AESO/SE
2-21-00-F-397 October 20, 2000

Memorandum

To: Chief, Division of Federal Aid, Fish and Wildlife Service, Albuquerque, New Mexico

From: Field Supervisor

Subject: Intraservice Section 7 Consultation for Reintroduction of Gila Trout into Raspberry Creek

The Arizona Ecological Services Office has reviewed your September 7, 2000, biological assessment for the reintroduction of Gila trout (*Oncorhynchus gilae*) into Raspberry Creek, on the Apache-Sitgreaves National Forests, in Greenlee County, Arizona. Your request for formal section 7 consultation under the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.) was received on September 7, 2000. Your letter also requested conferencing on the proposed threatened Chiricahua leopard frog (*Rana chiricahuensis*) which we provide at the end of this biological opinion. This action, proposed by Federal Aid, is being coordinated by the Arizona Game and Fish Department whom you have designated as an applicant for the purpose of this consultation.

This biological opinion is based on information provided in the August 3, 2000, biological assessment, telephone conversations between our staffs, and other sources of information. Literature cited in this biological opinion is not a complete bibliography of all literature available on the species of concern, and its effects, or on other subjects considered in this opinion. A complete administrative record of this consultation is on file in this office.

CONSULTATION HISTORY

Informal discussions lead by the AGFD on the possible reintroduction of Gila trout into Raspberry Creek have been underway for several years. On August 7, 2000, we received an August 3, 2000, letter from the Division of Federal Aid requesting the initiation of formal consultation. Attached to the letter, was a Biological Evaluation prepared by Terry Myers, biologist at the Apache-Sitgreaves National Forests. The Biological Evaluation stated that the Forest Service was not a cooperator in this action and that ongoing Forest Service activities would not be included in this consultation. Informal discussions between the Service's Division of Federal Aid, the Arizona Ecological Service Field Office, and staff at the Apache-Sitgreaves

National Forests concluded that Forest Service activities needed to be addressed before the actual introduction of Gila trout into Raspberry Creek. This was confirmed in a August 28, 2000, letter from the Forest Supervisor of the Apache- Sitgreaves National Forests, requesting a separate consultation on the effect of ongoing Forest actions on the Gila trout (2-21-00-F-396). The AESO received the September 7, 2000, letter from Federal Aid, clarifying that this consultation addressed only the effects of the introduction of Gila trout. A draft biological opinion was sent to Federal Aid on October 3, 2000. On October 16, we received a call and an e-mail from Pat Mullane, Federal Aid, asking us to finalize the draft biological opinion in its current format.

BIOLOGICAL OPINION

DESCRIPTION OF PROPOSED ACTION

The AGFD, with funding from the Service's Division of Federal Aid, will transport Gila trout from Mescalaro National Fish Hatchery in New Mexico to Raspberry Creek in Arizona during the fall of this calendar year. The original plans were to stock up to 1500 fingerling; however, the actual number of fish to be stocked is likely to be less than 150 (Rob Bettaso, AGFD, pers. comm.). Additional adults and/or hatchery progeny taken directly from Spruce Creek will be introduced into Raspberry Creek over the next 5 to 10 years until the desired population structure is obtained. The purpose of this action is to restore Gila trout in the Blue River watershed.

All fish introduction will occur above a natural barrier on Raspberry Creek and will occur within 24 hours after the fish are loaded from the trucks onto the pack mules. Other logistical considerations including the collection, manipulation, holding, and transport of Gila trout are already permitted by the Service. No mechanized equipment will be used on the stream and no ground disturbing activities are permitted.

Project Area

Raspberry Creek is a first order stream located in Greenlee County, in the Blue Range Primitive Area of the Clifton Ranger District on the Apache-Sitgreaves National Forests. The creek originates from a series of springs and tributaries on the southwest side of Blue Peak and travels southeasterly for approximately 11 kilometers (6.8 miles) where it meets the Blue River at an elevation of 1530 meters (5020 feet). A steep gradient (6-8%) exists in the upper 7 km (4.3 miles) of Raspberry Creek and levels somewhat (4-5%) in the lower 4 km (2.9 miles) (Stefferud and Young 1998). Channel substrate is cobble and gravel, with good canopy cover overhead.

