Restoration*” (for bridge replacement), Section 3.2.7.1, “*Irrigation and Water Delivery Modifications*” (for irrigation diversion replacement), and Section 3.2.7.3, “*State Programs for Fish Screens*”. These sections are incorporated by reference and summarized in this document below.

Below is a description of the potential site-specific effects of the *SEF-16 Fish Screen and Access Bridge Reconstruction* project, and an assessment of whether these effects are consistent with those described in the Programmatic EA for each resource. This project is designed to improve both aquatic and riparian habitats for the long term, so the adverse effects from soil and vegetation disturbance, and from human and mechanical activity, as detailed below, would be short-term only.

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

The effects of using heavy equipment for bridge construction and diversion replacement along the East Fork 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, “*Effects Conclusion for the Proposed Action on Fish and Aquatic Species*”, describes overall low impacts to fish and aquatic species after considering moderate short-term adverse effects and beneficial long-term effects.

Three species listed under the Endangered Species Act are present in the project area: Snake River spring/summer Chinook salmon, Snake River steelhead, and bull trout. Consultation on the effects of this action on these species was completed with the National Marine Fisheries Service (NMFS No.: WCRO-2021-01284) with the conclusion that the project would likely adversely affect these species and their critical habitat but would not likely result in jeopardy to the species or result in destruction or adverse modification of their critical habitat. Consultation on the effects of this action on bull trout was completed with the the U. S. Fish and Wildlife Service (FWS/IR9/ES/IFWO/202021-I-1575) with the conclusion that the project would not likely adversely affect bull trout.

The short-term adverse effects of the project would expose, displace, reconfigure, or compact earth through the use of mechanized equipment along the banks of the East fork in four small locations, and likely create conditions where sediment would be released for a short period of time following construction activities. The amount of sediment anticipated by the project would be low to moderate because there would be work along the bank at three of the sites with low effect; and one work site (<500 square feet) with work-area isolation, dewatering, streambank excavation, and reintroduction of flows over newly exposed soils. However, mitigation measures as detailed in the

Programmatic EA, Appendix B for work area isolation and fish salvage would be applied, minimizing these impacts. The sediment inputs would be consistent with the amounts evaluated in the Programmatic EA at Section 3.3.1.2.1 “*Short-Term Effects to Fish and Aquatic Species from Construction Activities*”.

The work-area isolation, fish salvage, dewatering, and instream construction activity at the new diversion site would displace fish from the work area until the work area is re-watered. Fish salvage activities are very stressful on fish, and small aquatic organisms that could not be practically salvaged would likely be destroyed. These impacts are consistent with the level of effect to individual fish and other species that is described in the Programmatic EA at Section 3.3.1.2.1, “*Short-Term Effects to Fish and Aquatic Species from Construction Activities*”.

All affected riverbank construction sites would likely be re-colonized by fish and other aquatic organisms with near-full recovery likely in a matter of days, and full recovery likely in a few weeks. 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, “*Short-Term Effects to Fish and Aquatic Species from Construction Activities*”, which discloses that movement, sounds, and vibrations from human and mechanical activity would disturb fish and likely displace them temporarily.

The project’s beneficial effects include the elimination of long-term annual disturbances to the river bed at the river ford by the construction of the new bridge, and the increased effectiveness of fish screening and return to the East Fork by construction of the new fish screen and bypass. These beneficial effects to fish and aquatic species are consistent with the analysis in the Programmatic EA found at Section 3.3.1.2.2.1, “*Fish Passage Restoration (Category 1) Effects on Aquatic Species*” (for the bridge reconstruction); and Section 3.3.1.2.2.7, “*Irrigation, Water Delivery, and Water Use Actions (Category 7) Effects on Aquatic Species*” (for the new irrigation diversion and new fish screen).

## **2. Water Resources**

The effects of using heavy equipment for bridge construction and diversion replacement along the East Fork are consistent with the analysis in the Programmatic EA, Section 3.3.2 “*Water Resources*”. The Programmatic EA, Section 3.3.2.3, “*Effects Conclusion for the Proposed Action on Water Resources*”, describes overall low impacts to water quality after considering moderate short-term adverse effects and beneficial long-term effects. There would be no effect to water quantity, as this project would have no water withdrawals beyond what is already being diverted by the irrigation diversion for SEF-16.

