

United States Department of the Interior
Bureau of Reclamation
Western Colorado Area Office
Grand Junction, Colorado

FINDING OF NO SIGNIFICANT IMPACT

INSTALLATION OF NON-NATIVE PREDATORY FISH ESCAPEMENT NET IN ELKHEAD RESERVOIR, AS AUTHORIZED BY THE UPPER COLORADO RIVER ENDANGERED FISH RECOVERY PROGRAM

In accordance with the National Environmental Policy Act of 1969, as amended, and the Council on Environmental Quality's Regulations for implementing the procedural provisions of the National Environmental Policy Act (40 CFR Part 1500-1508), the Bureau of Reclamation (Reclamation) has prepared an Environmental Assessment (EA) to evaluate the environmental impacts of Reclamation providing partial funds to the Colorado River Water Conservation District (River District) on behalf of the Upper Colorado River Endangered Fish Recovery Program (Recovery Program) to install a net to prevent the escapement of fish from Elkhead Reservoir via the dam spillway. The EA assesses a No Action Alternative and a Proposed Action Alternative. Based on the following, Reclamation has determined that the Proposed Action, with integrated environmental commitments, will not result in a significant impact on the human environment.

Background

Elkhead Reservoir is located approximately nine miles northeast of Craig, Colorado, in Moffat and Routt Counties. The reservoir is an on-stream reservoir on Elkhead Creek, a major tributary of the Yampa River. The reservoir was constructed in 1974 by Colorado Parks and Wildlife (CPW) and the Yampa Participants, a consortium of power providers. The earthen-fill dam was originally constructed with a total capacity of 13,700 acre-feet of water for agricultural, industrial municipal, species conservation, and recreational uses. Elkhead Reservoir was enlarged by the River District in 2006 to increase the storage capacity to approximately 25,550 acre-feet. The River District, along with the City of Craig, own and operate Elkhead Reservoir.

Elkhead Reservoir is a 900 acre reservoir which provides many recreational opportunities, including fishing, boating, water skiing, swimming, hiking, mountain biking, bird watching, camping, and hunting. Fishing is a popular recreational activity at Elkhead Reservoir, which has led to the introduction of non-native game fish to the reservoir, particularly smallmouth bass (*Micropterus dolomieu*) and northern pike (*Esox Lucius*). These non-native fish can escape into Elkhead Creek and ultimately the Yampa River during periods of high water when use of the reservoir's spillway is necessary. Designated critical habitat for four upper Colorado River endangered fish species occurs in the Yampa River downstream of its confluence with Elkhead Creek, and research has shown escape of these non-native game fish from Elkhead Reservoir diminishes the efforts of the Recovery Program to achieve recovery goals for the listed fishes.

Purpose and Need

The purpose of the Proposed Action is to provide partial funding to the River District Recovery Program to install a net to prevent the escapement of fish from Elkhead Reservoir via the dam

spillway. The need for the Proposed Action is to prevent non-native predatory fish within Elkhead Reservoir from escaping over the reservoir spillway into the endangered fishes' critical habitat.

No Action Alternative

Under the No Action Alternative, Reclamation would not provide funding to the River District, on behalf of the Recovery Program, to install the barrier net. Non-native predatory fish species within Elkhead Reservoir would continue to escape during spillway operation into the endangered fishes' designated critical habitat downstream of the reservoir. Endangered fish populations in the Yampa River would continue to experience predation by non-native predatory fish that escape from Elkhead Reservoir.

Proposed Action Alternative

Under the Proposed Action, Reclamation would provide partial funds to the River District, on behalf of the Recovery Program, to construct the proposed Elkhead Reservoir non-native predatory fish barrier net (project). The River District will manage construction, in coordination with CPW. The project would include the installation of a 575-foot long by 25-foot high barrier net made of 1/4-inch mesh to contain fish in Elkhead Reservoir during spillway operation. The net will be anchored to micropiles which were installed in the shoreline of Elkhead Reservoir as part of the 2006 Elkhead Reservoir Enlargement Project. Shoreline contact areas which have been eroded by wave action will be restored to allow the net to fit the previously installed anchors. To protect the barrier net from floating debris, an 800-foot long floating debris barrier will be installed in the reservoir upstream of the net. The debris barrier net will require the installation of new concrete anchors at both ends, as well as steel boat anchors along its length. The net and debris barrier will pass 2,500 cubic feet per second (cfs) when the net is 50% clogged, and the net and debris barrier will safely overtop and pass the dam safety inflow design flood without failure or increasing reservoir surcharge during a design flood.

Operation and maintenance of the proposed project will include the removal of visible floating debris from the barrier net and the debris barrier and pressure washing by divers as necessary (estimated need is two to three times per year), and annual inspections. CPW has agreed to complete operation and maintenance work on behalf of the Recovery Program up to an annual expenditure of \$10,000. Actions required which may result in expenditures above \$10,000 in any year will be addressed as they occur by the Recovery Program.