Although the stream is entrenched 1-2 meters (3.3 to 6.6 ft.) deep (Stefferud and Young 1998), it is believed to be relatively stable with no signs of erosion or deposition when evaluated in July 1998. Perennial flows of Raspberry Creek exist in the last 600 meters (0.4 mile) of stream. A natural barrier on the creek, found about 4.3 km (2.7 miles) above the confluence with the Blue River, should prevent the movement of any fish above the barrier. The barrier consists of a large boulder backfilled with cobble and gravel which provides a vertical drop of about 1.2 to 2 meters (3.9 to 6.6 feet). Raspberry Creek itself is narrow 0.5 to 1.0 meter (1.6 to 3.2 ft) and shallow, 0.1

to 0.3 meters (0.3 to 1.0 feet) with a mixture of riffles, pools, and runs. The creek can be seasonally intermittent. The invertebrate community includes of caddis fly larvae (Trichoptera), blackfly larvae (Diptera-Simuliidae), and possibly water striders (Hemiptera-Gerridae) and other genera (Mike Lopez, AGFD, pers. comm.). Silvey and Thompson (1978) concluded that the uppermost reach of Raspberry Creek would provide a minor salmonid fishery. This was supported during a 1998 field investigation by Stefferud and Young (1998) and by Mike Lopez in 1999 (Lopez 2000).

STATUS OF THE SPECIES

The Gila trout was listed as an endangered species in 1967. Gila trout are a typical cold water species requiring well oxygenated high water quality, cobble substrate, deep narrow channels, and abundant overhanging banks or cover. Gila trout begin spawning activity in early April or whenever water temperatures reach 8 degrees C, and continue through June as water warms with summer (Rinne and Minckley 1991, USFWS 1993, Sublette *et al*. 1990). Adults live in pools, with smaller individuals dependent on overhanging vegetation (Rinne and Minckley 1991). The species inhabits clear runs that are typically narrow and shallow, and feed on aquatic insects including caddisflies, mayflies, chironomids, and beetles (Sublette *et al*. 1990).

The Gila trout is one of two native trout species known in Arizona. Prior to 1900, Gila trout were found in Arizona's Verde, San Francisco, and Agua Fria river systems, but the species was extirpated from Arizona around the turn of the century (USFWS 1993) until the reintroduction into Dude Creek in 1999. During the mid-1990s, the Spruce Creek fish were determined to represent the native trout of the San Francisco River drainage, including the Blue River.

One of the greatest successes for the species included the introduction of 120 multi-aged Gila trout into Dude Creek by AGFD in coordination with Federal Aid, the Tonto National Forests, and other cooperators. This was made possible after a 1990 catastrophic fire, known by locals as the "Dude fire," which burned more than 20,000 acres in the Payson Ranger District of the Tonto NF, including most of the Dude Creek drainage, and left the creek without fish for many years. An additional 44 fish have been placed in Dude Creek since the original 1999 stocking. Successful replication of the Spruce Creek lineage of Gila trout into Dude Creek has been a tremendous impetus for continuing to evaluate the downlisting of this species.

In New Mexico, the fish were found throughout the Gila and San Francisco river basins. By the 1960's, Gila trout were divided into five stocks or populations: Main Diamond, South Diamond, McKenna, Spruce, and Iron creeks. Today they exist in New Mexico in isolated populations throughout the upper portion of the Gila basin (Minckley 1973, Propst and Stefferud 1997). The replication and security of each of the five populations are essential for the recovery of the species (USFWS 1993).

Gila trout from Main Diamond Creek were translocated into Gap Creek, a tributary of the Verde River, in 1974. By 1981, the population was estimated at 150 fish. During a 1987 survey, the population was estimated at 70 fish, but they were restricted to about 2.4 km (1.5 miles) of

stream (Warnecke 1987). Although the population persisted for at least seven years, the fish were later believed lost (USFWS 1993).

