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AESO/SE
2-21-03-F-0261

July 15, 2003

Memorandum

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

FROM: Field Supervisor

SUBJECT: Biological Opinion for the Tule Spring Restoration

Thank you for your request for intra-Service consultation with the Arizona Ecological Services Office (AESO) following section 7 of the Endangered Species Act of 1973 (16 U.S.C. 1531-1544), as amended (Act). Your request for formal consultation was dated April 24, 2003, and received by us on April 28, 2003. The proposed action is the restoration and management of Tule Pond. The species of concern are the endangered Yaqui topminnow (*Poeciliopsis occidentalis sonoriensis*), endangered Yaqui chub (*Gila purpurea*), and threatened beautiful shiner (*Cyprinella formosa*), and designated critical habitat for the beautiful shiner, Yaqui catfish (*Ictalurus pricei*), and Yaqui chub on San Bernardino National Wildlife Refuge (SBNWR).

Your memorandum requested concurrence that the proposed project may affect, but is not likely to adversely affect the Yaqui topminnow. However, based on subsequent conversations between our staffs, you are now requesting formal consultation for the Yaqui topminnow, Yaqui chub, and beautiful shiner. Although it is designated critical habitat for the Yaqui catfish, Tule Pond cannot currently support Yaqui catfish. Therefore, we concur that the proposed action is not likely to adversely affect yaqui catfish.

This biological opinion responds to your request and is based on information provided in the April 10, 2003 Biological Evaluation (BE), telephone conversations and e-mail communications (Bill Radke, Refuge Manager, pers. comm., May 27, May 29, June 13, 2003), data in our files, and other sources of information. A complete administrative record of this consultation is on file at this office. References cited in this biological opinion are not a complete bibliography of all references available on the species of concern or the effects of the proposed action. We have assigned log number 2-21-03-F-0261 to this consultation. Please refer to that number in future correspondence on this consultation.

BIOLOGICAL OPINION

DESCRIPTION OF PROPOSED ACTION

The purpose of the proposed action is to create stream habitat for the San Bernardino springsnail, enhance pond habitat for native fishes, and make management and maintenance of the new Tule Ponds possible. This proposed action follows objectives contained in the Yaqui Fishes Recovery Plan (USFWS 1995). The San Bernardino springsnail is known to occur from only one spring on private land. Water was piped to the spring in 2002 to maintain habitat for the springsnail. This project will create an additional spring-run habitat for the springsnail.

The proposed action is to create two earthen ponds (basins) downstream from Tule Spring and the existing pond. A new spring-run will also be constructed from Tule Spring to the first pond. The two new ponds will be down-slope from Tule Spring, one below the other.

The two ponds will be constructed first. An earthen dam with a three-foot-tall water control structure will create each pond and each pond will be about five feet deep. After the two ponds are built, a flow-path will be created from Tule Pond to the first pond. The Tule Pond dam will then be cut to allow water and fish to flow downstream to the new ponds. As Tule Pond is draining, Refuge personnel will seine and trap for Yaqui topminnow to minimize their loss during pond drainage. After the original Tule Pond has drained, the cut/drainage from Tule Spring will be completed so the spring outflow goes to the new ponds.

After the new ponds are constructed and contain water, maintenance of the ponds will be needed to control vegetation and aquatic habitat. Most vegetation control will be through the manipulation of water level in the ponds. Infrequent hand removal of vegetation and mechanical dredging may also be necessary to maintain open water and pond depth.

Once the new ponds are functioning and provide suitable habitat, Yaqui chub and beautiful shiner may be released into the ponds (BE; B. Radke, pers. comm., June 13, 2003). The springsnail will be released into the spring run once suitable habitat has developed.

