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AESO/SE
(Ref. 02-21-92-F-0070-R2)
02-21-03-F-0472

December 4, 2003

Memorandum

To: Safford Field Office Manager, Bureau of Land Management, Safford, Arizona

From: Field Supervisor

Subject: Conference Opinion for the New Bull Gap Road Section Project,
Gila Box Riparian National Conservation Area (RNCA), Graham County, Arizona

Thank you for your memorandum dated September 12, 2003, regarding effects of the proposed new Bull Gap Road section project on the proposed endangered Gila chub (*Gila intermedia*), endangered razorback sucker (*Xyrauchen texanus*), threatened spikedace (*Meda fulgida*) and loach minnow (*Tiaroga cobitis*), and critical habitat proposed for the Gila chub and designated for the other species. This document constitutes our conference opinion on the effects to the Gila chub and its critical habitat pursuant to section 7 of the Endangered Species Act (16 U.S.C. 1531-1544), as amended (Act). You determined that your proposed project may affect but is not likely to adversely affect the other above-listed species and critical habitat. We concur with your determinations. The rationale for our concurrences appear in Appendix A of this conference opinion.

This conference opinion and accompanying concurrence is based on information provided in the September 11, 2003 BE, your September 8, 2003 EA, the project proposal, telephone conversations between our staff, field investigations, and other sources of information. Literature cited in this biological and conference opinion is not a complete bibliography of all literature available on the species of concern, roads and low-water river crossings and their effects, or on other subjects considered in this opinion. A complete administrative record of this consultation is on file in our Phoenix office. Please refer to consultation number 02-21-92-F-0070-R2 and 02-21-03-F-0472 in future correspondence on this project.

Consultation History

- July 2, 2003: You resubmitted a request for reinitiation of consultation on the January 30, 1998 Gila Box Management Plan (02-21-92-F-0070-R2) (Plan). The Plan included the new section of the Bull Gap Road addressed herein. This conference opinion and concurrences respond to both requests in regard to the new section of the Bull Gap Road.
- September 15, 2003: We received your September 12, 2003 cover letter, EA, and BE.
- October and November, 2003: Discussions between our respective staffs clarified and refined details of the project description and effects to listed and proposed species and their critical habitat.
- November 21, 2003: We sent you a draft of the biological and conference opinion.
- December 3, 2002: We received your comments to the draft BO/CO and made corrections to the final BO/CO.

CONFERENCE OPINION

DESCRIPTION OF THE PROPOSED ACTION

You propose to construct a new section of the Bull Gap Road for public use and access to the Gila Box RNCA and public lands north and east of Bonita Creek and the Gila River (see map 2 of the BE). A 1,350-foot section of road will be constructed uphill from the City Chlorinator Road and rejoin the Bull Gap Road in the Bonita Creek drainage. This new Bull Gap Road section will bypass a 3,100-foot section of the city road (which contains six of seven existing low-water crossings). You will no longer maintain the old road section; the City of Safford (which has an access right-of-way on this road to reach the city water supply pipeline) will be responsible for its maintenance. They plan to maintain this old portion at a lower (non-public use) level. You also propose to update an interpretative and informational display that is located at the Wildlife Viewing Area downstream from the Bull Gap crossing. In regard to the interpretive exhibit, no new construction is planned, and no effects are anticipated from this action.

Road

The proposed project is located in the Gila Box RNCA which is northeast of the town of Safford, in Graham County, Arizona, at about the 3,200 foot elevation (see map 1 in the BE). Bonita Creek bisects the Gila Box RNCA. While the proposed new Bull Gap Road section occurs in a relatively small and confined area above Bonita Creek, effects from the proposed project could travel downstream and affect a larger area. Thus, we define that portion of Bonita Creek at the proposed project location and the rest of the creek downstream to the confluence with the Gila River as the action area.

Project work will begin in late fall/early winter of 2003 and be completed in about 30 days. The construction crew of four to six workers will use equipment that may vary, but will include a crew transport vehicle, a bulldozer, a front-end loader, and a road grader. All vehicles will remain on existing roads (except while constructing the new road), existing parking areas, turnarounds, or disturbed sites unless involved in specific work on an authorized construction site. All equipment and vehicles will be power washed before going to the site to lessen the chance of introducing noxious weeds.

