

ENVIRONMENTAL ASSESSMENT AND DECISION NOTICE FOR THE KILBRENNAN LAKE REHABILITATION PROJECT

September 1, 2006

Project Proposal and Justification:

Kilbrennan Lake is located approximately 10 miles north of Troy, Montana, at an elevation of 2,884 feet. The lake has a surface area of 57 acres and a maximum depth of 22 feet. Feeder Creek and a small, unnamed spring at the south end of the lake are the only major sources of surface water entering the lake. Kilbrennan Creek flows out of the lake through private and public land for about 4 miles to the Yaak River. Montana Fish, Wildlife & Parks (FWP) believes that redband trout were likely the dominant salmonid species historically present in Kilbrennan Lake. However, black bullheads were illegally planted in Kilbrennan Lake sometime in the late 1960s or early 1970s, and since that time black bullheads have become a dominant species in the lake. Yellow perch were illegally introduced into Kilbrennan Lake in approximately 1995. The presence of these two exotic species has dramatically changed the species composition and population dynamics within the lake. Brook trout and rainbow trout numbers have decreased to point of near eradication, while stunted populations of black bullhead and yellow perch are very abundant. As a result of the change in species composition within Kilbrennan Lake, angler use of the lake has also declined within recent years.

FWP will implement a two-phased approach to rehabilitate Kilbrennan Lake. The first phase of this project will include enhancing the spawning habitat in Feeder Creek and constructing a fish barrier on Kilbrennan Creek. The enhancement of spawning habitat would involve adding up to approximately 40 cubic yards of washed gravel approximately 1.5 inches in diameter to the lower 700 feet of Feeder Creek. This action is intended to benefit redband trout residing in Kilbrennan Lake after project completion. The gravel will be placed strategically in the tailout regions of pools and run-type habitat, where redband trout spawning is likely to occur. FWP maintains that a physical barrier on Kilbrennan Creek is needed in conjunction with this project in order to prevent nonnative fish species from colonizing the lake after the chemical treatment. FWP will construct a physical structure on Kilbrennan Creek to achieve this objective. The identified barrier construction site is approximately 0.8 miles downstream of the lake outlet. This location has been identified as the most workable location to install the fish barrier based on access, stream channel type (confined and narrow), and stream channel stability. The barrier would be constructed of reinforced concrete, would span the active channel, and would create a barrier to upstream fish movement by creating a 3-4-jump barrier.

The second phase of this project would include using a combination of piscicides to remove nonnative fish species from Kilbrennan Lake, Feeder Creek, and a

portion of Kilbrennan Creek. We propose to use Prenfish, a commercial formulation that contains 5% rotenone as the active ingredient, as the primary piscicide for this project to remove nonnative rainbow trout, eastern brook trout, yellow perch, and black bullheads from Kilbrennan Lake and Feeder and Kilbrennan Creeks downstream to the constructed barrier on Kilbrennan Creek. FWP will also use a dry rotenone gel formulation in conjunction with Prenfish at strategic upwelling locations within Kilbrennan Lake. FWP will use potassium permanganate to detoxify Kilbrennan Creek near the constructed barrier on the Creek. We will determine the organic demand at several locations within Kilbrennan Creek and adjust the potassium permanganate concentrations to allow for demand and rotenone detoxification. This project will likely require two applications to achieve complete removal of the present fish community in Kilbrennan Lake due to the tenacious nature of black bullheads and the presence of spring activity within the lake. After the first piscicide application to Kilbrennan Lake and Feeder and Kilbrennan Creeks, we will evaluate the effectiveness of the treatment via gillnetting and electrofishing surveys and use the information gathered from these surveys to evaluate the need for an additional treatment. FWP will restock Kilbrennan Lake with redband trout after the effective chemical treatment. Stocking will likely take place the following spring.

Location of Project:

This project will be conducted on Kilbrennan Lake, the associated tributary to Kilbrennan Lake (Feeder Creek), and Kilbrennan Creek, the outlet stream to the lake, located approximately 10 miles northwest of the city of Troy, Montana. Specifically, Kilbrennan Lake is located within Township 33 North, Range 33 West, Section 29, Lincoln County, Montana.

