DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018–AF76

Endangered and Threatened Wildlife and Plants; Proposed Designation of Critical Habitat for the Spikedace and the Loach Minnow

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), propose designation of critical habitat pursuant to the Endangered Species Act of 1973, as amended (Act), for the spikedace (*Meda fulgida*) and the loach minnow (*Tiaroga = (Rhinichthys) cobitis*). This proposal is made in response to a court order in Southwest Center for Biological Diversity *v.* Clark CIV 98–0769 M/JHG, directing us to complete designation of critical habitat for the spikedace and loach minnow by February 17, 2000.

We are proposing as critical habitat a total of approximately 1,443 kilometers (km) (894 miles (mi)) of rivers and creeks for the two species. The entire designation is proposed as critical habitat for the loach minnow, and approximately 1,325 km (822 mi) of those miles are also proposed as critical habitat for the spikedace. Proposed critical habitat includes portions of the Gila, San Francisco, Blue, Black, Verde, and San Pedro rivers, and some of their tributaries, in Apache, Cochise, Gila, Graham, Greenlee, Pima, Pinal, and Yavapai Counties in Arizona; and Catron, Grant, and Hidalgo Counties in New Mexico.

If this proposed rule is finalized, Federal agencies proposing actions that may affect the areas designated as critical habitat must consult with us on the effects of the proposed actions, pursuant to section 7(a)(2) of the Act.

DATES: We will consider all comments on the rule, the draft Economic Analysis, and draft Environmental Assessment received from interested parties by January 14, 2000. We will hold public hearings in Thatcher, Arizona, and Silver City, New Mexico on December 15, 1999, and in Camp Verde, Arizona, on December 16, 1999.

ADDRESSES: 1. Send your comments on the rule, the draft Economic Analysis, and draft Environmental Assessment to the Arizona Ecological Services Office, U.S. Fish and Wildlife Service, 2321 W. Royal Palm Road, Suite 103, Phoenix, Arizona 85021.

2. The complete file for this rule will be available for public inspection, by appointment, during normal business hours at the Arizona Ecological Services Office, U.S. Fish and Wildlife Service, 2321 W. Royal Palm Road, Suite 103, Phoenix, Arizona 85021.

3. We will hold the Thatcher hearing at Eastern Arizona College Activity Center, Lee Little Theater, 1014 N. College Avenue, Thatcher, Arizona. We will hold the Silver City hearing at Western New Mexico University, White Hall Auditorium, 1000 College Street, Silver City, New Mexico. We will hold the Camp Verde hearing at the Camp Verde Unified Schools Multi-Use Complex Theater, 280 Camp Lincoln Road, Camp Verde, Arizona. We will start all hearings promptly at 7:00 p.m. and end them no later than 9:00 p.m.

FOR FURTHER INFORMATION CONTACT: Field Supervisor, Arizona Ecological Services Office, at the above address; telephone 602/640–2720, facsimile 602/640–2730.

SUPPLEMENTARY INFORMATION:

Background

Spikedace

The spikedace is a small, slim fish less than 80 millimeters (mm) (3 inches (in)) long. It is characterized by very silvery sides and by spines in the dorsal and pelvic fins (Minckley 1973). This species is found in moderate to large perennial streams, where it inhabits shallow riffles with sand, gravel, and rubble substrates and moderate to swift currents as well as swift pools over sand or gravel substrates (Barber *et al.* 1970; Propst *et al.* 1986; Rinne 1991). Specific habitat for this species consists of shear zones where rapid flow borders slower flow, areas of sheet flow at the upper ends of mid-channel sand/gravel bars; and eddies at downstream riffle edges (Propst *et al.* 1986; Rinne and Kroeger 1988). Recurrent flooding and a natural hydrograph (physical conditions, boundaries, flow, and related characteristics of waters) are very important in maintaining the habitat of spikedace and in helping the species maintain a competitive edge over invading nonnative aquatic species (Propst *et al.* 1986; Minckley and Meffe 1987).

The spikedace was first collected in 1851 from the Rio San Pedro in Arizona and was described from those specimens in 1856 by Girard. It is the only species in the genus *Meda*. The spikedace was once common throughout much of the Gila River basin, including the mainstem Gila River upstream of Phoenix, and the Verde, Agua Fria, Salt, San Pedro, and San Francisco subbasins. It occupies suitable habitat in both the mainstream reaches and moderate-gradient perennial tributaries, up to about 2,000 meters (m) (6,500 feet (ft)) elevation (Miller 1960; Chamberlain 1904; Gilbert and Scofield 1898; Cope and Yarrow 1875).

Habitat destruction and competition and predation by nonnative aquatic species have severely reduced its range and abundance. It is now restricted to approximately 445 km (276 mi) of stream in portions of the upper Gila River (Grant, Catron, and Hidalgo Counties, NM), middle Gila River (Pinal County, AZ), lower San Pedro River (Pinal County, AZ), Aravaipa Creek (Graham and Pinal Counties, AZ), Eagle Creek (Graham and Greenlee Counties, AZ), and the Verde River (Yavapai County, AZ) (Anderson 1978; Jakle 1992; Sublette *et al.* 1990; Bestgen, 1985; Marsh *et al.* 1990; Bettaso *et al.* 1995; Propst *et al.* 1986; Propst *et al.* 1985; Stefferud and Rinne 1996). Its present range is only about 10–15 percent of the historical range, and the status of the species within occupied areas ranges from common to very rare. At present, the species is common only in Aravaipa Creek and some parts of the upper Gila River in New Mexico.

Loach Minnow

The loach minnow is a small, slender, elongated fish less than 80 mm (3 in.) long. It is olivaceous in color with an oblique (slanting) terminal mouth and eyes markedly directed upward (Minckley 1973). This species is found in small to large perennial streams, using shallow, turbulent riffles with primarily cobble substrate and swift currents (Minckley 1973; Propst and Bestgen 1991; Rinne 1989; Propst *et al.* 1988). Loach minnow uses the spaces between, and in the lee of, larger substrate for resting and spawning. It is rare or absent from habitats where fine sediments fill the interstitial spaces (small, narrow spaces between rocks or other substrate) (Propst and Bestgen 1991). Recurrent flooding and a natural hydrograph are very important in maintaining the habitat of loach minnow and in helping the species maintain a competitive edge over invading nonnative aquatic species (Propst *et al.* 1986; Propst and Bestgen 1991).

The loach minnow was first collected in 1851 from the Rio San Pedro in Arizona and was described from those specimens in 1865 by Girard. The loach minnow was once locally common throughout much of the Gila River basin, including the mainstem Gila River upstream of Phoenix, and the

Verde, Salt, San Pedro, and San Francisco subbasins. It occupies suitable habitat in both the mainstream reaches and moderate-gradient perennial tributaries, up to about 2,500 m (8,200 ft) elevation. Habitat destruction and competition and predation by nonnative aquatic species have severely reduced its range and abundance. It is now restricted to approximately 645 km (400 mi) of stream in portions of the upper Gila River (Grant, Catron, and Hidalgo Counties, NM), the San Francisco and Tularosa Rivers and their tributaries Negrito and Whitewater Creeks (Catron County, NM), the Blue River and its tributaries Dry Blue, Campbell Blue, Little Blue, Pace, and Frieborn Creeks (Greenlee County, AZ and Catron County, NM), Aravaipa Creek and its tributaries Turkey and Deer Creeks (Graham and Pinal Counties, AZ), Eagle Creek (Graham and Greenlee Counties, AZ), the White River (Apache, Gila, and Navajo Counties, AZ), and the Black River (Apache and Greenlee Counties, AZ) (Bagley *et al.* 1998; Bagley *et al.* 1996; Barber and Minckley 1966; Bettaso *et al.* 1995; Britt 1982; Leon 1989; Marsh *et al.* 1990; Propst 1996; Propst and Bestgen 1991; Propst *et al.* 1985; Springer 1995). The present range is only 15–20 percent of its historical range, and the status of the species within occupied areas ranges from common to very rare. At present, the species is common only in Aravaipa Creek, the Blue River, and limited portions of the San Francisco, upper Gila, and Tularosa Rivers in New Mexico.

