

FOR FURTHER INFORMATION CONTACT: L. Bynum, 703-696-4970.

SUPPLEMENTARY INFORMATION: DoD Directive 1332.34, which was originally codified in the CFR as 32 CFR part 78, has been removed from the DoD Directives System. The sentence added to inform readers that were previously used to making cross-reference to the Directive will now know where to locate additional information.

List of Subjects in 32 CFR Part 78

Income taxes, Intergovernmental relations, Military personnel, Pensions.

■ Accordingly, 32 CFR part 78 is amended as follows:

PART 78—VOLUNTARY STATE TAX WITHHOLDING FROM RETIRED PAY

■ 1. The authority citation for 32 CFR part 78 continues to read as follows:

Authority: 10 U.S.C. 1045.

■ 2. Section 78.1 is amended by adding a sentence at the end of the section to read as follows:

§ 78.1 Purpose.

* * * The policy and procedures for this part are also located in the DoD Financial Management Regulation (“DoDFMR”), Volume 7B, Chapter 26, “State and Local Taxes” (DoD 7000.14-R).

Dated: July 12, 2006.

L.M. Bynum,

*OSD Federal Register Liaison Officer,
Department of Defense.*

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DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018-AH57

Endangered and Threatened Wildlife and Plants; Reclassification of the Gila Trout (*Oncorhynchus gilae*) From Endangered to Threatened; Special Rule for Gila Trout in New Mexico and Arizona

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), are reclassifying the federally endangered Gila trout (*Oncorhynchus gilae*) to threatened status under the authority of the Endangered Species Act of 1973, as amended (Act). We are also finalizing a

special rule under section 4(d) of the Act that would apply to Gila trout found in New Mexico and Arizona. This special rule will enable the New Mexico Department of Game and Fish (NMDGF) and the Arizona Game and Fish Department (AGFD) to promulgate special regulations in collaboration with the Service, allowing recreational fishing of Gila trout.

DATES: This final rule is effective on August 17, 2006.

ADDRESSES: Comments and materials received, as well as supporting documentation used in preparation of this final rule, are available for public inspection, by appointment, during normal business hours, at the New Mexico Ecological Services Field Office, 2105 Osuna Road NE, Albuquerque, New Mexico 87113.

You may obtain copies of this final rule from the New Mexico Ecological Services Field Office at the address provided above, by calling (505) 346-2525, or from our Web site at <http://www.fws.gov/ifw2es/NewMexico/>.

FOR FURTHER INFORMATION CONTACT: Field Supervisor, New Mexico Ecological Services Field Office (see **ADDRESSES**) (telephone 505/346-2525, facsimile 505/346-2542).

SUPPLEMENTARY INFORMATION:

Background

The purposes of the Act (16 U.S.C. 1531 *et seq.*) are to provide a means whereby the ecosystems upon which endangered and threatened species depend may be conserved and to provide a program for the conservation of those species. A species can be listed as threatened or endangered for any of the following factors: (1) The present or threatened destruction, modification, or curtailment of its habitat or range; (2) overutilization for commercial, recreational, scientific, or educational purposes; (3) disease or predation; (4) the inadequacy of existing regulatory mechanisms; and (5) other natural or manmade factors affecting its continued existence. When we determine that protection of a species under the Act is no longer warranted, we take steps to remove (delist) the species from the Federal list. If a species is listed as endangered, we may reclassify it to threatened status as an intermediate step before eventual delisting; however, reclassification to threatened status is not required in order to delist.

Section 3 of the Act defines terms that are relevant to this final rule. An endangered species is any species that is in danger of extinction throughout all or a significant portion of its range. A threatened species is any species that is

likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. A species includes any subspecies of fish or wildlife or plants, and any distinct population segment of any species of vertebrate fish or wildlife that interbreeds when mature.

Previous Federal Action

The Gila trout was originally recognized as endangered under the Federal Endangered Species Preservation Act of 1966 (March 11, 1967; 32 FR 4001), and Federal designation of the species as endangered continued under the Act (1973). In 1987, the Service proposed to reclassify the Gila trout as threatened (October 6, 1987; 52 FR 37424). However, we withdrew our proposal for reclassification on September 12, 1991 (56 FR 46400) (see “Recovery Plans and Accomplishments” section below for further information). On November 11, 1996, Mr. Gerald Burton submitted a petition to us to downlist the species from endangered to threatened. We acknowledged receipt of the petition by letter on January 13, 1997. On May 11, 2005, we published a proposed rule to downlist the species, which constituted our 90-day and 12-month findings on the November 11, 1996, petition (70 FR 24750).

In the May 11, 2005, proposed rule (70 FR 24750), we requested all interested parties to submit comments or information concerning the proposed reclassification of the Gila trout from endangered to threatened. We published notices, announcing the proposal and inviting public comment, in the Albuquerque Journal and the Arizona Republic. In addition, we contacted interested parties (including elected officials, Federal and State agencies, local governments, scientific organizations, and interest groups) through a press release and related fact sheets, faxes, mailed announcements, telephone calls, and e-mails. The public comment period on the proposal closed on July 15, 2005.

Systematics

The Gila trout is a member of the salmon and trout family (*Salmonidae*). Gila trout was not formally described until 1950, using fish collected in Main Diamond Creek in 1939 (Miller 1950). It is most closely related to Apache trout (*Oncorhynchus apache*), which is endemic to the upper Salt and Little Colorado River drainages in east-central Arizona. Gila trout and Apache trout are more closely related to rainbow trout (*O. mykiss*) than to cutthroat trout (*O. clarki*), suggesting that Gila and Apache

trout were derived from an ancestral form that also gave rise to rainbow trout (Behnke 1992, 2002; Dowling and Childs 1992; Utter and Allendorf 1994; Nielsen *et al.* 1998; Riddle *et al.* 1998).

Biological Information

Biological information (*i.e.*, physical description, distribution and threats, life history, and habitat characteristics) on the Gila trout can be found in our proposal for reclassification of the Gila trout with a special rule, published in the **Federal Register** on May 11, 2005 (70 FR 24750), and in the Gila Trout Recovery Plan (USFWS 2003). That information is incorporated by reference into this final rule.

Recovery Plans and Accomplishments

The original Recovery Plan for Gila trout was completed in 1979. The main objective of this Recovery Plan was "To improve the status of Gila trout to the point that its survival is secured and viable populations of all morphotypes are maintained in the wild" (Service 1979). The Gila Trout Recovery Plan was revised in 1984, with the same objective as the original plan. Downlisting criteria in the plan stated that "The species could be considered for downlisting from its present endangered status to a threatened status when survival of the four original ancestral populations is secured and when all morphotypes are successfully replicated or their status otherwise appreciably improved" (Service 1984). Replication involves either moving individuals from a successfully reproducing original pure or replicated population or taking hatchery-propagated fish and releasing them into a renovated stream. On October 6, 1987, we proposed that Gila trout be reclassified from endangered to threatened with a special rule to allow sport fishing (52 FR 37424). At that time, Gila trout populations were deemed sufficiently secure to meet criteria for reclassification to threatened as identified in the Recovery Plan (October 6, 1987; 52 FR 37424). However, the proposed rule to downlist Gila trout was withdrawn on September 12, 1991 (56 FR 46400), for the following reasons:

- (1) Severe flooding in 1988 reduced the Gila trout populations in McKnight Creek by about 80 percent;
- (2) Wild fires in 1989 eliminated Gila trout from Main Diamond Creek and all of the South Diamond drainage except Burnt Canyon, a small headwater stream;

(3) Propagation activities at hatcheries had not proceeded as planned, and fish were not available to replenish wild stocks; and

(4) Brown trout, a predator, was present in Iron Creek, which at the time was thought to harbor one of the original pure populations of Gila trout.

The Gila Trout Recovery Plan was revised in 1993, to incorporate new information about ecology of the species and recovery methods. Criteria for downlisting remained essentially the same as in the 1984 revision but were more specific. The 1993 plan specified that downlisting would be considered "when all known indigenous lineages are replicated in the wild" and when Gila trout were "established in a sufficient number of drainages such that no natural or human-caused event may eliminate a lineage." The Act only protects species (*i.e.*, Gila trout is the listed entity). The lineages identified in the Recovery Plan do not have separate listed status under the Act. However, by conserving these lineages and their associated genetic diversity, we provide for the conservation of the listed species, Gila trout.

The Recovery Plan was revised again in 2003 (Service 2003). The criteria for downlisting in the 2003 Recovery Plan include the following: (1) The four known non-hybridized indigenous lineages are protected and replicated in the wild in at least 85 kilometers (km) (53 miles (mi)) of streams; (2) each known non-hybridized lineage is replicated in a stream geographically separate from its remnant population such that no natural or human-caused event may eliminate a lineage; and (3) an Emergency Evacuation Procedures Plan for Gila Trout (Emergency Evacuation Plan) to address wildfire impacts and discovery of nonnative salmonid invasion in Gila trout streams has been developed and implemented.

Today all four original pure populations (Main Diamond, South Diamond, Spruce, and Whiskey Creeks) are replicated at least once. Main Diamond has been replicated four times, South Diamond and Whiskey once, and Spruce Creek three times. The Service believes three of the four replicated populations are secure (Main Diamond, South Diamond, and Spruce Creek), and the viability of the Gila trout is sufficiently protected through these populations. The species is no longer in danger of extinction. Whiskey Creek, the fourth pure population, had not been replicated at the time of the proposed rule. The Service completed the

replication of the Whiskey Creek population into Langstroth Canyon on June 21, 2006, and will continue to monitor that population. A broodstock management plan and an Emergency Evacuation Plan have been completed (Kincaid and Reisenbichler 2002; Service 2004). Recovery actions have included chemically treating streams within the historic range of the species to remove nonnative fish species, removing nonnative trout by electrofishing, and constructing physical barriers to prevent movement of nonnatives into renovated reaches (Service 2003).

Surveys of the 12 existing populations (excluding the recent replicate; Langstroth Canyon) indicate that the recovery efforts to remove nonnative fish and prevent their return to the renovated areas have been successful (Service 2003). Replicated populations in New Mexico are successfully reproducing, indicating that suitable spawning and rearing habitats are available. Replicated populations in Arizona exist in Raspberry Creek. Young of the year were planted in Raspberry Creek in Arizona in 2000. In 2004, Gila trout in Raspberry Creek were found in mixed size classes, indicating that the fish spawned and successfully recruited. Although some fish were removed from Raspberry Creek due to the threat of wildfire, some of these fish were restocked in November 2004 into the uppermost portions of Raspberry Creek, which survived the impacts caused by the fire and which still support Gila trout. Spawning was not documented in Raspberry Creek in 2005. Young of the year were planted in Dude Creek in 1999; however, due to a lack of recruitment, Dude Creek is no longer considered a viable population.

Overall, there has been an increase in the total wild population of Gila trout. In 1992, the wild populations of Gila trout were estimated to be less than 10,000 fish greater than age 1. In 2001, the population in New Mexico was estimated to be 37,000 fish (Brown *et al.* 2001). As noted above, Gila trout were more recently replicated in Arizona; as such, we do not have estimated numbers of fish at this time. The stream renovation and transplantation efforts have been accomplished jointly by the Service, Forest Service, NMDGF, AGFD, and New Mexico State University. Original pure populations and their replicates are summarized in Table 1.

