

**Kootenai River Ecosystem  
Finding of No Significant Impact (FONSI)**

**June 2005**

Department of Energy

BONNEVILLE POWER ADMINISTRATION

Kootenai River Ecosystem Project

Finding of No Significant Impact (FONSI)

**Summary:** Bonneville Power Administration (BPA) is proposing to fund the Kootenai River Ecosystem Project. With this funding the Kootenai Tribe of Idaho (KTOI) and Idaho Fish and Game (IDFG) would add liquid nitrogen and phosphorus to the Kootenai River from late June through September for up to five years to replace nutrients lost to the hydrosystem. The goal of this project is to help enhance native fish populations and river health. The nutrients are expected to stimulate production in the Kootenai River's depleted food web and reverse downward trends in fish populations. Monitoring would determine the effects of nutrients on the ecosystem and water quality. This proposed project would be temporary and would be re-evaluated after 3-5 years. BPA has prepared an environmental assessment (EA) (DOE/EA-1518) evaluating the proposed project. Based on the analysis in the EA, 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. Therefore, the preparation of an Environmental Impact Statement (EIS) is not required, and BPA is issuing this FONSI.

**Copies:** For copies of the EA and additional copies of the FONSI please call BPA's toll-free document request line: 800-622-4520. Leave a request naming this project and giving your complete mailing address. The documents are also available on our web site at [http://www.efw.bpa.gov/environmental\\_services/Document\\_Library/Kootenai/](http://www.efw.bpa.gov/environmental_services/Document_Library/Kootenai/).

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**Public Availability:** This FONSI will be distributed to all persons and agencies known to be interested in or affected by the proposed action or alternatives.

**Supplementary Information:** BPA proposes to fund the Kootenai River Ecosystem Project. Under provisions of the Pacific Northwest Electric Power Planning and Conservation Act of 1980 (Act), BPA is obligated to protect, mitigate and enhance fish and wildlife and their habitats affected by the construction and operation of the federal hydroelectric system in the Columbia Basin, consistent with the Northwest Power and Conservation Council's (Council) Fish and Wildlife Program (2000). Libby Dam, on the Kootenai River near Libby, Montana is part of the federal hydroelectric system, and so BPA has a need to address impacts from Libby Dam on fish and wildlife.

The construction and operation of Libby Dam has changed the Kootenai's flow patterns and also captured nutrients, such as nitrogen (N) and phosphorus (P), that once enriched downstream areas behind the dam in Lake Koocanusa. Low nutrient levels are believed to be partly responsible for the low productivity of important native fish populations found in the river such as sturgeon, burbot, kokanee, redband trout, whitefish, bull trout, and cutthroat trout. These populations are particularly important to the Kootenai Tribe of Idaho,) which historically derived subsistence from the Kootenai River fishery. The Tribe and the Idaho Department of Fish and Game have proposed this project—to add nutrients to the Kootenai River—to help improve productivity of the native species and are seeking funding from BPA for the project to help BPA meet its mitigation obligation for Libby Dam.

The Kootenai River is currently nutrient poor and has been so for about 25 years. Although there are other factors influencing fish populations, low nutrient levels are partly responsible for the low productivity found in the river and part of the reason that important fish populations are not doing well. Nutrients that once flowed downriver from Canada are now being trapped in Lake Koocanusa behind Libby Dam. The separation of the Kootenai River from its historic floodplain (downstream of Bonners Ferry, Idaho) has also resulted in fewer available nutrients for river productivity.

Nutrients in the river system stimulate algae growth, which aquatic insects feed on. Fish then feed on the aquatic insects and completes the aquatic food chain. Nutrient declines, therefore, can reduce the health and productivity of affected fish populations.

Through the Council's Fish and Wildlife Program (1994/2000) and with funding from BPA, KTOI, IDFG, Montana Department of Fish, Wildlife, and Parks (MFWP), and others have been conducting Kootenai River fisheries research. This research has helped develop alternatives for meeting the need to enhance the river ecosystem, including the option of improving nutrient levels. BPA proposes to fund KTOI and IDFG to add liquid nitrogen and phosphorus to the Kootenai River from late June through September each year of the temporary project starting in 2005 to replace nutrients lost to the hydrosystem.