STATUS OF THE SPECIES (range-wide)

Yaqui topminnow

The Sonoran topminnow (*Poeciliopsis occidentalis*) was listed as endangered on March 11, 1967. The Yaqui form was originally described as a full species (Girard 1859). The Gila and Yaqui forms were recognized as subspecies of *Poeciliopsis occidentalis* by Minckley (1969). A publication by Minckley (1999), considers the Gila topminnow and Yaqui topminnow to be separate species, *P. occidentalis* and *P. sonoriensis*, respectively (Hedrick 2002). Critical habitat has not been designated for this species. The Yaqui topminnow (*P. o. sonoriensis*) is a small, livebearing fish of the family Poeciliidae (Minckley 1973). It is found throughout the Río Yaqui and adjacent drainages in Arizona and Sonora, México, but is listed only in the United States'

portion of its range (Hendrickson et al. 1980, Juarez-Romero et al. 1988, Campoy-Favela et al. 1989). Its historical range in the United States encompassed the lower to mid-elevation reaches of the Río Yaqui basin, including Whitewater and Black Draws. Much of the habitat in those areas has been lost to water diversion, stream downcutting, backwater draining, vegetation clearing, channelization, grazing, groundwater pumping, and other human uses of the natural resources (USFWS 1984). In addition, nonnative fish have been introduced in many portions of historical range in the United States. The mosquitofish (*Gambusia affinis*) is particularly damaging and was first found in the United States portion of the Río Yaqui basin in 1979 (Hendrickson et al. 1980, Meffe et al. 1983, Galat and Robertson 1992). Mosquitofish are currently extirpated from SBNWR.

In the United States, Yaqui topminnow are presently found only on the SBNWR and Leslie Canyon NWR. Additional information can be found in the [Rio Yaqui Fishes Recovery Plan](#) (USFWS 1995).

Yaqui chub

The Yaqui chub was listed as an endangered species on August 31, 1984. Critical habitat was designated for this species for "all aquatic habitats of San Bernardino NWR" (USFWS 1984). However, this designation occurred before the acquisition of Leslie Canyon, and Leslie Canyon is not part of the designated critical habitat. The Yaqui chub is a medium-sized fish of the family Cyprinidae (Minckley 1973). Originally, *Gila purpurea* was thought to occur in the basins of the Ríos Sonora, Matape, and Yaqui in Arizona and Sonora, México (Hendrickson et al. 1980). In 1991, it was recognized that the chub in the Ríos Sonora and Matape and the Río Yaqui system downstream from San Bernardino Creek are a different species, *Gila eremica* (DeMarais 1991). *Gila purpurea* is endemic to San Bernardino Creek in Arizona and Mexico and possibly the Willcox Playa basin in Arizona (Varela-Romero et al. 1990, DeMarais 1991). A population in Turkey Creek in the Chiricahua Mountains was stocked in 1986 and 1991 from Astin Spring (via Leslie Creek) stock raised at Dexter National Fish Hatchery. Asian tapeworm infestation continues to impact this species. Additional information can be found in the [Rio Yaqui Fishes Recovery Plan](#) (USFWS 1995) and the listing package (USFWS 1984).

Beautiful shiner

The beautiful shiner was listed as a threatened species on August 31, 1984. Critical habitat was designated for this species for "all aquatic habitats of San Bernardino NWR" (USFWS 1984). This designation occurred before the acquisition of Leslie Canyon NWR, and Leslie Canyon is not part of the designated critical habitat. The beautiful shiner is a small Cyprinid fish (Minckley 1973). It occurred in the Río Yaqui in Arizona and in Sonora and Chihuahua, México and in the Mimbres River and Guzman basin in New Mexico and Chihuahua, México but has been extirpated from the Mimbres River (Hendrickson et al. 1980, Campoy-Favela et al. 1989, Sublette et al. 1990). Water diversion, stream downcutting, backwater draining, vegetation clearing, channelization, grazing, groundwater pumping, and other human uses of the natural resources resulted in the extirpation of the beautiful shiner from the United States. In 1990,

beautiful shiner was reestablished into the SBNWR originating from collections made in 1989 from Río Moctezuma, Chihuahua, México. Additional information can be found in the [Rio Yaqui Fishes Recovery Plan](#) (USFWS 1995) and the listing package (USFWS 1984).