TABLE 1.—SUMMARY AND STATUS OF STREAMS INHABITED BY GILA TROUT AS OF JANUARY 2001
[Original pure population (*i.e.*, relict) lineages in bold]

State	County	Stream name	Drainage	km (mi) of stream inhabited	Origin
NM	Sierra	Main Diamond Creek	East Fork Gila River	6.1 (3.8)	Relict Lineage Eliminated in 1989, re-established in 1994.
NM	Grant	McKnight Creek	Mimbres River	8.5 (5.3)	Replicate of Main Diamond, est. 1970.
NM	Grant	Black Canyon	East Fork Gila River	18.2 (11.3)	Replicate of Main Diamond, est. 1998.
NM	Catron	Lower Little Creek	West Fork Gila River	6.0 (3.7)	Replicate of Main Diamond, est. 2000.
NM	Catron	Upper White Creek	West Fork Gila River	8.8 (5.5)	Replicate of Main Diamond, est. 2000.
NM	Sierra	South Diamond Creek ¹	East Fork Gila River	6.7 (4.2)	Relict Lineage Eliminated in 1995, re-established in 1997.
NM	Catron (Grant)	Mogollon Creek ²	Gila River	28.8 (17.9)	Replicate of South Diamond Creek, est. 1987.
NM	Catron	Spruce Creek	San Francisco River	3.7 (2.3)	Relict Lineage.
NM	Catron	Big Dry Creek	San Francisco River	1.9 (1.2)	Replicate of Spruce Creek, est. 1985.
AZ	Gila	Dude Creek	Verde River	3.2 (2.0)	Replicate of Spruce Creek, est. 1999.
AZ	Greenlee	Raspberry Creek	Blue River	6.0 (3.7)	Replicate of Spruce Creek, est. 2000.
NM	Catron	Whiskey Creek	West Fork Gila River	2.6 (1.6)	Relict Lineage.
NM	Catron	Langstroth Canyon	West Fork Gila River	9.0 (5.6)	Replicate of Whiskey Creek est. 2006.

¹ South Diamond Creek includes Burnt Canyon.

² Mogollon Creek includes Trail Canyon, Woodrow Canyon, Corral Canyon, and South Fork Mogollon Creek. Portions of the drainage are in Grant County, New Mexico.

The four original pure population lineages are currently protected and replicated in 109 km (67 mi) of stream. Each replicate is geographically separate from its original pure population with one exception. The Spruce Creek replicate in Big Dry Creek is proximal; however, the additional replicate in Raspberry Creek is located more than 75 km (47 mi) to the northwest. An Emergency Evacuation Plan has been developed and it has been successfully implemented twice. The plan addresses emergency-related impacts (including floods) and discovery of nonnative salmonid invasions (Service 2004). In 2002, the Emergency Evacuation Plan (Service 2004) was implemented during the Cub Fire to evacuate fish from Whiskey Creek (Brooks 2002), and in 2003, the plan was implemented during the Dry Lakes Fire to remove fish from Mogollon Creek (J. Brooks, U.S. Fish and Wildlife Service, in litt. 2003b).

Summary of Comments and Responses

Peer Review

In conformance with our policy on peer review, published on July 1, 1994 (59 FR 34270), we solicited the expert opinions of seven appropriate and

independent experts following publication of the proposed rule. We received responses from three of these reviewers. Two of the reviewers were in support of the reclassification with special rule and provided no further comments. One of the reviewers did not support the proposal. His comments are included in the summary below.

(1) *Comment:* Dude and Raspberry Creeks in Arizona do not qualify as successful transplants because there is no Gila trout reproduction in the former and not enough time has passed to determine the establishment of a self-sustaining population in the latter. Thus, the plan criterion of 85 stream km of occupied habitat has not been met.

Our Response: Dude Creek (replicate of Spruce Creek) is no longer considered a viable population due to lack of recruitment. However, there was documentation of reproduction and successful recruitment in Raspberry Creek (also a replicate of Spruce Creek) in 2004. In addition, the Raspberry Creek population survived a fire in 2004, and evacuated fish were returned to the upper portion of the creek later in the year. The four original pure population lineages are currently protected and replicated in 109 km (67

mi) of stream. Thus, we have exceeded the recovery criteria of establishing 85 stream km (53 mi) of occupied habitat. We completed the replication of Whiskey Creek into Langstroth Canyon on June 21, 2006. Subsequent monitoring will be done to ensure the viability of the replicate.

(2) *Comment:* The proposed reclassification and special rule should be rejected on the basis that they do not meet the intent of the Act, and do not promote recovery of Gila trout.

Our Response: We believe that the special rule promotes the conservation and recovery of Gila trout by relieving population pressures as described under the "Description of Special Rule" section below. More specifically, we anticipate that implementation of the special rule will benefit the Gila trout by providing a means whereby excess Gila trout from captive rearing may be placed in streams for recreational benefit rather than destroyed. Furthermore, recreational management for Gila trout will be consistent with the goals of the Recovery Plan for the species (Service 2003).

Additionally, the special rule contributes to the conservation of the Gila trout through: (1) Eligibility for

Federal sport fishing funds; (2) increase in the number of wild populations; (3) enhanced ability to monitor populations (e.g., creel censuses) for use in future management strategies; and (4) creation of goodwill and support in the local community. Each of these topics is discussed in detail in the "Description of Special Rule" section below.

(3) *Comment:* Replicates of Main Diamond Creek are less than 10 years old and do not have enough generations to determine whether they can support self-sustaining populations of Gila trout. South Diamond Creek and its replicate Mogollon Creek also have a history of less than 10 years.

Our Response: The Main Diamond Creek lineage is the most replicated of all the lineages (see Table 1 above). The Mogollon Creek population was established in 1998, and is well established. Currently it supports more than five different age classes (Jim Brooks, NMFRO, pers. comm. 2006). Self-sustaining populations are a component of the criteria for delisting, not a component of the criteria for downlisting. See our response to Comment 11 below.

(4) *Comment:* McKnight Creek is in the Mimbres River drainage and not within the historical range of the Gila trout, and should not be considered as contributing to recovery.

Our Response: While McKnight Creek is not within the historical range of Gila trout, it has played an important role in the improved status of the species. The McKnight Creek population was established in 1972, when there was no direction for conservation and recovery actions in the native range of species. When a fire burned through Main Diamond Creek in 1989, McKnight Creek maintained the Main Diamond Creek lineage. Currently, due to its large population size, it is used to provide and maintain genetic variability of the captive broodstock at the Mora Fish Hatchery and Technology Center.

(5) *Comment:* Dry Creek is not geographically separate from Spruce Creek and has extremely limited habitat.

Our Response: It is true that Dry Creek is not geographically separate from Spruce Creek. However, Spruce Creek is also replicated by Raspberry Creek, which is geographically separate.

(6) *Comment:* Although Gila trout may be rescued from a stream threatened by wildfire, it takes years to many decades for a stream ravaged by wildfire to recover to a point that it can sustain a trout population.

Our Response: Although it may take decades for a stream to recover from a devastating wildfire, not all wildfires are devastating, and recovery for less

intense fires can occur within a few years. The effects to the streams can range anywhere from mild to extreme, and likewise the timeline for returning fish to those streams can be of short or long duration. Emergency evacuated fish are held at the Mora Fish Hatchery until a post-fire evaluation determines that the fish can be returned to the stream. Gila trout evacuated from Raspberry Creek in 2004 were returned within the same season after an evaluation determined the effects of the fire on the upper portions of the stream were minimal. In addition, Gila trout evacuated from Mogollon Creek were used to supplement the captive broodstock for additional recovery efforts.

(7) *Comment:* There is no provision in the Emergency Evacuation Plan to rescue Gila trout populations threatened by flood or drought. The proposed reclassification and Emergency Evacuation Plan address the threat of predation from brown trout but do not address the threat of hybridization with rainbow trout.

Our Response: The Emergency Evacuation Plan specifically addresses the rescue of Gila trout due to wildfire, flooding, drought, and invasion by nonnative salmonids. Both the proposed rule and the Emergency Evacuation Plan refer to nonnative salmonids, which include rainbow trout.

(8) *Comment:* The proposed rule dismisses whirling disease as a potential threat to Gila trout because the species is found only in high elevation streams with low water temperatures. However, Gila trout occur in streams as low as 6,500 feet (ft) and in water temperature between 60 to 70 degrees Fahrenheit (°F). In addition, you do not address the threat of bacterial kidney disease (BKD), which occurs in Gila trout streams.

Our Response: Whirling disease and BKD are minor potential threats to Gila trout. Whirling disease is unlikely to threaten Gila trout because: (1) There has never been a detection of the intermediate host (*Tubifex tubifex*) from the many benthic samples taken; (2) there is no source for infection (rainbow trout have not been stocked in the Gila Basin since the early 1970s, and the NMDGF no longer stocks brown trout); and (3) despite many years of monitoring and sampling of Gila trout populations, the disease has never been detected.

Gila trout from Whiskey Creek tested positive for antigens of BKD, indicating that there was past exposure to BKD, but fish in Whiskey Creek developed an antibody to resist the disease. However, we have no information documenting that BKD is currently present in

Whiskey Creek or other streams where Gila trout are extant. We believe that the Whiskey Creek population was exposed to BKD prior to the listing of the Gila trout (Jim Brooks, NMFRO, pers. comm. 2006). Please refer to discussion under "Factor C. Disease and Predation" below.

(9) *Comment:* Considering recent events (wildfires, drought, floods, and invasion by nonnative trout), most recovery actions have been undertaken to replace or rescue populations that were lost rather than establish new ones. The present proposal assumes that history will not repeat itself.

Our Response: The threats from wildfire, drought, flood, and invasion by nonnative trout exist, but we have successfully used our Emergency Evacuation Plan to minimize those threats. We have a highly successful collaborative recovery program with participation from the Forest Service, Service, NMDGF, and AGFD.

Cooperative recovery actions have increased the number of populations from 4 at the time of listing to 13 today. In addition, the West Fork Gila River Restoration Project is ongoing and will add a total of 34 km (21 mi) to occupied range including the Whiskey Creek replication.

(10) *Comment:* The Emergency Evacuation Plan has been invoked three times in three years, indicating that extraordinary efforts must continue to prevent extirpation of the species from a significant portion of its range. Therefore, the reclassification is premature.

Our Response: The Emergency Evacuation Plan has been used several times in the past few years to rescue populations that may otherwise be lost. The plan was developed specifically for the purpose of minimizing threats from natural events. These examples demonstrate the usefulness and success of the emergency response process. Please refer to Comment 6 above.

(11) *Comment:* The benefit to Gila trout from implementation of the special rule is speculative. There is no guarantee that sport fish money will be spent on Gila trout. The number of wild populations of Gila trout will not increase because hatchery fish will be stocked into streams containing nonnative trout, where a few will be removed by anglers or predation and the rest will hybridize with the nonnatives. Creel census will add nothing to information regarding the viability of the populations. Demographic monitoring is already in place and being accomplished.

Our Response: Funds generated by sport fishing activity are already being

spent on Gila trout for conservation. Although there is no guarantee that additional monies will be spent on Gila trout, allowing for angling would contribute to sport fish money. This would create an opportunity for generating revenue from Gila trout angling and then using that revenue to supplement Gila trout conservation activities.

Although increases in the number of wild populations of Gila trout will not be immediate, we believe that over time, stocking of nonnative trout would be discontinued in favor of efforts to restore Gila trout. In addition, we will have the ability to utilize Gila trout derived from the large numbers of fish produced under the genetic broodstock management guidelines and excess to recovery needs. Currently, the hatchery is producing fish beyond what we are using for recovery. These excess fish can be used to support angling programs in non-recovery streams and lakes.

Although the details of the creel survey programs have yet to be worked out by the States, the programs will likely include monitoring of angling impacts on Gila trout by gathering information such as population data (size of fish, number caught, and released), data concerning the survival of released fish, and angler-related data.

Public Comments

In the proposal to reclassify the Gila trout from endangered to threatened with a special rule, we requested that all interested parties submit comments on the proposed reclassification and special 4(d) rule enabling NMDGF and AGFD to promulgate special regulations in collaboration with the Service allowing recreational fishing for Gila trout. In addition, we also requested information concerning angling opportunities that may be affected by this action in New Mexico or Arizona and how the special rule might affect these uses and further the conservation of the Gila trout beyond what we have discussed. We requested this information in order to make a final listing determination based on the best scientific and commercial data currently available. During the public comment period, we received 16 written comments (2 written comments were identical, in the form of automatically generated letters), and 7 speakers gave verbal comments at the public hearings. All substantive information provided during the public comment period, written and verbal, either has been incorporated directly into this final determination or is addressed below. Similar comments are grouped together by issue.

Issue 1: Procedural and Legal Compliance

(12) *Comment:* It is premature to downlist the Gila trout from endangered to threatened at this time. The Service has not yet met its own Emergency Recovery Plan standard of replicating the Gila trout's four original genetic lineages, inclusive of Whiskey Creek. Given the fact that the Gila trout population remains small and fragile, and the long-term recovery strategy for the Gila trout is still problematic due to fire, flood, drought, or other natural disaster dangers, a downlisting could severely endanger or even destroy the species. The Service is setting a precedent by downlisting a species that has not met current recovery criteria and relying on future anticipated progress as a basis for reclassification.