Previous Federal Actions

The spikedace was included as a Category 1 candidate species in our December 30, 1982, Vertebrate Notice of Review (47 FR 58454). Category 1 included those taxa for which we had substantial biological information to support listing the species as endangered or threatened. We were petitioned on March 14, 1985, by the American Fisheries Society (AFS) and on March 18, 1985, by the Desert Fishes Council (DFC) to list the spikedace as threatened. Because the species was already under active petition by AFS, the DFC petition was considered a letter of comment. Our evaluation of the AFS petition revealed that the petitioned action was warranted, and we published a proposed rule to list this species as threatened with critical habitat on June 18, 1985 (50 FR 25390). We published the final rule listing the spikedace as a threatened species on July 1, 1986 (51 FR 23769). We did not finalize the proposed critical habitat designation at the time of listing but postponed the designation to allow us to gather and analyze economic data, in compliance with section 4(b)(2) of the Act.

We included the loach minnow as a Category 1 candidate species in the December 30, 1982, Vertebrate Notice of Review (47 FR 58454). On June 18, 1985 (50 FR 25380) we published a proposed rule to list this species as threatened with critical habitat. We published the final rule listing the loach minnow as a threatened species on October 28, 1986 (51 FR 39468). We did not finalize the proposed critical habitat designation at the time of listing but postponed the designation to allow us to gather and analyze economic data.

Section 4(a)(3) of the Act requires that, to the maximum extent prudent and determinable, the Secretary designate critical habitat at the time a species is determined to be endangered or threatened. Our regulations (50 CFR 424.12(a)(2)) state that critical habitat is not determinable if information sufficient to perform required analyses of the impacts of the designation is lacking or if the biological needs of the species are not sufficiently well known to permit identification of an area as critical habitat. At the time of listing of the spikedace and loach minnow, we found that critical habitat was not determinable because we had insufficient information to perform the required analyses of the impacts of the designation. As part of a settlement order of January 18, 1994, in *Greater Gila Biodiversity Project* v. *U.S. Fish and Wildlife Service* CIV 93–1913 PHX/PGR, we finalized critical habitat designation for both the spikedace and loach minnow on March 8, 1994 (59 FR 10906 and 10898 respectively).

Critical habitat for spikedace and loach minnow was set aside by court order in *Catron County Board of Commissioners, New Mexico* v. *U.S. Fish and Wildlife Service* CIV No. 93–730 HB (D.N.M., Order of October 13, 1994). The court cited our failure to analyze the effects of critical habitat designation under the National Environmental Policy Act (NEPA) as its basis for setting aside critical habitat for the two species. The United States District Court for the District of Arizona recognized the effect of the *Catron County* ruling as a matter of comity in the *Southwest Center for Biological Diversity* v. *Rogers* CV 96–018–TUC–JMR (D. Ariz., Order of December 28, 1996). As a result of these court rulings, we removed the critical habitat description for spikedace and loach minnow from the Code of Federal Regulations on March 25, 1998 (63 FR 14378).

On September 20, 1999, the United States District Court for the District of New Mexico, *Southwest Center for Biological Diversity* v. *Clark*, CIV 98–0769 M/JHG, ordered us to complete designation of critical habitat for the spikedace and loach minnow by February 17, 2000.

We completed final recovery plans for spikedace and loach minnow in 1991 (Service 1991a, 1991b). We developed those plans under the oversight of the Desert Fishes Recovery Team and other biologists familiar with the species. This proposed rule is based, in part, on recommendations offered in those recovery plans.

Critical Habitat

Critical habitat is defined in section 3(5)(A) of the Act as—(i) the specific areas within the geographic area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) that may require special management considerations or protection and; (ii) specific areas outside the geographic area occupied by a species at the time it is listed, upon a determination that such areas are essential 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 which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this Act are no longer necessary'' (i.e., the species is recovered and removed from the list of endangered and threatened species).

Section 4(b)(2) of the Act requires that we base critical habitat proposals upon the best scientific and commercial data available, taking into consideration the economic impact, and any other relevant impact, of specifying any particular area as critical habitat. We can exclude areas from critical habitat designation if we determine that the benefits of exclusion outweigh the benefits of including the areas as critical habitat, provided the exclusion will not result in the extinction of the species.

A. Proposed Critical Habitat Designation

In proposing critical habitat for spikedace and loach minnow, we reviewed the overall approach to the conservation of the species undertaken by local, State, Tribal, and Federal agencies and private individuals and organizations since the species' listing in 1986. We also considered the

measures identified as necessary for recovery, as outlined in the species' recovery plans. Additionally, we solicited information from knowledgeable biologists and recommendations from the Desert Fishes Recovery Team. We also reviewed the available information pertaining to habitat requirements of the two species, including material received during previous critical habitat proposals and designations.

Due to the need for additional information on the two species, habitats, threats, controllability of threats, restoration potentials, and other factors, no quantitative criteria for delisting spikedace and loach minnow were set forth in the recovery plans. However, the recovery plans recommend protection of existing populations, enhancement and restoration of habitats occupied by depleted populations, and reestablishment of the two species into selected streams within their historical ranges.

Both recovery plans call for designation of critical habitat for all stream reaches identified in the 1985 proposed rule as well as for consideration of additional stream reaches. Except for Eagle Creek, the recovery plans do not identify the specific streams to be considered for critical habitat designation due to the lack of information to support such identifications available at that time. The recovery plans do identify potential areas for reestablishment of spikedace and loach minnow including the San Pedro River and its tributaries, the San Francisco River, Mescal Creek (a middle Gila River tributary), and Bonita Creek. The recovery plans also recommend evaluation and selection of other potential sites.

Recovery Team discussions since 1991 identified the need for critical habitat designation in Hot Springs and Redfield Canyons; Aravaipa, Eagle, Bonita, Beaver, West Clear, Campbell Blue, and Dry Blue Creeks; and Gila, Verde, San Pedro, San Francisco, Blue, Tularosa, and White Rivers.

The proposed critical habitat described below constitutes our best assessment of areas needed for the conservation of spikedace and loach minnow and is based on the best scientific and commercial information available. The proposed areas are essential to the conservation of the species because they either currently support populations of spikedace and/or loach minnow, or because they currently have, or have the potential for developing, the necessary requirements for survival, growth, and reproduction of the spikedace and/or loach minnow (see description of primary constituent elements, below). All of the proposed areas require special management consideration and protection to ensure their contribution to the species' recovery.

