

Finding of No Significant Impact (FONSI)

BPA Adoption of the Westslope Cutthroat Trout and Bull Trout Preservation in the Upper Camas Drainage Environmental Assessment

Bonneville Power Administration
DOE/EA-2114
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SUMMARY

Bonneville Power Administration (BPA) announces its environmental findings for its proposal to fund the Montana Fish, Wildlife and Parks (MFWP) in the removal of non-native fish species through the use of a fish toxicant, and reintroduction of native fish species, within a small area of the Camas Drainage in partnership with Glacier National Park (Glacier). On March 19, 2019, the National Park Service (NPS) issued a final *Environmental Assessment* for the *Westslope Cutthroat Trout and Bull Trout Preservation in the Upper Camas Drainage* project. BPA is adopting the NPS EA (DOE/EA-2114) which describes and analyzes proposed BPA-funded activities. Since BPA was not a Cooperating Agency in the development of the EA, BPA is recirculating the final EA, with minor text modifications, as required by the Council on Environmental Quality's regulation 40 CFR 1506.3(b) for implementing the National Environmental Policy Act (NEPA). The minor changes are identified in red throughout the EA document and include the following:

- Analysis of effects to Yellowstone cutthroat trout. BPA is required to analyze effects to nonnative species as well as native ones.
- Analysis of effects to wetlands, floodplains, and water quality. Under DOE regulations (10 CFR Part 1022), BPA does not have waivers to dismiss potential effects to wetlands and floodplains from detailed analysis. Related to those impacts, BPA included the water quality analysis in the body of the EA rather than in Appendix D.

The BPA-funded program activities are described in the NPS EA as the Proposed Action. NPS issued a Finding of No Significant Impact (FONSI) on the Proposed Action on June 10, 2019. BPA has further 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.

Mitigation measures are described in the EA (Chapter 2, *Mitigation Measures for Alternative A* section) that NPS and MFWP are committed to implementing.

PUBLIC AVAILABILITY

A notification of availability would be mailed to potentially affected parties. The Final EA and this FONSI are available on BPA's project website: www.bpa.gov/goto/UpperCamas.

PROPOSED ACTION

To partially mitigate for the effects of Hungry Horse Dam on native fishes in the Flathead Basin, MFWP is considering the removal of non-native fish species, and reintroduction of native fish species, within a small area of the Camas Drainage in partnership with Glacier. BPA, which has an obligation to protect, mitigate, and enhance fish and wildlife affected by the construction and operation of Hungry Horse Dam under the Pacific Northwest Electric Power Planning and Conservation Act of 1980 (16 USC § 839b(h)(10)(A)), is proposing to contribute cost-share funding to MFWP to implement Westslope Cutthroat Trout and Bull Trout Preservation in the Upper Camas Drainage and adopt the NPS's March 19, 2019, Environmental Assessment of the same name with minor modifications to comply with DOE requirements under NEPA.

Under the Proposed Action, BPA would fund the activities of the MFWP who, in partnership with Glacier, are proposing to use rotenone, a fish toxicant (via motorized watercraft, drip stations, and backpack sprayers), to remove non-native Yellowstone cutthroat trout that hybridize with native cutthroat trout, from Camas Lake, Lake Evangeline, and Camas Creek above Arrow Lake in the upper Camas drainage of Glacier National Park, beginning in early September 2019. While unexpected, if Yellowstone cutthroat trout are present during post-treatment sampling, a second application of rotenone may be employed during the same or a following year to remove the remaining fish. Following the removal of the Yellowstone cutthroat trout, genetically pure (less than one percent non-native genes) native westslope cutthroat trout and bull trout would be translocated (i.e. stocked) into Camas Lake and Lake Evangeline. This would be done to establish a native fish assemblage that is secure against the threats of non-native fish and climate-related habitat degradation.

NO ACTION ALTERNATIVE

Under the No Action Alternative, BPA would not provide cost share funding to MFWP and Glacier would likely not remove Yellowstone cutthroat trout from the upper Camas drainage and would not stock Camas Lake or Lake Evangeline with westslope cutthroat trout, bull trout, or other native fish. A native fish assemblage would not be established and the threats of non-native fish would continue.

