

**Bonneville Power Administration's  
Record of Decision  
For Crooked River Valley Rehabilitation Project  
August 2015**

## **Decision**

Bonneville Power Administration (BPA) has decided to fund implementation of the Crooked River Valley Rehabilitation Project in Idaho County, Idaho. BPA's decision is based on the analysis documented in the Crooked River Valley Rehabilitation Project Final Environmental Impact Statement (DOE/EIS-0506, June 2015) and project record, and the selection of Alternative 2 by the United States Forest Service Nez Perce – Clearwater National Forests (Forests) as documented in their July 21, 2015 Final Record of Decision (ROD). Alternative 2 was identified in the Final EIS as the preferred alternative for the rehabilitation of the lower two miles of the Crooked River valley, including Crooked River.

The Forests, in cooperation with the Nez Perce Tribe (NPT), U.S. Army Corps of Engineers (USACE) and BPA, prepared the EIS and evaluated the potential impacts of the proposed project and its alternatives. As a cooperating agency, BPA has adopted the EIS. USACE has also adopted the EIS and the Forests' ROD.

As described in the Final EIS, Alternative 2 consists of: (1) constructing a 6,000 foot temporary bypass channel and temporary access road/levee and, following construction of the channel, removing and decommissioning these structures; (2) regrading approximately 115 acres of floodplain by moving dredge tailings; (3) filling in approximately 10,960 feet of the current channel, reconstructing approximately 7,400 feet of new channel, and constructing more than 2,700 feet of side channels; (4) replanting the valley bottom with native and approved non-native plant species; (5) staging materials and equipment at campgrounds; and (6) monitoring project activities and effectiveness.

## **Background**

BPA is a one of four regional Power Marketing Administrations within the U.S. Department of Energy (DOE) and operates in the Pacific Northwest. BPA's operations are governed by several organic statutes, including the Pacific Northwest Electric Power Planning and Conservation Act (Northwest Power Act). Among other things, this Act directs BPA to protect, mitigate, and enhance fish and wildlife affected by the development and operation of the Federal Columbia River Power System (FCRPS). The proposed Crooked River Valley Rehabilitation project is consistent with BPA's implementation of the Northwest Power Act. Specific details of the proposed project are fully described in the Final EIS and Appendices, and are incorporated here by reference.

The proposed project also helps BPA fulfill its obligations under the Endangered Species Act (16 U.S.C. 1531 *et seq.*) (ESA). Specifically, BPA identifies and funds tributary habitat restoration projects under Reasonable and Prudent Alternative action 35 of the National Oceanic

and Atmospheric Administration, National Marine Fisheries Service 2008 FCRPS Biological Opinion, as supplemented in 2010 and 2014.

Crooked River is a tributary of the South Fork of the Clearwater River which in turn is a major tributary of the Snake River. During the 1930s through the 1950s the main stem of Crooked River was heavily impacted by dredge mining, which left large tailings piles and deep ponds throughout the valley bottom. Physical changes to the valley bottom have altered stream and riparian processes and affected aquatic and terrestrial habitat conditions. The lower two miles of Crooked River have been altered so drastically that the natural migration pattern of the stream channel and floodplain functions are restricted, instream habitat complexity is low, and the development of riparian vegetation has been impaired. These alterations have resulted in degraded fish habitat and increased water temperatures harming fish populations in Crooked River.

The selected alternative (Alternative 2) will improve fish habitat for ESA-listed fish species (Snake River steelhead trout and Columbia River bull trout) and the Forests' sensitive aquatic species (west-slope cutthroat trout, interior redband trout, spring/summer Chinook salmon, and pearlshell mussel) in part by restoring instream fish habitat complexity. Alternative 2 will also improve fish habitat and water temperatures by reestablishing natural stream meanders and floodplain connections, and improving conditions for development of healthy riparian vegetation.