The new section will be about 1,350 feet long with a roadbed of 18 feet wide, plus a two-foot-wide drainage ditch on each side of the roadway where appropriate. The maximum width of disturbance, including equipment backup and turnaround sites, will be 50 feet on each side of the center line, with the road grade from top to bottom between 8 and 13 percent. The proposal includes one bench-to-bench section for about 150 feet toward the bottom of the road (see map 3 of the BE). Limited, blanketed, site-specific blasting may be necessary in this section (see map 3 of the BE). The majority of road construction will be partial-bench cut-and-fill. All road work will produce about 950 cubic yards of fill for onsite use. Any excess fill will be spread on the primary access road to the construction site. Two culverts are proposed for installation; one 30-inch culvert near the top of the road and about 150 feet from Bonita Creek, and a 24-inch culvert near the bottom about 50 feet from Bonita Creek (see map 3 of the BE). Vegetation would be removed from the road surface and ditch area (about 1,350 feet by 22 feet). Vegetation may be crushed by equipment out to 50 feet on each side of the center line.

You will be conducting maintenance and repair for the new road section for the purpose of public travel and use. Maintenance actions will also pertain to the seventh low-water crossing of Bonita Creek. Your maintenance of the new road section will likely be done once or twice per year with road grading equipment over the space of one or two days. Maintenance of the seventh low-water crossing may be conducted up to four times a year, and would include the use of a road grader or front-end loader for about four hours of a day; this is not a change from current maintenance practices for this crossing.

The City of Safford maintains a right-of-way access on the old road for maintaining the city drinking water pipeline. The lower level of maintenance on this road by the City of Safford will consist of the minimum work necessary to allow passage of city vehicles (not public use) to access the pipeline. This is addressed in the ongoing consultation for the Gila Box Riparian National Conservation Area Interdisciplinary Activity Plan (our consultation number 02-21-92-F-0070 - see Consultation History).

Conservation Measures

To lessen the likelihood of sediment from construction or use of the new Bull Gap Road section reaching and entering Bonita Creek, sufficient straw bale barriers will be placed to assist the upland vegetation in catching and holding any excess sediment. Best management practices for road work and hazardous materials containment will be followed for all work. Employees will be briefed on road effects to fish and water quality before work begins.

STATUS OF THE SPECIES

NOTE: Greater details and information regarding the biology, life history, and habitat needs for the species considered in this conference opinion may be located on our website (www.arizonaes.gov) under the Threatened and Endangered Species, Document Library/Documents by Species links.

We proposed the Gila chub (*Gila intermedia*) be listed as endangered with (proposed) critical habitat in a Federal Register notice (67 FR 51948) dated August 9, 2002. The Gila chub is a large minnow that grows to seven to eight inches long and occupies smaller streams and cienega-type habitats. It is a highly secretive fish and lives in deeper water or near cover (Griffith and Tiersch 1989). Historically, the Gila chub was found in most headwater streams of the Gila River drainage in Arizona and New Mexico, and within the Santa Cruz and San Pedro river systems of Arizona and Sonora, Mexico. Currently, it is thought to be extirpated from New Mexico. In Sonora, it was recently found in two cienegas near the headwaters of the San Pedro River. In Arizona, populations have been extirpated from Monkey Spring; Amette, Cave, Fish, and Queen creeks; San Simon, San Pedro, and Santa Cruz rivers; and Post Canyon. Gila Chub are found in fewer than 15 streams in central and southern Arizona and are abundant at no more than 10 of these locations. The reasons for decline of this fish include past dewatering of rivers, springs and marshlands; impoundment; channelization; diversion; regulation of flow; land management practices that promote erosion and arroyo formation; and the introduction of predacious and competing nonindigenous fishes (Miller 1961, Minckley 1985).