Environmental and Social Impacts of Project:

There will be short-term increases in turbidity during the fish barrier construction phase. During construction of the barrier, all reasonably applicable Best Management Practices will be employed to minimize sedimentation to Kilbrennan Creek. For example, we will minimize turbidity by 1) scheduling construction during a low-flow period; 2) constructing temporary clear-water bypass channels, so that much of the new channel construction can be conducted in the dry; and 3) using pumps to dewater areas as necessary during construction of bank revetment and instream structures. We expect that any short-term increases in turbidity will not adversely impact the aquatic biota within Kilbrennan Creek or the Yaak River.

This project is designed to kill unwanted fish. Yellow perch, eastern brook trout, and nonnative rainbow trout are game species that would be eliminated from Kilbrennan Lake and Kilbrennan and Feeder Creeks. Black bullheads would also be eliminated, but are not classified as a game species. The impact from the removal of these fish species is expected to be short term and minor because the

lakes would be restocked with redband trout and would also likely pioneer into sections of Feeder and Kilbrennan Creeks. To help ensure that aquatic life and water quality in Kilbrennan Lake and Feeder and Kilbrennan Creeks will not be affected, Prenfish and a powdered rotenone formulation used in this project will be detoxified with potassium permanganate near the proposed fish barrier.

FWP expects the impacts to nontarget invertebrates within the project area to be minimal based on the resilient nature of most invertebrates to the chemicals used in this project. FWP also expects impacts to amphibians and reptiles as a result of this project to be minimal and further minimized by implementing the project during the fall time, when larval life stages are less likely to be present in the area. FWP expects this project to have little or no adverse effect on mammals or birds occupying the area, based on research that has shown that rotenone is not toxic to mammals and birds at the fish-killing concentrations that will be used for this project. This project is also not likely to have secondary effects, such as displacement, on any local populations of birds or mammals. Project personnel activity during project completion may be slightly higher than existing recreational use during the remainder of the summer and fall, but should have no effect on sensitive animal displacement. The fish community in Kilbrennan Lake is unlikely to be a substantial food source for any of these sensitive animal species. Therefore removing these fish from Kilbrennan Lake will have little or no impact on any of these species.

The risk that rotenone will enter and be mobile in groundwater is minimal. Although there are no domestic wells located within the project area, a single household on lower Kilbrennan Creek relies on Kilbrennan Creek for domestic water. FWP will consult with the landowner regarding this issue and provide a workable and safe source of domestic water, which will be made available for use from just prior to the application of Prenfish or powdered rotenone formulation until the degradation process of these piscicides is complete. FWP will collect water samples from the domestic water source and test for the presence of rotenone and the petroleum-based carriers in Prenfish. FWP will also follow the Prenfish label recommendations that advise using sentinel fish (rainbow trout in this case) to ensure the product has adequately degraded.

Risks to applicators are substantially greater than risks to the general public because of the necessity of handling the compounds at full strength. Measures to reduce risks to applicators include training, proper handling, and the use of safety equipment listed on the product labels such as respirator, goggles, rubber boots, Tyvek overalls, and nitrile gloves. All applicators would be trained on the safe handling and application of the piscicide. At least one, and most likely several, Montana Department of Agriculture certified pesticide applicator(s) would supervise and administer the project. Rotenone and potassium permanganate would be transported, handled, applied, and stored according to the label specifications to reduce the probability of human exposure or spill.

Health risk to project personnel will be minimized through the use of proper planning, preparation, and the use of personal protective gear.

The risk of exposure of these chemicals to the public will also be minor. Public signs notifying the public of the project will be posted in the area at all access routes, and the two forest access roads will be temporarily closed on the day the piscicides are applied. FWP will further limit human exposure of the chemicals used for this project to the public by providing domestic water for the local landowner on lower Kilbrennan Creek, closing the site to public use, collecting dead fish from the site, containing the treatment within the designated zone by detoxifying the piscicides, and posting signs within the project area that indicate no drinking, no swimming, and no eating dead fish.

Fish will not be stocked into Kilbrennan Lake until the toxic effects are gone, as indicated on the product labels. FWP will use caged fish (rainbow trout) to determine toxicity. Stocked fish will not accumulate residues of rotenone from the water.