## **Alternatives Considered**

The Forests, as the lead agency under NEPA, and BPA and the other cooperating agencies (NPT and USACE) considered two alternatives in detail in the Final EIS: the No Action and the Proposed Action alternatives. The following is a description of these alternatives. More specific descriptions can be found in the Final EIS on pages 2-1 through 2-20.

### **Alternative 1 - No Action**

Under the No Action alternative (Alternative 1), rehabilitation actions would not be conducted. Alternative 1 would not have the temporary impacts to the natural environment (land uses, vegetation, wildlife, visual resources, etc.) from construction that Alternative 2 will.

### **Alternative 2 - Proposed Action**

Alternative 2 will rehabilitate the lower two miles of Crooked River. The project area extends from 0.1 mile upstream from the mouth of Crooked River (at the Idaho Department of Fish and Game intake weir) to approximately 2.1 miles upstream. Alternative 2 includes multiple activities implemented in sequential phases over a period of four to six years beginning in 2015 and ending in 2021. The sequential phases were developed to meet requirements for managing bypass channels, stabilizing unconsolidated materials necessary to transition from each phase, balancing earthwork volumes (cut and fill), and maintaining fish passage. Rehabilitation activities that will occur throughout the phases are described below:

- **Temporary Bypass Channel and Access Road/Levee.** A temporary bypass channel will be constructed to reduce direct impacts of construction to water quality, as well as to fish and other aquatic organisms. The bypass channel (about 6,000 feet) will be constructed prior to any instream or floodplain work and remain in place (three to four years) until completion of the new floodplain and stream channel. Cofferdams or headgates will be constructed in the mainstem channel to divert Crooked River into the bypass channel. Fish and other aquatic organism salvage will occur in the main channel, mining ponds, and bypass channel before dewatering actions. Following construction, the new channel of Crooked River will be slowly rewatered during low flow, cofferdams or headgates removed, and the temporary bypass channel reshaped into the floodplain.

A temporary access road/levee will be constructed through the project area to reduce impacts to Forest Road 233 and public travelers during construction. The length of the road/levee will be approximately 6,000 feet. About 23,200 cubic yards of material excavated for the temporary bypass channel will be used in construction of the temporary access road. Three existing access roads will be used to access the valley bottom from Forest Road 233. Stream crossing structures will be installed on these existing access roads over the temporary bypass channel. Following construction of the channel, the temporary access road will be decommissioned and the stream crossing structures removed from the existing access roads. The existing access roads will be retained for recreational use.

- **Floodplain Regrading.** Approximately 115 acres of floodplain, including existing dredge tailings, will be regraded. All dredge material will be redistributed within the project area. Trees, shrubs, and rocks will be removed and stockpiled in designated staging areas. This salvaged material will be used in bank and floodplain treatments. Floodplain grading includes dredge pile excavation, pond filling, and upland construction. The total estimated earthwork quantity is 190,000 cubic yards. The new floodplain will be constructed to allow for moderate flood disturbance and distribution of sediment.

Approximately 50 acres of the new floodplain will be regraded to allow for seasonal flooding to create conditions for the formation of approximately 64 acres of wetlands, including 14 acres of open water. This will provide a net increase of 12 acres of wetlands in the project area. Secondary features, which include swales and depressions, will also be constructed to further contribute to the development of wetlands.

Another approximately 49 acres of the new floodplain will be roughened to provide microtopography such as ridges and furrows. Large woody debris will be partially buried on the floodplain to provide microsites and roughness. This will help create stability in the floodplain by breaking up flows across the surface, providing depositional areas for sediment and seeds, and increasing the water holding capacity of the soils in the floodplain.

- **New Channel Construction.** Approximately 10,960 feet of the current channel will be filled in and approximately 7,400 feet of new stream channel will be reconstructed to establish natural stream meanders and connections to floodplains. Woody bank

material will be installed along the new stream channel to provide protection from erosion. Large woody debris will also be added along approximately 9,400 feet of the stream channel to provide habitat complexity. To provide nutrients and a food source for fish, cobble substrate and large woody debris will be added to the newly created channel from the temporary bypass channel.

