United States Department of the Interior
Fish and Wildlife Service
Arizona Ecological Services Field Office
2321 W. Royal Palm Road, Suite 103
Phoenix, Arizona 85021-4951
(602) 640-2720 Fax (602) 640-2730

In Reply Refer To:
AESO/SE
2-21-92-F-213

October 2, 1996

Charles R. Bazan
Forest Supervisor
Tonto National Forest
2324 East McDowell Road
Phoenix, Arizona 85006

Dear Mr. Bazan:

This letter constitutes an amendment to the February 14, 1994 Biological Opinion on the Management Plan for the Dos S Unit of the Sunflower Allotment (2-21-92-F-213). The U.S. Fish and Wildlife Service received your letter dated July 25 1996, requesting reinitiation of section 7 consultation, on July 26. Your letter and subsequent telephone conversations contained ample information to determine the change in the proposed action and the possible effects on the endangered Gila topminnow (*Poeciliopsis o. occidentalis*). All information in the original biological opinion regarding the project description, effects of the action, incidental take, and others, remain in effect unless specified below.

The Implementation Plan for the Mud Springs Gila Topminnow Habitat Improvement Project was enclosed with your request. Service concurrence with the plan was required by the original biological opinion. The Service concurs with the Implementation Plan and believes it is well written. Execution of the plan will assist with conservation and recovery of the Gila topminnow at Mud Springs and range wide. Please notify this office when work is planned, we would like to assist or observe if possible. In addition, we have not received any reports required by Term and Condition 3.1 of the original biological opinion. This information is important in determining effectiveness of the reasonable and prudent measures and the terms and conditions for implementation.

Amendment to Biological Opinion

Proposed Action

The biological opinion assessed the effects of livestock grazing and of management actions at Mud Springs. The revised proposed action modifies some of the actions that were analyzed in the previous biological opinion. The changes in the proposed action alter the effects to the Gila topminnow and change the circumstances and level of anticipated take. These changes require reinitiation of formal consultation, as required by 50 CFR 402.16.

The major changes to the proposed action involve excluding the existing drinker (trough) and more upland habitat from access to livestock, and adding a new drinker system for livestock outside the south end of the exclosure.

The exclosure will be enlarged from the previous proposed action to include the cement trough containing Gila topminnow. Also exclosed will be the area to the east which contains portions of a small mesquite bosque and an ephemeral wash. Interior fencing will be removed.

A new springbox will be installed in one of the springs at the south end of the exclosure. All planned and existing Gila topminnow habitat is at the north end of the exclosure. A new pipeline will deliver water to a new trough outside of the exclosure. Livestock will have access to this drinker and no Gila topminnow will be placed in the trough.

The existing water trough containing Gila topminnow will be maintained for at least four years after topminnow are put in the potholes. Maintenance may include, but not be limited to; clearing the pipe with compressed air, cleaning the springbox and trough, and replacing system components. Small dirt berms, or "wings", will be constructed upslope of the springbox, to channel runoff towards the springbox. The Forest Service believes this may increase reliability of water supplied to the trough.

Effects Of The Action

The changes to the proposed action should benefit Gila topminnow in the long term. However, short term negative effects may still occur.

Excluding livestock from the existing trough will reduce or eliminate impacts associated with watering livestock. Livestock use of the drinker will occur until the exclosure is built. Enlarging the exclosure may enlarge the marsh area that is frequently found around the trough and is periodically inhabited by topminnow. Moving the livestock water away from the present and proposed areas inhabited by Gila topminnow should reduce the likelihood that livestock enter the exclosure.

Maintenance and monitoring of the drinker and potholes is likely to result in take of Gila topminnow. A scenario not considered in the original biological assessment and biological opinion was the impacts that construction of the potholes could have. The potholes could effect water levels in the drinker by changing the amount of water collected by the springbox. Reduction or termination of water flow to the trough would affect the Gila topminnow occurring there. It is uncertain if the springs yield enough water to maintain viable habitat in the potholes. The small dirt berms may reduce runoff and siltation to one or two of the potholes.

Incidental Take

The anticipated amount of incidental take is less than in the original biological opinion. The following three items replace items 1 through 3 of the original biological opinion (pg. 9).