Overall, the project would create short-term sediment input by flows along the work sites where the old bridge abutments and the old irrigation diversion would be removed; and by re-introduced flows into the dewatered work area following the new irrigation diversion construction. As in the Programmatic EA, this would be a short-term effect which would be lessened by the application of mitigation measures for work area isolation (Appendix B in Programmatic EA) and others, such as erosion control measures, minimization of areas to be impacted, location of refueling areas, use of non-toxic hydraulic fluids, and revegetation when actions are complete. The level of effect on water quality for the mid to long term would be low.

## **3. Vegetation**

The effects of using heavy equipment for bridge construction and diversion replacement along the East Fork are consistent with the analysis in the Programmatic EA, Section 3.3.3 “*Vegetation*”. The Programmatic EA, Section 3.3.3.3, “*Effects Conclusion for the Proposed Action on Vegetation*”, describes overall moderate impacts to vegetation after considering moderate short-term adverse effects and beneficial long-term effects. No plant species listed under the Endangered Species Act are present within this project area, and only herbaceous vegetation would be disturbed as there is no woody vegetation present in the heavily-grazed work sites.

This project is anticipated to have effects consistent with that described in the Programmatic EA, or less. There would be no large-scale earthmoving, with its associated vegetative loss. This project would impact approximately 2.5 acres, and though larger than the typical area impacted by projects analyzed in the Programmatic EA, it would be smaller than the much larger projects discussed there (up to 100 acres). Also, impacts to vegetation would be primarily from the loss of herbaceous vegetation in the uplands where the new fish screen and new irrigation ditch would be constructed, and some disturbance of herbaceous vegetation along the banks during irrigation diversion replacement and abutment removal. All of these sites would be replanted. There would be no loss of functional

riparian habitats with trees and shrubs, as this area has none within the construction sites. Only herbaceous vegetation in a heavily grazed state would be impacted. This level of effect would be low.

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

This project would not affect wetlands or floodplains since none are present in the project area. There would be no effect.

#### **5. Wildlife**

The effects of using heavy equipment for bridge construction and diversion replacement along the East Fork are consistent with the analysis in the Programmatic EA, Section 3.3.5 “*Wildlife*”. The Programmatic EA, Section 3.3.5.3, “*Effects Conclusion for the Proposed Action on Wildlife*”, describes overall low impacts to wildlife after considering short-term adverse effects and beneficial long-term effects. No wildlife species listed under the Endangered Species Act are present within this project area, and wildlife habitat is marginal given the site’s heavily grazed condition.

The short-term effects from this project would be less than those analyzed in the Programmatic EA, because the planned bridge construction and diversion replacement would have far less impact to soils and vegetation, and thus to wildlife habitat than that analyzed there. There would be no large-scale earthmoving, and no loss of functional riparian habitats with shrubs and trees and associated small animal impacts as was assessed in the Programmatic EA. Impacts would primarily be from disturbance of nearby wildlife by the temporary presence and activity of humans and machines. This could temporarily displace them from their preferred haunts during construction (up to eight weeks), and they would likely re-occupy the site once human activity has ceased. This level of effect would be low, as is stated in the Programmatic EA.

#### **6. Geology and Soils**

The effects of using heavy equipment for bridge construction and diversion replacement along the East Fork are consistent with the analysis in the Programmatic EA, “*Geology and Soils*”, Section 3.3.6. The Programmatic EA, Section 3.3.6.3, “*Effects Conclusion for the Proposed Action on Geology and Soils*”, describes moderate impacts to geology and soils.

The short-term effects from this project would be consistent with that analyzed in the Programmatic EA: there would be no large-scale earthmoving, and thus no widespread mixing of soil horizons or severe compacting of soils. Approximately 2.5 acres of upland soils would be impacted in this project, and though the impacts within that acreage could be considered high alone (e.g. irrigation ditch digging), mitigation measures designed to minimize adverse effects, such as stockpiling topsoil for restoration, minimizing the area of impact, and applying erosion control measures, would be applied. The level of effect from this project, considering the short-term adverse effects and the long-term beneficial effects would be moderate.

#### **7. Transportation**

The effects of using heavy equipment for bridge construction and diversion replacement along the East Fork are consistent with the analysis in the Programmatic EA, Section 3.3.7 “*Transportation*”. The Programmatic EA, Section 3.3.7.3, “*Effects Conclusion for the Proposed Action on Transportation*”. describes low impacts to transportation.

This action would not impact any roads, either open or closed, public, or private. No roads would be closed; none would be temporarily blocked; none would be relocated. The most effect this action would have on transportation would be that vehicles transporting workers and equipment to the project site would be sharing local roads with other traffic during construction. This level of impact would be low, as is stated in the Programmatic EA.

