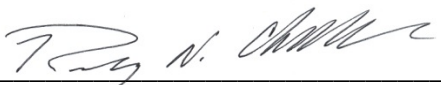


**United States Department of the Interior  
Bureau of Reclamation  
Lower Colorado Region  
Phoenix Area Office**

**FINDING OF NO SIGNIFICANT IMPACT**

**West Fork Black River Fish Barrier**

**Apache-Sitgreaves National Forests  
Apache County, Arizona**

Approved:   
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**Randy N. Chandler, Area Manager  
Phoenix Area Office  
Bureau of Reclamation**

Date: 9/25/2014

FONSI No. PXAO-14-04

## **Introduction**

The Bureau of Reclamation (Reclamation), in cooperation with the U.S. Forest Service (USFS), the U.S. Fish and Wildlife Service (USFWS), and the Arizona Game and Fish Department (AZGFD), proposes to construct a fish barrier in the West Fork Black River (WFBR), Apache-Sitgreaves National Forests (A-SNF), Apache County, Arizona. Following construction of the fish barrier, AZGFD will renovate the stream with a piscicide and stock federally-threatened Apache trout (*Oncorhynchus apache*) and federally endangered loach minnow (*Tiaroga cobitis*) in the WFBR.

In accordance with 43 CFR 46.320, Reclamation is adopting the USFS-prepared revised “Environmental Assessment for an Apache Trout Enhancement Project” (EA) (USFS 2004). The project, as originally proposed by the USFS, entailed modification of three existing fish barriers, construction of seven new fish barriers, and stream renovation within the A-SNF. Construction of the proposed WFBR fish barrier was included in the project description. Rehabilitation of the three existing fish barriers and construction of six of the seven proposed new barriers were completed by A-SNF; however, the WFBR fish barrier was never constructed. The agencies now propose to construct the WFBR fish barrier with funding provided by Reclamation. Construction management would be performed by Reclamation.

## **Project Location**

The project is situated on the WFBR in the A-SNF within Apache County, approximately 22 miles southwest of Alpine, Arizona (Latitude N. 33.755581°, Longitude W. -109.365473°, elevation 7,520 feet) (Figure 1). The proposed site is approximately 0.4-mile upstream of the stream’s confluence with the East Fork Black River. The study area includes a 3,200-foot reach of the WFBR that encompasses the proposed fish barrier site and potential upstream aggradation zone.

## **Project Description**

***Fish Barrier Site Selection.*** Reconnaissance-level field investigations of possible barrier sites on the WFBR were conducted by fish biologists from A-SNF and AZGFD prior to 2002. Selection criteria for identifying viable barrier sites on the WFBR were: (1) The presence of bedrock abutments to solidly anchor the barrier and minimize site impacts; and (2) a location near the confluence with the East Fork Black River to maximize the length of stream protected and minimize fragmentation of existing native fish populations. The proposed site was identified by A-SNF as meeting the requisite siting criteria. That site was included in the proposed alternative for the WFBR fish barrier in the 2004 EA.

***Fish Barrier Construction.*** The reinforced, concrete fish barrier would be constructed between rock abutments and sloping terrain that confine the stream channel and floodplain. The barrier would have a 7-foot tall drop onto a sloped, concrete apron, and would be designed to withstand forces associated with a 100-year frequency flood. Energy dissipation baffles would be integrated into the apron. The barrier would be anchored directly to bedrock at the abutments. Construction of the barrier will commence in the spring of 2015. Materials and equipment will

be transported from Forest Road 25G to a staging area on a terrace meadow along the existing road. From there, materials will be hauled by vehicle to the contractor use area at the barrier site. Concrete required for the barrier will be transported from commercial batch plants located in nearby towns to the terrace meadow by cement mixer trucks. From the meadow, concrete will be pumped down to the barrier site.

To facilitate construction, and to minimize downstream sedimentation and turbidity resulting from project activities, streamflow will be routed around in-stream portions of the work area. A small cofferdam will be built across the channel a short distance upstream of the barrier site to divert water into a suitably sized pipe (or ditch) and delivered back to the stream below the worksite. Waddles, hay bales, and other appropriate methods will be employed as necessary to minimize erosion and stabilize disturbed areas during construction. Construction and security crews will camp near the corral on Forest Road 25G.