Our Response: We have met every component of the downlisting criteria recommended in the Recovery Plan, with the replication of all of the four known, non-hybridized lineages. The replication of the Whiskey Creek lineage into Langstroth Canyon was completed on June 21, 2006. Additional efforts will be pursued to expand the Whiskey Creek population to its confluence with the upper West Fork Gila River in 2007. The Forest Service has evaluated the effects of this action under the National Environmental Policy Act (42 U.S.C. 4321–4347) and section 7 of the Act. The New Mexico Game Commission approved the use of Antimycin to remove nonnatives in the renovation of Langstroth Canyon. With the completion of the Whiskey Creek replication into Langstroth Canyon, we currently have Gila trout in 109 km (67 mi) of stream. Thus, we have exceeded the recovery criteria of establishing 85 stream km (53 mi) of occupied habitat.

We also have an Emergency Evacuation Plan in place that has proven to be successful to minimize impacts on Gila trout that are threatened by wildfire and other potential threats such as floods and drought. The plan can be implemented through the emergency consultation provisions under section 7 of the Act during emergency events (e.g., flood, fire, drought).

Recovery plans are not regulatory documents and are instead intended to provide guidance to the Service, States, and other partners on methods of minimizing threats to listed species and on criteria that may be used to determine when recovery is achieved. There are many paths to accomplishing recovery of a species and recovery may be achieved without all criteria being fully met. For example, one or more

criteria may have been exceeded while other criteria may not have been accomplished. In that instance, the Service may judge that over all criteria, the threats have been minimized sufficiently, and the species is robust enough, to reclassify the species from endangered to threatened or perhaps delist the species. In other cases, recovery opportunities may have been recognized that were not known at the time the recovery plan was finalized. These opportunities may be used instead of methods identified in the recovery plan. Likewise, information on the species may be learned that was not known at the time the recovery plan was finalized. The new information may change the extent that criteria need to be met for recognizing recovery of the species. Overall, recovery of species is a dynamic process requiring adaptive management and judging the degree of recovery of a species is also an adaptive management process that may, or may not, fully follow the guidance provided in a recovery plan.

Endangered status is no longer appropriate because we have increased the number of Gila trout populations from 4 at the time of listing to 13 today. In addition, abundance has increased significantly over the last 10 years (Brown *et al.* 2001). Major threats to Gila trout have been reduced (e.g., nonnative salmonids are not in the streams that currently support Gila trout), and we have measures in place to minimize remaining threats (see discussion in "Summary of Factors Affecting the Species" below). Additionally, reclassifying Gila trout as a threatened species does not diminish any of the protections it currently receives as an endangered species, except that the special rule will allow take in accordance with fishing regulations enacted by New Mexico and Arizona.

(13) *Comment:* Some forms of recreational fishing for Gila trout are not yet appropriate because populations remain fragile. Not all of the genetic strains in Gila trout streams are recovered or are self-sustaining and able to withstand fishing pressure. Despite the fact that there has been no fishing of Gila trout for more than 50 years in New Mexico, the population is still limited. This action could threaten the fish and reverse years of trout preservation.

Our Response: We do not expect a high level of angling pressure on Gila trout streams because: (1) Not every stream occupied by Gila trout will be opened to fishing, e.g., as stated elsewhere in this rule, the four relic populations will not be opened for angling; (2) these streams are high

elevation, remote, and difficult to access; and (3) it is likely that additional "non-recovery" or "enhancement" streams will be stocked with surplus hatchery-raised fish. We expect that the State agencies, in collaboration with the Service, will determine which streams will be opened to fishing, to what degree, and the types of angling that will be allowed (e.g., catch and release using artificial flies and lures with single barbless hooks). In general, establishment of recreational opportunities can be developed in recovery waters that have stable or increasing numbers of individuals (as measured by population surveys) and where habitat conditions are of sufficient quality to support viable populations of Gila trout (populations having annual recruitment, size structure indicating multiple ages, and individuals attaining sufficient sizes to indicate 3 to 7 years of survival). In addition, recreational opportunities may be developed in non-recovery or enhancement waters. According to NMDGF, the process by which a stream is designated a fishery involves: (1) Carefully evaluating the Gila trout population (e.g., size structure, density, distribution, and recruitment) in each stream; (2) determining whether the stream can sustain angling and how much (this evaluates a suite of different angling pressures); (3) making a recommendation to designate the stream a fishery; and (4) monitoring to insure there are no detrimental effects to the population from angling. If monitoring indicates a negative effect on the conservation of Gila trout, the fishing regulations can be amended, and the stream withdrawn as a fishery. The process by which AGFD designates a fishery is very similar and can be found on the AGFD Web site at http://www.azgfd.gov/inside_azgfd/rulemaking_process.shtml.

(14) *Comment:* The Emergency Evacuation Plan should be fully implemented before there is any discussion of removal of the Gila trout from the Endangered Species list. Although there has been an increase in the number of Gila trout populations, those populations are still not capable of fishing pressure since the Gila Trout Emergency Plan has not been complied with by the Service and the Service concedes that "drought, wildfire, and floods remain as threats" to stable fish populations.

Our Response: The Emergency Evacuation Plan is in place and has been implemented in 2002, 2003, and 2004, and will continue to be implemented as needed. The Emergency Evacuation Plan was developed to

protect against losses of Gila trout populations due to wildfire-related effects (including floods), nonnative salmonid invasion, and drought. In addition, the plan is currently under review to update personnel contact information and, where appropriate, revise and improve evacuation procedures.

(15) *Comment:* Gila trout is a critically imperiled species whose future is not secure and for which the conservation benefits of sport fish designation are unclear. Individual Gila trout of suitable size to interest anglers are a small proportion of existing populations. From a population dynamics perspective, these larger fish are among the most important. Their intentional or inadvertent removal (via angling stress and mortality) would be detrimental, especially where populations are small. This was the case for the roundtail chub (*Gila robusta*) in Arizona that was designated a sport fish in lieu of listing. The roundtail chub's status continued to deteriorate despite the accompanying assurances that sport fish dollars would provide a conservation benefit. In addition, Gila trout fishing regulations have yet to be developed, thus there is no opportunity to assess what protections will actually be provided.

Our Response: Sport fishing for Gila trout will only be allowed through the 4(d) rule and subsequent State regulations promulgated by Arizona and New Mexico in collaboration with the Service. The Gila trout will be considered a threatened species under the Act and continue to receive recovery funding. Therefore it will not rely solely on monies generated through the Federal Aid in Sport Fish Restoration Act (Dingell-Johnson Act) (16 U.S.C 777-777l of 1950, as amended) or other sport fish-related revenue. Contributions from the Dingell-Johnson Act have been used in the past and are currently being used to fund conservation actions for this species, and therefore it is anticipated that those monies and any other sport fish-related revenue will continue to be utilized in the future. As noted, individual streams will only be opened to sport fishing after each State conducts a thorough analysis and determines that a fishery is supportable. We anticipate that the State Game Commission's meetings to amend the fishing regulations to allow sportfishing of Gila trout will be open to the public and comments will be solicited. Thus, we expect the public will have ample opportunity to evaluate proposals from the States. It is likely that most of the angling opportunities would be offered in non-recovery streams stocked with surplus hatchery fish.

The roundtail chub is not a federally-listed species and as such cannot be compared to the Gila trout, which still receives the Act's protection and associated funding.

(16) *Comment:* Substantial take is occurring from illegal fishing activities.

Our Response: We did not receive any information during the public comment period that documents illegal fishing as a widespread threat to the species. There is limited evidence that illegal fishing activity has taken place (e.g., fishing tackle has been found on a few occasions). Still, we believe the amount of take is small. Please refer to our discussion below under "Factor B. Overutilization for commercial, recreational, scientific, or educational purposes."

(17) *Comment:* The Service issues too many research permits resulting in a negative effect to fish species.

Our Response: We have only issued 13 recovery permits for Gila trout since August 2002. The majority of these permits are issued to the Forest Service, the State Game and Fish Agencies, and the Service for survey and monitoring work. In addition, to minimize potential impacts, the Service insures that permits issued for research purposes do not overlap.

(18) *Comment:* In the current proposal, there are no restrictions on the States to prevent opening of streams that contain relic or replicated populations to angling. A draft of proposed State regulations should be included in the proposal for public analysis.

Our Response: As stated in the "Description of Special Rule" section, this final rule will allow recreational fishing of Gila trout only in specified waters. Areas open to fishing would not include the four relic populations identified in Table 1.

The States need the flexibility to adjust how a fishery is regulated on a case-by-case basis. The States can amend their fishing regulations in a manner of months, whereas the Federal rulemaking process typically takes much longer. The general process to amend fishing regulations includes a State Game and Fish Agency (NMDGF or AGFD) making a recommendation to their State Game Commission. The State Game Commission considers the recommendations and can either finalize the proposed regulations or postpone a final action until a future date. We anticipate that the State Game Commission's meetings to amend the fishing regulations to allow sportfishing of Gila trout will be open to the public and comments will be solicited. Thus, we expect the public will have ample opportunity to evaluate proposals from

the States. For these reasons, we believe it is prudent to allow the States to develop Gila trout regulations apart from the Federal rulemaking process.

(19) *Comment:* Critical habitat for Gila trout should be designated for at least those streams containing relict populations and, ideally, all those streams that contribute to recovery of the species.

Our Response: The Gila trout was originally recognized as endangered under the Federal Endangered Species Preservation Act of 1966 (March 11, 1967; 32 FR 4001), prior to critical habitat being formalized in the 1978 and 1982 amendments to the Act. One of the applicability provisions in the 1982 amendments to the Act indicates that the provision for designating critical habitat, section 4(a)(3)(A) of the Act, shall not apply with respect to any species which was listed as an endangered species or a threatened species before November 10, 1978 (section 4(b)(6)(A)(i)(II) of the Endangered Species Act of 1973, as amended, (16 U.S.C. 1533(b)(6)(A)(i)(II)), Pub. L. 95-632, at 2(2), 92 Stat. 3751 (November 10, 1978), and Pub. L. 97-304, at 2(b)(2), 2(b)(4), 96 Stat. 1411, 1416 (October 13, 1982). Therefore, we are not required to designate critical habitat for the Gila trout.

Furthermore, we do not believe it is necessary to designate critical habitat for the Gila trout due to existing protections and the progress being made towards species recovery (as discussed throughout this rule). For example, 10 of 11 populations in New Mexico exist in the Aldo Leopold Wilderness or Gila Wilderness, and the population in Raspberry Creek in Arizona occurs in the Blue Range Primitive Area. Thus, a majority of the extant populations are protected by these special designations on Forest Service lands. We provide a further discussion of the existing regulatory protections for the Gila trout in "Factor D: The inadequacy of existing regulatory mechanisms" below.

(20) *Comment:* Because the Recovery Plan criteria have not been met, the size and diversity of Gila trout populations remain inadequate, and significant risks to the species are still present. Seven populations have been lost to fire since 1989. The Iron and McKenna Creek populations are hybridized with rainbow trout, indicating they cannot be used for recovery. The abundance of Gila trout numbers in the Spruce Creek population remains low.

Our Response: We agree that fire is still one of the most significant threats to Gila trout. The Emergency Evacuation Plan was developed to allow for the

emergency removal of Gila trout from a stream that is immediately threatened and for the transport of removed Gila trout to a facility where they will be held until conditions allow the fish to be successfully placed back into the original stream. We have utilized the plan in the last several years and it has been successful. (Please refer to "Recovery Plans and Accomplishments" section above.)

In 1998, it was determined that the McKenna and Iron Creek populations had hybridized with rainbow trout and, therefore, did not contribute to the recovery of the species because they are not pure (Leary and Allendorf 1998; Service 2003). In 2002, three age classes (age 0 to age 3) of Gila trout were abundant in Spruce Creek (USFWS 2003).

(21) *Comment:* How will the 4(d) rule be implemented? What will be the role of the States in conserving Gila Trout?

Our Response: As noted in response to Comment 13 above, the States, in collaboration with the Service, will determine whether a Gila trout stream will be designated as a fishery. See also our response to Comment 19 above for further information.