The stream channel will be constructed so as not to interfere with Forest Road 233. More than 2,700 feet of side channels will be constructed to provide areas of slow water for fish during high flow events, and restrict access during low flows in summer to avoid stranding.

- **Replanting.** The valley bottom will be replanted with native plant species to facilitate the continuous and natural recruitment of wood and instream substrate material. Replanting will include salvaged materials and container grown plants. Non-native plant species, approved by the Forests' native plant coordinator, will also be used to replant the project area. Groupings of plant species (vegetation communities) were identified that will fit the specific site conditions, maximize aquatic habitat function, and be sustained by channel processes. Rehabilitation treatments (floodplain features, such as swales and depressions) will create the conditions necessary to support development of the vegetation communities over time. However, the floodplains will be replanted to speed up the recovery efforts. Approximately 20,000 plants will be used to replant the project area.

To increase plant productivity, soil material will be salvaged during floodplain construction and used within the upper foot of the new floodplain to provide rooting material for the replanted vegetation. Woody material and wood chips will be distributed throughout the site to improve soil productivity. The wood chips and soil will also increase water retention in the substrate and improve plant survival.

- **Staging Areas.** Materials such as large woody debris, rock, wood chips, and soil will be staged in developed and dispersed campsites in the project area. Campsites will be temporarily closed prior to beginning construction through the duration of the project to ensure public safety. Much of the staged material will come from within the project area, but some will be imported. All soil will come from within the project area. Large woody debris and wood chips will be imported from within the Crooked River watershed or other areas on the Forests.
- **Project Monitoring.** Monitoring for implementation and effectiveness of the Final EIS design and mitigation measures, the Biological Opinions terms and conditions, and permit requirements will be completed over the life of the project. Project monitoring will evaluate survival of vegetation and changes to the floodplains, wetlands, groundwater, large woody debris, and water temperature, as well as other parameters such as presences of invasive plants.

## **BPA's Rationale for Decision**

In making its decision to provide funding for implementation of Alternative 2, BPA has considered and balanced a variety of relevant factors. BPA considered how well each alternative under consideration – the Proposed Action alternative and the No Action alternative – would fit with BPA's statutory missions and obligations, such as the Northwest Power Act and the ESA, and meet the purposes of and need for this project. BPA also considered the environmental impacts described in the Final EIS, and public comments received throughout the NEPA process, including those received on the Draft EIS. In addition, BPA considered objections to the project received during the Forests' administrative review process (as required under 36 CFR Part 218, subpart A and B), resolutions to the objections, and changes to the Final EIS as a result of the resolutions.

BPA decided that, overall and on balance, funding implementation of Alternative 2 will meet BPA's objectives mandated under Northwest Power Act and the 2008 FCRPS Biological Opinion, as supplemented in 2010 and 2014. Funding Alternative 2 will result in improved tributary fish habitat in the Crooked River.

Funding Alternative 2 also meets the purposes of and need for the project as described in the June 2015 Final EIS (Chapter 1, pages 1-1 to 1-5). Alternative 2 activities will directly improve degraded fish habitat in the lower two miles of the river by restoring channel and floodplain functions, instream habitat complexity, and water quality. Other similar types of fish habitat restoration/rehabilitation projects in the Columbia River Basin have been successful and through project design and monitoring requirements, BPA expects Alternative 2 to be successful as well (see Response to Comment 22; FEIS, Appendix F, page 16).

BPA also considers funding for Alternative 2 to be responsive to public and regulatory concerns received during the NEPA process. Alternative 2 addresses many of these public and regulatory concerns by including mitigation measures that will be applied to reduce the short term effects of construction to soils, water quality (sediment, temperature, mercury, toxins), fish and fish habitat, public access, sensitive and invasive species, mining claims, recreation, and cultural resources (including effects to one National Historic Register Site).