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

There would be no effect on land use or recreation from this project. Land uses would not change; and public recreational opportunity on the private land (of which there is none because this land is not open to public use) would not change. This level of effect is consistent with that described in the Programmatic EA at Section 3.3.8.3,

*“Effects Conclusion for the Proposed Action on Land Use and Recreation”*, which states that land use practices underlying project sites would not be changed for most projects.

## **9. Visual Resources**

The effects of using heavy equipment for bridge construction and diversion replacement along the East Fork are consistent with the analysis in the Programmatic EA, Section 3.3.9 *“Visual Resources”*. The Programmatic EA, Section 3.3.9.3, *“Effects Conclusion for the Proposed Action on Visual Resources”*, describes low impacts to visual resources.

The restoration activities along the East Fork would be about 1/3 mile southeast of the East Fork Road (a lightly traveled local gravel-surfaced road) and about 17 miles from State Highway 93 at the Salmon River. Construction sites are not visible from the East Fork road, being visually blocked by terrain and vegetation. 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). There would be no change to the visual landscape, since completed work would create no new terrestrial landscape feature, and the only altered feature would be the relocation of an irrigation diversion and a fish screen, which are common features throughout the Upper Salmon watershed. This level of impact would be low, as is stated in the Programmatic EA.

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

The effects of this project are consistent with the analysis in the Programmatic EA, Section 3.3.10 *“Air Quality, Noise, and Public Health and Safety”*. The Programmatic EA, Section 3.3.10.3, *“Effects Conclusion for the Proposed Action on Air Quality, Noise, and Public Health and Safety”*, describes low impacts to air quality, noise, and public health and safety.

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

## **11. Cultural Resources**

The effects of this project are consistent with the analysis in the Programmatic EA, *“Cultural Resources”*, Section 3.3.11. The Programmatic EA, Section 3.3.10.3, *“Effects Conclusion for the Proposed Action on Cultural Resources”*, describes low impacts to cultural resources because cultural resources would be avoided by project construction, effects would be appropriately resolved through the Section 106 consultation process, or any proposed projects’ adverse effects to cultural or historic resources that cannot be appropriately resolved through the Section 106 consultation process would not be tiered to this programmatic environmental assessment.

Cultural resources surveys were conducted, and consultations with Idaho State Historic Preservation office and the Shoshone-Bannock Tribes and the Confederated Tribes of the Umatilla Indian Reservation were completed for the area potentially affected by the project. The results of those surveys and consultations with the Idaho State Historic Preservation Office (Idaho SHPO review Number 2020-353) were that there would be no adverse effect to historic properties. Neither tribe responded to Bonneville’s consultation letters.

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

The effects of this project 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, *“Effects Conclusion for the Proposed Action on Socioeconomics and Environmental Justice”*, describes low impacts to socioeconomics and environmental justice.

As described in the Programmatic EA, this action would neither generate a requirement for additional permanent employees nor would it require individuals to leave the local area or relocate within it. There would be no effect on housing available for local populations. This project would not displace people or eliminate residential suitability of the land being affected, or from lands near the project site. The project would generate short-term employment for

those directly implementing the actions and provide small, short-term input 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 this action and its impacts are limited to the private land on which it would be located, and no offsite or indirect effects are anticipated that could impact such populations elsewhere.

### ***13. Climate Change***

The effects of this project are consistent with the analysis in the Programmatic EA, “*Climate Change*”, Section 3.3.10. The Programmatic EA, Section 3.3.10.3, “*Effects Conclusion for the Proposed Action on Climate Change*”, describes low impacts to climate change.

The project would have a low level of effect on climate change from short-term emissions from motorized equipment operations during implementation of the proposed activity.

### **Findings**

Bonneville finds that the types of actions and the potential impacts related to the proposed *SEF-16 Fish Screen and Access Bridge Reconstruction* project were examined, reviewed, and consulted upon and are similar to those analyzed in the *Columbia River Basin Tributary Habitat Restoration Programmatic Environmental Assessment* (DOE/EA 2126) and Finding of No Significant Impact. There are no substantial changes in the Proposed Action and no significant new circumstances or information relevant to environmental concerns bearing on the Proposed Action or its impacts within the meaning of 10 CFR § 1021.314(c)(1) and 40 CFR §1502.9(d). Therefore, no further NEPA analysis or documentation is required.

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