Major threats to the species include habitat degradation including natural disasters (particularly floods and fires), grazing, timber management, and competition/hybridization with introduced non-native trout (USFWS 1993). In 1988, a flood eliminated more than 90% of the Gila trout in McKnight Creek (Propst and Stefferud 1997). In 1989, a forest fire and associated impacts eliminated the Main Diamond Creek population. Later that same year, drought combined with impacts of a fire reduced the South Diamond Creek population by 95% (USFWS 1996). Wildfires and subsequent ash laden runoff have decimated the Gila trout population in New Mexico many times over the years (USFWS 1993, Propst *et al*. 1992, others). Prior to these events, discussions of downlisting the species from endangered to threatened were underway. The loss to these populations has delayed downlisting considerations. The presence of rainbow trout (*O. mykiss*) or other salmonids in areas designated as Gila trout streams, has required the use of toxicants to eliminate the non-native salmonids and subsequent restoration with Gila trout. The presence of rainbow trout in Dry Creek and Trail Canyon Creek has also lead to rainbow trout and Gila trout hybrids requiring similar treatment, expenditures of funds and staff time, and a set-back in long-term persistence of Gila trout.

ENVIRONMENTAL BASELINE

The environmental baseline includes past and present impacts of all Federal, State, 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.

Raspberry Basin is managed under the Apache-Sitgreaves Clifton Ranger District. Livestock grazing and recreation are the primary uses of the land. Raspberry Creek includes two grazing permits, the Strayhorse allotment which includes about 75% of the watershed above the fish barrier, and Raspberry Allotment which includes the remaining 25% of the allotment. Strayhorse Allotment was evaluated in July 1998 and determined to be in "Proper Functioning Condition." Livestock grazing on the Strayhorse Allotment, which will change significantly in 2001, will be addressed in a separate consultation. The area has a well-developed riparian plant community and no adverse impacts from ongoing livestock. Evaluation of the Raspberry Allotment occurred twice in 1998 and concluded that the allotment was "Functional - At Risk" and in a "Downward" trend. The report noted an incised channel, and concluded that upland watershed conditions were contributing to the riparian degradation. A 1995 decision notice resulting in significant changes to the Raspberry Allotment became fully effective this year. This change calls for a reduction in livestock numbers from 225 cattle (cow/calf) yearlong, and 160 cattle (yearlings) from January 1 to May 15, to 46 cattle (cow/calf) grazed yearlong (or less, depending on when utilization standards are reached). Animal Months have dropped from a maximum of 3,400 to 81 AMs.

Recreation in the Raspberry Basin is primarily a result of Forest Trail 35. The trail which mostly parallels the creek (although it veers away from the creek in places), is primarily used by deer and elk hunters from September through January. Some limited camping in the basin and incidental fishing in the creek may also occur. No sport fish currently exist in Raspberry Creek.

A natural barrier on the creek found about 4.3 km (2.7 miles) above the confluence with the Blue River, appears to have prevented the movement of any fish into the upper portion of the creek. The barrier consists of a large boulder backfilled with cobble and gravel which provides a vertical drop of about 1.2 to 2 meters (3.9 to 6.6 feet). Surveys conducted by Arizona State University in 1994 reported speckled dace (*Rhinichthys osculus*) upstream of this barrier (Bagley and Knowles 1994). No fish have been documented above the barrier since 1994 but surveys have been limited. Surveys by AGFD in 1999 documented specked dace, rainbow trout, and longfin dace (*Agosia chrysogaster*) below the barrier (Lopez 2000).