The primary constituent elements of proposed critical habitat determined necessary for survival and recovery of the Gila chub include but are not limited to: 1) perennial pools, areas of higher velocity between pool areas, and areas of shallow water among plants or eddies all found in small segments of headwaters, springs, or cienegas of smaller tributaries, 2) water temperatures for spawning ranging from 68 to 79.7⁰ F with sufficient dissolved oxygen, nutrients, and any other water-related characteristic needed, 3) water quality with reduced levels of contaminants or any other water quality characteristics, including excessive levels of sediments, adverse to Gila chub health, 4) a food base consisting of invertebrates, filamentous algae, and insects; 5) sufficient cover consisting of downed logs in the water channel, submerged large tree root wads, undercut banks with sufficient overhanging vegetation, and large rocks and boulders with overhangs; 6) habitat devoid of non-native aquatic species detrimental to Gila chub or habitat in which detrimental non-natives are kept at a level that allows Gila chub to continue to survive and reproduce (e.g. the Muleshoe Preserve and Sabino Canyon Gila chub populations are devoid of non-native aquatic species; however, the O'Donnell Canyon Gila chub population has continued to survive and reproduce despite the current level of non-native aquatic species present); and 7) streams that maintain a natural unregulated flow pattern including periodic natural flooding; if flows are modified, then the stream should retain a natural flow pattern that demonstrates an ability to support Gila chub.

Additional information about the Gila chub can be found in the proposed rule (67 FR 51948) and on our website.

ENVIRONMENTAL BASELINE

Within the Gila Box RNCA, Bonita Creek flows for about 15 miles from its headwaters on the San Carlos Indian Reservation to its confluence with the Gila River (about five miles below the mouth of Eagle Creek and about two miles above the head of the Safford Valley). About five miles above the mouth of Bonita Creek, an infiltration gallery (buried perforated pipes) collects and transports water through the 24 mile-long pipeline that extends down the creek and across the Gila River Valley to the communities of Solomon, Safford, and Thatcher for public water use. The infiltration gallery separates Bonita Creek into lower and upper reaches.

Most of upper Bonita Creek is ephemeral, but deep pools persist year round and support the primary Gila chub population. The habitat in upper Bonita Creek is considered to be higher-quality compared to that which exists below the gallery.

Within lower Bonita Creek continuous surface flows are not always present, especially during periods of drought. While an infiltration gallery is not a complete barrier to invasive nonnative fish species, surveys have not located nonnative fish above this location. Below the gallery, a much smaller Gila chub population exists, which experiences greater impacts from nonnative fish that access lower Bonita Creek from the Gila River, greater rates of predation and competition, and greater levels of human disturbance due to easier public access of lower Bonita Creek. The Bureau of Land Management's (BLM) 1998 Gila Box Management Plan proposed a feasibility study to investigate construction of a fish barrier in Bonita Creek to halt potential invasion of the upper portion of the creek by non-native fishes.

The sediment load in Bonita Creek is known to be very low under normal conditions (Minckley, Sommerfeld *et al.* 1979). During typical rain events, turbidity increases as soil from the uplands of the watershed wash into Bonita Creek (U.S. Bureau of Land Management 2003).

Bonita Creek supports a wide array of aquatic invertebrates including backswimmers (*Notonectus* spp.), mayflies (Ephemeroptera), dragonflies (Odonata), and nonnative crayfish (*Orconectes virilis*). Bonita Creek supports a well-developed broadleaf riparian plant community consisting of Fremont cottonwood (*Populus fremontii*), sycamore (*Platanus wrightii*), Goodding willow (*Salix gooddingii*), velvet ash (*Fraxinus velutina*), Arizona walnut (*Juglans major*), seep willow (*Baccharis glutinosa*), and cattail (*Typha domingensis*).