ENVIRONMENTAL BASELINE

The environmental baseline includes past and present impacts of all Federal, Tribal, State, local, or private actions in the action area, the anticipated impacts of all proposed Federal actions in the action area that have undergone formal or early section 7 consultation, and the impact of State and private actions which are contemporaneous with the consultation process. The environmental baseline defines the current status of the species and its habitat in the action area to provide a platform to assess the effects of the action now under consultation.

The riparian and wetland areas of the Refuge have declined from what they were historically (Hastings and Turner 1965, Lanning 1981) and are part of a region-wide decline (Lowe 1964, Carothers et al. 1974, Hendrickson and Minckley 1984). Early accounts show that San Bernardino Creek/Black Draw had, at most, a small channel (see Lanning 1981 and Davis 1982), as opposed to the large incised channel present today.

Status of the species within the action area

The San Bernardino National Wildlife Refuge was established in 1982 for the conservation and recovery of fishes indigenous to the Rio Yaqui basin. Four Yaqui fish species are federally listed as either threatened or endangered. Critical habitat has been designated on the San Bernardino NWR for two cyprinid fishes, the endangered Yaqui chub and the threatened beautiful shiner, and one ictalurid, the threatened Yaqui catfish. Table 1 displays the locations of listed fish on the Refuge.

All the ponds are designated critical habitat, as all aquatic habitat on the Refuge is designated as critical habitat. The known constituent elements for the Rio Yaqui fishes include clean, small permanent streams and spring pools without exotic fishes and backwater areas of springs with overgrown cutbanks and accumulations of detritus, which are necessary for feeding and shelter (USFWS 1984). The status of the fish in the action area is included in the status of the species.

Effects of the Action

The proposed action will affect the Yaqui topminnow, and may also impact the Yaqui chub and beautiful shiner if they are released into Tule Pond. Critical habitat for the chub and shiner will also be affected. Yaqui topminnow may be impacted by:

Table 1. Locations of listed fish on the San Bernardino National Wildlife Refuge.

Water body	Yaqui topminnow	Yaqui chub	beautiful shiner	Yaqui catfish
North	+++	+++		
Bathhouse	+++			
Black Draw	+++	+++		
Cottonwood	+++			
Hay Hollow Storage Tank	+++			
House Pond	+++	+++		+++
Middle	+++			
Two PhD	+++	+++		
Tule	+++			
Little Mesquite	+++	+++	+++	
Bunting	+++			
Mesquite	+++	+++	+++	
Oasis	+++	+++	+++	
Twin	+++	+++	+++	+++
Evil Twin	+++	+++	+++	
Robertson	+++			

- « being moved into new habitat;
- « capture during pond draining;
- « loss during pond draining;
- « direct loss and habitat change during vegetation control;
- « natural predation from Yaqui chub.

When fish move or are moved into novel habitats, there can be a period of adjustment while the system equilibrates. During this time, certain resources may be limiting and competition can be greater than normal, negatively impacting some individuals.

Capture of fish during pond draining will definitely affect individuals. However, because it is an intentional action, it is not incidental take and must be permitted through a scientific collection

permit. There will likely be losses during this action, but most individuals should survive pond draining and capture.

Some individual Yaqui topminnow will not get to the new ponds and will not be captured. These topminnow will die. The numbers of topminnow lost should be a minor part of the Tule Pond population and their loss is unlikely to negatively affect the Tule Pond population.

Reestablishment of Yaqui chub and beautiful shiner is an action that is beneficial to both species, and is consistent with tasks in the Yaqui fishes recovery plan. However, some negative effects may occur during the life of the project. Transport and release of fish is an intentional action and must be permitted through a scientific collection permit. Yaqui chub will eat small fish such as topminnow, shiner, and younger chub. There is also diet overlap among all three species, and it is possible that food resources could be limiting at some time during the life of the proposed action. Given the prolific nature of Yaqui topminnow and beautiful shiner and the likely small Yaqui chub population size, it is very unlikely that topminnow and shiner will be negatively impacted by Yaqui chub.