Gila trout moving below the barrier and out of Raspberry Creek into the Blue River are likely to encounter minimally suitable habitat along with Apache trout, rainbow trout, and other non-native species. Rainbow trout and cutthroat trout (*Oncorhynchus clarki*) have been extensively stocked in the Blue River from 1938 to 1990, but a viable fishery has not been established (M. Lopez, AGFD, pers. comm.). Surveys on the Blue River watershed between 1994 and 1998 verified the lack of trout by documenting only 21 rainbows of 5,017 fish collected (0.4%). Although Apache trout are no longer being introduced into the Blue River, individuals still exist as a result of years of stocking. In 1969, some 1,729 individuals were introduced into KP Creek, a tributary of the Blue River. Another 179 were introduced into another Blue River tributary, Coleman Creek, in 1981 and 1983 (Novy and Lopez 1991). A small population of Apache trout probably still exists in Coleman Creek (Novy and Lopez 1991), but are scheduled to be removed. A barrier on Coleman Creek (as well as KP and Grant creeks) appears to have prevented rainbow trout from moving into those creeks. Low flows in Raspberry Creek could restrict the long-term recovery of Gila trout in this area (Stefferud and Young 1998).

EFFECTS OF THE ACTION

Since the introduction of the Gila trout into Raspberry Creek has been covered under a 10(A)1(a) permit, and ongoing forest management will be addressed in a separate consultation, this analyses only address the effects of Gila trout moving out of Raspberry Creek or other trout moving into Raspberry Creek. The possibility of other trout species entering Raspberry Creek is of great concern. If trout other than Gila trout are observed in Raspberry Creek, the fish must be removed, the situation evaluated, and the use of chemical piscicides considered. The use of piscicides in Raspberry Creek will require separate section 7 evaluation.

Some Gila trout are likely to move out of Raspberry Creek into the Blue River, particularly during periods of high runoff. Although these fish cannot be managed once they enter the Blue River, they remain fully protected under the ESA. The persistence of Gila trout in the Blue River is not known, but conditions are not likely to support a large permanent population of Gila trout, due to high water temperatures and low flows. Predation, hybridization with other trout, and/or

competition with the many non-native fish in the Blue River is also likely. Catch of Gila trout by anglers fishing for rainbow trout in the Blue is also likely to occur. Posting of signs differentiating rainbow trout from Gila trout, with information on the protected status of Gila trout and the penalties for take is necessary for the protection of Gila trout.

Raspberry Creek will be closed to fishing; however, illegal fishing may occur. Illegal introduction of rainbow trout upstream from the Raspberry Creek barrier may also occur. Successful, although illegal, introductions are commonly made to add a new game species or forage species to a native fish community (Taylor *et al.* In Courtenay and Stauffer 1984). Due to the remote location of Raspberry Creek, these activities will likely be limited.

CUMULATIVE EFFECTS

Cumulative effects include the effects of future State, 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 ESA.

The New Mexico Department of Game and Fish, and AGFD have obtained a scientific collecting permits 10(a)(1)(A) to transfer Gila trout from Spruce Creek directly into Raspberry Creek. Since the project area occurs within the jurisdiction of the Apache-Sitgreaves National Forests, it is likely that actions that might affect listed species within the project area would be considered Federal actions. Actions by individuals whose land is adjacent to the Forest or its tributaries may or may not be considered Federal actions. The Service is not aware of any proposed non-Federal action that may affect species or critical habitats considered in this consultation.

CONCLUSION

After reviewing the current status of Gila trout, the environmental baseline for the action area, the effects of the proposed reintroduction and subsequent management, and the cumulative effects, it is the Service's biological opinion that the action, as proposed, is not likely to jeopardize the continued existence of the Gila trout. No critical habitat has been designated for this species, therefore, none will be affected.

Although the success of this reintroduction effort is not known, and the long-term survival of the species in Raspberry Creek cannot be guaranteed, this action should provide a second secure replicate of the Spruce Creek Gila trout lineage in Arizona. Diligence in preventing illegal fishing and/or movement of other trout species into Raspberry Creek must be maintained.

INCIDENTAL TAKE STATEMENT

Sections 4(d) and 9 of ESA, as amended, prohibit 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 or 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. Harass is defined as 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 any take of listed animal species that results from, but is not the purpose of, carrying out an otherwise lawful activity conducted by the Federal agency or the applicant. 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 terms and conditions of this incidental take statement.

