



United States Department of the Interior

FISH AND WILDLIFE SERVICE

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Memorandum

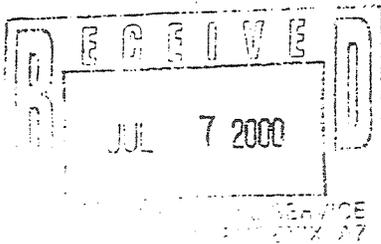
To: Regional Director, Bureau of Reclamation, Boulder City, Nevada

From: Regional Director, Region 2

Subject: Amendment Number 5 to the April 20, 1994, Biological Opinion on the Transportation and Delivery of Central Arizona Project Water to the Gila River Basin in Arizona and New Mexico

This is in response to your memorandum dated April 6, 2000, regarding changes to item 1 of the reasonable and prudent alternative (RPA) of the April 20, 1994, biological opinion on the transportation and delivery of Central Arizona Project (CAP) water to the Gila River Basin in Arizona and New Mexico. This also responds to your request of June 22, 2000, regarding designated critical habitat for spinedace (*Meda fulgida*) and loach minnow (*Tiaroga cobitis*) and the effect of funding transfer delays under RPA items 3 and 4 on the effectiveness of the overall RPA in avoiding jeopardy and adverse modification of critical habitat. The 1994 opinion concluded the project would jeopardize the continued existence of the spinedace, loach minnow, razorback sucker (*Xyrauchen texanus*), and Gila topminnow (*Poeciliopsis occidentalis*) and would adversely modify critical habitat of the spinedace, loach minnow, and razorback sucker. The findings for critical habitat of spinedace and loach minnow were removed from the opinion on May 6, 1998, due to a court-ordered set-aside of those designations. Species for which the action was determined to be non-jeopardy included the desert pupfish (*Cyprinodon macularius*), Colorado River squawfish (*Ptychocheilus lucius*), and bald eagle (*Haliaeetus leucocephalus*).

There have been four previous amendments to the April 20, 1994, opinion:



Amendment No.	Amendment Date	Opinion Element Affected	Change
1	6/22/95	RPA item 2	Approximate 10-month extension of initiation of monitoring to 8/1/95, with interim monitoring program.
		RPA item 3 and 4	Approximate 12-month extension of first funding transfers to 6/30/95, with final transfer mechanism to be in place by 10/94.
2	5/6/98	finding for critical habitat	Removal of findings for critical habitat for spikedace and loach minnow due to court set-aside.
		RPA item 1	Approximate 26-month extension for Aravaipa Creek barrier completion.
3	7/24/98	action agency	Adds the Corps of Engineers issuance of 404 permit for barriers under RPA 1, as an action covered by opinion.
4	1/13/00	RPA item 1	Additional 6-month extension for Aravaipa Creek barrier completion; 12-month extension for San Pedro River barrier completion.

The purpose of this fifth amendment is to modify dates for implementation of parts of RPA item 1, to restore the findings for critical habitat for spikedace and loach minnow, and to address the effect of funding transfer delays for RPA items 3 and 4 on the avoidance of jeopardy and adverse modification of critical habitat.

BIOLOGICAL OPINION AMENDMENT

This amendment does not change the findings made for the seven species considered in the April 20, 1994, opinion and amendments 1 through 4, nor for the critical habitat for razorback sucker. On January 13, 2000, the Fish and Wildlife Service (Service) provided the Bureau of Reclamation (BR) with a memorandum discussing the effects of the CAP on the proposed critical habitat for spikedace and loach minnow and concluded that conferencing was not necessary. Critical habitat for spikedace and loach minnow was redesignated on April 25, 2000 (65 FR 24328) to include a total of 898 miles of stream in the Gila River basin. To formalize that analysis, the findings for spikedace and loach minnow critical habitat are amended as follows:

The critical habitats for spikedace and loach minnow were redesignated on April 25, 2000 (65 FR 24328) to include a total of 838 miles of stream in the Gila River basin. It is the Service's biological opinion that the proposed delivery of CAP water to water users in central Arizona is likely to adversely modify the critical habitat of spikedace and loach minnow.