Funding of Alternative 2 takes into account objections received during the Forests' administrative review process. The Forests received a total of seven objections, of which six met the objection process criteria and were reviewed. As a result of the review process, the Objection Reviewing Officer found the project in compliance with laws, regulations and policies, and required the Forests complete several instructions. The Objection Reviewing Officer response letter with specific details of the instructions can be found on the Forests' project webpage at: [http://www.fs.fed.us/nepa/nepa\\_project\\_exp.php?project=40648](http://www.fs.fed.us/nepa/nepa_project_exp.php?project=40648). The instructions involved providing additional or clarifying information to better demonstrate compliance with laws, regulations, or policies in regards to economics, water quality, mercury, and mining. Instructions, including edits to the Final EIS, have been completed.

The Forests identified Alternative 1 as the environmentally preferred alternative in their ROD. However, BPA is identifying Alternative 2 as the environmentally preferable alternative because

of the direct improvements to the natural environment. Although Alternative 2 will create short-term construction impacts on various resource areas (e.g., water quality, fish and fish habitat, floodplains, cultural resources), its long-term benefits for fish and water quality in the Crooked River watershed make it the alternative that best enhances the natural environment.

## **Mitigation**

All mitigation measures described in the Final EIS have been adopted by the Forests. A complete list of these measures is in the attached Mitigation Action Plan. The Nez Perce – Clearwater National Forests will be responsible for the execution of all mitigation measures.

## **Public Availability**

This ROD will be available to all interested parties and affected persons and agencies. It is being sent to all stakeholders who requested a copy. Copies of the Crooked River Valley Rehabilitation Project Draft and Final EISs; the Forests' Draft and Final RODs, and additional copies of this ROD are available from BPA's Public Information Center, P.O. Box 3621, Portland, Oregon, 97208-3621. Copies of these documents may also be obtained by using BPA's nationwide toll-free document request line: 1-800-622-4520, or by accessing BPA's project Web site: [www.bpa.gov/goto/CrookedRiver](http://www.bpa.gov/goto/CrookedRiver).

## **Decision**

BPA has decided to fund implementation of the Crooked River Valley Rehabilitation Project.

Issued in Portland, Oregon.

<u>/s/ Elliot E. Mainzer</u>	<u>August 13, 2015</u>
Elliot E. Mainzer	Date
Administrator and	
Chief Executive Officer	

## Mitigation Action Plan For Crooked River Valley Rehabilitation Project

Mitigation Measures <sup>1</sup>	Time of Implementation
<b>Soil, Water Quality, and Fish Habitat</b>	
<ul style="list-style-type: none"> <li>Complete ground-disturbing activities during low-flow conditions. Adjust instream work dates site-specifically through coordination with the Central Idaho Level 1 ESA Team [U.S. Department of Interior, Fish and Wildlife Service (USFWS) and Bureau of Land Management (BLM); National Oceanic and Atmospheric Administration-National Marine Fisheries Service (NMFS), U.S. Department of Agriculture, Forest Service (USDA Forest Service) and other agencies]. Follow all conservation measures outlined in the NMFS and USFWS Biological Opinions (Forests' Final ROD, Appendix C).</li> </ul>	Prior to and during construction
<ul style="list-style-type: none"> <li>Thoroughly wash and inspect all equipment used in stream restoration activities before it enters the Nez Perce – Clearwater National Forests to help prevent the introduction of chemicals to the site. Keep all equipment in a well-maintained condition to minimize the likelihood of a fluid leak.</li> </ul>	Prior to and during construction
<ul style="list-style-type: none"> <li>Stage all construction equipment in a location and manner to minimize soil and water pollution.</li> </ul>	During construction
<ul style="list-style-type: none"> <li>Require a Spill Prevention, Control, and Containment Plan approved by the Forest Contracting Officer's Technical Representative for handling and storage of petroleum products. Keep any storage of petroleum products in excess of 200 gallons within constructed containment structures that have an impervious liner with a capacity equal to or larger than the storage container. Locate the containment structure at least 150 feet from all waterbodies. Before being used within 300 feet of the stream reconstruction site, inspect all heavy equipment or other machinery for hydraulic leaks or other leaks. Do not use leaking or faulty equipment. Clean equipment that has accumulations of oil, grease, or other toxic materials prior to use in these areas. Do not permit disposal of petroleum products on National Forest land.</li> </ul>	Prior to and during construction
<ul style="list-style-type: none"> <li>Fuel and lubricate equipment at least 150 feet from all waterbodies. Service and refuel in a manner that avoids spills and overfills.</li> </ul>	During construction
<ul style="list-style-type: none"> <li>Require a Storm Water Pollution Prevention Plan (SWPPP) and National Pollutant Discharge Elimination System (NPDES) permit, approved by the Environmental Protection Agency, prior to commencing construction activities. Ensure erosion control measures are in place before construction or staging of erodible materials begins. Follow conservation measures outlined in the SWPPP, NPDES, Army Corps of Engineers Clean Water Act Section 404 permit, and Idaho Department of Environmental Quality Clean Water Act Section 401 water quality certification.</li> </ul>	Prior to construction