The measures described below are non-discretionary, and must be implemented by Federal Aid, or their applicant, so that they become binding conditions of any grant or permit issued to the applicant, as appropriate, in order for the exemption in section 7(o)(2) to apply. Federal Aid has a continuing duty to regulate the activity covered by this incidental take statement. If Federal Aid or their applicant (1) fails to require the 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, and/or (2) fails to retain oversight to ensure compliance with these terms and conditions, the protective coverage of section 7(o)(2) may lapse.

AMOUNT OR EXTENT OF TAKE

The Service anticipates that the proposed project would result in incidental take of Gila trout in the form of harassment, harm, capture, and kill after being washed out of Raspberry Creek. The take will be difficult to detect since trout may be removed from the creek by predators, masked by seasonal fluctuations in numbers or other causes, such as sedimentation, or movement downstream.

As a surrogate measure of take, the Service will consider incidental take to be exceeded if the reasonable and prudent measures and terms and conditions are not fulfilled.

If, during the course of the action, the amount or extent of the incidental take anticipated is exceeded, Federal Aid must reinitiate consultation with the Arizona Ecological Service Field Office immediately to avoid violation of section 9. Operations must be stopped in the interim period between the initiation and completion of the new consultation if it is determined that the impact of the additional taking will cause an irreversible and adverse impact on the species, as required by 50 CFR 402.14(i). An explanation of the causes of the taking should be provided to the Service.

EFFECT OF THE TAKE

In the accompanying biological opinion, the Service determined that this level of anticipated take is not likely to result in jeopardy to the species. No critical habitat has been designated for this species; therefore, none will be affected.

REASONABLE AND PRUDENT MEASURES

The Service believes the following reasonable and prudent measure is necessary and appropriate to minimize take:

> Federal Aid (or AGFD) will provide a process to determine the long-term suitability of Raspberry Creek as a permanent site for Gila trout.

TERMS AND CONDITIONS

In order to be exempt from the prohibitions of section 9 of ESA, the Division of Federal Aid or their applicant must comply with the following terms and conditions, which implement the reasonable and prudent measure described above. These terms and conditions are nondiscretionary.

To implement the reasonable and prudent measure:

1. Salvage Protocol - Federal Aid or AGFD shall report salvage of all Gila trout found dead, and deposit specimens in a suitable museum collection such as ASU, or as otherwise specified in the AGFD permit.

2. Monitoring of the project area and other areas that could be affected by the proposed action shall be done to ascertain take of individuals of the species and/or of its habitat that causes harm or harassment to the species. The first year following introduction, assessment of stocking success shall be done visually to minimize impacts and stress to populations, as recommended by the Gila Trout Recovery Team. Once the population is established, monitoring will be accomplished using the following protocol as described in Appendix A of the 1993 Gila trout Recovery Plan which reads:

   Two to four permanent sites will be established on each stream. Sites will be selected to encompass the array of habitats available to Gila trout in the stream. The number of sites and length of sites per stream will be dependent upon stream size. Short streams, such as Spruce Creek, will have a minimum of two permanent sites. Longer streams, such as Iron Creek, will have a minimum of four. No permanent site markers will designate sites; rather, location will be on USGS 7.5' topographic maps. Reference photo points will be established at each site and photos taken during each sampling effort.

   Fish collection will be by backpack electrofishing gear. One sampling pass will be made. As many fish as possible will be collected while exercising care to minimize sampling mortality. All collected specimens will be weighed, measured, and returned to the stream alive. Any mortalities will be preserved and curated. Voltage, amperage, pulse width, and frequency will be recorded for each sampling pass. Time and area electrofished will be recorded.

At one permanent site, a population/density estimate (including length/weight data) for each habitat type (e.g. pool, run, riffle, undercut bank) will be made. Data for each habitat type will be recorded separately.

At each permanent site, water temperature, dissolved oxygen, and pH will be measured. If deemed necessary, other water quality parameters will be measured.