Two possible alternative plans have been identified and are addressed in the EA (Chapter 2). Briefly, they are as follows:

Proposed Action, Kootenai River Ecosystem Project: BPA would fund KTOI and IDFG to add nutrients (nitrogen and phosphorus) to the Kootenai River ecosystem for up to 5 years. The goal of this project is to enhance native fish populations and river health affected by the construction and operation of Libby Dam. The nutrients are expected to stimulate production in the Kootenai River's depleted food web and reverse downward trends in fish populations.

The project sponsors would develop an operations manual and recordkeeping system to collect data on nutrient additions and effects over time, and adapt the project to respond to the results. The fish community and water quality would be monitored. Should managers see nutrient additions resulting in potentially negative effects or no apparent benefit (especially within the fish community), the experiment would be discontinued and re-evaluated. Table 1 in the EA shows the possible outcomes and management actions based on those outcomes.

No Action Alternative: BPA would not fund the Kootenai River Ecosystem Project. As a result, it most likely would not be implemented. This alternative would not facilitate the enhancement of native fish populations and river health through the addition of liquid nitrogen and phosphorus. The current impacts to the Kootenai River Ecosystem would continue. Additionally, the negative impact of the no action alternative is not acceptable because it would not be consistent with the Northwest Power Planning Council's Fish and Wildlife Program, and it would not complement the activities of fish and wildlife agencies and appropriate Tribes.

BPA has determined, based on the context and intensity of the impacts identified for the proposed action, that they are not significant, using the definition of this concept in Section 1508.27 of the *Council on Environmental Quality Regulations for Implementing the National Environmental Policy Act*. This determination is based on the following discussion of the points in section 1508.27.

- 1) The project aims to rehabilitate the post development Kootenai River ecosystem and reverse declining trends in native fish populations by adding liquid nitrogen and phosphorus. The area of the river to be treated is used by boaters, hikers, birdwatchers, fishers and other recreationists. The pipe used for treatment would be submerged and would not provide a hazard to boaters. If the treatment is successful and fish populations increase, there would be a benefit to fishers because there would be the opportunity for harvest. Hikers, birdwatchers and others could also benefit if birds and other predators increase.
- 2) Implementation of the proposed action is not expected to affect the health or safety of the people of the project area. Though the City of Bonners Ferry uses Kootenai River water for its municipal water supply and has an intake downstream of the proposed treatment site, the treatment dilutions are well within safe water consumption standards (human) within 2m of the pipe (standards for humans are more conservative than for aquatic organisms). The storage tanks for the liquid nutrients would be on private land and would be underlain and surrounded by materials designed to contain leaks. An automated switch would shut off flow should nutrients flow faster than programmed. An alarm system notifying the on-site technician of a failure in the systems would be in place. Fencing and a locked gate would protect the area from vandalism. The pipe that transports the nutrients into the river would be submerged so that boaters can safely pass by. Public notification via pamphlet distribution and signs would be available at areas used by recreationists. Signs would be placed at the outlet pipe to provide information and alert river users of elevated nitrate concentrations at the pipe nozzle prior to mixing. Turbulence caused by the jet of fluid exiting the pipe would do the initial dilution of liquid and the turbulence from the moving water in the river would continue to mix the nutrients into the water. Following the treatment season the tanks will be emptied and the pipe in the river removed until the following season.
- 3) No park lands, prime farmlands, wild and scenic rivers, national trails, wilderness areas, national parks or ecologically critical areas would be affected. There is one riverine wetland along the eastern riverbank where the pipe would run into the river.

However, no soil or vegetation would be disturbed and no construction would occur in the wetland. See Number 8 below for a discussion of historic sites within the project area.