The expected life of the net is approximately seven years. There is no guarantee of funding for a subsequent net at the end of the first net's life cycle. CPW has prepared a Final Elkhead Reservoir Lake Management Plan (Plan), which describes fishery management actions to reduce the number of non-compatible, predatory non-native fish (northern pike and smallmouth bass) in the reservoir, with the goal of establishing a high quality, cost effective, and sustainable fishery that is also compatible with recovery efforts for endangered native fishes and conserves non-listed native fishes. The Plan was submitted to the Recovery Program for review and input.

Findings

Reclamation prepared an EA in March 2016 that analyzes the effects of the Proposed Action. Under the Proposed Action, Reclamation will provide partial funds to the River District, on behalf of the Recovery Program, to construct the proposed Elkhead Reservoir non-native predatory fish barrier net project.

Following are the reasons why the impacts of the proposed action are not significant:

1. The Proposed Action will have no long-term impacts on camping or other recreation.
2. Approximately one acre of reservoir will be permanently removed from recreational use due to an expanded area near the spillway being netted off by the fish barrier net and debris barrier; however, the reservoir will no longer need to operate below the maximum reservoir target to avoid using the spillway, which will expand the reservoir's surface area approximately 10 acres while at capacity.
3. The Proposed Action may affect and is not likely to adversely affect the Federally listed fish species, and will have no effect on the fishes' critical habitat or any other federally listed species or designated critical habitat.
4. The Proposed Action will have no potential to affect cultural resources.
5. The Proposed Action will have no effect on public or dam safety.
6. The Proposed Action will not alter Indian Trust Assets and American Indian Sacred Sites.
7. The Proposed Action will not involve any relocations, health hazards, hazardous waste, property takings, or substantial economic impacts. The proposed action would not have disproportionately high or adverse human health or environmental effects on minority or low-income populations or Indian Tribes.
8. There would be no long-term impacts on air quality or water quality.

Environmental Commitments

The following environmental commitments will be implemented as an integral part of the Proposed Action.


- The River District is responsible for obtaining and complying with any required Federal, state, or local permits to construct and operate the project, including permits under the Clean Water Act (Section 402 and 404 permits).
- Prior to construction, drawings and specifications for barrier net and debris barrier installation will be approved by the Dam Safety Branch of the Colorado State Engineer's Office.
- Access to the project area's east end will be confined to the access route through the Bears Ears Campground or across the spillway approach channel (while the reservoir level is below the spillway channel elevation), as identified in the EA.
- Access to the project area's west end will be confined to an area which was prepared and left as a maintenance work staging area after the dam enlargement project, as identified in the EA.
- Straw wattles, silt curtains, cofferdams, dikes, straw bales, or other suitable erosion control measures shall be used to prevent erosion from entering water bodies during construction.
- Fuels, lubricants, hydraulic fluids, and other petrochemicals shall be stored and dispensed in an upland staging area, away from water resources.
- Equipment shall be inspected daily and immediately repaired as necessary to ensure equipment is free of petrochemical leaks.
- Construction equipment shall be parked, stored, and serviced only at the designated upland staging area.

- Ground disturbances shall be limited to only those areas necessary to safely implement the Proposed Action.
- Vegetation removal shall be confined to the smallest portion of the Proposed Action Area necessary for completion of the work.
- Following construction, all disturbed areas above the normal high water elevation of the reservoir shall be smoothed, shaped, contoured and reseeded to as near to their pre-project conditions as practicable.
- The River District, in coordination with CPW, will ensure the effectiveness of the barrier with periodic inspections to detect tears or other defects in the net. Sampling in the stilling basin will take place on the descending limb of reservoir spilling. The sampling will detect fish escaping the reservoir, possibly indicating failure of the spillway net. The sampling will be designed to differentiate escapement from the reservoir from upstream movement from Elkhead Creek.
- In the event that threatened or endangered species are encountered during construction, all construction activities shall stop until Reclamation has consulted with FWS to ensure that adequate measures are in place to avoid or reduce impacts to the species.
- In the event of discovery of evidence of possible cultural or paleontological resources, all ground disturbing activities in the area shall immediately cease, and Reclamation shall be notified. Work shall not be resumed until authorized by Reclamation.

Conclusions

Based on the analysis of environmental impacts, coordination with local, state, and Federal agencies, as documented in the EA and supporting documents, I have determined that implementing the Proposed Action will not result in significant impacts on the quality of the human environment or the natural resources in the project area. The Proposed Action is not a major Federal action that would significantly affect the quality of the human environment. Furthermore, no environmental effects meet the definition of significance in context or intensity as defined at 40 CFR 1508.27 and evaluated in the EA. Therefore, an environmental impact statement is not required for carrying out the Proposed Action.

Signatures

Prepared by:	 Jennifer Ward Environmental Protection Specialist	<u>2/29/2016</u> Date
Recommended:	 Lesley McWhirter, Chief Environmental and Planning Group	<u>2/29/2016</u> Date
Approved:	 Ed Warner, Area Manager Western Colorado Area Office Bureau of Reclamation	<u>2/29/16</u> Date