

# RECLAMATION

*Managing Water in the West*

**PROPOSED  
SPRING CREEK (OAK)  
AQUATIC RESOURCES PROTECTION PROJECT**

**Red Rock Ranger District  
Coconino National Forest  
Yavapai County, Arizona**

**Scoping Information  
and  
Opportunity to Comment**

**U.S. Department of the Interior  
Bureau of Reclamation  
Phoenix Area Office**



**October 2013**

## Introduction

This Scoping Notice/Opportunity to Comment is being offered to the public to allow early and meaningful participation in the National Environmental Policy Act (NEPA) review of an aquatic resources protection project in Spring Creek (Oak Creek drainage) proposed by the Bureau of Reclamation, U.S. Forest Service (USFS), Arizona Game and Fish Department (AGFD), and U.S. Fish and Wildlife Service (FWS). After the public scoping period has ended, Reclamation will prepare an Environmental Assessment (EA) to evaluate the potential environmental consequences of the proposed project.

## Background

The proposed Spring Creek aquatic resources protection project complements other conservation measures being implemented by Reclamation to assist with the recovery and conservation of federally listed fish and amphibian species in the Gila River Basin. These measures are mandated by biological opinions issued by the FWS in 1994, 2001, and 2008 on impacts of Central Arizona Project (CAP) water transfers to the Gila River Basin.<sup>1</sup> Spring Creek is a tributary to Oak Creek within the Verde River watershed. The Verde River watershed forms part of the middle Gila River Basin.

Human induced changes in aquatic habitat and interaction with nonnative species have had a profound impact on native fishes in Arizona. Habitat destruction and alteration were the principal causes for declines of native fishes in the American southwest prior to the mid-1900s; however, in the past several decades, it has become apparent that the presence of nonnative fishes precludes or negates benefits from habitat protection and restoration (e.g., Marks et al. 2010). Avenues of impact to native fishes include predation, competitive exclusion, niche displacement, hybridization, and pathogen transmission (Mooney and Cleland 2001, Strauss et al. 2006). Introduction and spread of nonnative fishes now are considered the most consequential factors preventing sustenance and recovery of imperiled native fishes in the Gila River Basin and other drainages of the southwest (Moyle et al. 1986, Minckley 1991, Minckley and Marsh 2009, Clarkson et al. 2012). The cumulative impact of physical and biological stressors to aquatic habitats, especially in mainstem rivers, has fostered a pattern where native species now persist primarily in the upper reaches of tributary drainages. Consequently, the segregation of native and nonnative fishes in these tributary systems (or isolation management; Novinger and Rahel 2003) via the emplacement of fish barriers to prevent mixing of the two kinds has become a primary management tool to assist with recovery of native fishes.

Spring Creek is considered by the agencies to be a high-value stream for conservation of several aquatic and semi-aquatic species. The lower 3.9-mile perennial reach currently supports lowland leopard frog, terrestrial gartersnake, and five species of native warm-water fishes, including longfin dace, speckled dace, desert sucker, Sonora sucker, and federally-endangered Gila chub. Habitat conditions appear suitable for other federally-endangered fishes such as spikedace, Gila topminnow, and possibly loach minnow, and other species of native gartersnakes.

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<sup>1</sup> The 1994, 2001, and 2008 biological opinions on CAP water transfers to the Gila River Basin are available at <http://www.fws.gov/southwest/es/arizona/biological.htm>.

There are no nonnative fishes present in Spring Creek, but several problematic species are found in Oak Creek and the Verde River downstream. Nonnative crayfish, however, are present throughout the perennial reach of Spring Creek.

## **Project Description**

The proposed project includes the emplacement of a concrete fish barrier to protect the existing native fish assemblage in Spring Creek, Yavapai County, Arizona. The barrier would be constructed upstream of an existing concrete irrigation diversion structure in the lowermost reach of Spring Creek on National Forest System (NFS) land administered by Coconino National Forest (CNF), north of Cornville in Section 27 of Township 16 North, Range 4 East of the Gila and Salt River Baseline and Meridian (Figures 1 and 2). Following construction, spinedace and Gila topminnow would be stocked in Spring Creek upstream of the fish barrier. Consideration would also be given to stocking loach minnow, narrow-headed gartersnake, and/or Mexican gartersnake.