The Bonita Creek upland watershed has been affected by anthropogenic impacts such as mining, livestock grazing, and recreation over the past 100 years. Construction, maintenance, repair, and public use of all the roads to reach areas of the watershed have affected stream conditions by introducing easier public access to the creek at particular sites and contributing soil and particulate matter to the creek. The uplands are dominated by Sonoran Desert vegetation including saguaro (*Carnegiea gigantea*), jojoba (*Simmondsia chinensis*), creosote (*Larrea tridentata*), and mesquite (*Prosopis* spp.). Area vegetation includes prickly pear (*Opuntia*), barrel cactus (*Ferocactus* spp.), hedgehog cactus (*Echinocereus* spp.), pencil cholla

(*Cylindropuntia arbuscula*), creosote, ocotillo (*Fouquieria splendens*), palo verde (*Cercidium* spp.), wolfberry (*Lycium* spp.), mesquite (*Prosopis* spp.), and Goodding willow (*Salix gooddingii*).

EFFECTS OF THE PROPOSED ACTION

The existing road traverses Bonita Creek at seven low-water crossings. The new section will be a shorter, better-maintained section of the Bull Gap Road that will eliminate public use of six of the seven crossings. You state your intention to promote awareness and use of the new road section, noting that existing public road use levels are fairly low and not anticipated to increase due to this project. You anticipate current road use to become redistributed, with the result that public road users will prefer and use the new road section because it is shorter and better-maintained, making travel easier and quicker, especially for those of the public who often tow horse and other types of trailers. This is expected to result in reduction (and possible elimination) of public travel through the six low-water crossings of the creek, resulting in decreased amounts of soil, fine sediments, oils, and automotive fluids entering the creek. This in turn is expected to reduce negative impacts such as turbidity, higher water temperatures, sediment deposition in spawning gravels, and toxicity, however low the current levels appear to be.

The proposed action will displace about 950 cubic yards of topsoil and fill which will be used onsite for filling cuts and as road surface material. Roads near watercourses typically degrade stream habitat for aquatic species by accelerating erosion and modifying natural drainage networks. Roads can accelerate soil erosional rates from surface erosion, poor placement, mass surface water runoff, and poor drainage. Road erosion can result in stream sedimentation and contribute to declines in fish spawning habitat when too high a proportion of fine sediment is deposited. Fine sediments can clog spawning gravels, reduce oxygen availability for fish eggs, and increase embryo mortality. Sedimentation negatively impacts macroinvertebrates, the primary food supply of Gila chub and many other fish species (Waters 1995).

Road alignment, drainage placement, surface compaction, and barriers placed to catch moving soil are all carefully considered for this road section. Road surface hardening is expected to occur quickly because the construction machinery will compact the surface and additional vehicle traffic after project completion will continue to compact the road. Temporary increases in dust and soil erosion are expected to occur during construction but are likely to be small in scale and short-term in duration. Small amounts of soil are anticipated to be produced from the edges of partial and full bank-to-bank road cutting and switchback construction. Soil may roll far enough downhill to potentially enter the creek, but the upland vegetation between the road and the creek, along with carefully placed and staked straw bale barriers, are expected to prevent anticipated small amounts of soils and sediment from reaching Bonita Creek.

While public traffic is expected to be diverted from using the portion of the old road that contains the six low water crossings, City of Safford traffic and road maintenance will continue to occur, but less often, on the old road section. The City of Safford plans to use a grader about twice a year to allow their trucks access to their pipeline. The old road will not be maintained to higher

public road use standards, and public traffic is likely to immediately begin using the new road section.

Even though the City of Safford will conduct maintenance on these six low-water crossings, the anticipated large reduction (and possible elimination) of public travel through them should result in some level of benefits to Gila chub. There should be less frequent crossing at these sites, a reduction of sediment introduced into the creek, and a reduction in the frequency of aquatic and riparian vegetation damage. This is expected to improve overall water quality in Bonita Creek.

The seventh low-water crossing occurs after the new Bull Gap Road section rejoins the original road. This crossing will continue to experience the current level of public use and road maintenance. The original City Chlorinator and Bull Gap roads and the remainder of the Bull Gap Road north of the proposed new section are not part of the proposed action; they are being addressed in the ongoing reinitiation of consultation for the Gila Box Management Plan (consultation number 02-21-92-F-0070-R2).