The entire stream reach supporting Gila trout will be visually surveyed to gain an overall impression of the security of the stream and relative habitat quality.

All data gathered on each population monitored in a year will be summarized in a brief report to be submitted by agency representatives. This report will be submitted to the Regional Office, U.S. Fish and Wildlife Service, for transferral to relevant agencies.

3. Signs posting prohibition on angler possession of Gila trout shall be placed on Raspberry Creek and the Blue River within 30 days of the initial stocking.

4. An annual report of the results of the monitoring, and supplemental stocking, including complete and accurate records of all incidental take that occurred during the course of the project, will be submitted to the Gila Trout Recovery Team and the Service. This report will also describe collections of Gila trout on the Blue River, and how the terms and conditions of all RPM in this incidental take statement were implemented.

Review requirement: 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. The Division of Federal Aid (or AGFD) 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.

CONFERENCE REPORT

Status of the Species

The Chiricahua leopard frog was proposed for listing as a threatened species on June 14, 2000. No critical habitat is proposed for the species (65 CFR 37343) (USFWS 2000). The frog has a distinctive pattern on the rear of the thigh consisting of small, raised, cream-colored spots or tubercles on a dark background, dorsolateral folds that were interrupted and deflected medially, stocky body proportions, relatively rough skin on the back and sides, and often green coloration on the head and back (Platz and Mecham 1979). The species also has a distinctive call consisting of a relatively long snore of 1 to 2 seconds in duration (Davidson 1996, Platz and Mecham 1979). Snout-vent lengths of adults range from approximately 54 to 139 millimeters (mm) (2.1 to 5.4 inches (in)) (Stebbins 1985, Platz and Mecham 1979). The Ramsey Canyon leopard frog *(Rana subaquavocalis*) is similar in appearance to the Chiricahua leopard frog, but it often grows to a

larger size and has a distinct call that is typically given under water (Platz 1993). This differentiation is being investigated and may result in a description of the northern populations of leopard frogs being described as a separate species from the southern populations (James Platz, Creighton University, pers. comm. 1994). If the species is split into two distinct taxa, fewer populations would exist within each taxon. Historically, Chiricahua leopard frogs were either collected or observed at 212 localities in Arizona.

Threats to this species include predation by nonnative organisms, especially bullfrogs, fish and crayfish; disease; drought; floods; degradation and destruction of habitat; water diversions and groundwater pumping; disruption of metapopulation dynamics (relationships between populations of frogs); increased chance of extirpation or extinction resulting from small numbers of populations and individuals; and environmental contamination.

The Chiricahua leopard frog is an inhabitant of cienegas (mid-elevation wetland communities often surrounded by arid environments), pools, livestock tanks, lakes, reservoirs, streams, and rivers at elevations of 1,000 to 2,710 meters (3,281 to 8,890 feet) in central and southeastern Arizona; west-central and southwestern New Mexico; and in Mexico, northern Sonora. The Chiricahua leopard frog is currently known to occur at 52 sites in Arizona and 27 in New Mexico. The species has also been found at 12 or 13 sites in Chihuahua, northern Durango, and northern Sonora, Mexico.

Environmental Baseline

Although the Chiricahua leopard frog is not known to occur in Raspberry Creek, surveys are limited and the species has been documented in similar habitats on the Apache-Sitgreaves National Forests (Myers 2000). The Blue River is assumed to be occupied by Chiricahua leopard frogs (J. Rorabaugh, Service, pers. comm.).

Effects of the Action

The establishment of Gila trout in habitats occupied or potentially occupied by Chiricahua leopard frogs may negatively affect the frogs. Predation is a significant factor in the decline of the Chiricahua leopard frog. In southeastern Arizona, Rosen *et al.* (1994, 1996) documented 13 nonnative predaceous vertebrates, including trout, in aquatic habitats in the range of the Chiricahua leopard frog. In contrast, nearly all of the perennial sites that support the Chiricahua leopard frog also lacked predatory vertebrates (Rosen *et al.* 1996). Although Gila trout feed primarily on aquatic insects including caddisflies, mayflies, chironomids, and bettles (Sublette et al. 1990), Gila trout are known to shift their diet seasonally and to consume speckled dace (Van Eimeren 1988). No records of Gila trout feeding on frog or frog eggs have been documented.