(22) *Comment:* Only when the Gila trout population is self-sustaining in the wild should the Service consider reclassification.

Our Response: We have evaluated the threats to the Gila trout (see "Summary of Factors Affecting the Species" section), and are reclassifying this animal as threatened (*i.e.*, one that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range). Based on the information available, we believe the Gila trout is no longer in danger of extinction throughout all or a significant portion of its range (*i.e.*, it does not meet the definition of an endangered species). The criteria for downlisting the Gila trout to a threatened species, outlined above in the "Recovery Plans and Accomplishments" section, refers, in part, to replicating the indigenous lineages in 85 km (53 mi) of stream. The reference to establishment of self-sustaining populations is only discussed in the Recovery Plan criteria for delisting (*i.e.*, fully recovered and removed from the list of endangered species). Thus, since we are not proposing to "delist" the Gila trout at this time, the reference to self-sustaining populations is not pertinent to our current action.

(23) *Comment:* If fishing for Gila trout is allowed, it will be abused, and there will be no chance for the population to recover.

Our Response: Both States have a long and successful history in the management of recreational fisheries. Regulations implemented for Gila trout along with increased law enforcement attention will insure that protections are adequate for the conservation of the species. In addition, as stated previously, the populations will be monitored to ensure that they can withstand fishing pressure while contributing to the conservation of the species. If monitoring indicates that a Gila trout population is being adversely affected, the fishery may be closed. See also our responses to Comments 12 and 15 above.

Issue 2: Biological Concerns

(24) *Comment:* Factors that threaten the security of Gila trout have not been removed and remain so severe that the species could be eliminated from a significant portion of the remnant habitat it now occupies within its historic range. These factors include, but are not limited to, hybridization with other fish species, stream flooding or desiccation, direct or indirect effects of fire, disease, parasites, and predation. Many of these threats cannot be eliminated but their impacts can be mitigated by ensuring that viable Gila trout populations occupy a suite of suitable streams across a broad regional landscape, which currently is not the case. For example, recent fires that have resulted in emergency evacuations or eliminated Gila trout from several streams demonstrate that the species is in a precarious state and deserves the continued protection afforded by endangered status.

Our Response: As discussed in the "Summary of Factors Affecting the Species" section below, we recognize that some threats to Gila trout still exist. However, based upon our analysis, threatened status is the appropriate classification for the Gila trout. For this reason, we are reclassifying the species from endangered to threatened. Refer to the "Available Conservation Measures" section below for a discussion of the protections afforded the Gila trout as a threatened species. In addition we have an Emergency Evacuation Plan in place to minimize effects from fire, drought, floods, and nonnative salmonid invasion.

(25) *Comment:* Given the current ban on piscicide use by the New Mexico Game Commission, it is unlikely that the Whiskey Creek Gila trout population can be securely replicated.

Our Response: The replication of Whiskey Creek was completed on June 21, 2006. The New Mexico Game Commission recently gave their

approval to use Antimycin on the West Fork Gila River once they concluded that the use of Antimycin would aid in the downlisting of Gila trout (New Mexico Game Commission 2005).

(26) *Comment:* Federal agencies routinely use pesticides, herbicides, and other chemicals that are lethal to macroinvertebrates, thereby depleting the food supply for Gila trout. Grazing is detrimental to Gila trout. Moreover, prescribed burning is a threat to Gila trout because the fine particulate matter from prescribed burning suffocates fish.

Our Response: We acknowledge that these are all potential threats to the Gila trout. However, Federal agencies considering an action that may affect a threatened or endangered species are subject to section 7 of the Act. Under section 7, Federal agencies must consult with the Service to ensure that actions they fund, authorize, or carry out are not likely to jeopardize the continued existence of any endangered or threatened species or adversely modify its habitat. Please see Comment 27 below for discussion of piscicides and macroinvertebrates. As discussed in the "Factor A. The present or threatened destruction, modification, or curtailment of its habitat or range" section below, livestock grazing is carefully managed now, and on creeks occupied by Gila trout, grazing has either been suspended or cattle are excluded.

Also described under "Factor A" below, prescribed fire is closely managed and analyzed under section 7 of the Act to minimize adverse effects to the Gila trout and its habitat. Threats of wide-scale habitat loss due to wildfire are real and immediate on many public lands. Reducing fuels in these areas may help to protect habitat for threatened and endangered species. Forest thinning, often in conjunction with prescribed fires, is extremely important as a management tool needed to enhance, and often to restore, many of the ecosystem functions and processes. These types of projects may result in long-term benefits to listed species, including the Gila trout, but may also contribute, in the short term, to certain adverse effects to the species. Nevertheless, we believe it is important to address adverse impacts by minimizing, to the greatest extent practical, those short-term adverse effects and move forward with proactive land management to restore ecosystem functions and community dynamics.

(27) *Comment:* Using piscicides to remove nonnative fish ultimately hurts all fish species and ruins water quality.

Our Response: At the levels used to kill trout, Antimycin has been

demonstrated to have no effect on amphibians, mammals, and birds, and only minimal effects on some insects (Finlayson *et al.* 2002). In addition, Antimycin alone appears to have little short-term effect on invertebrates in high elevation streams (Cerreto *et al.* 2003). Antimycin breaks down rapidly, and can be contained easily because it naturally detoxifies quickly. Numerous researchers have found that organic substances in a streambed act as a filter to naturally detoxify Antimycin-treated water. Additionally, it can be neutralized by 20 minutes of contact with potassium permanganate (Q&A Fact Sheet, Westslope Cutthroat Trout Conservation Program).

Summary of Factors Affecting the Species

Section 4 of the Act and regulations issued to implement the listing provisions of the Act (50 CFR part 424) set forth the procedures for listing, reclassifying, and delisting species. Species may be listed as threatened or endangered if one or more of the five factors described in section 4(a)(1) of the Act threaten the continued existence of the species. A species may be reclassified, according to 50 CFR 424.11(c), if the best scientific and commercial data available provide a basis for determining that the species' current status is no longer correct. This analysis must be based upon the five categories of threats specified in section 4(a)(1).

For species that are already listed as threatened or endangered, this analysis of threats is primarily an evaluation of the threats that could potentially affect the species in the foreseeable future following the delisting or downlisting, and the associated removal or reduction of the Act's protections. Our evaluation of the future threats to the Gila trout that would occur after reclassification to threatened status is partially based on the protection provided by the Gila and Aldo Leopold Wilderness areas, the Emergency Evacuation Plan, and the broodstock management plan, and on limitations on take that would be determined by the States in collaboration with us.

Discussion of the five listing factors and their application to reclassification of the Gila trout are as follows:

A. The Present or Threatened Destruction, Modification, or Curtailment of Its Habitat or Range

In the past, Gila trout populations were threatened by habitat degradation and watershed disturbances (52 FR 37424). These factors compounded the threats posed by nonnative salmonids

(see Factors C and E below for discussions of nonnative salmonids). We discuss habitat degradation from livestock grazing, timber harvest, and wildfires below.

Livestock Grazing

Intensive livestock grazing has been shown to increase soil compaction, decrease infiltration rates, increase runoff, change vegetative species composition, decrease riparian vegetation, increase stream sedimentation, increase stream water temperature, decrease fish populations, and change channel form (Meehan and Platts 1978; Kaufman and Kruger 1984; Schulz and Leininger 1990; Platts 1991; Fleischner 1994; Ohmart 1996). Although direct impacts to the riparian zone and stream can be the most obvious sign of intensive livestock grazing, upland watershed condition is also important because changes in soil compaction, percent cover, and vegetative type influence the timing and amount of water delivered to stream channels (Platts 1991). Increased soil compaction, decreased vegetative cover, and a decrease in grasslands lead to faster delivery of water to stream channels, increased peak flows, and lower summer base flow (Platts 1991; Ohmart 1996; Belsky and Blumenthal 1997). As a consequence, streams are more likely to experience flood events during monsoons (water runs off quickly instead of soaking into the ground) that negatively affect the riparian and aquatic habitats and are more likely to become intermittent or dry in September and October (groundwater recharge is less when water runs off quickly) (Platts 1991; Ohmart 1996).

Livestock grazing practices that degrade riparian and aquatic habitats generally cause decreased production of trout (Platts 1991). Livestock affect riparian vegetation directly by eating grasses, shrubs, and trees; by trampling the vegetation; and by compacting the soil. Riparian vegetation benefits streams and trout by providing insulation (cooler summer water temperatures, warmer winter water temperatures), by filtering sediments so that they do not enter the stream (sediment clogs spawning gravel and reduces the survival of salmonid eggs), by providing a source of nutrients to the stream from leaf litter (increases stream productivity), and by providing root wads, large woody debris, and small woody debris to the stream (provides cover for the fish) (Kauffman and Krueger 1984; Platts 1991; Ohmart 1996). Poor livestock grazing practices can increase sedimentation through

trampling of the stream banks (loss of vegetative cover), by removal of riparian vegetation (filters sediment), and through soil compaction (decreases infiltration rates, increases runoff, causes increased erosion). Sediment is detrimental to trout because it decreases the survival of their eggs (Bjornn and Reiser 1991), and because of its negative impact on aquatic invertebrates, a food source for trout (Wiederholm 1984).

In the late 1800s and early 1900s, livestock grazing was uncontrolled and unmanaged over many of the watersheds that contain Gila trout, and much of the landscape was denuded of vegetation (Rixon 1905; Duce 1918; Leopold 1921; Leopold 1924; Ohmart 1996). Livestock grazing is more carefully managed now, which has resulted in less impact to streams occupied by Gila trout. Improved grazing management practices (e.g., fencing) have reduced livestock access to streams. Six of the 12 streams currently occupied by Gila trout are within Forest Service grazing allotments. However, as described below, on the six creeks occupied by Gila trout within Forest Service lands, grazing has either been suspended or cattle are typically excluded.

Mogollon Creek is within the Rain Creek/74 Mountain Allotment. This allotment receives only winter use, and much of the riparian habitat is inaccessible to livestock. Riparian vegetation along Mogollon Creek is in good condition (A. Telles, U.S. Forest Service, Gila National Forest, in litt. 2003c). Main Diamond Creek and the adjacent riparian zone, located in the South Fork Allotment, are excluded from grazing. The Forest Service is implementing a fencing project along Turkey Run Creek to prevent livestock trespass into Main Diamond Creek (A. Telles, U.S. Forest Service, Gila National Forest, in litt. 2003c).

Spruce Creek and Big Dry Creek are within the northern portion of the Dry Creek Allotment within the Gila Wilderness and have not been grazed in several years. Although the allotment is not closed to grazing, topography essentially excludes livestock from grazing in the Spruce Creek Drainage and within the occupied reach of Big Dry Creek (J. Monzingo, U.S. Forest Service, Gila National Forest, pers. comm 2006). McKnight Creek is within the Powder Horn Allotment managed by the Headwaters Ranch. The Headwaters Ranch is a partnership that includes The Nature Conservancy and other partners. Grazing has been excluded upstream of occupied habitat as well as from the entire occupied reach of McKnight

Creek (J. Monzingo, U.S. Forest Service, Gila National Forest, pers. comm 2006).

South Diamond Creek and Black Canyon are within the Diamond Bar Allotment, where grazing was suspended in 1996. This has resulted in marked improvements in the condition of riparian and aquatic habitat in these areas (A. Telles, U.S. Forest Service, Gila National Forest, in litt. 2003c).

Lower Little Creek, Upper White Creek, and Whiskey Creek do not occur within grazing allotments. The area of the Gila Wilderness where these streams are located was closed to grazing in the 1950s when the NMDGF acquired the private property associated with the Glenn Allotment, which included these streams (J. Monzingo, U.S. Forest Service, Gila National Forest, pers. comm 2006). The NMDGF and FS have since signed an agreement excluding livestock from the area and allowing the State to utilize the area for elk introduction (J. Monzingo, U.S. Forest Service, Gila National Forest, pers. comm 2006).