CRITICAL HABITAT

Proposed Gila chub critical habitat includes 39.5 miles of Bonita Creek extending from the City of Safford's diversion pipeline (T6S, R28E, Section 21) continuing upstream to Bonita Creek's headwaters (T3S, R25E, Section 14) (see map in BE). The proposed new Bull Gap Road section will bypass six crossings of Bonita Creek before it rejoins the original Bull Gap Road, avoiding direct impacts to the creek and proposed Gila chub critical habitat. The new road is expected to be the favored route for the public using Bull Gap Road, and thus should greatly reduce public use of the route through the creek bottom and proposed critical habitat. Indirect effects such as sediment transport or soil movement from the road construction and existence are anticipated to be contained in the uplands and not reach the creek due to the road and drainage alignment, placement of straw bale barriers, and existing vegetation between the new section of the road and the creek.

CUMULATIVE EFFECTS

Cumulative effects include the effects of future State, Tribal, local or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act.

Most of the lands with the action area are Federal lands; thus, any future action is most likely to be a Federal action and be consulted on under the Act. A notable exception are activities by the City of Safford on their private lands in Bonita Creek where the City will continue to divert water for public use in the Safford Valley. The diversion, located about 0.5 mile above the Gila confluence, may reduce flows below the diversion point, but the resulting ephemeral reach

around the diversion may help to limit invasion of the upper portion of the creek by non-native fishes.

CONCLUSION

After reviewing the current status of the proposed Gila chub, the environmental baseline for the action area, the effects of the proposed action and the cumulative effects, it is our conference opinion that the action, as proposed, is not likely to jeopardize the continued existence of the proposed Gila chub and is not likely to destroy or adversely modify proposed critical habitat. Our conclusions are based on the following:

1. To facilitate and promote public awareness and use of the new Bull Gap Road section, you will provide public notification and encouragement of its use.
2. The new Bull Gap Road section will be shorter than the old route and will be maintained at the road-quality standard supportive of public use. Because public use is anticipated to shift to the shorter, smoother road section, public use along the old section should decrease proportionately. This is anticipated to improve overall water quality in Bonita Creek at and between the six low-water crossings.
3. The small population of Gila chub found in lower Bonita Creek currently experiences predation and competition from nonnative fish entering Bonita Creek from the Gila River. The larger population of Gila chub in upper Bonita Creek (above the infiltration gallery) survives in the deep pool habitat that occurs there. Nonnative fish have not been found above the gallery and the Gila chub population there continues as a source population for the creek. The proposed action will have no effect on the upper reaches of Bonita Creek.
4. Road and drainage alignment and placement, straw bale barriers, and existing vegetation between the new section of road and the creek are expected to prevent erosion and sedimentation of Bonita Creek and critical habitat of the Gila chub.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. "Take" is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. "Ham" is defined (50 CFR 17.3) to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. "Harass" is defined (50 CFR 17.3) as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering. "Incidental take" is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. 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 to be prohibited taking under the Act

provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

The prohibitions against taking Gila chub found in section 9 of the Act do not apply until the species is listed.

AMOUNT OR EXTENT OF INCIDENTAL TAKE

We do not anticipate that the proposed project will incidentally take Gila chub because:

1. The new Bull Gap Road section contains no low-water crossings (it re-connects to the old Bull Gap Road above the seventh low-water crossing), and
2. careful use of road alignment, drainage placement, and straw bale barrier placement will not affect, nor allow soil movement to affect, Gila chub at the six low-water crossings.

We further conclude that beneficial effects associated with conservation measures implemented as part of this project will minimize any chance of incidental take through direct or indirect actions.

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. Conservation recommendations are discretionary agency activities to minimize or avoid effects a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

We recommend that you:

1. Close the old section of the Bull Gap Road to public use and work with City of Safford to have them access their property from the upstream connection to the new road segment.
2. Clearly establish and maintain signs leading to, and at, the new Bull Gap Road section that promotes or requires its public use.
3. Clearly establish and maintain signs leading to, and at, the old Bull Gap Road section that discourages or forbids its public use.
4. Educate your employees and the public in various locations within and outside of the Gila Box promoting positive actions towards listed threatened and endangered fish species (i.e.; haul out trash, no littering, pick up fly fishing line at creeks, do not release bait into creeks, etc.).
5. Actively participate in the recovery of, and assist in developing, the recovery plan for the Gila chub if and when that species is listed.