<sup>1</sup> The U.S. Forest Service Nez Perce-Clearwater National Forests will be responsible for the execution of all mitigation measures.

<ul style="list-style-type: none"> <li>• Divert or pump river around work site. Place screens on pump intakes following NMFS fish screen criteria.</li> </ul>	During construction
<ul style="list-style-type: none"> <li>• Install silt fences, straw bales, and sand bag as needed before excavation occurs to separate the disturbed areas from waterbodies and prevent eroded soil from entering the river channel.</li> </ul>	Prior to construction
<ul style="list-style-type: none"> <li>• Stabilize any road cuts, fills, and treads with a cover of annual rye or mulch where roads would remain for more than one year.</li> </ul>	During construction
<ul style="list-style-type: none"> <li>• Grade and shape all disturbed sites to allow drainage. Seed disturbed sites as needed immediately upon completion of work in that area with certified weed-free seed. Replant any small trees excavated from the work sites in the rehabilitated disturbed areas to help stabilize the soils.</li> </ul>	During and after construction
<ul style="list-style-type: none"> <li>• Remove fish, amphibians, and mussels (referred to as fish salvage) from dewatered areas. Removal would be done to minimize potential injuries and reduce the likelihood of behavior disturbance. Ensure that a fisheries biologist is present onsite during dewatering and all salvage operations. Reduce water volume using pumping or diversion. Set up block nets to isolate areas to ensure that all species are removed. Conduct electroshocking only when a biologist with at least 100 hours of electrofishing experience is onsite to conduct or direct all activities associated with capture attempts in accordance with <i>Guidelines for Electrofishing Waters Containing Salmonids Listed under the Endangered Species Act</i> (NMFS 2000) and <i>Best Management Practices for Pacific Lamprey</i> (USFWS 2010).</li> </ul>	Prior to construction
<ul style="list-style-type: none"> <li>• All water bodies, especially ponds, will be checked for amphibians prior to and during construction of any work associated with the temporary bypass channel, side channel, temporary road, floodplain, new channel, etc. All life stages of amphibians will be collected and immediately translocated to pond being retained within the downstream section of the project area. Western toads tend to lay eggs in shallow water with emergent vegetation and facing a certain exposure. Take note of the conditions surrounding the egg masses and mimic those conditions when the egg masses are translocated to the new pond. It may be possible to translocate the new egg masses immediately adjacent to the egg masses in the identified pond.</li> </ul>	Prior to and during construction
<ul style="list-style-type: none"> <li>• Sanitize, clean and inspect equipment (machines, waders, nets, etc.) of invasive aquatic organisms. Do not dump water from water trucks directly from one stream or pond to another. Disinfect/decontaminate all gear, clothing, equipment, and waders, using a 10% bleach solution prior to entering any waterbodies in the Crooked River Valley Rehabilitation project area to prevent spread of fungal pathogens. Standard disinfection protocols will be followed.</li> </ul>	Prior to and during construction
<ul style="list-style-type: none"> <li>• In some instances, disposable gloves have been shown to cause mortality when handling certain life stages of amphibians, especially tadpoles. If disposable gloves are necessary for aquatic organism salvage operations and handling of aquatic organisms in the translocation process, minimize exposure and reduce incidental mortality of amphibians to pathogens/toxins from the gloves.</li> </ul>	Prior to and during construction