Because of these species' precarious status, mere stabilization of spikedace and loach minnow at their present levels will not achieve conservation. Recovery through protection and enhancement of the existing populations, plus reestablishment of populations in suitable areas of historical range, is necessary for their survival. The recovery plans for both species state, ''One of the most critical goals to be achieved toward recovery is establishment of secure self-reproducing populations in habitats from which the species has been extirpated'' (Service 1991a, 1991b). We, therefore, determine that the unoccupied areas proposed as critical habitat are essential for the conservation of the species.

This proposed designation differs substantially from the critical habitat designation we proposed in 1986 and made final in 1994, and which was subsequently withdrawn under court order. The differences reflect new information we gathered on distribution of spikedace and loach minnow. The changes also reflect the need to consider areas in addition to those designated in 1994. As stated in the 1994 final rules, ''The Service is considering revising critical habitat in the future to add these areas [referring to newly discovered occupied areas]. In addition, the Service is considering adding certain unoccupied areas considered vital for recovery of the species.'' For spikedace, in the 1994 final critical habitat rule, we stated the same but, in addition, specifically recognized the recovery plan recommendation for inclusion of Eagle Creek.

Important considerations in selection of areas proposed in this rule include factors specific to each geographic area or complex of areas, such as size, connectivity, and habitat diversity, as well as rangewide recovery considerations, such as genetic diversity and representation of all major portions of the species' historical ranges. The proposed critical habitat reflects the need for complexes of sufficient size to provide habitat for spikedace and/or loach minnow populations large enough to be self-sustaining over time, despite fluctuations in local conditions.

Each complex contains interconnected waters so that spikedace and loach minnow can move between areas, at least during certain flows or seasons. The ability of the fish to repopulate areas where they are depleted or extirpated is vital to recovery. Some complexes may include stream reaches that do not have substantial spikedace- or loach minnow-specific habitat, but which provide migration corridors as well as play a vital role in the overall health of the aquatic ecosystem and, therefore, the integrity of upstream and downstream spikedace and loach minnow habitats.

The areas we selected for proposed critical habitat designation include areas containing all known remaining genetic diversity within the two species, with the possible exception of the fish on certain tribal lands, which we believe are capable of persistence without critical habitat designation (see discussion under Secretarial Order 3206 later in this proposed rule). Information on spikedace and loach minnow indicates a high degree of genetic differentiation among the remnant populations (Tibbets 1993), making conservation of each remaining population vital to recovery (Tibbets 1992). It is also important that the areas selected for proposed critical habitat designation include a representation of each major subbasin in the historical range of the species.

The proposed designation includes all currently known populations of spikedace and loach minnow, except those on tribal lands. Uncertainty on upstream and downstream distributional limits of some populations may result in small areas of occupied habitat being excluded from the designation. For loach minnow, the proposed designation includes at least one remnant population for each major subbasin except the Verde subbasin, from which it has been completely extirpated. For spikedace, no remnant populations exist in the Agua Fria, Salt, and San Francisco/Blue subbasins. In those subbasins where no populations of spikedace or loach minnow currently exist, the proposed critical habitat includes currently unoccupied areas for restoration of the species, with the exception of the Agua Fria subbasin where no suitable areas are known to remain.

The inclusion of both occupied and currently unoccupied areas in the proposed critical habitat for spikedace and loach minnow is in accordance with section 3(5)(A)(i) of the Act, which provides that areas outside the geographical area currently occupied by the species may meet the definition of critical habitat upon a determination that they are essential for the conservation of the species. Both spikedace and loach minnow are in serious danger of extinction, and their status is declining. In 1994, we made a

finding on a petition that reclassification of spikedace and loach minnow from threatened to endangered was warranted; however, reclassification was precluded by other higher priority listing actions (59 FR 35303–35304). Although additional populations of loach minnow have been found since that time, they are small and their contribution to the status of the species is offset by declines in other populations.

Both of the 1986 listing rules for spikedace and loach minnow conservatively estimated about 2,600 km (1,600 mi) of stream within the species' historical ranges. This proposal includes approximately half that amount for loach minnow and slightly less than half for spikedace. Although this amount is less than the historical ranges for both species, we believe that conservation of spikedace and loach minnow within the proposed areas can achieve long-term survival and recovery of these species.

For each stream reach proposed for designation, the up- and downstream boundaries are described below. Proposed critical habitat includes the stream channels within the identified stream reaches and areas within these reaches potentially inundated during high flow events. This proposal takes into account the naturally dynamic nature of riverine systems and recognizes that floodplains are an integral part of the stream ecosystem. A relatively intact floodplain, along with the periodic flooding in a relatively natural pattern, are important elements necessary for long-term survival and recovery of spikedace and loach minnow. Among other things, the floodplain and its riparian vegetation provides space for natural flooding patterns and latitude for necessary natural channel adjustments to maintain appropriate channel morphology and geometry, provides nutrient input and buffering from sediment and pollutants, stores water for slow release to maintain base flows, and provides protected side channel and backwater habitats for larval and juvenile spikedace and loach minnow.

Spikedace

We propose the following areas as critical habitat for spikedace (see the Regulation Promulgation section of this rule for exact descriptions of boundaries). The proposed designation includes 31 reaches found within portions of 26 streams; however, individual streams are not isolated, but are connected with others to form 7 areas or ''complexes.'' The complexes include those that currently support populations of spikedace, as well as some currently unoccupied by spikedace, but which are considered essential for reestablishing populations of spikedace to achieve recovery. The distances and conversions below are approximate; more precise estimates are provided in the Regulation Promulgation section of this rule.

1. Verde River complex, Yavapai County, Arizona. The Verde River is currently occupied by spikedace. Its tributary streams are believed to be currently unoccupied by spikedace. The Verde River complex is unusual in that a relatively stable thermal and hydrologic regime is found in the upper river and in Fossil Creek. Also, spikedace in the Verde River are genetically (Tibbets 1993) and morphologically (Anderson and Hendrickson 1994) distinct from all other spikedace populations.

a. Verde River—171 km (94 mi) of river extending from the confluence with Fossil Creek upstream to Sullivan Dam, but excluding lands belonging to the Yavapai Apache Tribe. Sullivan Dam is at the upstream limit of perennial flow in the mainstem Verde River. Perennial flow results from a series of river-channel springs and from Granite Creek. Below Fossil Creek, the Verde River becomes larger due to the input of Fossil Creek and changes character to an extent that it may not provide sufficient suitable habitat for spikedace.

b. Fossil Creek—8 km (5 mi) of creek extending from the confluence with the Verde River upstream to the confluence with an unnamed tributary. The lower portion of Fossil Creek contains all elements of spikedace habitat at present, except sufficient discharge. Discharge is currently diverted for hydropower generation at the Childs/Irving Hydropower site. Relicensing of the Childs/Irving Hydropower project will provide enhanced flows into lower Fossil Creek, although the amount of that flow restoration is still under negotiation.

c. West Clear Creek—12 km (7 mi) of creek extending from the confluence with the Verde River upstream to the confluence with Black Mountain Canyon. The lower portion of West Clear Creek was historically known to support spikedace and contains suitable, although degraded, habitat. Gradient and channel morphology changes above Black Mountain Canyon make the upstream area unsuitable for spikedace.

d. Beaver/Wet Beaver Creek—33 km (21 mi) of creek extending from the confluence with the Verde River upstream to the confluence with Casner Canyon. Beaver Creek, and its upstream extension in Wet Beaver Creek, historically supported spikedace and contain suitable, although degraded, habitat. Above Casner Canyon, gradient and channel morphology changes make the stream unsuitable for spikedace.

e. Oak Creek—54 km (34 mi) of creek extending from the confluence with the Verde River upstream to the confluence with an unnamed tributary (near the Yavapai/Coconino County boundary). The lower portion of Oak Creek is part of the historical range of spikedace and contains suitable, although degraded, habitat. Above the unnamed tributary, the creek becomes unsuitable due to urban and suburban development and to increasing gradient and substrate size.

f. Granite Creek—2.3 km (1.4 mi) of creek extending from the confluence with the Verde River upstream to a spring. As a perennial tributary of the upper Verde River, Granite Creek is considered an important expansion area for spikedace recovery.