SIGNIFICANCE OF POTENTIAL IMPACTS OF THE PROPOSED ACTION

To determine whether the Proposed Action has the potential to cause significant environmental effects, the potential impacts of the proposal on human and natural resources were evaluated and presented in Chapter 3, *Affected Environment and Environmental Consequences*, of the EA. The Proposed Action, with implementation of selected mitigation measures, would have no significant impacts. The potential impacts associated with the Proposed Action and the reasons why these impacts would not be significant are summarized below.

Fish and Other Aquatic Species

- Yellowstone cutthroat trout present in the project area would be eradicated as a component of the Proposed Action, as is the objective. They are not native to Glacier National Park. They were stocked in Camas Lake and Lake Evangeline in the 1920s and 1930s and persist to the present day. They present an ongoing risk of hybridization and competition for habitat and resources to downstream native westslope cutthroat populations. Application of rotenone in the project area would kill up to 100% of existing Yellowstone cutthroat trout in the project area. If any Yellowstone cutthroats survive the rotenone treatment, their genes would be removed from the ecosystem via genetic swamping of westslope cutthroat trout post treatment. The watershed is

geographically separated from the Yellowstone cutthroat's native range by hundreds of miles and would have no effect on naturally-occurring Yellowstone cutthroat trout.

- Rotenone is a fish toxicant applied with the intent of killing fish. It is proposed for this project because, compared with mechanical methods of removing non-native Yellowstone cutthroat trout (e.g. netting, trapping, electrofishing, and angling), it would remove non-native fish in a period of days as opposed to years, and would achieve a complete removal. Removing fish via electrofishing and possibly other mechanical methods would also be used as needed. While other fish toxicants are available, rotenone is the only one that is registered and approved for use by the EPA. Rotenone is extracted from the roots of several plant species in the bean (legume) family. The chemical deprives aquatic gilled organisms of oxygen by interfering with cellular respiration, and is highly toxic to fish. Rotenone is naturally degraded by sunlight and water movement.
- Following application of the rotenone, a potassium permanganate solution would be used to detoxify the stream and neutralize the rotenone before it reaches native fish populations, including westslope cutthroat trout and bull trout, in Arrow Lake. Potassium permanganate is an odorless oxidizing agent, often used to remove foul tastes and odors from drinking water and reduce odors at wastewater treatment plants. The potassium permanganate would only be applied to Camas Creek. Camas Lake and Lake Evangeline would not be treated with potassium permanganate, but would be left to detoxify naturally.
- Native westslope cutthroat trout would benefit in the long term by conserving and establishing non-hybridized populations. Rotenone and potassium permanganate would cause some mortality of individual westslope cutthroat trout and sculpin that may be present in the stream portion of the treatment area at the time of application. But since only a few individuals would likely be affected, the degree of mortality would be too limited to cause effects at the community or population levels. Rotenone would not affect bull trout because it would be detoxified before reaching bull trout populations. The risk of bull trout mortality would be further mitigated by electrofishing the stream portion of the treatment area prior to applying rotenone, and relocating any bull trout that are found to untreated waters downstream.
- The translocation of westslope cutthroat trout and bull trout would result in the removal of eggs and/or individuals from donor fish populations. But the donor populations are large enough to support the removal of a small fraction (i.e. less than 10 percent) of the population. To minimize impacts to bull trout from the removal of eggs, females would be only partially spawned, with only about 50 percent of the eggs taken from each female. This would allow for some natural reproduction, producing enough eggs to fully seed the available juvenile rearing habitat. Maintaining oxygen levels and cold water temperatures during fish collection would mitigate the risk of mortality.
- Amphibian larvae and some macroinvertebrates (aquatic insects) and zooplankton would be killed during rotenone and potassium permanganate applications. Based on post-treatment monitoring of other MFWP applications that indicate the persistence of amphibian populations following treatment, and because amphibian mortality would be limited to the larval stage, local amphibian population abundance would likely recover within a year or two. Mortality to amphibians would also be reduced by implementing the project in late summer/fall, when many amphibian species have developed into terrestrial adults and are no longer susceptible (because they no longer rely on gills to breathe). Studies also show little lasting effect on aquatic insect communities; since some individuals are likely to survive, and because downstream drift and

overland migration from untreated waters would aid recolonization, local aquatic insect population abundance would likely recover in two to four years.