In order for us to be kept informed of actions minimizing or avoiding adverse effects or benefitting listed species or their habitats, we request notification of the implementation of any conservation recommendations.

Disposition of Dead or Injured Listed Species

Upon locating a dead, injured, or sick listed species, initial notification must be made to our Law Enforcement Office, 2450 West Broadway Road, Suite 113, Mesa, Arizona 85202 (480/835-8289) within three working days of its finding. Written notification must be made within five calendar days and include the date, time, and location of the animal, a photograph if possible, and any other pertinent information. Notification shall be sent to the Law Enforcement Office with a copy to this office. Care must be taken in handling sick or injured animals to ensure effective treatment and care, and in handling dead specimens to preserve the biological material in the best possible state.

REINITIATION NOTICE

After listing as threatened or endangered and any subsequent adoption of this conference opinion, the Federal action agency shall request reinitiation of consultation if: 1) the amount or extent of incidental take is exceeded; 2) new information reveals effects of your action that may affect the species in a manner or to an extent not considered in the conference opinion; 3) your action is subsequently modified in a manner that causes an effect to the species that was not considered in this opinion; or 4) a new species is listed or critical habitat designated that may be affected by the action.

This concludes the conference for the proposed new Bull Gap Road section. You have asked us in writing to confirm the conference opinion as a biological opinion issued through formal consultation if the proposed species is listed or critical habitat is designated. If, after listing, we review the proposed action and find there are no significant changes in the action as planned or in the information used during the conference, we will confirm the conference opinion as the biological opinion for the project and no section 7 consultation will be necessary.

We appreciate your efforts to identify and minimize effects to listed species from this project. For further information please contact Thetis Gamberg at (520) 670-4619 or Jim Rorabaugh at (602) 242-0210 (x238). Please refer to our consultation number 02-21-92-F-0070-R2 and 02-21-03-F-0472 in future correspondence concerning this project.

/s/ Steven L. Spangle

cc: Regional Director, Fish and Wildlife Service, Albuquerque, NM (ARD-ES)
Field Supervisor, Fish and Wildlife Service, Albuquerque, NM
State Director, Bureau of Land Management, Phoenix, AZ
Assistant Field Supervisor, Fish and Wildlife Service, Tucson, AZ

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- Miller, R.R. 1961. Man and the changing fish fauna of the American Southwest. Paper Michigan Academy of Science, Arts, Letters, 46: 365-404.
- Minckley, W.L. 1985. Native fishes and natural aquatic habitats in US Fish and Wildlife Region II west of the Continental Divide. Rep. to US Fish and Wildlife Service, Albuquerque, New Mexico, Arizona State University, Dept. of Zoology, Tempe. 158pp.
- Minckley, W. L., M. R. Sommerfeld, and *et al.* 1979. Resource inventory for the Gila River complex, eastern Arizona. Final Reports, Contract No. YA-512-CT6-2166. USDI, Bureau of Land Management, Safford District Office, Safford, Arizona.
- U.S. Bureau of Land Management. 2003. Biological evaluation for the proposed Bull Gap Road crossing, Gila Box Riparian National Conservation Area, Graham County, Arizona. Bureau of Land Management, Safford Field Office, Arizona. 28pp + maps.
- Waters, T. F. 1995. Sediment in streams: sources, biological effects, and control. American Fisheries Society Monograph 7.

APPENDIX A**CONCURRENCES****SPECIES #2: Spikedace (*Meda fulgida*)****SPECIES #3: Loach minnow (*Tiaroga cobitis*)****SPECIES #4: Razorback sucker (*Xyrauchen texanus*)**

We combine spikedace, loach minnow, and razorback sucker discussions in this concurrence due to their similar habitat needs, environmental baseline, project effects, and conclusions. The Description of the Proposed Action and the Conservation Measures as written in the Conference Opinion, above, remain the same for these fish.

