Montana Fish, Wildlife & Parks

Region One
490 N. Meridian Road
Kalispell, MT 59901

Record of Decision
and
Finding of No Significant Impact
for
Proposed Bluegill Removal from Two Private Ponds
near Noxon, Montana

September 9, 2005

Montana Fish, Wildlife & Parks (MFWP) in cooperation with Avista Corporation (Avista) recently proposed to protect the fisheries in Cabinet Gorge Reservoir and other water bodies downstream by removing bluegill from two private ponds near Noxon, Montana. The bluegill were proposed to be removed using rotenone, a fish toxin, in September 2005.

Bluegill are not native to Montana and were not thought to be present in the Lower Clark Fork River Drainage. However, in the fall of 2003, bluegill were sampled in the two private ponds near Noxon, Montana, and both ponds are connected during high flows to Cabinet Gorge Reservoir. Introduced fish can cause substantial changes to aquatic ecosystems that are often negative, particularly for native fish and existing sport fisheries. This project was needed to prevent bluegill from establishing populations in Cabinet Gorge Reservoir or water bodies downstream in order to protect native and existing sport fisheries. A short summary of the proposal is provided below.

Because this proposal constitutes a management action under the jurisdiction of the state of Montana, MFWP conducted a Montana Environmental Policy Act (MEPA) analysis for the project. The MEPA process provides a means for examining possible impacts to the human and physical environment and for public involvement in the decision process. As part of the MEPA process, an environmental assessment (EA) of the project was released August 1, 2005. A memo announcing the project and release of the EA was mailed to 117 potentially concerned citizens/organizations. In addition, a news release about the project and EA was printed in the Sanders County Ledger in early August 2005. Comments on the project were accepted between August 1 and September 1, 2005. Presented below is a summary of the comments received, response to those comments, and decision regarding the project.

Proposal Summary

The proposed project would remove bluegill from the private ponds and connecting channel using rotenone, a fish toxin, to prevent them from establishing populations in Cabinet Gorge Reservoir or water bodies downstream and to protect the native and existing sport fisheries.

Rotenone is a naturally occurring substance derived from the roots of tropical plants in the bean family. It inhibits a biochemical process at the cellular level making it impossible for fish to use oxygen absorbed in the blood and needed in the release of energy during respiration. Rotenone kills fish at low concentrations because it rapidly enters the blood stream through the gills.

It was proposed to use the liquid-emulsifiable Prenfish brand rotenone containing 5% rotenone to treat the ponds and connecting channel. Concentrations proposed were allowed by the Prenfish label for normal pond use (0.5-1.0 ppm). However, potentially greater concentrations (up to 5 ppm is allowed by the label) would be used if field bioassays suggest that higher concentrations were needed. The Prenfish label states that the persistence would be one week to a month depending on water temperatures, sunlight intensity, alkalinity, etc.

The rotenone was proposed to be dispensed in the ponds by boat. Drip stations would be used to dispense the rotenone in the channel connecting the ponds along with backpack sprayers for ponded areas and springs. The discharge of the connecting channel would be measured prior to treatment to determine the amount of Prenfish needed in the drip stations. In addition, it was proposed to possibly use the powdered form of rotenone to treat the springs in the upper pond and connecting channel, thus preventing fish from seeking them as freshwater refuges during the application.

Potassium permanganate was proposed to detoxify the water at the lower pond outlet as an extra precautionary measure. The discharge of the lower pond would be measured prior to treatment, and the potassium permanganate would be applied to the water at a rate that would neutralize the rotenone and leave a residual amount of permanganate at the end of the zone of contact between the two chemicals. This concentration used would be up to 12 mg/L.

Treatment was proposed to occur once in the ponds and for an estimated eight hours in the connecting channel. Detoxification with potassium permanganate would occur during treatment and for one to two days following treatment.

Sentinel cages with target fish would be placed in each pond and the connecting channel to determine if the toxicity levels are effective and when the rotenone levels in the ponds are no longer toxic to fish.

It was proposed to either leave dead fish on-site in the water or dispose of them properly. It was also proposed to collect and bury dead fish that were found floating or along the pond shoreline on-site.

In the event some water was in the next landowner's pond downstream of the lower pond, it was proposed to be treated as well.

In addition, as a precaution, the well of the water user closest to the project would be monitored for rotenone following treatment, and it was proposed to provide the landowner with an alternate water source for drinking and for the birds that he raises for his commercial business during the project. This would be precautionary because rotenone breaks down very quickly when it comes in contact with soil and is not known to travel more than 3 inches in soil.