2. Black River complex, Apache and Greenlee Counties, Arizona. The Salt River subbasin is a significant portion of spikedace historical range and has no existing population of spikedace. Large areas of the subbasin are unsuitable, either because of topography or because of reservoirs, stream channel alteration by humans, or overwhelming nonnative species populations. Recovery for spikedace includes reestablishing populations in the subbasin. The East and West Forks Black River contain suitable habitat, and the continuing presence of loach minnow in the East Fork is evidence that it may support reestablishment of spikedace, which historically occurred with loach minnow in most streams in the Gila River basin. The following are some of the most suitable areas for reestablishment of spikedace.

a. East Fork Black River—8 km (5 mi) of river extending from the confluence with the West Fork Black River upstream to the confluence with Deer Creek.

b. North Fork of the East Fork Black River—18 km (11 mi) of river extending from the confluence with Deer Creek upstream to the confluence with Boneyard Creek.

c. West Fork Black River—10 km (6 mi) of river extending from the confluence with the East Fork Black River upstream to the confluence with Hay Creek. Above Hay Creek the gradient and channel morphology are unsuitable for spikedace.

3. Tonto Creek complex, Gila County, Arizona. Tonto Creek was historically occupied by spikedace and loach minnow. Suitable habitat still exists,

although degradation has occurred due to watershed uses, water diversion, agriculture, roads, and nonnative species introduction. The presence of substantial areas of U.S. Forest Service (USFS) lands make this one of the most promising areas for reestablishment of spikedace in the Salt River subbasin.

a. Tonto Creek—47 km (29 mi) of creek extending from the confluence with Greenback Creek upstream to the confluence with Houston Creek. The influence of Roosevelt Lake below Greenback Creek, and gradient and substrate changes above Houston Creek, make the stream unsuitable for spikedace.

b. Greenback Creek—14 km (8 mi) of creek extending from the confluence with Tonto Creek upstream to Lime Springs.

c. Rye Creek—2.1 km (1.3 mi) of creek extending from the confluence with Tonto Creek upstream to the confluence with Brady Canyon. This area of Rye Creek still supports a native fish community indicating high potential for spikedace reestablishment.

4. Middle Gila/Lower San Pedro/Aravaipa Creek complex, Pinal and Graham Counties, Arizona. This complex is occupied by spikedace with its population status ranging from rare to common. Aravaipa Creek supports one of the best and most protected spikedace populations due to special use designations on Bureau of Land Management (BLM) land and to substantial ownership by The Nature Conservancy as well as planned construction of fish barriers to prevent invasion of nonnative fish species. Enhancement of downstream habitats in the San Pedro and Gila Rivers would contribute substantially to recovery of this species.

a. Gila River—63 km (39 mi) of river extending from Ashurst-Hayden Dam upstream to the confluence with the San Pedro River. A small population of spikedace currently occupies this area. At Ashurst-Hayden Dam, all water is diverted into a canal. Above the confluence with the San Pedro River, flow in the Gila River is highly regulated by San Carlos Dam and becomes marginally suitable for spikedace.

b. San Pedro River—21 km (13 mi) of river extending from the confluence with the Gila River upstream to the confluence with Aravaipa Creek. This area is currently occupied by spikedace. Existing flow in the river comes primarily from surface and subsurface contributions from Aravaipa Creek.

c. Aravaipa Creek—45 km (28 mi) of creek extending from the confluence with the San Pedro River upstream to the confluence with Stowe Gulch. Aravaipa Creek supports a substantial population of spikedace. Stowe Gulch is the upstream limit of sufficient perennial flow for spikedace.

5. Middle-Upper San Pedro River complex, Cochise, Graham, and Pima Counties, Arizona. None of the habitat in this complex is currently occupied by spikedace. However, the San Pedro River is the type locality of spikedace, and this complex contains important restoration area.

a. San Pedro River—74 km (46 mi) of river extending from the confluence with Alder Wash (near Redfield) upstream to the confluence with Ash Creek (near the Narrows). This middle portion of the river has increasing surface flow due to restoration activities, primarily groundwater pumping reductions.

b. Redfield Canyon—22 km (14 mi) of creek extending from the confluence with the San Pedro River upstream to the confluence with Sycamore Canyon. Above Sycamore Canyon, perennial water becomes too scarce, and the habitat becomes unsuitable.

c. Hot Springs Canyon—19 km (12 mi) of creek extending from the confluence with the San Pedro River upstream to the confluence with Bass Canyon. Hot Springs Canyon is currently unoccupied but contains suitable habitat for restoration of spikedace.

d. Bass Canyon—5 km (3 mi) of creek extending from the confluence with Hot Springs Canyon upstream to the confluence with Pine Canyon. Bass Canyon is an extension of the Hot Springs Canyon habitat.

e. San Pedro River—60 km (37 mi) of river extending from the confluence with the Babocomari River upstream to the U.S./Mexico border. Although currently unoccupied, this area is identified in BLM (BLM 1993) planning documents as a high-potential restoration area for spikedace.

6. Gila Box/San Francisco River complex, Graham and Greenlee Counties, Arizona and Catron County, New Mexico. The only spikedace population remaining in the complex is in Eagle Creek. Substantial restoration potential for spikedace exists in the remainder of the complex. This complex has the largest area of habitat suitable for spikedace restoration. In addition, management in the Gila Box, Bonita Creek, and the Blue River are highly compatible with recovery goals, giving restoration of spikedace in this complex a high likelihood of success.

a. Gila River—36 km (23 mi) of river extending from the Brown Canal diversion, at the head of the Safford Valley, upstream to the confluence with Owl Canyon, at the upper end of the Gila Box. The Gila Box is not known to currently support spikedace, but is considered to have a high potential for restoration of the species. Both above and below the Gila Box, the Gila River is highly modified by agriculture, diversions, and urban development.

b. Bonita Creek—19 km (12 mi) of creek extending from the confluence with the Gila River upstream to the confluence with Martinez Wash. Bonita Creek has no spikedace at present but has suitable habitat. Bonita Creek above Martinez Wash lies on the San Carlos Apache Reservation, which is not included in this proposed designation.

c. Eagle Creek—74 km (46 mi) of creek extending from the Phelps-Dodge Diversion Dam upstream to the confluence of Dry Prong and East Eagle Creeks, but excluding lands of the San Carlos Apache Reservation. Because the creek repeatedly flows from private or USFS land into the San Carlos Reservation and back, it is difficult to separately calculate stream mileage on tribal lands. Therefore, the above mileage covers the entire stream segment and is not corrected for tribal exclusions. Eagle Creek supports a small population of spikedace. Below the Phelps-Dodge Diversion Dam, the creek is often dry.

d. San Francisco River—182 km (113 mi) of river extending from the confluence with the Gila River upstream to the confluence with the Tularosa River. Habitat above the Tularosa River does not appear suitable for spikedace. The San Francisco River was historically occupied by spikedace and is important recovery habitat for restoration of the species.

e. Blue River—82 km (51 mi) of river extending from the confluence with the San Francisco River upstream to the confluence of Campbell Blue and Dry Blue creeks. The Blue River is not currently occupied by spikedace, but planning among several State and Federal agencies for restoration of native fishes in the Blue River is under way.

f. Campbell Blue Creek—13 km (8 mi) of creek extending from the confluence of Dry Blue and Campbell Blue Creeks upstream to the confluence with Coleman Canyon. Above Coleman Canyon, the creek changes and becomes steeper and rockier, making it unsuitable for spikedace.

g. Little Blue Creek—5 km (3 mi) of creek extending from the confluence with the Blue River upstream to the mouth of a box canyon. Little Blue Creek is not currently occupied by spikedace, but contains suitable habitat and is considered an important restoration area for the species.