In Arizona on the Apache-Sitgreaves National Forest, Raspberry Creek, which is located in the Blue Range Primitive Area, includes two grazing allotments, Strayhorse and Raspberry. The Strayhorse Allotment includes about 75 percent of the watershed above the fish barrier. The allotment was evaluated in July 1998, and determined to be in "Proper Functioning Condition" (D. Bills, U.S. Fish and Wildlife Service, in litt. 2003d). It has a well-developed riparian plant community and no adverse impacts from ongoing livestock grazing (Service 2000). Evaluation of the Raspberry Allotment occurred twice in 1998, and concluded that the allotment was "Functional—At Risk" and in a "Downward" trend (Service 2000). The report noted an incised channel (eroded downward), and concluded that upland watershed conditions were contributing to the riparian degradation. Significant changes were made to the Raspberry Allotment in 2000 (Service 2000). Specifically, the Forest Service required a reduction in livestock numbers to 46 cattle from November 1 to June 14 (or removal of cattle prior to June 14 if utilization standards are reached). Prior to this, 225 cattle were permitted on the Allotment yearlong, and 160 cattle were permitted from January 1 to May 15.

Dude Creek, on the Tonto National Forest, is within the East Verde Pasture of the Cross V Allotment. Current management techniques are designed to protect the stream banks and riparian vegetation, thereby reducing sedimentation and increasing river insulation (and thereby maintaining cooler summer and warmer winter

water temperatures). Riparian conditions on Dude Creek continue to improve; however, the Gila trout population has not done well. This is most likely due to other stressors such as drought.

Timber Harvest

Logging activities in the early to mid 1900s likely caused major changes in watershed characteristics and stream morphology (Chamberlin et al. 1991). Rixon (1905) reported the occurrence of small timber mills in numerous canyons of the upper Gila River drainage. Early logging efforts were concentrated along canyon bottoms, often those with perennial streams. Tree removal along perennial streams within the historical range of Gila trout likely altered water temperature regimes, sediment loading, bank stability, and availability of large woody debris (Chamberlin et al. 1991). Nine of 10 populations in New Mexico exist in the Aldo Leopold Wilderness or Gila Wilderness. Of the two populations in Arizona, Raspberry Creek occurs in the Blue Range Primitive Area. Timber harvest is not allowed in wilderness or primitive areas. There are no plans for timber harvest near the other streams that have Gila trout (A. Telles, U.S. Forest Service, Gila National Forest, in litt. 2003c). If timber harvest were to be proposed in the future in the two areas located outside of a wilderness or primitive area, the Forest Service would need to consider the effects of the proposed action under section 7 of the Act.

Fire

High-severity wildfires, and subsequent floods and ash flows, have caused the extirpation of three populations of Gila trout since 1989: Main Diamond (1989), South Diamond including Burnt Canyon (1995), and Upper Little Creek (2003). In addition, Trail Canyon and Woodrow Canyon (both subpopulations of the Mogollon Creek population) were lost in 1996. In addition, Sacaton Creek was lost in 1996. However, Sacaton Creek was a replicate of Iron Creek, which was determined to be a hybridized population and is no longer considered a legitimate replicate (Propst *et al.* 1992; Brown *et al.* 2001; J. Brooks, Service, pers. comm. 2003). Lesser impacts were experienced in 2002, when ash flows following the Cub Fire affected the lower reach of Whiskey Creek. However, lower Whiskey Creek is frequently intermittent and typically contains few fish (Brooks 2002). Upper Whiskey Creek, where the majority of the fish occur, was not affected by the Cub Fire. The Cub Fire also impacted the upper

West Fork Gila and may have eliminated nonnative trout from the watershed upstream of Turkey Feather Creek (Brooks 2002). In 2003, fire retardant was dropped on Black Canyon, affecting approximately 200 meters (m) (218 yards) of stream (J. Monzingo, U.S. Forest Service, Gila National Forest, in litt. 2003e). Although some Gila trout were killed, the number of mortalities is unknown (J. Monzingo, U.S. Forest Service, Gila National Forest, in litt. 2003e) because dead fish were carried by the current out of the area by the time fire crews arrived. However, a week after the retardant drop, live Gila trout were observed about 400 m (438 yards) below the drop site (J. Monzingo, U.S. Forest Service, Gila National Forest, in litt. 2003e).

Severe wildfires capable of extirpating or decimating fish populations are a relatively recent phenomenon. They result from the cumulative effects of historical or overly intensive grazing (can result in the removal of fine fuels needed to carry fire) and fire suppression (Madany and West 1983; Savage and Swetnam 1990; Swetnam 1990; Touchan *et al.* 1995; Swetnam and Baisan 1996; Belsky and Blumenthal 1997; Gresswell 1999), as well as the failure to use good forestry management practices to reduce fuel loads. Historic wildfires were primarily cool-burning understory fires with return intervals of 3 to 7 years in ponderosa pine and 5 to 20 years in mixed conifer (Swetnam and Dieterich 1985). Cooper (1960) concluded that prior to the 1950s, crown fires were extremely rare or nonexistent in the region. In 2003, over 200,000 acres burned in the Gila National Forest (S. Gonzales, U.S. Fish and Wildlife Service, in litt. 2004). The watersheds of Little Creek, Black Canyon, White Creek, and Mogollon Creek were affected. Because Gila trout are found primarily in isolated, small streams, avoidance of ash flows is impossible, and opportunities for natural recolonization usually do not exist (Brown *et al.* 2001). Persistence of Gila trout in streams affected by fire and subsequent ash flows is problematic. In some instances, evacuation of Gila trout from streams in watersheds that have burned is necessary (Service 2004).

Effects of fire may be direct and immediate or indirect and sustained over time (Gresswell 1999). The cause of direct fire-related fish mortalities has not been clearly established (Gresswell 1999). Fatalities are most likely during intense fires in small, headwater streams with low flows (less insulation and less water for dilution). In these situations, water temperatures can

become elevated or changes in pH may cause immediate death (Cushing and Olson 1963). Spencer and Hauer (1991) documented 40-fold increases in ammonium concentrations during an intense fire in Montana. Ammonia is very toxic to fish (Wetzel 1975). The inadvertent dropping of fire retardant in streams is another source of direct mortality during fires (J. Monzingo, U.S. Forest Service, Gila National Forest, in litt. 2003e).

Indirect effects of fire include ash and debris flows, increases in water temperature, increased nutrient inputs, and sedimentation (Swanston 1991; Bozek and Young 1994; Gresswell 1999). Ash and debris flows can cause mortality months after fires occur when barren soils are eroded during monsoonal rain storms (Bozek and Young 1994; Brown *et al.* 2001). Fish suffocate when their gills are coated with fine particulate matter, they can be physically injured by rocks and debris, or they can be displaced downstream below impassable barriers into habitat occupied by nonnative trout. Ash and debris flows or severe flash flooding can also decimate aquatic invertebrate populations that the fish depend on for food (Molles 1985; Rinne 1996; Lytle 2000). In larger streams, refugia are typically available where fish can withstand the short-term adverse conditions; small headwater streams are usually more confined, concentrating the force of water and debris (Pearsons *et al.* 1992; Brown *et al.* 2001).

Increases in water temperature occur when the riparian canopy is eliminated by fire and the stream is directly exposed to sunlight. After fires in Yellowstone National Park, Minshall *et al.* (1997) reported that maximum water temperatures were significantly higher in headwater streams affected by fire than temperatures in reference (unburned) streams; these maximum temperatures often exceeded tolerance levels of salmonids. Warm water is stressful for salmonids and can lead to increases in disease and lowered reproductive potential (Bjornn and Reiser 1991). Salmonids need clean, loose gravel for spawning sites (Bjornn and Reiser 1991). Ash and fine particulate matter created by fire can fill the interstitial spaces between gravel particles and eliminate spawning habitat or, depending on the timing, suffocate eggs that are in the gravel. Increases in water temperature and sedimentation can also impact aquatic invertebrates, changing species composition and reducing population numbers (Minshall 1984; Wiederholm 1984; Roy *et al.* 2003), consequently affecting the food supply of trout.

As discussed above, in the "Timber harvest" and "Livestock grazing" sections, we have determined that the threats to Gila trout habitat from livestock grazing and timber harvest have been greatly reduced over time. It is expected that the livestock management practices (*e.g.*, exclusion from riparian zones, reduction in numbers, suspension of grazing in some allotments) that have been implemented will remain in place (A. Telles, U.S. Forest Service, Gila National Forest, in litt. 2003c). Additionally, the Forest Service will continue to consider the effects of grazing on Gila trout under section 7 of the Act. Presently, 9 of the 10 streams that contain Gila trout occur in the Aldo Leopold Wilderness Area or the Gila Wilderness within the Gila National Forest, New Mexico. Timber harvest, roads, and mechanized vehicles are not allowed in wilderness areas, providing further protection to the habitat of Gila trout. Dispersed recreation does occur in wilderness areas but because of the inaccessibility of most of the streams (not near roads, hiking or backpacking is required), dispersed recreation has very little impact on the habitat. By practice, the NMDGF and AGFD do not stock nonnative trout within wilderness areas or above any barrier that protects a population of Gila trout. The NMDGF has not stocked nonnative fish in wilderness areas for more than 20 years (Mike Sloan, NMDGF, pers. comm. 2004). AGFD seasonally stock the East Verde River, within 3 miles of Dude Creek, with rainbow trout. Dude Creek has one manmade and at least one natural barrier separating it from the East Verde River (K. Young, AGFD, pers. comm. 2006). Downlisting of the Gila trout with the special 4(d) rule will allow AGFD to stock Gila trout into the East Verde River instead of rainbow trout (K. Young, AGFD, pers. comm. 2006). Rainbow trout have not been stocked into the Blue River (Raspberry is a tributary) since 1990 (K. Young, AGFD, pers. comm. 2006).

High-severity forest fires remain a threat to isolated populations because natural repopulation is not possible. However, populations have been reestablished after forest fires (Main Diamond and South Diamond creeks), there is an Emergency Evacuation Plan (Service 2004) that outlines procedures to be taken in case of a high-severity forest fire, and most populations are sufficiently disjunct (*e.g.*, separated by mountain ridges), thereby ensuring that one fire would not affect all populations simultaneously. Additionally, as discussed in this rule, fires have

occurred in recent times in many areas occupied by Gila trout. Thus, the risk of fire in these areas, especially one that would affect all populations, is reduced due to an overall reduction in fuel loads. Populations may still be extirpated because of forest fires, but through management activities (rescue of fish, reestablishment of populations, hatchery management) populations can be, and have been, reestablished successfully once the habitat recovers.

B. Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

All stream reaches that contain Gila trout have been closed to sport fishing since the fish was listed in 1967. Main Diamond Creek was closed to angling in the 1930s for the protection of an undescribed fish species, later identified as Gila trout (Dave Propst, NMDGF, pers. comm. 2006). While some illegal fishing may take place, we believe that the amount of take is small. These are remote high-elevation streams located away from roads and difficult to access. NMDGF usually visits the recovery streams annually and has found limited evidence of illegal fishing activity (e.g., fishing tackle has been found on a few occasions). Also, because NMDGF makes periodic visits to these streams, we believe their possible presence at unpredictable times serves as a deterrent to illegal angling activities.

The special rule (see "Description of Special Rule" section below) being finalized with this reclassification will enable NMDGF and the AGFD to promulgate special regulations allowing recreational fishing of Gila trout in specified waters, not including the four relic populations identified in Table 1 above. Any changes to the recreational fishing regulations will be made by the States in collaboration with the Service. Management as a recreational species will be conducted similar to Apache trout, with angling allowed only in selected waters. Recreational management for Gila trout will be consistent with the goals of the Recovery Plan for the species (Service 2003). It is anticipated that implementation of the special rule will benefit the Gila trout by providing a means whereby Gila trout excess to recovery needs may be placed in non-recovery streams, thereby avoiding a choice between potential overcrowding in the designated recovery streams or euthanizing of excess fish. Additionally, the special rule contributes to the conservation of the Gila trout through: (1) Eligibility for Federal sport fishing funds; (2) increase in the number of wild populations; (3) enhanced ability

to monitor populations (e.g., creel surveys) for use in future management strategies; and (4) creation of goodwill and support in the local community. Each of these topics is discussed in detail in the "Description of Special Rule" section below.

A few Gila trout are removed from the wild for propagation, and some are taken for scientific or educational purposes, but the take is small and controlled through Federal and State permitting. Federal and State permitting will continue. Because of the remoteness of current and proposed recovery streams, the special regulations that will be imposed on angling, and the small amount of Gila trout collected for scientific and educational purposes, we determine that overutilization for commercial, recreational, scientific, or educational purposes is not a threat to Gila trout.