EFFECTS OF THE ACTION

The 1994 opinion contained an analysis of effects regarding critical habitat for spikedace and loach minnow and concluded that the proposed action would adversely modify their critical habitat. This was based on a March 8, 1994, critical habitat designation that was subsequently withdrawn on March 25, 1998, due to a court decision. On May 6, 1998, the April, 1994, opinion was amended by removing the part of the opinion addressing spikedace and loach minnow critical habitat. The amendment indicated that all of the RPA elements were also necessary to avoid jeopardy, and removal of the analysis of effects to spikedace and loach minnow critical habitat did not result in changes to or removal of any requirements or recommended measures in the opinion.

In the 1994 opinion, the existing RPA was considered sufficient to avoid adverse modification of spikedace and loach minnow critical habitat. Although the critical habitat designated in April, 2000, includes additional reaches not considered in the 1994 critical habitat designation, all are within the affected area considered in the 1994 opinion. We have reviewed the analysis and findings in the 1994 opinion, as they relate to critical habitat, and determined that the analysis covered effects to spikedace and loach minnow habitat, including all currently designated critical habitat. Although some newly designated areas, such as most of the San Pedro River, are unoccupied by these species, the 1994 analysis included consideration of such unoccupied habitat. In fact, substantial portions of the RPA are directed toward protection of the San Pedro River.

It is recognized that construction of fish barriers on both Aravaipa Creek and the San Pedro River will occur within designated critical habitat. Although this construction will result in alteration of critical habitat, the action is designed to remove adverse impacts from CAP-mediated nonnative aquatic species and will entail substantial benefits to spikedace and loach minnow. The construction of the barriers is part of the RPA in the 1994 opinion and therefore, is not likely to destroy or adversely modify critical habitat for spikedace or loach minnow.

All other portions of the effects analysis remain unchanged.

REASONABLE AND PRUDENT ALTERNATIVE

Implementation of the April 20, 1994, RPA, as modified by the four amendments listed above and the following changes, will avoid the likelihood of jeopardizing the continued existence of

listed species or destruction or adverse modification of critical habitat.

RPA item 1.1

Item 1.1 requires BR to complete a set of two barriers on Aravaipa Creek within 3½ years of the date of the opinion. Because of difficulties in securing rights to appropriate barrier sites, this date was not met. The date was amended on May 6, 1998, and again on January 13, 2000, and the present due date for completion of these barriers is June 30, 2000. All property agreements, environmental compliance, and permits are in place and construction is set to begin in June, 2000. However, the barriers will not be complete until September, 2000.

It also requires BR to complete a set of two barriers on the San Pedro River between Redington and Fairbank within 6 years of the date of the opinion. There have been substantial difficulties, both regarding property rights and technically suitable barrier sites, that have resulted in delays in barrier construction. In addition, it may not be possible to find two technically suitable sites with willing landowners. As discussed in your April 6, 2000, memorandum, a possible alternative scenario may be one barrier on the San Pedro River and a second on Hot Springs Canyon. Because of the delay in nonnative fish management that this would entail, if that scenario becomes necessary, there may need to be additional or different monitoring and/or nonnative management actions in the San Pedro River. The details of those would need to be established once the barrier locations are determined. If two barriers can be constructed on the San Pedro River, they are expected to be completed by July 1, 2002.

RPA item 1.1 is amended as follows:

1.1 BR shall construct physical drop structures that act as barriers to upstream fish movement at the following locations:

Aravaipa Creek -- between the Aravaipa Canyon Wilderness and the mouth (2 barriers in close proximity).

San Pedro River -- one of the following two alternatives between Redington and Fairbank (2 barriers in close proximity) or 1 barrier between Redington and Fairbank and 1 barrier on lower Hot Springs Canyon (with additional monitoring and management to be mutually agreed upon by BR and SERVICE, in consultation with the AGFD).

The barriers on Aravaipa Creek shall be completed by November 1, 2000. The barrier(s) on the San Pedro River shall be completed by July 1, 2002. If the Hot Springs Canyon barrier option is used, the completion date of that barrier will be as soon as feasible after completion of the San Pedro barrier, and no later than July 1, 2004.

All other specifications of RPA 1 remain unchanged.