In nature, wetlands are dynamic habitats, and occupants have adapted to this regime. Manipulation of water levels is the only way that vegetation management will occur. Water level manipulation can positively and negatively affect the Yaqui topminnow, beautiful shiner, and Yaqui chub. To help manage and reduce aquatic vegetation, water levels may be raised and lowered, often done so in sequence. Raising water levels should benefit all three species as it creates additional habitat and increases certain necessary resources. Intentionally lowering water levels will likely have the opposite effect, and is likely to lead to losses of individual fish during the life of the project. Leaving water levels stable, whether high or low, results in a static system with resulting vegetation increase, decreased fish productivity, anaerobic conditions, and decreased fitness.

The constituent elements of the critical habitat at Tule pond will be lost for only a matter of hours. However, not only will it be quickly replaced, there will be more potential habitat for Yaqui chub and beautiful shiner at the new Tule Ponds.

Cumulative Effects

Cumulative effects are those effects of future non-Federal (State, local government, or private) activities on endangered or threatened species or critical habitat that are reasonably certain to occur during the Federal activity subject to consultation. Future Federal actions are subject to the consultation requirements established in Section 7 and, therefore, are not considered cumulative in the proposed action.

The cumulative effects that may impact listed species on the SBNWR are difficult to assess. Effects that are reasonably certain to occur are associated with the expected population growth of the Douglas, Arizona and Agua Prieta, Sonora region. Associated effects may include pollution, increased visitation to the refuge, groundwater depletion, illegal traffic, and increased resource

use and degradation. Decreases in the flows of the artesian wells on San Bernardino NWR have already been documented in response to groundwater pumping in Mexico (USFWS 1995). Groundwater declines have the greatest potential to impact the aquatic resources of the refuge. However, development in the San Bernardino Valley is minimal in both the United States and Mexico at this time.

CONCLUSION

After reviewing the status of the Yaqui topminnow, Yaqui chub, and beautiful shiner, the environmental baseline for the action area, the effects of the proposed action and the cumulative effects, it is the Service's biological opinion that the proposed action, as submitted, is not likely to jeopardize the continued existence of these species, and is not likely to destroy or adversely modify designated critical habitat. We base our conclusion on the above reasons and because:

1. The immediate effects of the restoration will be short-lived and are beneficial for Yaqui topminnow and may actually increase species fitness;
2. Reestablishing Yaqui chub and beautiful shiner into Tule ponds will benefit the species and will have only minor impacts on Yaqui topminnow;
3. The proposed action is a recovery task in the Rio Yaqui Fishes Recovery Plan (USFWS 1995).
4. Negative impacts from vegetation management will be transitory and small;
5. Designated critical habitat will be temporarily impacted while the old pond is drained. The proposed action will increase the amount of critical habitat on the refuge by increasing surface area of wetlands.
6. The proposed action will have an overall beneficial effect for the Yaqui chub, Yaqui topminnow, and beautiful shiner over the life of the project.

The conclusions of this biological opinion are based on full implementation of the project as described in the Description of the Proposed Action section of this document, including any Conservation Measures that were incorporated into the project design.

INCIDENTAL TAKE

Section 9 of the Act and Federal regulation under 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. Harm is further defined 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 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 measures described below are non-discretionary, and must be undertaken by you so that they become binding conditions of any grant or permit issued, as appropriate, for the exemption in section 7(o)(2) to apply. You have a continuing duty to regulate the activity covered by this incidental take statement. If you (1) fail to assume and implement the terms and conditions or (2) fail to require any applicant to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, the protective coverage of section 7(o)(2) may lapse. To monitor the impact of incidental take, you (or applicant) must report the progress of the action and its impact on the species to us as specified in the incidental take statement [50 CFR §402.14(i)(3)].