C. Disease or Predation

The carrier of bacterial kidney disease (BKD) is known to occur in trout in the upper West Fork drainage. The carrier, a bacterium (*Renibacterium salmoninarum*), occurs in very low amounts in brown trout populations in the upper West Fork Gila River drainage and in the Whiskey Creek population of Gila trout. The bacterium was also detected in rainbow \times Gila trout hybrid populations in Iron, McKenna, and White creeks. Although the carrier bacterium is present, there were no signs of BKD in any Gila trout populations (Service 2003). Trout populations in the Mogollon Creek drainage, McKnight Creek, and Spruce Creek tested negative for BKD.

Whirling disease (WD) was first detected in Pennsylvania in 1956, and was transmitted here from fish brought from Europe (Thompson *et al.* 1995). *Myxobolus cerebralis* is a parasite that penetrates through the skin or digestive tract of young fish and migrates to the spinal cartilage, where it multiplies very rapidly, putting pressure on the organ of equilibrium. This causes the fish to swim erratically (whirl) and have difficulty feeding and avoiding predators. In severe infections, the disease can cause high rates of mortality in young-of-the-year fish. Water temperature, fish species and age, and dose of exposure are critical factors influencing whether infection will occur and its severity (Hedrick *et al.* 1999). Fish that survive until the cartilage hardens to bone can live a normal life span, but have skeletal deformities. Once a fish reaches 3 to 4 inches in length, cartilage forms into bone, and the fish is no longer susceptible to effects from whirling disease. Fish can

reproduce without passing the parasite to their offspring; however, when an infected fish dies, many thousands to millions of the parasite spores are released into the water. The spores can withstand freezing, desiccation, and passage through the gut of mallard ducks, and they can survive in a stream for many years (El-Matbouli and Hoffmann 1991). Eventually, the spore is ingested by its alternate host, the common aquatic worm, *Tubifex tubifex*. After about 3.5 months in the gut of the worms, the spores transform into a Triactinomyxon (TAM). The TAMs leave the worm and attach to the fish, or they are ingested when the fish eats the worm. The spores are easily transported by animals, birds, and humans.

Salmonids native to the United States did not evolve with WD. Consequently, most native species have little or no natural resistance. Colorado River cutthroat trout and rainbow trout are very susceptible to the disease, with 85 percent mortality within 4 months of exposure to ambient levels of infectivity in the Colorado River (Thompson *et al.* 1999). Brown trout, native to Europe, evolved with *M. cerebralis*, and they become infected but rarely suffer clinical disease. At the study site on the Colorado River, brown trout thrive, but there has been little survival beyond 1 year of age of rainbow trout since 1992 (Thompson *et al.* 1999). Gila trout are also vulnerable to WD (D. Shroufe, Arizona Game and Fish Department, in litt. 2003a)

There have been no documented cases of WD in the Gila River drainage in New Mexico or Arizona. Wild and hatchery populations of Gila trout tested have been negative for WD (Service 2003). Although WD is a potential threat to Gila trout, high infection rates would probably only occur where water temperatures are relatively warm and where *T. tubifex* is abundant. *T. tubifex* is the secondary host for the parasite; when *T. tubifex* numbers are low, the number of TAMs produced will be low, and consequently, the infection rate of Gila trout will be low. *T. tubifex* is a ubiquitous aquatic oligochaete (worm); however, it is most abundant in degraded aquatic habitats, particularly in areas with high sedimentation, warm water temperatures, and low dissolved oxygen. In clear coldwater streams (typical Gila trout habitat), it is present but seldom abundant. Infection rate is low at temperatures less than 10 °C (50 °F) (Thompson *et al.* 1999).

We determine that BKD is not a likely threat to the 4 original pure populations nor to the 11 replicated populations because of its limited distribution, low occurrence within trout populations,

and lack of any clinical evidence of the disease in Gila trout. Likewise, we determine that WD is not a likely threat to Gila trout because most Gila trout are located in high-elevation headwater streams that typically have cold water and low levels of sedimentation, which limit *T. tubifex* populations and infection rates from TAMs. *T. tubifex* has never been detected in benthic samples collected. Although Gila trout may be susceptible to infection, there has not been a documented occurrence of WD in a wild Gila trout population. Mora National Fish Hatchery and Technology Center, where Gila trout have been held, has tested negative for WD. In addition, NMDGF and AGFD are educating the public about how to prevent the spread of WD (e.g., through educational brochures and information provided with fishing regulations). In summary, no hatchery that stocks Gila trout has a history of whirling disease. In such hatcheries, we control the stocking, source fish, and fish health testing. Further, there will be no stocking of trout in private waters in proximity to Gila trout. Therefore, it is unlikely that Gila trout populations would be exposed to whirling disease.

Predation of Gila trout by brown trout has been a serious problem, and continues to be a problem for fish below stream barriers. Brown trout, a nonnative salmonid, prey on Gila trout and are able to severely depress Gila trout populations. Predation threats have been addressed by chemically removing all nonnative fish and reintroducing only native species. The specific locations and timing of the potential use of chemicals in any future stream restoration projects would be made by the States, in coordination with the Gila Trout Recovery Team, and with the approval of their State Game Commissions. Additionally, the Gila Trout Recovery Plan provides a list of potential stream reaches that may be used for recovery purposes. Physical stream barriers, either natural waterfalls or constructed waterfalls (e.g., either composite concrete/rock or basket-type gabion) built by cooperating agencies, prevent brown trout from moving upstream and preying on Gila trout. Barrier failure is generally not considered a threat to existing Gila trout populations in New Mexico because most existing barriers are natural waterfalls. However, human-made barriers exist on lower Little Creek, McKnight Creek, and Black Canyon. Failure of human-made barriers would most likely result from catastrophic flooding and include scouring around barriers, undercutting, or complete

removal. Brown trout and other nonnative species downstream from these barriers remain a threat.

The threat of predation by brown trout has been reduced by eliminating brown trout from streams with Gila trout populations, and by creating barriers that prevent the upstream dispersal of brown trout into areas occupied by Gila trout. Field monitoring by the Service, Forest Service, AGFD, and the NMDGF of Gila trout provides a means to detect the introduction of brown trout into a Gila trout population, and, once detected, the nonnatives are removed (Service 2004). Each population is monitored at least once every 3 years. Monitoring may occur more often depending upon the situation, including additional surveys due to the occurrence of wildfire. Annual monitoring using electrofishing is not undertaken due to potential sampling impacts from electrofishing. The Emergency Evacuation Plan provides further information on the procedures for detecting and addressing the threat of nonnatives (Service 2004).

D. The Inadequacy of Existing Regulatory Mechanisms

Before the Gila trout was federally listed as endangered (1967), the species was protected by New Mexico. NMDGF had closed angling to all streams known to contain pure populations of Gila trout. Upon being listed under the Act, the Gila trout immediately benefited from a Federal regulatory framework that provided protection and enhancement of the populations in three ways. First, take was prohibited. Take is defined under the Act to include killing, harassing, harming, pursuing, hunting, shooting, wounding, trapping, capturing, or collecting individuals, or attempting to do any of these things. Habitat destruction or degradation is also prohibited if such activities harm individuals of the species. Second, section 7 of the Act requires that Federal agencies consult with the Service to ensure that actions they carry out, fund, or authorize will not likely jeopardize the continued existence of the species or adversely modify its habitat. Third, once a species is listed, the Service is required to complete a recovery plan and make timely revisions, if needed. Thus, listing the species provided recognition, protection, and prohibitions against certain practices (such as take), facilitated habitat protection, and stimulated recovery actions.

Subsequent to the Federal listing action, the States of New Mexico and Arizona officially recognized the declining status of the species. In 1988,

Arizona designated the Gila trout as an endangered species, which includes species that are known or suspected to have been extirpated from Arizona but that still exist elsewhere. New Mexico designated the Gila trout as an endangered species (Group 1) on January 24, 1975 (NM State Game Commission Regulation No. 663) under authority of the Wildlife Conservation Act. Group 1 species are those whose prospects of survival or recruitment in New Mexico are in jeopardy. The designation provides the protection of the New Mexico Wildlife Conservation Act (Sections 17-2-37 through 17-2-18, NMSA 1978) and prohibits taking of such species except under a scientific collecting permit. In 1989, New Mexico downlisted Gila trout to threatened in response to a petition to downlist Gila trout in the ESA. Although the Service did not proceed to downlist the species at that time, the State went forward with the downlisting. New Mexico also has a limited ability to protect the species' habitat through the Habitat Protection Act (Sections 17-3-1 through 17-3-11) through water pollution legislation, and tangentially through a provision that makes it illegal to dewater areas used by game fish (Section 17-1-14). Take of Gila trout in Arizona is prohibited through State statute (Arizona Revised Statute Title 17) and Commission Order (Commission Order 40). With the promulgation of the special rule, we expect that the States of Arizona and New Mexico will likely adopt regulations to allow for recreational fishing as described in the "Description of Special Rule" section below.

We determine that because of the protection that would be provided from Federal listing as a threatened species, along with the special rule, State regulatory protection, and habitat protection provided by the National Forests, there are adequate regulatory mechanisms to protect and enhance Gila trout populations and their habitat. Many of these protective regulations, conservation measures, and recovery actions have substantially improved the status of the Gila trout.

E. Other Natural or Manmade Factors Affecting Its Continued Existence

When the Gila trout was listed as endangered, the most important reason for the species' decline was hybridization and competition with and/or predation by nonnative salmonids (52 FR 37424). Uncontrolled angling depleted some populations of Gila trout, which in turn encouraged stocking of hatchery-raised, nonnative species (Miller 1950; Propst 1994). Due to declining native fish populations, the

NMDGF propagated and stocked Gila trout, rainbow trout, cutthroat trout, and brown trout during the early 1900s to improve angler success. Gila trout were propagated from 1923 to 1935 at the Jenks Cabin Hatchery in the Gila Wilderness, and through 1947 at the Glenwood Hatchery, but these programs were abandoned because of the hatcheries' poor accessibility and low productivity (Service 1984). After early stocking programs were discontinued, the nonnative trout species persisted and seriously threatened the genetic purity and survival of the few remaining populations of Gila trout. Recent efforts to recover the species have included eliminating nonnative salmonids from the species' historic habitat through piscicide (fish-killing), mechanical removal, and construction of waterfall barriers to prevent nonnative reinvasion. Currently, 12 viable populations of Gila trout exist in the absence of nonnative salmonids.

We have determined that the threats posed by nonnative fish are reduced because nonnative trout are not present in the streams with original pure or replicated populations of Gila trout. Barriers are present to prevent nonnative trout from dispersing into areas occupied by pure Gila trout populations. Drought, wildfire, and floods remain as threats. However, conditions are monitored, and fish can be rescued from streams threatened by drying, fires, floods, or barrier failure, if necessary (Service 2004). As explained in the Emergency Evacuation Plan, these remote areas may be accessed through helicopter or use of horses and mules, depending upon the urgency of the situation. Flooding that occurs in an undisturbed watershed is not considered a threat to Gila trout. However, flooding that occurs after a severe fire is a threat. In a multi-agency effort, Forest Service personnel monitor fires and the potential for flooding in coordination with NMDGF and Service personnel, and then a decision is made whether to rescue fish from streams that are in danger of flash floods (Service 2004). Rescued fish may be used in broodstock development, introduced into other suitable streams, or placed back into their stream of origin once the habitat conditions are suitable. However, it may take many years for the habitat to recover to the point that it is again suitable for trout.