The changes to RPA item 1 do not alter the type or severity of effects from implementation of the RPA-modified project to spikedace, loach minnow, Gila topminnow, or razorback sucker and their critical habitat. Although the actions required by the RPA are expected to alleviate threats from future incursions of nonnative fishes, the probability of adverse effects is slightly increased by the changes to RPA item 1. The addition of an alternative barrier scenario on the San Pedro River and Hot Springs Canyon may slightly lessen the effectiveness of nonnative fish management in the mainstream of the river. However, the lengthy intermittent section upstream from the one barrier still allows for detection and control of invading nonnative fish under most conditions. Moving the second barrier to Hot Springs Canyon will provide a greater degree of protection to that portion of the critical habitat of spikedace and loach minnow. Extension of the deadlines for the barriers increases the probability that nonnative fish may enter the system and cause adverse impacts to the spikedace, loach minnow, Gila topminnow, or razorback sucker. However, the increase in probability is not expected to be large enough during the time extension to result in jeopardy to any listed species or result in the destruction or adverse modification of critical habitat.

RPA items 3 and 4

The delay in implementation of RPA items 3 and 4 has been reviewed to determine if those alterations affect achievement of the RPA. Based on our analysis, the Service concludes that the RPA is avoiding jeopardizing the four fish species and avoiding adverse modification of critical habitat for the spikedace, loach minnow, and razorback sucker. Therefore, no changes to RPA items 3 and 4 are needed.

The first funding transfers under RPA items 3 and 4 were to occur within three months following issuance of the 1994 opinion. RPA items 3 and 4 were amended on June 22, 1995, to require the first funding transfers by June 30, 1995, under interim agreements. The amendment provided for a final funding transfer mechanism to be in place before the beginning of Fiscal Year 1995. Several difficulties delayed this process. Legal and fiscal difficulties were encountered in identifying an appropriate mechanism for transfer. In addition, extensive time was required for negotiation with Arizona Game and Fish Department (AGFD) over projects to be funded and their role in opinion implementation. The opinion requires expenditures to be identified "in consultation with AGFD and New Mexico Department of Game and Fish." The first funding transfers occurred in August 1997. Subsequent transfers occurred in March 1999 and April 2000.

The funding transfer mechanism is now in place and working smoothly. Projects have been identified for the fourth funding transfers that are expected to occur by November, 2000. Implementation is underway and approximately 30 percent of the first 3 years' funding has been expended, with six projects completed and ten projects in various stages of implementation.

Although transfer of funds for RPA items 3 and 4 is approximately 2 years behind, the delay in actual implementation is much less. The 2 years of transfer delay were productively used to take actions necessary to allow expenditure of the funds, such as setting up processes for project identification and implementation, development of projects, and establishing the required coordination with other agencies and entities. Therefore, the overall effect was only a minor delay in the use of the funds and a minor change in the overall effect of implementation. Since an inherent component of the jeopardy determination is the increasing probability over time of the adverse effects from CAP, delays in the beginning are less significant than delays later in the implementation. The Service does not believe the delay in RPA items 3 and 4 funding transfer significantly affected avoidance of jeopardy through RPA implementation. The RPA in the 1994 opinion, as amended, continues to avoid the likelihood of jeopardizing the continued existence of spikedace, loach minnow, razorback sucker, and Gila topminnow and destroying or adversely modifying their critical habitats.

No other items of the RPA are changed by this amendment.

INCIDENTAL TAKE

No change in anticipated incidental take is expected as a result of the amendment of the opinion. The reasonable and prudent measures and implementing terms and conditions have not changed. Because the terms and conditions call for implementation of the RPA, the incidental take statement becomes subject to any changes made to the RPA by this or earlier amendments.

SUMMARY

The provisions of the summary of the April 20, 1994, opinion providing for reinitiation of consultation under certain circumstances apply to this amendment.

Thank you for the progress report on implementation of the fish barriers contained in your April 6, 2000, memorandum. If you have questions regarding this amendment or other matters on the April 1994 opinion, please contact Sally Stefferud in our Phoenix Ecological Services Field Office, at 602-640-2720, ext. 235 or Sherry Barrett in our Tucson Ecological Services Suboffice, at 520-670-4617.

Nancy M. Kaufman

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