<ul style="list-style-type: none"> <li>• Apply the State of Idaho Best Management Practices (BMP) and Forest Soil and Water Conservation Practices to minimize soil disturbance and runoff into waterbodies.</li> </ul>	Prior to and during construction
<ul style="list-style-type: none"> <li>• Contact appropriate utility companies to locate and move or avoid underground powerlines prior to ground-disturbing activities. Restore all utility lines upon completion of the project so that no loss of power occurs.</li> </ul>	Prior to, during, and after construction
<ul style="list-style-type: none"> <li>• Stage sanitary facilities such as chemical toilets at least 150 feet from waterbodies to prevent contamination of surface or subsurface water.</li> </ul>	Prior to construction
<ul style="list-style-type: none"> <li>• Obtain and comply with all appropriate permits prior to ground-disturbing activities (such as the National Pollutant Discharge Elimination System Permit, Stormwater Construction General Permit). Adjust mitigation or monitoring through coordination with regulatory agencies, as appropriate.</li> </ul>	Prior to and during construction
<ul style="list-style-type: none"> <li>• Build soil and plant substrate suitable for restoring vegetation within riparian areas.</li> </ul>	During construction
<ul style="list-style-type: none"> <li>• Conserve plants and active soil materials for re-use in valley and roadside reclamation and upland restoration activities.</li> </ul>	During construction
<ul style="list-style-type: none"> <li>• Secure side-slopes after construction activities using onsite materials where available, including natural mulch from residual vegetation slash, chipping/masticated material, and transplanted trees and shrubs.</li> </ul>	After construction
<ul style="list-style-type: none"> <li>• Implement procedures outlined in the <i>Best Management Practices for Mercury Collection from Restoration Activities in Crooked River</i> (Appendix E) if mercury is found during project work.</li> </ul>	Prior to and during construction
<ul style="list-style-type: none"> <li>• Conduct fish and aquatic organism salvage operations from the mainstem channel after July 15 when steelhead and Chinook salmon have emerged from redds and bull trout would not be migrating in the project area. Provide fish and aquatic organism passage at all times.</li> </ul>	Prior to and during construction
<ul style="list-style-type: none"> <li>• Halt activity during dewatering, floodplain grading, or temporary bypass channel or new channel construction, if soils act as a liquid (similar to quicksand). Reinitiate work if the condition stops.</li> </ul>	During construction
<ul style="list-style-type: none"> <li>• Keep natural soils in place onsite or stockpile them for future use.</li> </ul>	During construction