Summary

We believe that reclassifying the Gila trout from endangered to threatened status with a special rule is consistent with the Act, and that the special rule will further the conservation and

recovery of this species. See the "Description of Special Rule" section below for an explanation of the conservation benefits of the special rule. Threatened status is appropriate because the number of populations has increased from 4 to 12 since recovery efforts began, and all of the threats affecting the species have been reduced and some have been eliminated. Additionally, as noted above, the wild populations of Gila trout were estimated to be fewer than 10,000 fish greater than age 1 in 1992. In 2001, almost 10 years later, the population in New Mexico had increased significantly and was estimated to be 37,000 fish (Brown *et al.* 2001). The four remnant, genetically pure, populations are protected and replicated in 109 km (67 mi) of stream, and each replicate is geographically separate from its remnant population, thereby exceeding the mileage recommended in the Recovery Plan. The Service recently completed the replication of the Whiskey Creek lineage into Langstroth Canyon on June 21, 2006. An Emergency Evacuation Plan was developed and has been implemented in 2002 and 2003 (Service 2004), and will continue to be implemented as necessary. A copy of the Emergency Evacuation Plan is available by contacting the New Mexico Ecological Services Field Office (see **ADDRESSES** section). We have determined that the Gila trout is no longer in danger of extinction throughout all or a significant portion of its range and therefore no longer meets the Act's definition of endangered.

Threatened status is appropriate for the Gila trout because although the major threats have been reduced by recovery efforts and its status has improved, threats to the species still exist. Nonnative salmonids, which were the major threat to the species, do not occur in the 13 Gila trout recovery streams. We will continue to work with the States to manage nonnative salmonids. Current State and Federal regulations prohibit the take of Gila trout and few Gila trout are taken for scientific or educational purposes, in accordance with State and Federal permits under section 10(a)(1)(A) of the Act. State and Federal regulations governing take will continue after downlisting because the special rule prohibits take, except for take related to recreational fishing activities in accordance with State law. Threats due to natural disasters remain, but are mitigated by the Emergency Evacuation Plan that addresses wildfire- and drought-related impacts and discovery of nonnative salmonid invasions

(Service 2004) (see "Recovery Plans and Accomplishments" section for a discussion of past successes). Therefore, we believe that given continued careful management, reclassification to a threatened status is appropriate.

Description of Special Rule

While the Gila trout was listed as endangered, the prohibitions described in section 9(a)(1) of the Act applied. Upon reclassification to threatened status, we have the opportunity to use the special regulations provisions of section 4(d) of the Act. When we establish a special regulation (alternatively known as a special rule), the general prohibitions in 50 CFR 17.31 for threatened species do not apply to the subject species, and the special rule contains all the prohibitions and exceptions that do apply. Typically, such special rules incorporate some of the prohibitions contained in 50 CFR 17.31, with exceptions for certain activities.

In 1978, we finalized regulations applying most of the take prohibition provisions to threatened wildlife (50 CFR 17.31). These procedures were established on April 28, 1978 (43 FR 18181), and amended on May 31, 1979 (44 FR 31580) and on March 4, 2005 (70 FR 10493). Reclassifying the species will have no effect on the regulations regarding protection and recovery of Gila trout, except for take related to recreational fishing as provided in the special rule. Beginning on the effective date of this reclassification rule, the special rule will enable the States of Arizona and New Mexico to promulgate regulations to allow recreational fishing for Gila trout; however, actual angling for Gila trout will not be allowed until those State regulations are in effect.

The special rule will apply to Gila trout found in New Mexico and Arizona and will allow recreational fishing of Gila trout in specified waters, not including the four remnant populations identified in Table 1 above. As noted elsewhere, changes to the recreational fishing regulations will be made by the States in collaboration with the Service. Management as a recreational species will be conducted similar to Apache trout and consistent with the goals of the Recovery Plan for the species (Service 2003). For the reasons explained herein, it is no longer necessary or advisable for the conservation of the Gila trout to prohibit take caused by regulated fishing. In general, establishment of recreational opportunities can be developed in recovery waters that have stable or increasing numbers of individuals (as measured by population surveys) and

where habitat conditions are of sufficient quality to support viable populations of Gila trout (populations having annual recruitment, size structure indicating multiple ages, and individuals attaining sufficient sizes to indicate 3 to 7 years of survival). In addition, recreational opportunities may be developed in non-recovery waters. According to NMDGF the process by which a stream is designated a fishery involves: (1) Carefully evaluating each stream; (2) determining whether the stream can sustain angling and how much (this evaluates a suite of different angling pressures); (3) making a recommendation to designate the stream a fishery; and (4) monitoring to insure there are no detrimental effects to the population from angling. If monitoring indicates a negative effect on the conservation of Gila trout, the fishing regulations can be amended or the fishery can be closed. The process by which AGFD designates a fishery is very similar and can be found on the AGFD Web site at http://www.azgfd.gov/inside_azgfd/rulemaking_process.shtml. The principal effect of the special rule is to allow take in accordance with fishing regulations enacted by New Mexico and Arizona. We will collaborate with the States to develop fishing regulations that are adequate to protect and conserve Gila trout. We anticipate New Mexico and Arizona will institute special regulations to allow recreational fishing of Gila trout in certain waters.

This rule is not an irreversible action on our part. Reclassifying the Gila trout back to endangered status is possible and may be done through an emergency rule if a significant risk to the well-being of the Gila trout is determined to exist, or through a proposed rule should changes occur that alter the species' status or significantly increase the threats to its survival. Because changes in status or increases in threats (e.g., wildland fire effects, nonnative salmonid invasion, barrier failure, drought) might occur in a number of ways, criteria that would trigger another reclassification proposal cannot be specified at this time.

The special 4(d) rule for recreational fishing is based on the best available science. We anticipate that over time, as a result of additional studies and as the analyses of monitoring data become available, some changes to these regulations may be required (e.g., closure of areas previously permitted for fishing, or opening of new areas). Changes to the recreational fishing regulations will be made by the States in collaboration with the Service. Management of Gila trout as a

recreational species will be consistent with the goals of the Recovery Plan for the species (Service 2003). These changes could result in an increase or decrease in restrictions on recreational fishing as determined by State and Service personnel in collaboration.

Conservation of the Gila Trout

As noted above, a special rule for a threatened species shall be issued by the Secretary when it is deemed necessary and advisable to provide for the "conservation" of the species. The term conservation, as defined in section 3(3) of the Act, means to use and the use of all methods and procedures necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to the Act are no longer necessary. Such methods and procedures include, but are not limited to, all activities associated with scientific resources management such as research, census, law enforcement, habitat acquisition and maintenance, propagation, live trapping, and transplantation, and, in the extraordinary case where population pressures within a given ecosystem cannot be otherwise relieved, may include regulated taking.

The authority to take endangered or threatened species to relieve population pressures is applicable to our recovery efforts for Gila trout. We currently have active captive propagation of Gila trout at the Mora National Fish Hatchery and Technology Center, guided by a genetic broodstock management plan. Within the near future, recovery augmentation and broodstock management needs for these two lineages will likely require the production of up to 20,000 fish. Ensuring the genetic diversity of these 20,000 fish through implementation of the broodstock management plan will result in the simultaneous production of about 100,000 excess Gila trout. These excess Gila trout are produced as a result of the specific controlled propagation techniques required to ensure the genetic quality of the Gila trout needed for recovery. Currently, hatchery-reared and rescued Gila trout are stocked only in streams designated for recovery that are closed to angling. If the excess Gila trout were to be stocked into the designated recovery streams, this might cause overcrowding and attendant problems. The streams designated for recovery are small, high-elevation streams, which do not support great numbers of fish (i.e., they have a low carrying capacity). While the numbers of Gila trout stocked into recovery streams would vary each year, depending on circumstances such as wildfire, we expect that the number of

Gila trout produced would greatly exceed the carrying capacity of the recovery streams. We believe that placing excess Gila trout in streams (e.g., lower West Fork Gila River downstream of the falls near White Creek confluence, and throughout the Middle Fork Gila River) and lakes (e.g., Bill Evans Lake, Lake Roberts, Snow Lake) that are currently not identified for use as part of the long-term Gila trout recovery strategy would avoid any potential overcrowding in the designated recovery streams. Without a 4(d) rule in place that allows for recreational fishing, Gila trout could not be stocked in nonrecovery streams that are open to angling due to the take prohibitions of the Act that apply to endangered and threatened species. In summary, this final 4(d) rule for Gila trout will avoid overcrowding in the designated recovery streams by allowing excess Gila trout to be placed in streams open to angling. If excess Gila trout are not used for stocking in nonrecovery streams, we would be required to euthanize all genetically pure, excess Gila trout because of limited space and resources to maintain them at captive propagation facilities.

Below we provide additional reasons why the 4(d) rule provides for the conservation of the Gila trout beyond that of relieving potential population pressures due to overcrowding. Specifically, this special 4(d) rule contributes to the conservation of the Gila trout through: (1) Providing eligibility for Federal sport fishing funds, (2) increasing the number of wild populations, (3) enhancing the ability to monitor populations, and (4) creating goodwill and support in the local community. Each of these topics is discussed in detail below.

Expansion of the Population

There are several benefits to stocking fish in streams and lakes. First, having Gila trout in additional stream miles and lakes will increase the overall security of the species. If Gila trout are introduced into larger, higher order streams that are less subject to catastrophic events and where refugia are more abundant, these fish are likely to persist even if a large-scale disturbance, such as fire, were to occur. Despite these benefits, it is probable that some Gila × rainbow trout hybrids would be produced and that Gila trout might also be lost to predation by brown trout; however, the benefits far outweigh any potential negative aspects of this action. Second, areas directly below existing barriers could also be targeted for stocking. These reaches of stream would then act as "buffers" between

pure Gila trout populations and stream reaches contaminated with nonnative trout.

Finally, if Gila trout were stocked in additional waters, the angling public would be exposed to, and become more familiar with, Gila trout's natural beauty and value as a sport fish, thereby increasing public support for the program. As noted above, there are several lakes (e.g., Bill Evans Lake, Lake Roberts, Snow Lake) and stream segments (e.g., lower West Fork Gila River downstream of the falls near White Creek confluence, and throughout the Middle Fork Gila River) that are not currently identified in long-term recovery strategies and that could provide quality angling opportunities for Gila trout. Within Arizona, Verde River, Oak Creek, Wet Beaver Creek, and West Clear Creek have potential for developing angling opportunities for Gila trout. Reservoirs include Watson, Willow, Mingus, and Deadhorse.

Eligibility for Funds

Once a stream or lake occupied by Gila trout is opened to angling, the trout can be designated as a "sport fish" and the potential funding available to Gila trout restoration projects may increase. For example, as a sport fish, the Gila trout would be eligible for funding through the Sport Fish Restoration Program (SFRP) for management activities, including hatchery production associated with the Gila trout. In fiscal year 2004, NMDGF received \$3,258,275, and AGFD received \$3,556,597, through the SFRP. The specific amount that would be spent on the Gila trout using these funds would depend on the priorities of the NMDGF and the AGFD; however, with Gila trout recognized as a sport fish, the States would have this additional funding source available for restoration projects (P. Mullane, U.S. Fish and Wildlife Service, in litt. 2005). In contrast, the amount of Service money spent on Gila trout in 2004 is estimated at \$137,500.

In Arizona, approximately \$2.1 million dollars (including matching dollars) are available to sport fishing projects (L. Riley, ADGF, pers. comm. 2004). In addition, about \$1.7 million dollars are available for the culture (hatchery production) of sport fish (L. Riley, ADGF, pers. comm. 2004). With increased hatchery production and establishment of new populations in additional waters, recovery goals could be reached sooner and more angling opportunities could be provided to the public. An increase in the amount of money available for nonnative trout removal, barrier construction, habitat

restoration, and hatchery production would aid in recovery and delisting of the Gila trout.

Monitoring and Education

Monitoring is critical to the successful conservation of the Gila trout. We will work closely with the States of New Mexico and Arizona to develop evaluation and assessment programs to gather population data (e.g., size of fish caught, number caught and released), data on the survival of released fish, and angler-related data (e.g., time spent fishing, streams fished, catch rate, hooking and handling mortality) on streams and lakes. Our ability to evaluate these data is essential to the development of management strategies to ensure the long-term conservation of Gila trout. Using a population viability model that examined mortality from various sources, Brown *et al.* (2001) found that up to a 15 percent angling mortality of adult Gila trout per year had no effect on population viability. Although models never perfectly incorporate the complexity of natural systems and are only an approximation based on many assumptions (Schamberger and O'Neil 1986), they are useful tools that can be used by managers to improve recovery strategies. With information gathered from streams and lakes open to angling, the impact of angling on population dynamics could be tested directly, leading to better management of the populations, especially as the species moves closer to recovery.