Public Involvement:

In compliance with the Montana Environmental Policy Act, an environmental assessment was prepared and circulated for public comment from July 17 through August 28, 2006. Notices were advertised in three local newspapers (Daily Inter Lake, Tobacco Valley, and Western News), a news release was done, and notification was mailed to local conservation groups, timber companies, selected businesses, and natural resource agencies. We also notified adjacent landowners of the project. Copies of the EA were made available at three local libraries, the state library in Helena, the FWP Region 1 headquarters in Kalispell, and the FWP internet web site. FWP also conducted a public meeting in Troy on August 17, 2006, at which time FWP representatives described the project, answered questions, and gathered comments related to the project. FWP received the following public comments.

Citizen Comments:

Comment:

We are very pleased that you are doing something about this lake. Although we would like to see some "eastern brook" in there, but we are glad it will again be used. People used to come from all over on opening day of fishing season. Someone from Libby would come down opening day and have a big barbeque. It was great. I really hope we can get some of that back.

Response:

FWP agrees that Kilbrennan Lake is a valuable recreational resource for the Libby/Troy area, and that the productive potential for Kilbrennan Lake is high. FWP is proposing to restock the lake with native redband trout because we believe this species has great potential in the lake to create a meaningful fishery. However, we will evaluate redband performance in the lake within 2-5 years after stocking. If redband trout performance does not meet expectations, we will evaluate stocking other species, including brook trout.

Comment:

A very comprehensive job has been done on this project. On behalf of the membership of the Yaak Rod and Gun Club, we look forward to seeing this project move forward. It would be a real plus for FWP and the local fishermen to see this lake restored. Perhaps our only criticism is we would like to see brook trout as part of the plan. Congratulations on a very professional effort! Thank you!

Response:

FWP appreciates the recognition of our efforts on this project. FWP is proposing to restock the lake with native redband trout because we believe this species has great potential in the lake to create a meaningful fishery. However, we will evaluate redband performance in the lake within 2-5 years after stocking. If redband trout performance does not meet expectations, we will evaluate stocking other species, including brook trout.

Comment:

I support the rotenone treatment of Kilbrennan Lake. I would like to see the lake stocked with native fish only. I would also like to see some educational /informational signs put at the lake to inform the public on the project and the importance of protecting native fish and the damage of nonnatives and bucket biologists.

Response:

FWP's preferred alternative is to restock Kilbrennan Lake with native redband trout. We will continue to work with the U.S. Forest Service to implement a signage project after completion of the project.

Comment:

I feel the proposed project is a great idea whose time has come way too late. Looking at historic data, we know that Kilbrennan had the first documented

population of redband rainbows. To replant the lake with a fish that has been totally removed. My father and I started fishing the lake in the early 60s. It was an amazing fishery. My father told me stories of large rainbow and brook trout in the lake. The 20 years I fished the lake it came as promised. The bullhead issue did the lake in by the mid '80s. From my prospective to rebuild the fishery could restore a lake near and dear to my heart. Issues I have with the project: First, the bullheads will be hard to remove. I feel an under-ice treatment would be best for treatment. Second, I do not think brook trout should be added back to the lake. Third, the dam - who will maintain this structure and will it be engineered?

Response:

FWP agrees that Kilbrennan Lake is a valuable recreational resource for the Libby/Troy area, and that the productive potential for Kilbrennan Lake is high. We also agree that the black bullhead population inhabiting Kilbrennan Lake may be hard to eradicate. However, we feel that by 1) using the powdered rotenone at upwelling locations, 2) using appropriate concentrations of Prenfish (the commercial formulation of rotenone) determined via bioassays, and 3) applying a second treatment to the lake if needed, the likelihood of meeting the project objectives is high. FWP's preferred alternative is to restock Kilbrennan Lake with native redband trout. FWP accepts the responsibility of maintaining the barrier structure on Kilbrennan Creek. This structure was designed by the FWP Design and Construction Bureau and reviewed by a licensed professional engineer.

Decision Notice:

Based on the comments we received during the public comment period for the draft environmental assessment for the Kilbrennan Lake Rehabilitation Project, we have prepared the final environmental assessment for this project. Due to the urgent need to improve the quality of angling and restore redband trout to part of their historic range, I recommend that we implement plans to enhance spawning habitat in Feeder Creek, construct a barrier on Kilbrennan Creek, remove the nonnative fishes from Kilbrennan Lake, and restock the lake with redband trout as soon as possible.

James R. Satterfield, Jr., Ph.D., Supervisor
MT Fish, Wildlife & Parks, Region One

Date