Cumulative Effects

The New Mexico Department of Game and Fish, and AGFD have obtained a scientific collecting permits 10(a)(1)(A) to transfer Gila trout from Spruce Creek directly into Raspberry Creek. Since the project area occurs within the jurisdiction of the Apache-Sitgreaves National Forests, it

is not likely that actions that might affect listed species within the project area would not be considered a Federal action. The Service is not aware of any proposed non-Federal action that may affect species or critical habitats considered in this consultation.

Conclusions

After reviewing the current status of Gila trout, the environmental baseline for the action area, the effects of the proposed reintroduction and subsequent management, and the cumulative effects, it is the Service's biological opinion that the action, as proposed, is not likely to jeopardize the continued existence of the Chiricahua leopard frog. No critical habitat has been designated for this species; therefore, none will be destroyed or adversely modified.

Incidental Take Statement

The prohibitions against taking the species found in section 9 of the Act do not apply until the species is listed. However, the AESO advises agencies to consider implementing reasonable and prudent measures where given. If a conference opinion is adopted as a biological opinion following a listing or designation, reasonable and prudent measure, and implementing term and condition, become non-discretionary. We do not anticipate the proposed action will incidentally cause any take of Chiricahua leopard frogs. There are no currently known frogs in the project site. However, because suitable habitat exists, we anticipate that individual frogs could move into the area and be affected by the presence of Gila trout. In the event that frogs are documented in the project area this would provide new information and require a re-evaluation of the project.

Conservation Recommendation

This recommendation is advisory, as required by 50 CFR 402.10, and designed to minimize or avoid adverse effects to proposed species. If the proposed species is subsequently listed, the Federal agency must review the action to determine whether formal consultation is required.

1. Any detections of leopard frogs in Raspberry Creek during the translocation or subsequent monitoring should be documented and reported to the AESO to evaluate the need for formal consultation.

Conclusion

This concludes the conference report for the proposed reintroduction of Gila trout into Raspberry Creek. You may ask the AESO to confirm this conference as a biological opinion issued through formal consultation if the Chiricahua leopard frog is listed. The request must be in writing. If the Service reviews the proposed action and finds there have been no significant changes in the action as planned or in the information used during the conference, the Service will confirm the conference opinion as the biological opinion on the project and no further section 7 consultation is necessary.

After listing of the Chiricahua leopard frog as threatened and any subsequent adoption of this conference report, the Federal agency shall request reinitiation of consultation if any of the reinitiation criteria listed below are met.

An incidental take statement provided in a conference opinion does not become effective until the species is listed and the conference opinion is adopted as the biological opinion through formal consultation. At that time, the project will be reviewed to determine whether any take of the Chiricahua leopard frog has occurred. Modifications of the opinion and incidental take statement may be appropriate to reflect that take. No take of the frog may occur between the listing of the frog and the adoption of the conference through formal consultation, or the completion of a subsequent formal consultation.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of ESA directs Federal agencies to utilize their authorities to further the purposes of ESA 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.

1. Investigate opportunities for a hatchery stock of Spruce Creek fish in Arizona.

2. Investigate opportunities for introduction of Gila trout into other Arizona waters.

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

REINITIATION - CLOSING STATEMENT

This concludes formal consultation on the action outlined in the request for consultation. 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 continued coordination. Please refer to the consultation number 2-21-00-F-397 in future correspondence concerning this project. If we can be of further assistance, please contact Debra Bills (ext. 239) or Tom Gatz (ext. 240).

David L. Harlow

cc: Regional Director, Fish and Wildlife Service, Albuquerque NM (ES-ARD)
Project Leader, Fish and Wildlife Service, Pinetop, AZ
Field Supervisor, Fish and Wildlife Service, Albuquerque, NM

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