## **Purpose and Need**

The purpose and need for the proposed project is to protect the existing Spring Creek population of Gila chub and other native aquatic species against possible future upstream incursion of nonnative fishes from Oak Creek and the Verde River. Additional benefits would accrue from securing habitat for stocking spinedace, Gila topminnow, and possibly loach minnow and gartersnakes. Implementation of the proposed action would meet one of the key conservation measures of the CAP biological opinions, which encourages the strategic placement of fish barriers to “prevent or hinder upstream movements of nonindigenous fish and other aquatic organisms into high-value native fish and amphibian habitats” and to “protect existing populations of listed fishes or facilitate the repatriation and stocking of native fishes upstream of the barriers.”

## **Alternatives to the Proposed Action**

Section 102(2)(E) of NEPA requires that no action must be considered as an alternative in an environmental review whenever there are unresolved conflicts about the proposed action with respect to alternative uses of available resources. A description of no action is also customarily used in EAs to provide the baseline for comparison of environmental effects of the action alternatives against conditions that are representative of the status quo.

In addition to no action and the proposed action, other alternatives to meet the purpose and need will be considered during scoping.

## **Decision Framework**

The Responsible Official for the NEPA process and construction of the fish barrier is the Area Manager of Reclamation’s Phoenix Area Office. This Official must decide whether to

implement the proposed action, another action, or no action. The Responsible Official for the USFS (Red Rock District Ranger) must decide whether or not to authorize the use of NFS land for implementation of the project. If the USFS authorizes the project, Reclamation would construct the proposed barrier on NFS land, and AGFD, in cooperation with the FWS, USFS, and Reclamation would take the lead in stocking spikedace and Gila topminnow, and potentially the other native species identified above.

## **Preliminary Issues**

In accordance with Department of the Interior NEPA regulations at 43 CFR 46.300, Reclamation has determined that an EA is the appropriate level of NEPA compliance to evaluate the potential environmental consequences of the proposed project. NEPA applies to Federal actions; therefore, the first step in determining the scope of the EA is to identify relevant issues related to the effects of the proposed Federal action on the existing environment. Public input during this initial scoping process will help us focus the EA on those issues.

The Interdisciplinary Team determined the following issues were important to assess in detail in the EA:

- effects to biological resources, including special status species
- effects to cultural resources
- effects to water resources, including water quality and quantity
- effects to soils and sedimentation
- effects to land use

## **Consistency with CNF Resource Management Plans and Policy**

The CNF manages NFS land in the Spring Creek watershed in accordance with the *Coconino National Forest Land and Resource Management Plan* (Forest Plan; USFS 1987, as amended)<sup>2</sup> and other national policy and direction, including section 7(a)(1) of the Endangered Species Act (ESA) which requires all federal agencies to utilize their authorities to carry out programs for the conservation of threatened and endangered species.

The proposed action was determined to be consistent with the management direction of the current Forest Plan, as follows:

- Manage habitat to maintain viable populations of wildlife and fish species and improve habitat for selected species (Forest Plan page 22-1).
- Improve habitat for threatened, endangered, or sensitive species of plants and animals and other species as they become threatened or endangered. Work toward recovery and delisting threatened and endangered species (Forest Plan page 23).

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<sup>2</sup> The Forest Plan is presently undergoing revision. Implementation of the revised Forest Plan is anticipated at the end of 2013.

- Identify and protect areas that contain threatened, endangered, and sensitive species of plants and animals (Forest Plan page 23).

Commensurate with the management direction of the Forest Plan, USFS policy is to recover threatened and endangered species so that special protection measures provided under the ESA are no longer necessary and to ensure, through appropriate management practices, that non-listed native species do not become threatened or endangered because of USFS actions (FSM 2602, 2670). Policy also is to encourage or initiate translocation of listed species into suitable unoccupied habitat when such actions promote recovery of the species (FSM 2674). The National Forest Management Act of 1976 (PL 104-333, as amended) requires the USFS to provide for the biological diversity of national forests consistent with overall multiple-use objectives of the planning area and to maintain viable populations in the planning area.

## **How to Comment and Timeframe**

You are encouraged to offer comments on the scope of the upcoming EA, including potential alternatives to the proposed project that would meet the stated purpose and need. To be most helpful, comments should be as specific as possible. Please mail your comments to Mr. John McGlothlen, Bureau of Reclamation, 6150 West Thunderbird Road, Glendale, Arizona 85306, or email your comments to [jmcglothlen@usbr.gov](mailto:jmcglothlen@usbr.gov). Comments may also be faxed to 623-773-6486. To be considered in the EA, comments must be submitted no later than November 22, 2013. Before including your name, address, telephone number, email address, or other personal identifying information in your comment, you should be aware that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public view, we cannot guarantee that we will be able to do so.