AMOUNT OR EXTENT OF TAKE

We anticipate incidental take of Yaqui chub, Yaqui topminnow, and beautiful shiner will be difficult to detect for the following reasons: dead specimens will be difficult to enumerate and difficult to find, cause of death may be difficult to determine, and losses may be masked by seasonal fluctuations in numbers or other causes. Also, take of all three species can be anticipated through competition or predation for similar forage or prey. The Yaqui topminnow in the current Tule Pond are likely to undergo some form of take, either through death, harm, or harassment. Individuals present during vegetation management may suffer harm through reduction of habitat and increased competition.

Anticipated take will be considered to be exceeded if:

1. More than 100 Yaqui topminnow are found dead during or immediately after the process of closing old Tule Pond and opening the new ponds.

2. More than 25 individuals each of Yaqui chub, Yaqui topminnow, and beautiful shiner are found dead during each vegetation management/pond manipulation event.

In the accompanying biological opinion, we have determined that this level of anticipated take is not likely to result in jeopardy to the species or destruction or adverse modification of critical habitat.

REASONABLE AND PRUDENT MEASURES AND TERMS AND CONDITIONS

We believe the following reasonable and prudent measures are necessary and appropriate to minimize take. To be exempt from the prohibitions of Section 9 of the Act, you must comply with them and their terms and conditions, which implement the reasonable and prudent measures and outline required reporting and monitoring requirements. These terms and conditions are nondiscretionary.

1. Conduct the proposed action in a manner which will minimize mortality of Yaqui topminnow, beautiful shiner, and Yaqui chub.
 - 1.1. Ensure that enough personnel and equipment are available to move and salvage Yaqui topminnow when the old pond is breeched and drained;
 - 1.2. Minimize holding time for all captured fish during pond renovation and reestablishment of Yaqui chub and beautiful shiner;
 - 1.3. Not more than three months before Yaqui chub or beautiful shiner are released, determine the population abundance of all fishes in the waters to be stocked;
 - 1.4. After chub or shiner are released, monitor the population abundance of the listed fish species every three months, beginning one month after fish release and continuing for one year. Monitoring may then be done annually.
 - 1.5. Make weekly inspections of the new ponds to check for potential problems (e.g., exceeding anticipated take) for two months immediately after water is released into the new ponds.
2. Conduct the proposed action in a manner which will minimize destruction or modification of habitat for Yaqui topminnow, Yaqui chub, and beautiful shiner.
 - 2.1. When possible, minimize drawing down water levels in the new ponds, unless monitoring demonstrates that viable populations are remaining after those actions.

3. Maintain complete and accurate records of listed fish species populations and status and water quality of constructed habitats.
 - 3.1. Monitor implementation of the proposed action and these terms and conditions. During monitoring, document and record any take of Yaqui topminnow, Yaqui chub, or beautiful shiner, and take notes on the condition of the habitat. We encourage development of a standard form to record these data. A brief written report shall be prepared summarizing the results of the proposed action and monitoring. The report shall also describe any deviations from the proposed action, and procedures and results of fish captures, transport, holding, and release. This report shall be submitted to us within one year of breaching old Tule Pond. The report shall also make recommendations, as needed, for modifying or refining these terms and conditions to enhance protection of the listed species and designated critical habitat or reduce needless hardship on the SBNWR.

The reasonable and prudent measures, with their implementing terms and conditions, are designed to minimize incidental take that might otherwise result from the proposed action. If, during the course of the action, the level of incidental take is exceeded, such incidental take would represent new information requiring review of the reasonable and prudent measures provided. You must immediately provide an explanation of the causes of the taking and review with the AESO the need for possible modification of the reasonable and prudent measures.

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. Consult on the Comprehensive Management Plan, and consider including all planned, site-specific actions. This would reduce the number of consultations needed.
2. Continue implementing the Rio Yaqui Fishes Recovery Plan (USFWS 1995).

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.

REINITIATION - CLOSING STATEMENT

This concludes formal consultation on the action outlined in the request. 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 retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of your action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) your action is subsequently modified in a manner that causes an effect to the listed species or critical habitat 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 efforts to identify and minimize effects to listed species from this project. For further information please contact Doug Duncan (520-670-4860) or Sherry Barrett (520-670-4617). Please refer to the consultation number, 2-21-03-F-0261, in future correspondence concerning this project.