- Western toad adults would not be affected by rotenone or potassium permanganate because they are terrestrial and would not be present in the water. The tadpoles would have matured into terrestrial juveniles by the time rotenone and potassium permanganate would be applied in late summer/early fall. While some tadpoles could still be in the water and killed, the number would be too small to be of any measurable or lasting consequence to the population, especially since they would be rapidly replaced by the following year's hatch.
- Zooplankton densities have been shown to recover within a few months of rotenone application, with no change in species diversity, as evidenced by MFWP sampling associated with treatments elsewhere. Based on this, zooplankton communities would likely recover from any effects by the following spring. Since zooplankton primarily inhabit the lakes, most would not be exposed to potassium permanganate and, therefore, would not be affected by it (potassium permanganate would only be applied to the stream).

Wetlands, Floodplains, and Water Quality

- The Proposed Action would be a brief action (2–3 days) in a small area that would not disturb any wetland or floodplain soils or hydrology. As a non-persistent chemical, rotenone breaks down quickly and does not accumulate in the water, soil, plants, or surviving animals. Potassium permanganate is a strong oxidizer that rapidly breaks down into potassium, manganese, and water, and is also used by water treatment plants to remove foul odors from drinking water. The break-down products are common in nature and have no deleterious environmental effects at concentrations used for neutralization of piscicides. None of the project activities would cause physical alterations to water flow patterns within wetlands, nor affect floodplain function or value.
- The use of rotenone would not affect wetland and floodplain vegetation, since rotenone is not known to be toxic to plants at the concentration that would be used. Similarly, potassium permanganate would not impact wetland and floodplain vegetation at the levels proposed. Any vegetation trampling that occurs would be short enough in duration for wetland and floodplain soils and vegetation to recover independently, without restoration measures.
- Surveys for rare wetland and floodplain vegetation would occur prior to implementing the project, and any identified locations would be marked and avoided. This, combined with mitigation measures requiring personnel to stay on trails and unvegetated surfaces whenever possible and avoid the creation of social trails, would reduce the potential for trampling to the point that any effects that do occur would be barely noticeable and would not affect wetland and floodplain vegetation permanently or at a community or population level. In the unlikely event that wetland and floodplain plants or soils are trampled or compacted to the degree that they cannot recover on their own, the site would be restored.
- Work would occur in late summer (early September), when wetland and floodplain vegetation begins entering dormancy for the season and is less susceptible to permanent damage.
- Personnel would be working for an estimated one to two weeks along streambanks and lakeshores during the collection of native fish for translocation, which could occur any time during spring, summer, or fall. But the activity would be dispersed, rather than concentrated in any one area, resulting in negligible impacts to vegetation.
- Rotenone and potassium permanganate would dissipate to the point where there would be no detectable long-term changes to water quality. The inert ingredients associated with rotenone

formulations are highly volatile and naturally degrade in waterways within one to five weeks depending on pH, temperature, alkalinity, UV light, and dilution by freshwater in Camas Lake and Lake Evangeline. Potassium permanganate is one of the most widely used inorganic chemicals for the treatment of municipal drinking water and wastewater. At the anticipated concentration, potassium permanganate toxicity would decline rapidly as it reacts with the natural stream environment and the rotenone, and would not be expected to persist for more than 10-15 minutes of flow time in Camas Creek.