<ul style="list-style-type: none"> <li>Operate dewatering within the construction area continuously until project construction has been completed to minimize turbidity and sedimentation. Turbid water may be pumped to the floodplain or settling ponds to keep areas dry during construction and to reduce sediment input delivery to Crooked River and the South Fork Clearwater River. Add water to the bypass channel and new channel slowly to prevent turbidity from reaching 50 Nephelometric Turbidity Units (NTUs) above background 300 feet downstream. Monitor turbidity while reintroducing water, and if turbidity levels approach 50 NTUs above background 300 feet downstream, reduce flow in channel until turbidity levels recede to 10 NTUs above background. Follow any other requirements in approved water quality permits.</li> </ul>	During construction
<ul style="list-style-type: none"> <li>Store mulch piles to reduce combustion hazard.</li> </ul>	Prior to and during construction
<ul style="list-style-type: none"> <li>Construct temporary bypass channel of Crooked River to pass water, fish, and aquatic organisms during construction. Construct temporary bypass channel prior to any instream or floodplain work, and use until completion of the new floodplain and stream channel (approximately two to three years). Construct a spillway on the cofferdam or headgates to spill any flows greater than the <math>Q_{10}</math> (Ten year return interval flow approximately 1,062 cubic feet per second) into the new channel to reduce the potential for bypass channel failure at high flows. If high flows occur in the new channel, conduct fish salvage. The bypass channel will be evaluated for stability before reintroducing water and at the end of each construction season. Slowly rewater the newly constructed channel during low flow. Remove cofferdams or headgates and reshape the bypass channel into the new floodplain.</li> </ul>	Prior to and during construction
<ul style="list-style-type: none"> <li>Ensure sands and gravels are properly mixed into the new channel to prevent losing water below the surface of the new channel. Inspect the new channel to ensure flows remain above ground. If flows are lost, add fine sediment to the new channel to seal interstitial spaces. If water loss continues, remix the substrate in the new channel with an excavator. Bentonite clay may be used to help seal the new channel if water continues to seep below the surface. Follow all measures for adding water to the new channel as outlined in the Biological Assessment – Forests’ ROD, Appendix C.</li> </ul>	During construction
<ul style="list-style-type: none"> <li>Install catchment structures to collect large woody debris moving at high flows from interfering with structures downstream of the project area (e.g. Idaho Department of Fish and Game fish intake and weir). Wood catchment structures would be anchored at the lower end of the project area in the new floodplain, incorporate large boulders and designed to withstand high stream flows greater than <math>Q_{50}</math> (~ 1,500 cubic feet per second).</li> </ul>	During construction
<b>Transportation</b>	
<ul style="list-style-type: none"> <li>Water road surfaces, including the temporary haul road to reduce airborne dust.</li> </ul>	During construction
<ul style="list-style-type: none"> <li>Provide maintenance on Forest Road 233 commensurate with construction-induced effects.</li> </ul>	During construction

<ul style="list-style-type: none"> <li>Construct a temporary haul/access road through the project area to reduce potential degradation to Forest Road 233 and impacts to the public, such as traffic delays. Install crossing structures for the bypass channel in two to three locations prior to adding water to the bypass channel. Decommission haul/access road following use, but retain existing access roads for recreation.</li> </ul>	Prior to and during construction
<ul style="list-style-type: none"> <li>Ensure that Forest Road 233 remains clear of debris and equipment during construction.</li> </ul>	During construction
<b>Noxious Weeds/Sensitive Plants and Wildlife</b>	
<ul style="list-style-type: none"> <li>Implement appropriate protection measures, under the direction of the Forest native plant coordinator, if previously unknown Forest sensitive plant species are observed and activities would impact individuals or populations during implementation. Appropriate measures would vary depending upon the ecology of the species involved and nature of the activity.</li> </ul>	Prior to and during construction
<ul style="list-style-type: none"> <li>Revegetate the project area using native and approved non-native species, as approved by the Forest native plant coordinator, immediately upon completion of the project.</li> </ul>	During and after construction
<ul style="list-style-type: none"> <li>Apply only certified weed-free mulching material and seed. Seed inspection testing is to be completed by a certified seed laboratory against the state noxious weed lists and documentation of the test provided to the Contracting Officer's Technical Representative (COTR) or designated inspector. Mulch material must be state certified weed free.</li> </ul>	During and after construction
<ul style="list-style-type: none"> <li>Soil, gravel, rock, and any material hauled to the project area must come from sources determined to be weed free. Sources must be approved by a COTR or designated inspector as weed free.</li> </ul>	Prior to construction
<ul style="list-style-type: none"> <li>Monitor to detect invasive and noxious weeds following implementation. Treat identified weed infestations following the Nez Perce National Forest Noxious Weed Environmental Assessment (EA) (USDA Forest Service 1988a), Biological Assessments (USDA Forest Service 2013b draft), and Biological Opinions for Herbicide Treatment of Invasive and Noxious Weeds on the Nez Perce National Forest (2013-2022) (NMFS and USFWS 2013 draft) when applying herbicides within 50 feet of sensitive plants to reduce potential for incidental contact of herbicides and avoid potential harmful exposure to non-target species. Adjust treatment through coordination with the Central Idaho Level 1 ESA Team.</li> </ul>	After construction
<ul style="list-style-type: none"> <li>Provide personnel with map locations and species identification of all known sensitive amphibians and plant habitats to reduce potential harmful exposure and direct contact prior to weed treatment.</li> </ul>	After construction
<ul style="list-style-type: none"> <li>Avoid directly spraying chemicals on any terrestrial or aquatic organism other than invasive plants to reduce potential for incidental contact of herbicides and avoid potential harmful exposure to non-target species of concern.</li> </ul>	After construction
<ul style="list-style-type: none"> <li>Wash and inspect all off-road equipment associated with the project for mud, soil, plant parts, and aquatic organisms prior to entering the Nez Perce – Clearwater National</li> </ul>	Prior to and during construction