1. Take of Gila topminnow from livestock use of the Mud Springs drinker may still occur until the exclosure is constructed. After exclosure construction, if the marshy area below the drinker extends outside of the exclosure and is inhabited by Gila topminnow, take could still occur, though at diminished levels. The amount or extent of take is unquantifiable due to several factors. The possibility that the marshy habitat will extend outside the exclosure is unpredictable as is the possibility it would be inhabited by Gila topminnow. Take may also occur when livestock get inside the exclosure. Take of Gila topminnow could occur as a result of livestock use of the drinker and potholes. This take could occur as direct mortality due to livestock trampling or through habitat degradation or loss due to trampling and water consumption.

2. Incidental take of Gila topminnow may still occur during pothole construction at Mud Springs. This includes the Gila topminnow in the drinker. Take will be greater than anticipated if the water level in the trough drops more than six inches below the lip of the drinker as measured at the lowest point of the lip.

3. Take may also occur during replacement or maintenance of the potholes and the existing drinker through loss of habitat or harassment. Take is anticipated to occur during monitoring of the habitat and Gila topminnow population in both the potholes and drinker through harassment or death. Take will be greater than anticipated if the water level in the trough drops more than six inches below the lip of the drinker as measured at the lowest point of the lip. Take will be greater than anticipated if more than 10 Gila topminnow are killed during monitoring activities annually.

The reasonable and prudent measures remain the same. The Terms and Conditions remain the same except the following changes.

1.1. The proposed action will be implemented and enforced as described in the BE, EA, the previous biological opinion, amended BA & E, the Mud Springs Implementation Plan, and where amended by this opinion.

1.2. The existing and replacement springboxes, pipelines, troughs, and potholes at Mud Springs shall be regularly inspected and maintained in good repair.

1.6 During pothole construction and springbox, pipeline, and trough replacement at Mud Springs, heavy machinery shall be limited to the minimal surface area necessary to complete the action. All dirt removed from the potholes will be placed in an area where the spoils will not affect the potholes and water collection systems.

1.8. The existing springbox, pipeline, and trough at Mud Springs shall remain unaltered for at least four years following the release of topminnow into the potholes. Maintenance and replacement of the system are allowed as necessary to maintain the system and Gila topminnow population.

1.12. If monitoring activities result in the death of 10 Gila topminnow in any one year, the monitoring will stop and section 7 consultation will be re-initiated. These topminnow will be properly preserved and accessioned into the Arizona State University Collection of Fishes.

2.1. The Tonto National Forest shall insure that annual monitoring of the Gila topminnow population at Mud Springs occurs. Monitoring may be done by the Arizona Game and Fish Department, Forest Service, or the Service. Monitoring protocols shall be mutually acceptable to the USFS, Service, and AGFD. Monitoring shall include presence or absence and relative abundance of Gila topminnow in the trough, marsh area, and potholes. During pothole construction and springbox, pipeline, and trough replacement, monitoring shall occur at least daily to detect dead or stressed fish. Following completion of those project actions monitoring shall occur once a month for three months. Construction and post-construction monitoring results shall be furnished to the Service within 120 days after completion of the construction. Annual monitoring results shall be furnished to the Service once a year on a mutually agreeable schedule. Unusual observations, such as dead or dying fish, the absence of observable Gila topminnow, or the presence of another fish species, shall be reported to the Service and AGFD by telephone as soon as possible, but no later than two days after the observation. Monitoring needs will be reassessed five years after topminnow are stocked into the potholes.

2.2. This term and condition no longer applies.

Conservation Recommendation

The following conservation recommendation is in addition to those in the original biological opinion.

3. Placing information signs near the exclosure should be considered. Potential topics include endangered species management and recovery, conservation of native fishes, or the importance of riparian and aquatic habitats.

This concludes the amendment to the Biological Opinion 2-21-92-F-213. The original Biological Opinion remains in effect, except for the parts replaced by this amendment. As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been maintained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect 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 (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation. We appreciate your continuing management of this important Gila topminnow site and your implementation of the terms and conditions of the biological opinion. If you have any questions or concerns about this consultation or the consultation process in general, please contact Doug Duncan or Ted Cordery.

Sincerely,

For

Sam F. Spiller
Field Supervisor

cc: Regional Director, Fish and Wildlife Service, Albuquerque, NM (GM:AZ)
Director, Arizona Game and Fish Department, Phoenix, AZ