7. Upper Gila River complex, Grant and Catron Counties, New Mexico. This complex is occupied by the largest remaining population of spikedace. It is considered to represent the ''core'' of what remains of the species. Because of the remoteness of the area, there is a relatively low degree of habitat threats.

a. Gila River—164 km (102 mi) of river extending from the confluence with Moore Canyon (near the Arizona/New Mexico border) upstream to the confluence of the East and West Forks. Below Moore Canyon, the river is substantially altered by agriculture, diversion, and urban development, thus making it unsuitable for spikedace.

b. East Fork Gila River—42 km (26 mi) of river extending from the confluence with the West Fork Gila River upstream to the confluence of Beaver and Taylor Creeks.

c. Middle Fork Gila River—12 km (8 mi) of river extending from the confluence with the West Fork Gila River upstream to the confluence with Big Bear Canyon.

d. West Fork Gila River—12 km (8 mi) of river extending from the confluence with the East Fork Gila River upstream to the confluence with EE Canyon. This lower portion of the West Fork is occupied by spikedace, but the river becomes unsuitable for spikedace above EE Canyon due to gradient and channel morphology.

Loach Minnow

We propose the following areas as critical habitat for loach minnow (see the Regulation Promulgation section of this rule for exact descriptions of boundaries). The proposed designation includes 41 reaches found within portions of 26 streams; however, individual streams are not isolated but are connected with others to form 7 complexes. The complexes include those that currently support populations of loach minnow as well as some currently unoccupied by loach minnow but that are considered essential for reestablishing populations of loach minnow to achieve recovery. Substantial overlap occurs with the proposed critical habitat for spikedace; 7 complexes and 26 streams are included in the proposed designation for both species. The distances and conversions below are approximate; more precise estimates are provided in the Regulation Promulgation section of this rule.

1. Verde River complex, Yavapai County, Arizona. Historically known from the Verde River and some of its tributaries, the loach minnow is believed to be extirpated in this complex. The Verde complex is unusual in that a relatively stable thermal and hydrologic regime is found in the upper river and in Fossil Creek. The continuing presence of spikedace and the existence of suitable habitat create a high potential for restoration of loach minnow to the Verde system.

a. Verde River—171 km (106 mi) of river extending from the confluence with Fossil Creek upstream to Sullivan Dam, but excluding lands belonging to the Yavapai Apache Tribe. Sullivan Dam is at the upstream limit of perennial flow in the mainstem Verde River. Perennial flow results from a series of river-channel springs and from Granite Creek. Below Fossil Creek, the Verde River becomes larger due to the input of Fossil Creek and changes character to an extent that it may not provide sufficient suitable habitat for loach minnow.

b. Fossil Creek—8 km (5 mi) of creek extending from the confluence with the Verde River upstream to the confluence with an unnamed tributary. The lower portion of Fossil Creek contains all elements of loach minnow habitat at present, except sufficient discharge. Discharge is currently diverted for hydropower generation at the Childs/Irving Hydropower site. Relicensing of the Childs/Irving Hydropower project will provide enhanced flows into lower Fossil Creek, although the amount of that flow restoration is still under negotiation.

c. West Clear Creek—12 km (7 mi) of creek extending from the confluence with the Verde River upstream to the confluence with Black Mountain Canyon. The lower portion of West Clear Creek contains suitable, although degraded, habitat for loach minnow. Gradient and channel morphology changes above Black Mountain Canyon make the upstream area unsuitable for loach minnow.

d. Beaver/Wet Beaver Creek—33 km (21 mi) of creek extending from the confluence with the Verde River upstream to the confluence with Casner Canyon. Beaver Creek, and its upstream extension in Wet Beaver Creek, historically supported spikedace and contain suitable, although degraded, habitat. Above Casner Canyon, gradient and channel morphology changes make the stream unsuitable for loach minnow.

e. Oak Creek—54 km (34 mi) of creek extending from the confluence with the Verde River upstream to the confluence with an unnamed tributary (near the Yavapai/Coconino County boundary). The lower portion contains suitable, although degraded, habitat for loach minnow. Above the unnamed tributary, the creek becomes unsuitable due to urban and suburban development and to increasing gradient and substrate size.

f. Granite Creek—2.3 km (1.4 mi) of creek extending from the confluence with the Verde River upstream to a spring. Below the spring, which supplies much of the base flow of Granite Creek, there is suitable habitat for loach minnow.

2. Black River complex, Apache and Greenlee Counties, Arizona. The Salt River subbasin is a significant portion of loach minnow historical range, but loach minnow have been extirpated from all but a small portion in the Black and White Rivers. As the only remaining population of loach minnow on public lands in the Salt River basin, the Black River complex is considered vital to survival and recovery of the species.

a. East Fork Black River—8 km (5 mi) of river extending from the confluence with the West Fork Black River upstream to the confluence with Boneyard Creek. This area is occupied by loach minnow, although the downstream end of the population is not well known. This population was only discovered in 1996.

b. North Fork of the East Fork Black River—18 km (11 mi) of river extending from the confluence with Deer Creek upstream to the confluence with Boneyard Creek. This area is occupied by loach minnow, although the upstream portion of the population is not well known. Above Boneyard Creek, the river character makes it unsuitable for loach minnow.

c. Boneyard Creek—2.3 km (1.4 mi) of creek extending from the confluence with the East Fork Black River upstream to the confluence with an unnamed tributary. Although no loach minnow have been found in Boneyard Creek, they are probably present based on the pattern of occupation of lower portions of small tributaries in other parts of the loach minnow range.

d. Coyote Creek—3 km (2 mi) of creek extending from the confluence with the East Fork Black River upstream to the confluence with an unnamed tributary. Loach minnow are thought to use the lower portion of this creek as part of the population in the East Fork Black River.

e. West Fork Black River—10 km (6 mi) of river extending from the confluence with the East Fork Black River upstream to the confluence with Hay Creek. Above Hay Creek, the gradient and channel morphology are unsuitable for loach minnow. The West Fork Black River is not known to be occupied by loach minnow at present. However, it is considered important for conservation of the Black River remnant of the Salt River subbasin population.