For additional information concerning the proposed project, please contact Mr. McGlothlen at 623-773-6256, or by email.

## **Literature Cited**

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- Novinger, D.C., and F.J. Rahel. 2003. Isolation management with artificial barriers as a conservation strategy for cutthroat trout in headwater streams. *Conservation Biology* 17:772-781.
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Figure 1. Project area map.

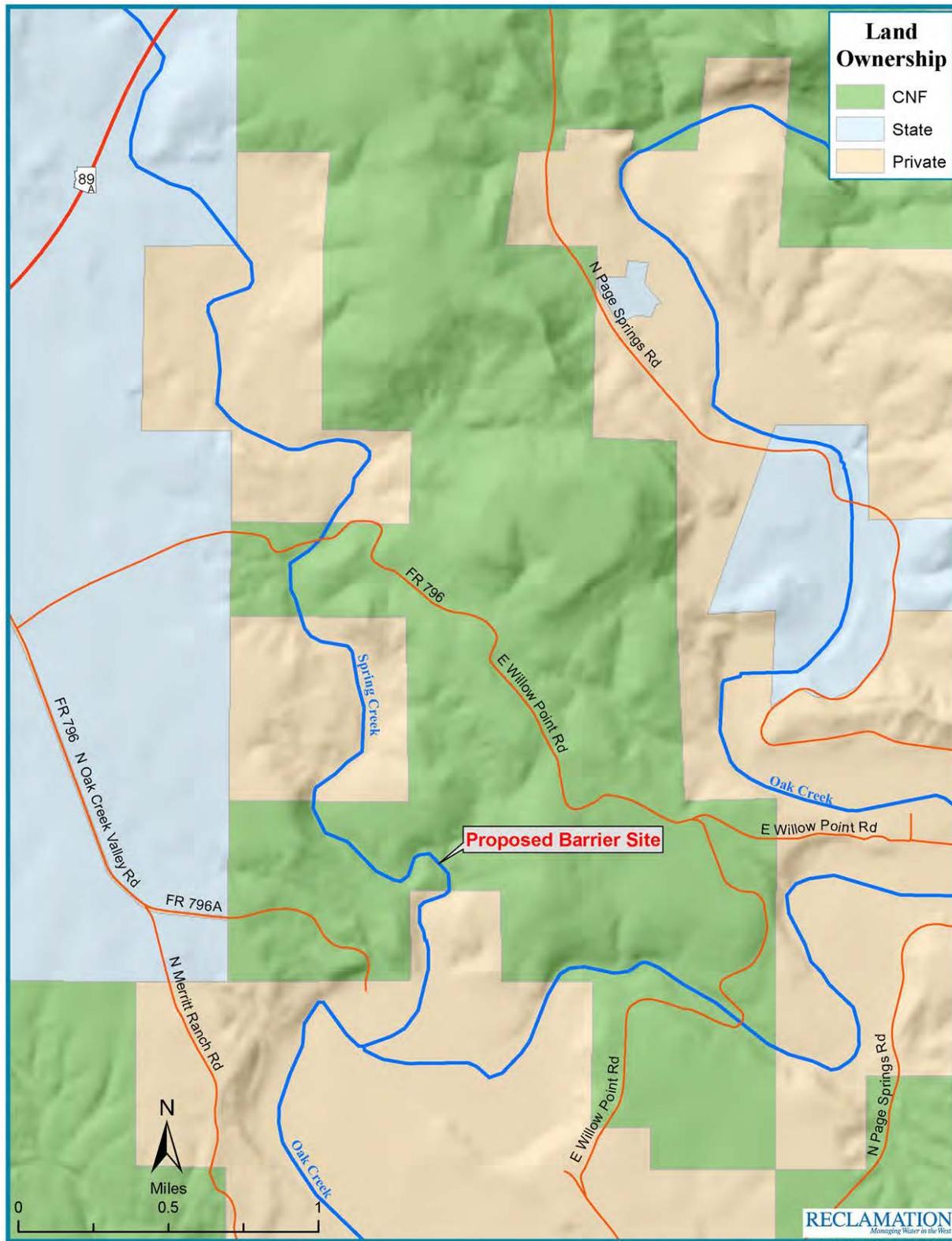


Figure 2. General location of proposed fish barrier.