Education is also critical to the successful conservation of the Gila trout because once the Gila trout is recovered and delisted, it will need to be properly managed to maintain adequate populations. We will work with the States to develop public education programs and materials on proper handling and release of Gila trout to reduce hooking and handling mortality in catch-and-release areas, and on species identification for educational purposes. Educating the public on the uniqueness of the Gila trout, its limited distributional range, and its value as one of New Mexico and Arizona's few native trout is expected to build support for the conservation of the species.

Public Support

As mentioned above, community support is essential to the recovery of Gila trout. Some members of the public have opposed Gila trout recovery efforts because of the loss of angling opportunities for nonnative trout through the renovation of streams (Brooks *et al.* 2000; Blue Earth Ecological Consultants 2001). As stated

earlier, we believe that adequate regulatory mechanisms are in place; however, illegal angling has occurred in streams officially closed to angling (NMDGF 1997a, b), and unauthorized stocking of nonnative salmonids into streams either currently occupied by Gila trout or proposed for reintroductions have been documented in recent years (NMDGF 1998; Brooks *et al.* 2000). It is likely that because Gila trout evolved in this ecosystem and are adapted to it, they will produce more stable populations and a more dependable fishery than nonnative trout (Turner 1986). There is also a demonstrated high public interest in the future angling opportunities for Gila trout (NMDGF 1997a, b). Therefore, we believe that the availability of recreational fishing for Gila trout will increase public support for the conservation and recovery of the species (NMDGF 1997a).

In the 1996 Policy for Conserving Species Listed or Proposed for Listing Under the Endangered Species Act While Providing and Enhancing Recreational Fisheries Opportunities (June 3, 1996; 61 FR 27978), we note that fishery resources and aquatic ecosystems are integral components of our heritage and play an important role in the Nation's social, cultural, and economic well being. Accordingly, and to implement Executive Order 12962, we are aggressively working to promote compatibility and reduce conflict between administration of the Act and recreational fisheries. Carefully regulated recreational fishing is not likely to impact Gila trout populations, and can promote awareness and conservation of the species by maintaining public support for conservation.

In conclusion, Gila trout will continue to be protected under the Act, but reclassification from endangered to threatened with a special 4(d) rule will allow recreational fishing opportunities to be developed in recovery streams, provide an outlet for fish excess to recovery needs, and increase public awareness and appreciation of Gila trout. Additionally, the 4(d) rule will provide New Mexico and Arizona greater flexibility in the management of Gila trout, increase the potential funding for population expansion and habitat restoration, allow for the expansion and greater security of populations, enhance our ability to monitor and manage populations, and increase the public's knowledge and appreciation of this native trout. On the basis of our experience with Gila trout recovery, we expect an increase in public acceptance and greater

opportunity for us to work with local agencies and the public to find innovative solutions to potential conflicts between endangered species' conservation and humans. We believe this special rule is consistent with the conservation of the species and that it will speed recovery of the Gila trout. Therefore, this special rule is necessary and advisable to provide for the conservation of the Gila trout.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages and results in conservation actions by Federal, State, and private agencies, and groups and individuals. The Act provides for possible land acquisition and cooperation with the States and requires that recovery plans be developed and implemented for the conservation of the species, unless a finding is made that such a plan will not promote the conservation of the species. Most of these measures have already been successfully applied to Gila trout.

Under this rule, the Act will continue to apply to the Gila trout. However, this rule would change the classification of the Gila trout from endangered to threatened, and allow New Mexico and Arizona to promulgate special regulations allowing recreational fishing of Gila trout in designated streams. The protection required of Federal agencies and the prohibitions against taking and harm are discussed above in the *Summary of Factors Affecting the Species* section, Factor D, the inadequacy of existing regulatory mechanisms.

Section 7(a) of the Act requires Federal agencies to evaluate actions they fund, authorize, or carry out with respect to any species that is listed as endangered or threatened and with respect to its critical habitat, if any is designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402. Section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of any species listed as endangered or threatened, or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into consultation with us. If a Federal action is likely to jeopardize a species proposed to be listed as threatened or

endangered or destroy or adversely modify proposed critical habitat, the responsible Federal agency must confer with us.

It is our policy, published in the **Federal Register** on July 1, 1994 (59 FR 34272), to identify to the maximum extent practicable at the time a species is listed those activities that would or would not constitute a violation of section 9 of the Act. The intent of this policy is to increase public awareness of the effect of the listing on proposed and ongoing activities within the species' range. We believe that, based on the best available information, the following actions are not likely to result in a violation of section 9, provided these actions are carried out in accordance with existing regulations and permit requirements:

(1) In accordance with section 9(b)(1) of the Act, the possession, delivery, or movement, including interstate transport and import into or export from the United States, involving no commercial activity, of specimens of this taxon that were collected prior to the listing of this species (December 28, 1973);

(2) Activities authorized, funded, or carried out by Federal agencies (*e.g.*, grazing management, recreational trail or forest road development or use, road construction, prescribed burns, timber harvest, or piscicide application (fish-killing agent)), when such activities are conducted in accordance with a biological opinion from us on a proposed Federal action;

(3) Activities that may result in take of Gila trout when the action is conducted in accordance with a valid permit issued by us pursuant to section 10 of the Act;

(4) Recreational activities such as sightseeing, hiking, camping, and hunting in the vicinity of Gila trout populations that do not destroy or significantly degrade Gila trout habitat as further defined in the Forest Service and State management strategies for the occupied areas; and

(5) Angling activities in accordance with authorized fishing regulations for Gila trout in New Mexico and Arizona.

We believe that the following actions involving Gila trout could result in a violation of section 9; however, possible violations are not limited to these actions alone:

(1) Take of Gila trout without a valid permit or other incidental take authorization issued by us pursuant to section 10 of the Act. Take includes harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting, or attempting any of these actions, except in

accordance with applicable State fish and wildlife conservation laws and regulations;

(2) Possessing, selling, delivering, carrying, transporting, or shipping illegally taken Gila trout;

(3) Use of piscicides, pesticides, or herbicides that are not in accordance with a biological opinion issued by us pursuant to section 7 of the Act, or a valid permit or other incidental take authorization issued by us pursuant to section 10 of the Act;

(4) Intentional introduction of nonnative fish species (*e.g.*, rainbow and brown trout) that compete or hybridize with or prey upon Gila trout;

(5) Destruction or alteration of Gila trout habitat that results in the destruction or significant degradation of cover, channel stability, substrate composition, increased turbidity, or temperature that results in death of or injury to any life history stage of Gila trout through impairment of the species' essential breeding, foraging, sheltering, or other essential life functions; and

(6) Destruction or alteration of riparian and adjoining uplands of waters supporting Gila trout by timber harvest, fire, poor livestock grazing practices, road development or maintenance, or other activities that result in the destruction or significant degradation of cover, channel stability, or substrate composition, or in increased turbidity or temperature, that results in death of or injury to any life history stage of Gila trout through impairment of the species' essential breeding, foraging, sheltering, or other essential life functions.

Questions regarding whether specific activities will constitute a violation of section 9 of the Act should be directed to the Field Supervisor of the New Mexico Ecological Services Field Office (see **ADDRESSES** section).

Requests for copies of the regulations concerning listed wildlife or inquiries regarding prohibitions and permits may be addressed to the U.S. Fish and Wildlife Service, Ecological Services, Endangered Species Permits, P.O. Box 1306, Albuquerque, New Mexico 87103 (telephone 505/248-6649; facsimile 505/248-6922).

Summary of Changes From the Proposed Rule

The final rule includes two changes from the proposed rule to clarify some issues that were discussed in the preamble to the proposed rule but not included in the actual rule language. These clarify that the four relic populations will not be opened to fishing and any changes to State recreational fishing regulations will be

made by the States in collaboration with the Service.

Required Determinations

Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.)

The Office of Management and Budget has approved our information collection associated with the issuance of permits for the take of Gila trout, and assigned OMB Control Number 1018-0094, which expires September 30, 2007. This rule does not contain any new collections of information that require approval by the Office of Management and Budget (OMB) under 44 U.S.C. 3501 et seq. This rule will not impose new recordkeeping or reporting requirements on State or local governments, individuals, businesses, or organizations. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

National Environmental Policy Act

We have analyzed this rule making in accordance with the criteria of the National Environmental Policy Act and 318 DM 2.2(g) and 6.3(D). We have determined that Environmental Assessments and Environmental Impact Statements, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4 of the Act. A notice outlining our reasons for this determination was published in the **Federal Register** on October 25, 1983 (48 FR 49244).

Section 7 Consultation

The Service is not required to consult on this rule under section 7(a)(2) of the Act. The development of protective regulations for a threatened species are an inherent part of the section 4 listing process. The Service must make this determination considering only the "best scientific and commercial data available." A necessary part of this listing decision is also determining what protective regulations are "necessary and advisable to provide for the conservation of [the] species." Determining what prohibitions and authorizations are necessary to conserve the species, like the listing determination of whether the species meets the definition of threatened or endangered, is not a decision that Congress intended to undergo section 7 consultation.

Government-to-Government Relationship With Indian Pueblos and Tribes

In accordance with the Secretarial Order 3206, American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act (June 5, 1997); the President's memorandum of April 29, 1994, Government-to-Government Relations with Native American Tribal Governments (59 FR 22951); Executive Order 13175; and the Department of the Interior's requirement at 512 DM 2, we understand that we must conduct relations with recognized Federal Indian Pueblos and Tribes on a Government-to-Government basis. There were no tribal lands affected by this rulemaking.

References Cited

A complete list of all references cited in this rule is available upon request from the New Mexico Ecological Services Field Office (see **ADDRESSES** section).

Authors

The primary authors of this notice are the New Mexico Ecological Services Field Office staff (see **ADDRESSES** section).

List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, Transportation.

Regulation Promulgation

■ Accordingly, we amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations as follows:

PART 17—[AMENDED]

■ 1. The authority citation for part 17 continues to read as follows:

Authority: 16 U.S.C. 1361-1407; 16 U.S.C. 1531-1544; 16 U.S.C. 4201-4245; Pub. L. 99-625, 100 Stat. 3500; unless otherwise noted.

■ 2. Amend § 17.11(h) by revising the entry for "Trout, Gila" under "FISHES" in the List of Endangered and Threatened Wildlife to read as follows:

§ 17.11 Endangered and threatened wildlife.

* * * * *
(h) * * *

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
*	*	*	*	*	*		*
FISHES							
*	*	*	*	*	*		*
Trout, Gila	<i>Oncorhynchus gilae</i>	U.S.A. (AZ, NM)	Entire	T	1,757	NA	17.44(z)
*	*	*	*	*	*		*

■ 3. Amend § 17.44 by adding a new paragraph (z) to read as follows:

§ 17.44 Special rules—fishes.

* * * * *

(z) Gila trout (*Oncorhynchus gilae*).

(1) Except as noted in paragraph (z)(2) of this section, all prohibitions of 50 CFR 17.31 and exemptions of 50 CFR 17.32 apply to the Gila trout.

(i) No person may possess, sell, deliver, carry, transport, ship, import, or export, by any means whatsoever, any

such species taken in violation of this section or in violation of applicable fish and conservation laws and regulations promulgated by the States of New Mexico or Arizona.

(ii) It is unlawful for any person to attempt to commit, solicit another to commit, or cause to be committed any offense listed in paragraph (z)(1)(i) of this section.

(2) In the following instances you may take Gila trout in accordance with

applicable State fish and wildlife conservation laws and regulations to protect this species in the States of New Mexico or Arizona:

(i) Fishing activities authorized under New Mexico or Arizona laws and regulations; and

(ii) Educational purposes, scientific purposes, the enhancement of propagation or survival of the species, zoological exhibition, and other

conservation purposes consistent with the Endangered Species Act.

(3) The four relict populations of Gila trout (Main Diamond Creek, South Diamond Creek, Spruce Creek, and Whiskey Creek) will not be opened to fishing.

(4) Any changes to State recreational fishing regulations will be made by the States in collaboration with the Service.

(5) Any violation of State applicable fish and wildlife conservation laws or regulations with respect to the taking of this species is also a violation of the

Endangered Species Act of 1973, as amended.

Dated: July 6, 2006.

Matt Hogan,

Acting Assistant Secretary for Fish and Wildlife and Parks.

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