/s/ Steven L. Spangle

cc: Regional Director, Fish and Wildlife Service, Albuquerque, NM (ARD-ES)
Assistant Field Supervisor, Fish and Wildlife Service, Tucson, AZ

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Regional Supervisor, Arizona Game and Fish Department, Tucson, AZ

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SUMMARY
BIOLOGICAL OPINION FOR THE TULE SPRING RESTORATION
ON THE SAN BERNARDINO NATIONAL WILDLIFE REFUGE

Date of the opinion/report: July 1, 2003

Action agency: US Fish Wildlife Service, San Bernardino National Wildlife Refuge

Project: Biological Opinion for the Tule Spring Restoration on San Bernardino National Wildlife Refuge

Listed species and critical habitats: Yaqui chub (*Gila purpurea*), and beautiful shiner (*Cyprinella formosa*) with designated critical habitat; Yaqui topminnow (*Poeciliopsis occidentalis sonoriensis*).

Biological opinion: Proposed action is not likely to jeopardize the continued existence of the three fish species, is not likely to destroy or adversely modify designated critical habitat of the Yaqui chub, and beautiful shiner.

Incidental take statement:

Level of take anticipated: Anticipated incidental take will be considered exceeded when:

1. More than 100 Yaqui topminnow are found dead during or immediately after the process of closing old Tule Pond and opening the new ponds;
2. More than 25 individuals each of Yaqui chub, Yaqui topminnow, and beautiful shiner are found dead during each vegetation management/pond manipulation event.

Reasonable and prudent measures and terms and conditions:

1. Reasonable and prudent measures:
 - 1.1 Conduct the proposed action in a manner which will minimize mortality of Yaqui topminnow, beautiful shiner, and Yaqui chub;
 - 1.2 Conduct the proposed action in a manner which will minimize destruction or modification of habitat for Yaqui topminnow, Yaqui chub, and beautiful shiner;
 - 1.3 Maintain complete and accurate records of listed fish species populations and status and water quality of constructed habitats.

2. Terms and conditions:

- 2.1 Ensure that enough personnel and equipment are available to move and salvage Yaqui topminnow when the old pond is breached and drained;
 - 2.2 Minimize holding time for all captured fish during pond renovation and reestablishment of Yaqui chub and beautiful shiner;
 - 2.3 Not more than three months before Yaqui chub or beautiful shiner are released, determine the population abundance of all fishes in the waters to be stocked;
 - 2.4 After chub or shiner are released, the Refuge shall monitor the population abundance of the listed fish species every three months, beginning one month after fish release and continuing for one year. Monitoring may then be done annually;
 - 2.5 The Refuge shall make weekly inspections of the new ponds to check for potential problems (e.g., exceeding anticipated take) for two months immediately after water is released into the new ponds;
 - 2.6 When possible, minimize drawing down water levels in the new ponds, unless monitoring demonstrates that viable populations are remaining after those actions;
3. Monitor implementation of the proposed action and these terms and conditions. During monitoring, document and record any take of Yaqui topminnow, Yaqui chub, or beautiful shiner, and take notes on the condition of the habitat. We encourage development of a standard form to record these data. A brief written report shall be prepared summarizing the results of the proposed action and monitoring. The report shall also describe any deviations from the proposed action, and procedures and results of fish captures, transport, holding, and release. This report shall be submitted to us within one year of breaching old Tule Pond. The report shall also make recommendations, as needed, for modifying or refining these terms and conditions to enhance protection of the listed species and designated critical habitat or reduce needless hardship on the SBNWR.

Conservation recommendations:

1. Consult on the Comprehensive Management Plan, and consider including all planned, site specific actions. This would reduce the number of consultations needed.
2. Continue implementing the Rio Yaqui Fishes Recovery Plan (USFWS 1995).