It was also noted that if unforeseen circumstances confounded the success of this project, it may be necessary to implement a second treatment to achieve the desired objectives, but the public would be informed prior to conducting the second treatment.

Summary of Comments Received and Response to Comments

The project proposal received a total of 3 written comments and 3 oral comments.

One of the written comments was from the neighboring landowner downstream of two main ponds proposed for treatment. The past two years this neighboring pond dried up, but this year about a foot of water remains in the pond that is connected to the two main ponds proposed for treatment. MFWP had proposed in the EA that in the event some water was in the neighboring pond, it would also be treated. The neighboring landowner suggested a better solution by oral and written comment during the comment period. The suggestion was to divert the water now trickling into the neighboring pond, instead of treating it due to the pond's proximity to his well. The neighboring pond would then likely dry up or the neighboring landowner suggested using mechanical means to remove the fish.

In addition, as a precaution, MFWP had proposed in the EA to provide this neighboring landowner with an alternate water source for drinking and for the birds that he raises for his commercial business during the project. This would be precautionary because rotenone breaks down very quickly when it comes in contact with soil and is not known to travel more than 3 inches in soil. The landowner turned down the offer of alternate water because he thought it would not be necessary if his pond were not treated.

The proposed project was changed as a result of this input. The proposal now is to divert the water feeding the neighboring pond through the county road culvert to an area on state land where it ponds up during spring before flowing to Cabinet Gorge Reservoir. The water would be diverted prior to, during, and following treatment for about a month (until the rotenone in the water flowing from the treated ponds would naturally have dissipated). Prior to the treatment the diverted water would be screened to keep any fish from escaping treatment. During and following treatment the screen would not be needed. Diverted water would likely pond up, but not be connected to any other bodies of water. The neighboring pond would then be drained of water with a trash pump to facilitate its drying up prior to fall rains. Other mechanical means (i.e., electrofishing and netting) may also be implemented if needed to remove any fish from any remaining water in the neighboring pond.

The second written comment was from the Montana Department of Transportation (MDT), the state agency owning the land to which the neighboring pond water would be diverted. MDT was supportive of the project, but had one proposed change. MDT wanted MFWP to investigate the possibility of hauling fish offsite for disposal instead of burying the fish on-site. This was due to the proposed project being within the bounds of the Cabinet-Yaak recovery zone for the grizzly bear and due to black bears in the project area as well potentially being attracted to the burial site and thus near a transportation corridor (Hwy. 200, county road, railroad, and private residences). Disposing of the fish offsite would minimize the concern of a vehicle collision or habituation of the bears. MFWP will investigate disposing of the fish offsite as requested by MDT.

The other written comment said the interested party did not support the project, but no specific concerns were given.

The main oral comment was from a neighbor downstream of the project. This neighbor had a pond on a portion of his property that he thought could be connected to the ponds proposed for treatment during high flows. His concern was that the pond partially on his property may have bluegill as well. As a result of his comment MFWP electrofished and netted his pond. The pond was shallow (between one and three feet deep), with silt substrate and a lot of aquatic vegetation. It was fed with spring water and connects during high water to Cabinet Gorge Reservoir. Two smallmouth bass were captured (species found in Cabinet Gorge Reservoir, not in the ponds to be treated). In addition, MFWP explored how the water from this pond would connect to the reservoir and discovered another pond downstream partially on railroad land. This pond was also relatively shallow, with silt substrate. It was netted and no fish were captured.

The second oral comment was of general support for the proposed project from Idaho Trout Unlimited. However, Idaho Trout Unlimited did not support any funding of the project to come from Avista. They thought the project should be fully funded by MFWP.

The final comment was more of an inquiry from a local resident. The local resident wanted to make sure the landowner of the ponds to be treated supported the project. MFWP explained the landowner was supportive. The landowner and adjacent neighbor have signed landowner agreements allowing MFWP to conduct the proposed project on their properties.

Decision and Justification

It is not known what effects bluegill would have on downstream fisheries if they established populations. However, during juvenile and potentially adult life stages, bluegill could compete with native fish and more important and desired game fish that achieve larger sizes. They may also change the abundance of other prey fish in the reservoir through competition for food, which ultimately could affect native fish and popular game fish predatory species by altering the prey base. MFWP has a responsibility to protect and conserve our natural heritage and sport fisheries.

As discussed in the EA, the proposed project would have minor and short-term environmental effects. In addition, as discussed above, the proposed project can be altered to meet the concerned citizens' needs.

Because of MFWP's responsibilities, the proposed project's minor potential environmental effects, and the ability to alter the proposed project to meet concerned citizens' concerns, the proposed project has been approved with the above-discussed modifications.

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Jim Satterfield, Regional Supervisor Date