Common Loons and Other Water Birds

- Since elevations at Camas Lake and Lake Evangeline are higher than what is typically considered optimal nesting habitat for loons, and since there is no evidence of loons nesting at either lake, it is unlikely that loons would be nesting at the project site during the project.
- Prior to applying rotenone, the park would survey Camas Lake and Lake Evangeline for common loons. In the off chance that loons have nested on either lake and are raising chicks, the application of rotenone would be scheduled as late as possible, allowing more time for the juvenile birds to acquire the ability to fly to nearby lakes for forage.
- Loons nesting elsewhere (e.g. Trout and Arrow Lakes) could forage at Camas Lake and Lake Evangeline, and loons could also feed at the lakes during the migration period. There would be no direct effects to foraging loons from rotenone, since treatment concentrations would be far below levels that are toxic to birds.
- Rotenone would remove a source of food for any loons using the lakes, since it would kill all fish inhabiting the lakes, as well as some amphibian and aquatic macroinvertebrate larvae. Impacts would be temporary, lasting until amphibians and macroinvertebrates recover and until translocated native fish become established. Impacts would not measurably affect loon distribution since loons would still be able to forage in Arrow, Trout, and Rogers Lakes as well as Lake McDonald, approximately eight miles (12 kilometers) away, as those lakes would remain unaffected.
- Fisheries personnel visiting the lakes earlier in the season for pre-treatment activities (such as surveys or stream flow-monitoring, for example) may encounter breeding or nesting loons. But this type of human activity would not be much different from existing activity already occurring from hikers and anglers. The potential to disturb breeding or nesting loons would not, therefore, be expected to change in any noticeable way.
- Impacts to other water birds would generally be as described above for common loons. A source of prey would be removed for species that prey on Yellowstone cutthroat trout, such as loons, grebes, cormorants, mergansers, and some species of duck. But as with common loons, impacts would be temporary, lasting until translocated native fish become established, and impacts would be limited to Camas Lake and Lake Evangeline, leaving fish-based prey unaffected in other, nearby lakes. Aquatic macroinvertebrate prey would also be readily available at other, nearby lakes.
- Birds that are resting or foraging in the treatment area during helicopter long-line sling load operations, fish planting with a helicopter, and motorboat use could be disturbed or displaced. Effects would be very minimal, with no measurable changes to species abundance or distribution, since many birds typically migrate out of the park by late summer/early fall. For those that are still present, abundant habitat would remain available at other, nearby lakes.

Grizzly Bears

- The use of motorboats and helicopters could temporarily displace grizzly bears from the treatment area, but impacts would only occur at the individual level, with no population effects and no effects to the overall distribution of bears. This is because adjacent and widespread areas of undisturbed habitat would be available beyond the treatment area, no grizzly bear habitat would be lost, and the project would not cause grizzly bear mortality.
- The removal of Yellowstone cutthroat trout and the establishment of native fish in the upper Camas drainage would not change forage for grizzly bears as there are no records of grizzly bears foraging on Yellowstone cutthroat trout at Camas Lake or Lake Evangeline. During the removal of Yellowstone cutthroat trout, sinking dead fish that do not remain submerged would eliminate much of the potential for grizzly bears to scavenge the carcasses, but some scavenging could still occur. Grizzly bears would not be affected by any consumption of fish killed by rotenone, since treatment concentrations would be far below levels that are toxic to wildlife.
- Strict enforcement of attractant storage requirements and training in the appropriate behavior in the presence of grizzly bears would reduce the potential for bears to obtain food rewards, and conservation measures as agreed to with the US Fish and Wildlife Service in Glacier's 2018 programmatic biological assessment for administrative flights would mitigate impacts to bears from helicopter flights.
- To reduce the likelihood of grizzly bears becoming habituated to people, crew size would be relatively small (estimated at approximately 15). The area would be closed to public access.

Visitor Use and Experience

- Closure of the proposed treatment area from the beginning of the project in late summer/early fall until spring would adversely impact visitors who wish to camp at the Camas Lake backcountry campground in late summer, as well as hikers and winter recreationists on the Camas Creek Trail above Arrow Lake. Impacts would be temporary, ending once the closure of the treatment area is lifted in the spring. Closure of the Arrow Lake backcountry campground during project implementation would also impact visitors, but this closure would only be in place for an estimated four to six weeks (during rotenone application and detoxification), possibly longer if a second rotenone application is required during the same year. The campground closures would not begin until mid or late August, when the number of backcountry campers begins to decrease to notably fewer campers in mid to late fall.
- With 65 backcountry campgrounds in the park (223 campsites combined) and approximately 750 miles of trail that provide access to the park's backcountry, the majority of the park's backcountry campgrounds and trails would remain open and available, and the overall majority of backcountry campers and hikers would not be affected.
- Since the treatment area would be closed during rotenone application and detoxification, most visitors would not be near enough to detect most of the project noise, i.e. the generator, water pumps, and motorboats.
- Noise from helicopter long-line sling load operations and fish planting with a helicopter in the treatment area would likely be too distant and sufficiently dampened by terrain shielding to be more than barely audible, and would occur for only a few minutes at a time.
- The loss of opportunities to fish for Yellowstone cutthroat trout at Camas Lake and Lake Evangeline would adversely impact some anglers. Adverse impacts would be slight, however, because the majority of angling opportunities throughout the park would remain unaffected.

DETERMINATION

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.

/s/ SCOTT G. ARMENTROUT
SCOTT G. ARMENTROUT
Vice President
Environment, Fish and Wildlife

August 21, 2019
Date