3. Tonto Creek complex, Gila County, Arizona. Tonto Creek was historically occupied by spikedace and loach minnow. Suitable habitat still exists, although degradation has occurred due to watershed uses, water diversion, agriculture, roads, and nonnative species introduction. The presence of substantial areas of USFS lands make this one of the most promising areas for reestablishment of loach minnow in the Salt River subbasin.

a. Tonto Creek—70 km (44 mi) of creek extending from the confluence with Greenback Creek upstream to the confluence with Haigler Creek. The influence of Roosevelt Lake above Greenback Creek and changes in channel morphology above Haigler Creek make those portions of the stream unsuitable for loach minnow.

b. Greenback Creek—14 km (8 mi) of creek extending from the confluence with Tonto Creek upstream to Lime Springs.

c. Rye Creek—2.1 km (1.3 mi) of creek extending from the confluence with Tonto Creek upstream to the confluence with Brady Canyon. This area of Rye Creek still supports a native fish community, indicating high potential for loach minnow reestablishment.

4. Middle Gila/Lower San Pedro/Aravaipa Creek complex, Pinal and Graham Counties, Arizona. This complex currently has loach minnow only in Aravaipa Creek and its tributaries. Aravaipa Creek supports one of the best and most protected spikedace populations due to special use designations on Bureau of Land Management (BLM) land and to substantial ownership by The Nature Conservancy as well as planned construction of fish barriers to prevent invasion of nonnative fish species. Enhancement of downstream habitats and expansion of the Aravaipa Creek population into the San Pedro and Gila Rivers would contribute substantially to recovery of this species. Expansion of this population is important to recovery of the species.

a. Gila River—63 km (39 mi) of river extending from Ashurst-Hayden Dam upstream to the confluence with the San Pedro River. At Ashurst-Hayden Dam, all water is diverted into a canal. Above the confluence with the San Pedro River, flow in the Gila River is highly regulated by San Carlos Dam and becomes marginally suitable for loach minnow.

b. San Pedro River—21 km (13 mi) of river extending from the confluence with the Gila River upstream to the confluence with Aravaipa Creek. This section of river is an important connection between the existing population of loach minnow in Aravaipa Creek and the recovery habitat in the Gila River. Existing flow in the river comes primarily from surface and subsurface contributions from Aravaipa Creek.

c. Aravaipa Creek—45 km (28 mi) of creek extending from the confluence with the San Pedro River upstream to the confluence with Stowe Gulch. Aravaipa Creek supports a substantial population of loach minnow. Stowe Gulch is the upstream limit of sufficient perennial flow for loach minnow.

d. Turkey Creek—4 km (3 mi) of creek extending from the confluence with Aravaipa Creek upstream to the confluence with Oak Grove Canyon. This creek is occupied by loach minnow. A substantial portion of the flow in Turkey Creek comes from the Oak Grove Canyon tributary.

e. Deer Creek—4 km (3 mi) of creek extending from the confluence with Aravaipa Creek upstream to the boundary of the Aravaipa Wilderness. This stream is occupied by loach minnow. Suitable habitat extends to the Wilderness boundary.

5. Middle-Upper San Pedro River complex, Cochise, Graham, and Pima Counties, Arizona. None of the habitat in this complex is currently occupied by loach minnow. However, the San Pedro River is the type locality of loach minnow, and this complex contains important restoration areas. a.

San Pedro River—4 km (46 mi) of river extending from the confluence with Alder Wash (near Redfield) upstream to the confluence with Ash Creek (near the Narrows). This middle portion of the river has increasing surface flow due to restoration activities, primarily groundwater pumping reductions.

b. Redfield Canyon—22 km (14 mi) of creek extending from the confluence with the San Pedro River upstream to the confluence with Sycamore Canyon. Above Sycamore Canyon, perennial water becomes too scarce, and the habitat becomes unsuitable.

c. Hot Springs Canyon—20 km (12 mi) of creek extending from the confluence with the San Pedro River upstream to the confluence with Bass Canyon. Hot Springs Canyon contains suitable habitat for restoration of loach minnow.

d. Bass Canyon—5 km (3 mi) of creek extending from the confluence with Hot Springs Canyon upstream to the confluence with Pine Canyon. Bass Canyon is an extension of the Hot Springs Canyon habitat.

e. San Pedro River—60 km (37 mi) of river extending from the confluence with the Babocomari River upstream to the U.S./Mexico border. Although currently unoccupied, this area is identified in BLM planning documents (BLM 1993) as a high-potential restoration area for loach minnow.

6. Gila Box /San Francisco River complex, Graham and Greenlee Counties, Arizona and Catron County, New Mexico. Most of this complex is occupied by loach minnow, although the status varies substantially from one portion to another. Only Bonita Creek, Little Blue Creek, and the Gila River are currently unoccupied. The Blue River system and adjacent portions of the San Francisco River is the longest stretch of occupied loach minnow habitat unbroken by large areas of unsuitable habitat. Management in the Gila Box, Bonita Creek, and the Blue River are highly compatible with recovery goals, giving restoration of loach minnow in this complex a high likelihood of success.

a. Gila River—36 km (23 mi) of river extending from the Brown Canal diversion, at the head of the Safford Valley, upstream to the confluence with Owl Canyon, at the upper end of the Gila Box. The Gila Box is considered to have a high potential for restoration of the loach minnow, and populations are located shortly upstream in both Eagle Creek and the San Francisco River. Both above and below the Gila Box, the Gila River is highly modified by agriculture, diversions, and urban development.

b. Bonita Creek—36 km (23 mi) of creek extending from the confluence with the Gila River upstream to the confluence with Martinez Wash. Suitable habitat for loach minnow exists in Bonita Creek. Bonita Creek above Martinez Wash lies on the San Carlos Apache Reservation, which is not being proposed for designation at this time.

c. Eagle Creek—74 km (46 mi) of creek extending from the Phelps-Dodge Diversion Dam upstream to the confluence of Dry Prong and East Eagle Creeks, but excluding lands of the San Carlos Apache Reservation. Because the creek repeatedly flows from private or USFS land into the San Carlos Reservation and back, it is difficult to separately calculate stream mileage on tribal lands. Therefore, the above mileage covers the entire stream segment and is not corrected for tribal exclusions. Below the Phelps-Dodge Diversion Dam, the creek is often dry.

d. San Francisco River—203 km (126 mi) of river extending from the confluence with the Gila River upstream to the mouth of The Box, a canyon above the town of Reserve. Loach minnow in the San Francisco River vary from common to rare throughout the length of the river.

e. Tularosa River—30 km (19 mi) of river extending from the confluence with the San Francisco River upstream to the town of Cruzville. Above Cruzville, the habitat becomes unsuitable.

f. Negrito Creek—7 km (4 mi) of creek extending from the confluence with the San Francisco River upstream to the confluence with Cerco Canyon. Above this area, gradient and channel morphology make the creek unsuitable for loach minnow.

g. Whitewater Creek—2 km (1 mi) of creek extending from the confluence with the San Francisco River upstream to the confluence with Little Whitewater Creek. Upstream gradient and channel changes make the portion above Little Whitewater Creek unsuitable for loach minnow.

h. Blue River—82 km (51 mi) of river extending from the confluence with the San Francisco River upstream to the confluence of Campbell Blue and Dry Blue Creeks. Planning is under way by several State and Federal agencies to restore native fishes in the Blue River.

i. Campbell Blue Creek—13 km (8 mi) of creek extending from the confluence of Dry Blue and Campbell Blue Creeks upstream to the confluence with Coleman Canyon. Above Coleman Canyon, the creek changes and becomes steeper and rockier, making it unsuitable for loach minnow.

j. Dry Blue Creek—5 km (3 mi) of creek extending from the confluence with Campbell Blue Creek upstream to the confluence with Pace Creek.

k. Pace Creek—1.2 km (0.8 mi) of creek extending from the confluence with Dry Blue Creek upstream to a barrier falls.

l. Frieborn Creek—1.8 km (1.1 mi) of creek extending from the confluence with Dry Blue Creek upstream to an unnamed tributary.

m. Little Blue Creek—5 km (3 mi) of creek extending from the confluence with the Blue River upstream to the mouth of a box canyon. Little Blue Creek is not currently occupied by loach minnow but contains suitable habitat and is considered an important restoration area for the species.