- 4) The potential impacts of the proposed action are not controversial so are not significant due to their controversy. Many of the comments that surfaced during the development and review of the preliminary EA focused on safety and technical issues relating to the storage and application of the liquid nitrogen and phosphorus. Additional concerns were expressed regarding potential affects to visual resources, vegetation and the implementation of erosion control measures and the possible contamination of well water. Concerns relating to the potential negative effects of adding nutrients to the river such as contamination and algal blooms were also expressed. These concerns have been addressed in the final EA.
  - No threatened or endangered plants or animals would be adversely affected.
  - Tanks would be colored to blend with local rock and vegetation. Tanks would not be visible from the river. River used would have their views altered slightly and most equipment would be screened by vegetation or would blend with surrounding vegetation and rocks.
  - No impacts to human health are expected.
  - Nutrients may improve river productivity and increase fish production.
  - No cultural resources were found. Historic resources would not be adversely affected.
  - Noise from construction and operations would be temporary.
  - Erosion control measures would be used to prevent and control erosion.
  - No floodplains or wetlands would be affected.
  - The treatment pipe would be submerged and not impact recreationists. Fish and wildlife may increase for recreation.
  - An access road would be improved. Some trees would be removed for a gravel pad for the tanks. Most equipment used would be temporary and removed after the treatment season.
  - During the treatment season, the onsite technician would provide security for the site.
- 5) The impacts of the proposed action are not significant due to the degree of highly uncertain, unique, or unknown risks. This project involves activities designed to enhance the environment for the benefit of native fish. The project will be evaluated on a continuous basis to determine if it is effective or results in any negative effects. Should it be determined that the project is not successful, the addition of liquid nutrients into the river will cease.
- 6) The actions proposed would not establish a precedent for future actions with significant effects or represent a decision in principle about a future consideration. This is a temporary project that could be halted at any time. Nutrient additions to

lakes and rivers have occurred in other ecosystems. If the impacts are positive and the project sponsors proposed to continue the project after 5 years, additional analysis would be done.

- 7) The proposal is not connected (40C.F.R. 1508.25 (a)(1)) to other actions with potentially significant impacts, nor is it related to other proposed actions with cumulatively significant impacts (40 C.F.R. 1508.25 (a)(2)). Moreover, as a small-scale scientific research action, this is not a major federal action and would not significantly affect the quality of the human environment (Department of Energy Regulations for Implementing NEPA, 10 CFR 1021, Subpart D, Appendix B B3.3, and Appendix C C8).
- 8) According to Montana State Historic Preservation Office site files, portions of the historic Moyie-Sylvanite and Leonia-Sylvanite wagon roads are located within the project APE. A portion of the historic Moyie-Sylvanite wagon road would be used to access the proposed storage tank location, and the outlet from the storage tanks would cross the path of the Leonia-Sylvanite wagon road (Ives 2005). This road within the project area has been previously impacted as a result of logging activities. Further modification in the form of adding fill material would not adversely affect this culture resource. No new cultural resources were identified during the field survey of the Area of Potential Effect conducted in March 2005. Montana State Historic Preservation Office concurred that this project would have no adverse effect on historic properties.
- 9) The following listed threatened or endangered species are found in the vicinity of the proposed actions: Kootenai River white sturgeon (*Acipenser transmontanus*); bull trout (*Salvelinus confluentus*); bald eagle (*Haliaeetus leucocephalus*), grizzly bear (*Ursus arctos horribilis*); gray wolf (*Canis lupus*); Canada lynx (*Felis lynx canadensis*); Ute ladies'-tresses (*Spiranthes diluvialis*); and critical habitat for Kootenai white sturgeon. BPA has consulted with the USFWS. The USFWS concurred with BPA's determination that the proposed project is "not likely to adversely effect" the listed species in the area (USFWS, May 16, 2005).
- 10) The actions proposed would not threaten to violate federal, state, or local law or requirements imposed for the protection of the environment. The following permits and consultation will be required and will be obtained: Stream Alteration Permit from Idaho Department of Water Resources; Land easement from the Idaho Department of Lands to have the proposed pipeline enter Idaho state land within the high-water mark; Section 12 Permit for Navigable Waters from the Army Corps of Engineers; a short-term activity exemption (STAE) from the Idaho Department of Environmental Quality for the initial 12-week treatment period proposed in lieu of a National Pollutant Discharge Elimination System (NPDES) permit and Section 401 of the Clean Water Act certification for the program. EPA would issue the NPDES permit and IDEQ the 401 certification for the next 4 years of treatment beginning in 2006 if the program is implemented.

**Determination:** Based on the information in the EA, as summarized here, BPA determines that the proposed action, the Kootenai River Ecosystem Project, as described and analyzed in the EA, is not a major federal action significantly affecting the quality of the human environment within the meaning of NEPA, 42 U.S.C. 4321 et seq. Therefore, an EIS will not be prepared, and BPA is issuing this FONSI.

Issued in Portland, Oregon.



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Date