



UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE

ECOLOGICAL SERVICES
3616 W. Thomas, Suite 6
Phoenix, Arizona 85019
January 30, 1991

2-21-91-F-059

MEMORANDUM

TO: Refuge Manager, San Bernardino National Wildlife Refuge,
Douglas, Arizona

FROM: Field Supervisor

SUBJECT: Biological Opinion, New Well at Cienega Spring

This responds to your request of October 30, 1990, for formal consultation pursuant to Section 7 of the Endangered Species Act (Act) of 1973, as amended, on replacement of an artesian well at Cienega Spring on the San Bernardino National Wildlife Refuge (NWR), Cochise County, Arizona. The species of concern are the Yaqui topminnow (Poeciliopsis occidentalis sonoriensis) and Yaqui chub (Gila purpurea). The 90-day consultation period began on November 1, 1990, the date your request was received in our office.

The following biological opinion is based on information provided in the November 1, 1990, Intra-Service Section 7 Evaluation Form, data in our files, and other sources of information.

BIOLOGICAL OPINION

It is my biological opinion that drilling a new well at Cienega Spring is not likely to jeopardize the continued existence of the Yaqui topminnow or the Yaqui chub and is not likely to destroy or adversely modify the critical habitat of the Yaqui chub.

BACKGROUND INFORMATION

Species Description

The Yaqui topminnow was listed as an endangered species on March 11, 1967. No critical habitat was designated for this species. The Yaqui topminnow is a small, livebearing fish of the family Poeciliidae (Minckley 1973). It is found throughout the Rio Yaqui and adjacent drainages in Arizona and in Sonora, Mexico (Vrijenhoek 1985). In Arizona, it is restricted to the San Bernardino NWR, including Leslie Creek.

The Yaqui chub was listed as an endangered species on August 31, 1984. Critical habitat was designated for this species as all aquatic habitats on the San Bernardino NWR. The Yaqui chub is a medium sized fish of the family Cyprinidae (Minckley 1973). It was historically found throughout the Rio Yaqui and adjacent drainages in Arizona and in Sonora, Mexico. In

Arizona it is now restricted to the San Bernardino NWR, including Leslie Creek, with an introduced population in Turkey Creek on the west slope of the Chiricahua Mountains. Following recent taxonomic revision, which split off a portion of what was earlier thought to be Gila purpurea into a new and presently undescribed species of Gila, the Yaqui chub is now known from Sonora only in Black Draw, just south of the U.S./Mexico border.

Project Description

The proposed project is replacement of an old deteriorated artesian well at Cienega Spring (T24S, R30E, Sec. 14) on the San Bernardino NWR. A new well would be drilled a few feet away from the old well. The old well was drilled in the early 1900's and its casing has rotted through and the bore hole has become blocked with debris.

The well provides water to a small cienega that provides habitat for the Yaqui topminnow and potentially for the Yaqui chub. This water supply is failing due to the failure of the old well. A new well would provide a reliable, controlled source of water for the habitat.

EFFECTS OF THE ACTION

The effects of the proposed action are expected to be beneficial to the Yaqui chub and Yaqui topminnow and to the critical habitat of the Yaqui chub. Failure to replace the failing existing well would result in loss of habitat for the two fish. Drilling the new well would provide a continuing water supply to sustain and possibly expand the existing habitat. No adverse effects to the two fish are expected from the proposed action, although some slight potential for adverse effect does exist due to possible disturbance of the aquifer during the drilling of the new well or to possible pollution or sedimentation problems during the well drilling activity. Potential for the first effect is thought to be extremely low, and we believe the second effect is preventable through careful planning and implementation.

INCIDENTAL TAKE

Section 9 of the Act, as amended, prohibits any taking (harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or attempt to engage in any such conduct) of listed species of fish and wildlife without a special exemption. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering. Under the terms of Section 7(b)(4) and Section 7(o)(2), taking that is incidental to, and not intended as part of, the agency action is not considered a prohibited taking provided that such taking is in compliance with the incidental take statement.

The Fish and Wildlife Service (FWS) does not anticipate that the proposed drilling of a new well at Cienega Spring would result in any incidental take of Yaqui topminnow or Yaqui chub. Accordingly, no incidental take is authorized. Should any take of either fish or their habitat occur, the San Bernardino NWR must reinitiate formal intra-FWS consultation and provide a description of the circumstances surrounding the take.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. The term conservation recommendations has been defined as FWS suggestions regarding discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat or regarding the development of information. The recommendations provided here relate only to the proposed action and do not necessarily represent complete fulfillment of the agency's 7(a)(1) responsibility for these species. The following conservation recommendations are made for this proposed action:

1. San Bernardino NWR should have a qualified biologist on site during siting, drilling, and any other facet of this project to ensure that no adverse effects to the aquatic habitat occur.
2. Measures should be taken to ensure that the proposed activity does not cause excess sediments or pollutants to enter the aquatic habitat. This may involve careful operation of machinery, construction of temporary berms, or other appropriate measures.

CONCLUSION

This concludes formal consultation on the actions outlined in the October 30, 1990 Intra-Service Section 7 Evaluation Form. As required by 50 CFR 402.16, reinitiation of formal consultation is required if: (1) the amount or extent of incidental take is reached; (2) new information reveals effects of the agency action that may impact listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this opinion; or (3) a new species is listed or critical habitat designated that may be affected by the action.

If we can be of further assistance, please contact Sally Stefferud or me
(Telephone: 602/379-4720 or FTS 261-4720).

A handwritten signature in cursive script that reads "Sam F. Spiller".

Sam F. Spiller

cc: Director, Arizona Game and Fish Department, Phoenix, Arizona
Regional Director, Fish and Wildlife Service, Albuquerque, New Mexico
(FWE/HC) and RW
Director, Fish and Wildlife Service, Washington, D.C. (HC)

LITERATURE CITED

- Minckley, W.L. 1973. Fishes of Arizona. Arizona Game and Fish Department. Phoenix, AZ. 293 pp.
- Vrijenhoek, R.C., M.E. Douglas, and G.K. Meffe. 1985. Conservation genetics of endangered fish populations in Arizona. Science 229: 400-402.