## **CONSULTATION, COORDINATION, AND PUBLIC INVOLVEMENT**

The A-SNF distributed an initial EA for the Apache Trout Enhancement Project in 2002. After two Decision Notices were signed in 2002, several interested publics stated that they were either not properly notified through the scoping process or did not receive scoping information. Consequently, the A-SNF issued a revised EA in January 2004 to address concerns and issues brought up by the public in public meetings and letters subsequent to the original decision (USFS 2004). Following consideration of public input on the revised EA, the Forest Supervisor issued a Finding of No Significant Impact (FONSI) and Decision Notice in March 2004, authorizing the project to proceed.

On April 19, 2002, the USFWS issued its biological opinion (BO) on the Apache trout enhancement project, which evaluated the effects of barrier construction, restoration, and subsequent translocations in waters of the Black River and Little Colorado River watersheds. The species considered in the BO consisted of Apache trout, Little Colorado spinedace (*Lepidomeda vittata*), loach minnow, bald eagle (*Haliaeetus leucocephalus*) (no longer listed), and Mexican spotted owl (*Strix occidentalis lucida*) (MSO). Pure strain Apache trout, loach minnow, and Little Colorado spinedace are not present in the WFBR. Also, there are no MSO protected activity centers within ¼-mile of the proposed fish barrier site. In December 2003, the USFS requested reinitiation of formal consultation on changes to the Apache Trout Enhancement Project (ATEP), including concurrence with their determination that the project may affect, but is not likely to adversely affect, the Chiricahua leopard frog (*Lithobates chiricahuensis*). Chiricahua leopard frog is known to occur within the Black River watershed. Concurrence for the USFS's determination on Chiricahua leopard frog was included in a letter from the USFWS on December 29, 2003. On February 23, 2004, the USFWS issued a BO that concluded the ATEP is not likely to jeopardize the continued existence of the Apache trout, the Little Colorado spinedace, loach minnow, MSO, and Chiricahua leopard frog.

The USFWS listed New Mexico meadow jumping mouse (*Zapus hudsonius luteus*) as endangered on June 10, 2014. Designation of critical habitat was proposed on June 20, 2013. Proposed critical habitat within the Gila River basin includes streamside habitats along all or portions of eight high-elevation streams (up to 8,000-feet) in the White Mountains of

East-Central Arizona, including the WFBR. The species also is found in the nearby upper Little Colorado River drainage of Arizona, and at scattered localities in western New Mexico and extreme southern Colorado. Since 2005, there are 29 populations known to be extant, and approximately 70 historical localities are believed extirpated. None of the remaining populations are considered to occupy habitats large enough to be resilient.

The New Mexico meadow jumping mouse has exceptionally specialized habitat requirements to support life-history needs and maintain adequate population sizes. Primary constituent elements that are necessary to sustain the species' life-history processes consist of: (1) tall (averaging at least 24 inches), dense herbaceous (plants with no woody tissue) riparian vegetation composed primarily of sedges and forbs on water-saturated sites; (2) persistent emergent herbaceous wetlands dominated by beaked sedge (*Carex rostrata*) or reed canarygrass (*Phalaris arundinacea*) alliances, or scrub-shrub riparian areas that are dominated by willows (*Salix* spp.) or alders (*Alnus* spp.); (3) sufficient areas of 5.6 to 15 miles along a stream, ditch, or canal that contain suitable or restorable habitat to support movements of individual New Mexico meadow jumping mice; and (4) adjacent floodplain and upland areas extending approximately 330-feet outward from the water's edge as defined by the bankfull stage of streams.