- We listed the spikedace (*Meda fulgida*) as threatened in a Federal Register notice (51 FR 223769) dated July 1, 1986 and designated critical habitat in a Federal Register notice (65 FR 24339) dated April 25, 2000.
- We listed the loach minnow (*Tiaroga cobitis*) as threatened in a Federal Register notice (52 FR 39468) dated October 28, 1986 and designated critical habitat in a Federal Register notice (65 FR 24331) dated April 25, 2000.
- We listed the razorback sucker (*Xyrauchen texanus*) in a Federal Register notice (56 FR 54957) dated October 23, 1991 and designated critical habitat in a Federal Register notice (59 FR 13379) dated March 21, 1994.

The environmental baseline of Bonita Creek remains the same as described in the Conference Opinion, above. Spikedace and loach minnow do not occupy Bonita Creek. Critical habitat for spikedace and loach minnow includes 14.6 miles of Bonita Creek, from the Bonita Creek confluence with the Gila River extending upstream to the confluence with Martinez Wash. The nearest known populations occur in Eagle Creek, about 45 miles away and separated from Bonita Creek by topography.

The naturally-occurring population of razorback sucker is likely extirpated from the Gila River and Bonita Creek. Despite massive reintroduction efforts from 1981 to 1990 on the Gila River, Bonita Creek, and Eagle Creek, reestablishment success is considered extremely limited. In 1991, a single large razorback sucker was documented in the lower reach of Bonita Creek (U.S. Bureau of Land Management 1996). While this species has not been documented in Bonita Creek or the Gila River mainstem since, extensive surveys have not been conducted. Critical habitat for razorback sucker is not designated in Bonita Creek, but includes the Gila River from the New Mexico border through the Gila Box to Coolidge Dam.

Primary threats to these fish species include stream alterations from dewatering and groundwater pumping activities; impoundments (which create lentic habitats not considered optimal for these fish species); changes in water temperatures, clarity, and flow regimes; and the presence of non-native competitive and predatory species.

Spikedace and loach minnow do not occupy Bonita Creek, and razorback sucker probably occurs only in very low numbers; thus, they are unlikely to be directly effected by this project. Indirect negative effects to designated spikedace and loach minnow critical habitat in Bonita Creek and designated razorback sucker critical habitat at the Bonita Creek/Gila River confluence are not expected to occur (see Effects of the Proposed Action for the Gila chub) due to conservation measures and project design.

Reduction (and possible elimination) of public travel across six low-water crossings of Bonita Creek should allow vegetation to grow and remain for longer periods of time (because the bi-annual maintenance activities by the City of Safford will continue remove this vegetation). Reduction (and possible elimination) of public road use over these six crossings will greatly reduce the frequency and amount of sediment movement into the creek.

Conclusion

After reviewing the current status of spikedace, loach minnow, and razorback sucker, the environmental baseline for the action area, and the effects of the proposed action, we concur that the proposed project, as planned, may affect but is not likely to adversely affect the spikedace, loach minnow, or razorback sucker and is not likely to adversely affect designated critical habitat for spikedace, loach minnow, and razorback sucker.

We base our conclusion on the above reasons and because the proposed new Bull Gap Road section will greatly reduce public travel out of the six low-water crossings of Bonita Creek, reducing the level and frequency of habitat damage in the creek.

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. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

We recommend that you:

1. Actively participate in the implementation of the recovery plan for spikedace, loach minnow, and razorback sucker.
2. Fund, aid, or establish research or study projects for these fish species.
3. Educate employees and your public users about these species and their habitat needs (haul out all trash, collect and carry out all fishing line, hooks, and bait, do not release nonnative aquatic species (crayfish, other fishes), etc.).

4. Close the old section of the Bull Gap Road to public use and work with City of Safford to have them access their property from the upstream connection to the new road segment.

In order for us to be kept informed of actions minimizing or avoiding adverse effects or benefitting listed species or their habitats, we request notification of the implementation of any conservation recommendations.

REFERENCES CITED

U.S. Bureau of Land Management. 1996. Biological evaluation: Safford District Grazing Program. Bureau of Land Management, Safford Field Office, Safford, AZ.