Forests. Cleaning must occur off National Forest lands.	
<b>Minerals</b>	
<ul style="list-style-type: none"> <li>• Protect or re-establish corners of existing lode mining claims.</li> </ul>	Prior to and during construction
<ul style="list-style-type: none"> <li>• Work with the mining claimants to get a waiver and notice of intent to hold during the temporary closure of the project area.</li> </ul>	During construction
<ul style="list-style-type: none"> <li>• Work with the claimants to determine when their mining claim could be accessed.</li> </ul>	After construction
<b>Recreation</b>	
<ul style="list-style-type: none"> <li>• During construction, place into effect, and post, a Forest Supervisor temporary area closure that would be yearlong for the duration of the construction for the valley bottom, including designated Campgrounds. Keep Forest Road 233 open. Notify public one year in advance of closure and have information available on the Forest Service website.</li> </ul>	Prior to and during construction
<ul style="list-style-type: none"> <li>• Retain dispersed recreation access points in the Crooked River valley.</li> </ul>	During construction
<ul style="list-style-type: none"> <li>• Retain and protect Campgrounds 3 and 4 for the long term while using them short term for construction for stockpiling or closure for public safety.</li> </ul>	During construction
<b>Cultural Resources</b>	
<ul style="list-style-type: none"> <li>• Contact the Nez Perce – Clearwater National Forests if human remains or materials subject to cultural patrimony (as defined in the Native American Graves and Repatriation Act) are encountered.</li> </ul>	During construction
<ul style="list-style-type: none"> <li>• Stop work and notify the Forest Service archeologist (36 CFR 800.13b) if any American Indian–related cultural resource materials, sites, or artifacts are discovered during project implementation.</li> </ul>	During construction
<ul style="list-style-type: none"> <li>• Retain a representative sample of dredge piles for public interpretation.</li> </ul>	Prior to and during construction
<ul style="list-style-type: none"> <li>• Construct a three-panel educational kiosk in the project area to inform the public of the history of the Crooked River Valley, following relevant laws and Forest Service direction for accessibility.</li> </ul>	After construction
<ul style="list-style-type: none"> <li>• Follow guidance and conduct any monitoring, documentation, or other measures directed by Idaho State Historical Preservation Office or the National Trust for Historic Preservation.</li> </ul>	Prior to, during, and after construction

<ul style="list-style-type: none"> <li>• Photograph, document, and map historic dredge piles that are proposed for removal.</li> </ul>	Prior to construction
<ul style="list-style-type: none"> <li>• Record the historic Gnome village (see Final EIS page 3-125 for description of village).</li> </ul>	Prior to construction
<ul style="list-style-type: none"> <li>• Perform a social business history related to the economic contribution historic dredge mining operations made to the local central Idaho economy.</li> </ul>	Prior to construction