On April 20, 2014, Reclamation examined floodplain characteristics on a 0.6-mile reach of stream encompassing the study area for the WFBR fish barrier project. While alders are present in narrow bands along the base flow channel banks, this reach of stream does not contain, nor does have it have the potential to express, all the primary constituent elements necessary for New Mexico meadow jumping mouse. In particular, habitat on the floodplain is not characterized by water-saturated soils and tall (at least 24 inches) and dense herbaceous riparian vegetation composed primarily of sedges and forbs. The main grasses found adjacent to the alders include Blue grama (*Bouteloua gracilis*), spike muhly (*Muhlenbergia wrightii*), and smooth brome (*Bromus inermis*); all of these are considered to be dry upland grass species. Although the project area is close to occupied habitat (approximately 1.3 miles away), the area would not be considered suitable habitat for the jumping mouse because it lacks the primary constituents elements necessary to sustain the species

On July 21, 2014, the A-SNF signed a Biological Assessment that determined the proposed WFBR fish barrier will have no effect on jumping mouse or its proposed critical habitat (USFS 2014). The Biological Assessment concluded that jumping mouse would not be expected to occur within the project area due to the lack of suitable habitat, and that the lack of necessary habitat features and primary constituent elements does not provide any critical habitat for this species.

## **FINDING OF NO SIGNIFICANT IMPACT**

Based upon a review and consideration of the effects presented in the revised EA and relevant Biological Assessments prepared by the USFS, Reclamation has determined the proposed action will not significantly impact the human environment and that preparation of an environmental impact statement is not warranted. The following issues have been taken into consideration in Reclamation's deliberation whether a FONSI is appropriate, or an environmental impact statement should be prepared:

1. The proposed action will not violate any Federal, State, or local environmental laws or requirements. Reclamation received Clean Water Act (CWA) 404 permit coverage from the U.S. Army Corps of Engineers under Nationwide Permit 27. The Arizona Department of Environmental Quality issued a waiver of CWA 401 individual certification. The proposed project will comply with all applicable 401 general conditions and 404 general and regional conditions.
2. A-SNF conducted a cultural resource survey of the area of potential effect for the proposed action. No cultural resources were found in or near the project area. In accordance with the USFS Region 3 Programmatic Agreement with the State Historic Preservation Office, no further survey is required. No impacts are foreseen on any proposed or listed National Register eligible historic or cultural places.
3. The WFBR fish barrier would provide protection for existing populations of Sonora sucker (*Catostomus insignis*), desert sucker (*Pantosteus clarki*), speckled dace (*Rhinichthys osculus*), and roundtail chub (*Gila robusta*), and for future stockings of pure strain Apache trout and loach minnow. The EA and relevant biological opinions demonstrate there are no foreseeable significant adverse impacts that are likely to jeopardize the continued existence of any threatened or endangered species or their habitat as a result of the proposed action.
4. There are no wetlands, floodplains, ecologically critical areas, or other unique characteristics within the project area that will be significantly impacted. The proposed action will not affect eligibility of the WFBR as a wild, scenic, and recreational river.
5. There are no known effects upon the human environment that are highly uncertain or involve unique or unknown risks. Reclamation has constructed fish barriers on other streams in Arizona and has monitored the effects of such projects on aquatic biota and fluvial morphology. Effects of the proposed project are expected to be similar to the effects of those past similar actions implemented by Reclamation.
6. The proposed action does not set a precedent for similar projects that may be implemented by Reclamation or other agencies. Numerous fish barriers have been constructed by Federal and State agencies throughout the western United States.
7. The EA demonstrates that there will be no significant adverse or beneficial impacts on the quality of the human environment including water, air, land use, soil, and cultural and biological resources. Impacts to physical and biological resources will be highly localized and limited to the project area.
8. Public health and safety will not be significantly affected by the project. The project area is unpopulated and isolated. There will be no disproportionate direct or indirect effects on populations defined in Executive Order 12898 (Environmental Justice) due to the remote nature of the project area.
9. Indian Trust Assets will not be affected.

Documents cited above.

USFS (U.S. Forest Service). 2004. Apache trout enhancement project environmental analysis. Apache-Sitgreaves National Forests, Arizona.

USFS (U.S. Forest Service). 2014. Biological assessment for the Apache-Sitgreaves National Forests West Fork Black River barrier New Mexico meadow jumping mouse assessment. July 21.

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