7. Upper Gila River complex, Grant and Catron Counties, New Mexico. This complex is occupied by loach minnow throughout. It contains what is considered to be the ''core'' of the remaining populations of the species. Because of the remoteness of the area, there is a relatively low degree of habitat threats.

a. Gila River—164 km (102 mi) of river extending from the confluence with Moore Canyon (near the Arizona/New Mexico border) upstream to the confluence of the East and West Forks. Below Moore Canyon, the river is substantially altered by agriculture, diversion, and urban development, thus making it unsuitable for loach minnow.

b. East Fork Gila River—42 km (26 mi) of river extending from the confluence with the West Fork Gila River upstream to the confluence of Beaver and Taylor Creeks.

c. Middle Fork Gila River—19 km (12 mi) of river extending from the confluence with the West Fork Gila River upstream to the confluence with Brothers West Canyon.

d. West Fork Gila River—12 km (8 mi) of river extending from the confluence with the East Fork Gila River upstream to the confluence with EE Canyon. This lower portion of the West Fork is occupied by loach minnow, but the river becomes unsuitable above EE Canyon due to gradient and channel morphology.

B. Primary Constituent Elements

The habitat features (primary constituent elements) that provide for the physiological, behavioral, and ecological requirements essential for the conservation of the species are described at 50 CFR 424.12, and include, but are not limited to, the following:

Space for individual and population growth, and for normal behavior;

Food, water, or other nutritional or physiological requirements;

Cover or shelter;

Sites for breeding, reproduction, or rearing of offspring; and

Habitats that are protected from disturbance or are representative of the historical geographical and ecological distributions of a species.

Spikedace

We determined the primary constituent elements for spikedace from studies on their habitat requirements and population biology including, but not limited to, Barber *et al.* 1970; Minckley 1973; Anderson 1978; Barber and Minckley 1983; Turner and Taffanelli 1983; Barrett *et al.* 1985; Propst *et al.* 1986; Service 1989; Hardy 1990; Douglas *et al.* 1994; Stefferud and Rinne 1996; Velasco 1997. These primary constituent elements include:

1. Permanent, flowing, unpolluted water;

2. Living areas for adult spikedace with slow to swift flow velocities in shallow water with shear zones where rapid flow borders slower flow, areas of sheet flow at the upper ends of mid-channel sand/gravel bars, and eddies at downstream riffle edges;

3. Living areas for juvenile spikedace with slow to moderate flow velocities in shallow water with moderate amounts of instream cover;

4. Living areas for larval spikedace with slow to moderate flow velocities in shallow water with abundant instream cover;

5. Sand, gravel, and cobble substrates with low to moderate amounts of fine sediment and substrate embeddedness;

6. Pool, riffle, run, and backwater components present in the aquatic habitat;

7. Low stream gradient;

8. Water temperatures in the approximate range of 1–30°C (35–85°F), with natural diurnal and seasonal variation;

9. Abundant aquatic insect food base;

10. Periodic natural flooding;

11. A natural, unregulated hydrograph or, if the flows are modified or regulated, then a hydrograph that demonstrates an ability to support a native fish community; and

12. Few or no predatory or competitive nonnative species present.

The areas we are proposing for designation as critical habitat for spikedace provide the above primary constituent elements or will be capable, with restoration, of providing them. All of the proposed areas require special management considerations or protection to ensure their contribution to the species' recovery.

Loach Minnow

We determined the primary constituent elements for loach minnow from studies on their habitat requirements and population biology including, but not limited to, Barber and Minckley 1966; Minckley 1973; Schreiber 1978; Britt 1982; Turner and Taffanelli 1983; Service 1988; Rinne 1989; Hardy 1990; Vives and Minckley 1990; Propst and Bestgen 1991; Douglas *et al.* 1994; Velasco 1997. These primary constituent elements include:

1. Permanent, flowing, unpolluted water;

2. Living areas for adult loach minnow with moderate to swift flow velocities in shallow water with gravel, cobble, and rubble substrates;

3. Living areas for juvenile loach minnow with moderate to swift flow velocities in shallow water with sand, gravel, cobble, and rubble substrates;

4. Living areas for larval loach minnow with slow to moderate velocities in shallow water with sand, gravel, and cobble substrates and abundant instream cover;

5. Spawning areas for loach minnow with slow to swift flow velocities in shallow water with uncemented cobble and rubble substrate;

6. Low amounts of fine sediment and substrate embeddedness;

7. Riffle, run, and backwater components present in the aquatic habitat;

8. Low to moderate stream gradient;

9. Water temperatures in the approximate range of 1–30°C (35–85°F), with natural diurnal and seasonal variation;

10. Abundant aquatic insect food base;

11. Periodic natural flooding;

12. A natural unregulated hydrograph or, if flows are modified or regulated, then a hydrograph that demonstrates an ability to support a native fish community; and

13. few or no predatory or competitive nonnative species present.

The areas we are proposing for designation as critical habitat for loach minnow provide the above primary constituent elements or will be capable, with restoration, of providing them. All of the proposed areas require special management considerations or protection to ensure their contribution to the species' recovery.

C. Land Ownership

Table 1 shows land ownership for areas proposed as critical habitat that are currently occupied by one or both species, and Table 2 shows land ownership for proposed critical habitat that is unoccupied. A general description of land ownership in each complex follows.

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Table 1. Stream distances in kilometers (miles) occupied by either Loach Minnow (*Tiaroga cobitis*) or Spikedace (*Meda fulgida*) by county and ownership.

	Private	State	Federal	Other Gov.	Total
Apache Co., AZ	0	0	31.5 (19.6)	0	31.5 (19.6)
Cochise Co., AZ	0	0	0	0	0
Gila Co., AZ	0	0	0	0	0
Graham Co., AZ	7.7 (4.8)	0	7.0 (4.4)	0	14.7 (9.2)
Greenlee Co., AZ	60.5 (37.6)	2.8 (1.7)	148.8 (92.5)	0	212.0 (131.8)
Pima Co., AZ	0	0	0	0	0
Pinal Co., AZ	78.4 (48.7)	7.3 (4.5)	33.8 (21.0)	0	119.5 (74.2)
Yavapai Co., AZ	69.8 (43.4)	3.3 (2.0)	96.3 (59.8)	0	169.4 (105.2)
AZ Total	**216.3 (134.5)**	**13.4 (8.2)**	**317.4 (197.3)**	**0**	**547.1 (340.0)**
Catron Co., NM	73.9	0	159.7	0	233.6 (145.2)
Grant Co., NM	50.2	2.0	108.6	0	160.8 (99.9)
Hidalgo Co., NM	12.7	0	9.0	0	21.7 (13.5)
NM Total	**136.8**	**2.0**	**277.3**	**0**	**416.1 (258.6)**
TOTAL	**353.1**	**15.4**	**594.7**	**0**	**963.2 (598.5)**

Table 2. Stream distances in kilometers (miles) unoccupied but recoverable by either Loach Minnow (*Tiaroga cobitis*) or Spikedace (*Meda fulgida*) by county and ownership.

	Private	State	Federal	Other Gov.	Total
Apache Co., AZ	0.3	2.8	7.2	0	10.3 (6.4)
Cochise Co., AZ	66.0	7.5	61.3	0	134.8 (83.8)
Gila Co., AZ	10.1	0	77.0	0	87.1 (54.1)
Graham Co., AZ	13.9	10.6	37.6	0	62.1 (38.6)
Greenlee Co., AZ	1.8	0	18.2	0	20.0 (12.4)
Pima Co., AZ	20.5	3.1	0	0	23.6 (14.7)
Pinal Co., AZ	4.4	0	0	0	4.4 (2.7)
Yavapai Co., AZ	60.3	0.5	44.5	2.3	107.6 (66.9)
AZ Total	**177.3**	**24.5**	**245.8**	**2.3**	**449.9 (279.6)**
Catron Co., NM	0	0	0	0	0
Grant Co., NM	0	0	0	0	0
Hidalgo Co., NM	0	0	0	0	0
NM Total	**0**	**0**	**0**	**0**	**0**
TOTAL	**177.3**	**24.5**	**245.8**	**2.3**	**449.9 (279.6)**

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1. Verde River complex—There are large blocks of USFS lands in the upper and lower reaches, with significant areas of private ownership in the Verde Valley and along the lower portions of Oak, Beaver, and West Clear Creeks. There are also lands belonging to the National Park Service (NPS), Arizona State Parks, and the Arizona Game and Fish Department.

2. Black River complex—The ownership is predominantly USFS, with a few small areas of private land.

3. Tonto Creek complex—Land here is mostly USFS on the upper end, but significant areas of private ownership occur in the lower reaches.

4. Middle Gila/Lower San Pedro/Aravaipa Creek complex—This area includes extensive BLM land as well as extensive private land, some State of Arizona lands, and a small area of allotted land owned by the San Carlos Apaches.

5. Middle-Upper San Pedro complex—The BLM is the largest landowner, and there are large areas of private ownership and smaller areas of State of Arizona lands.

6. Gila Box/San Francisco River complex—This complex contains extensive USFS land, some BLM land, and scattered private, State of Arizona, and New Mexico Game and Fish Department (NMGFD) lands. A portion of Eagle Creek is on the San Carlos Apache Reservation, but this area is not proposed as critical habitat at this time. The City of Safford holds significant portions of Bonita Creek.

7. Upper Gila River complex—The largest areas are on USFS land, with small private inholdings. There are large areas of private lands in the Cliff-Gila Valley, and the BLM administers significant stretches upstream of the Arizona/New Mexico border. There are also small areas of NMGFD, NPS, and State of New Mexico lands.

Significant private owners, with lands scattered among several of the proposed critical habitat complexes, include Phelps-Dodge Corporation and The Nature Conservancy. A large number of other private landowners hold lands within the proposed designation. Private lands are primarily used for grazing and agriculture, but also include towns, small-lot residences, and industrial areas.

D. Effect of Critical Habitat Designation

The designation of critical habitat directly affects only Federal agencies. The Act requires Federal agencies to ensure that actions they fund, authorize, or carry out do not destroy or adversely modify critical habitat to the extent that the action appreciably diminishes the value of the critical habitat for the survival and recovery of the species. Individuals, organizations, States, local and Tribal governments, and other non-Federal entities are only affected by the designation of critical habitat if their actions occur on Federal lands, require a Federal permit, license, or other

authorization, or involve Federal funding.

Section 7(a) of the Act requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its proposed or designated critical habitat. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402. Section 7(a)(4) of the Act and regulations at 50 CFR 402.10 require Federal agencies to confer with us on any action that is likely to jeopardize the continued existence of a proposed species or to result in destruction or adverse modification of proposed critical habitat.

If a species is subsequently listed or critical habitat is designated, then 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 such a species or destroy or adversely modify its critical habitat. To that end, if a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into consultation with us. Regulations at 50 CFR 402.16 also require Federal agencies to reinitiate consultation in instances where we have already reviewed an action for its effects on a listed species if critical habitat is subsequently designated.

Conference on proposed critical habitat results in a report that may provide conservation recommendations to assist the action agency in eliminating or minimizing adverse effects to the proposed critical habitat that may be caused by the proposed agency action. Our conservation recommendations in a conference report are advisory. If we subsequently finalize the proposed critical habitat, consultation on agency actions that may affect the critical habitat will result in a biological opinion as to whether the proposed action is likely to destroy or adversely modify critical habitat. If we find the proposed agency action is likely to destroy or adversely modify the critical habitat, our biological opinion may also include reasonable and prudent alternatives to the action that are designed to avoid destruction or adverse modification of critical habitat.

As a result of conferencing on the proposed critical habitat, we may issue a formal conference report if requested by a Federal agency. Formal conference reports on proposed critical habitat contain a biological opinion that is prepared according to 50 CFR 402.13, as if critical habitat were designated as final. We may adopt the formal conference report as the biological opinion when the critical habitat designation is made final, if no significant new information or changes in the action alter the content of the opinion (see 50 CFR 402.10(d)).

Section 4(b)(8) of the Act requires us to describe in any proposed or final regulation that designates critical habitat, a description and evaluation of those activities involving a Federal action that may adversely modify such habitat or that may be affected by such designation. Activities that may destroy or adversely modify critical habitat include those that alter the primary constituent elements (defined above) to an extent that the value of critical habitat for both the survival and recovery of the spikedace or loach minnow is appreciably reduced.

To properly portray the effects of critical habitat designation, we must first compare the section 7 requirements for actions that may affect critical habitat with the requirements for actions that may affect a listed species. Section 7 prohibits actions funded, authorized, or carried out by Federal agencies from jeopardizing the continued existence of a listed species or destroying or adversely modifying the listed species' critical habitat. Actions likely to ''jeopardize the continued existence'' of a species are those that would appreciably reduce the likelihood of the species' survival and recovery. Actions likely to ''destroy or adversely modify'' critical habitat are those that would appreciably reduce the value of critical habitat for the survival and recovery of the listed species.

Common to both definitions is an appreciable detrimental effect on both survival and recovery of a listed species. Given the similarity of these definitions, actions likely to destroy or adversely modify critical habitat would almost always result in jeopardy to the species concerned, particularly when the area of the proposed action is occupied by the species concerned. In those cases, critical habitat provides little additional protection to a species, and the ramifications of its designation are few or none.

Actions on Federal lands that we reviewed in past consultations on spikedace and loach minnow include land management plans; land acquisition and disposal; road and bridge construction, maintenance, and repair; water diversion and development; reservoir construction; off-road vehicle use; livestock grazing and management; fencing; prescribed burning; powerline construction and repair; recovery actions for spikedace and loach minnow; game fish stocking; timber harvest; access easements; flood repair and control; groundwater development; channelization; and canal and other water transport facilities construction and operation. Federal agencies involved with these activities include the USFS, BLM, Service, and Bureau of Reclamation.

Federal actions taken on private, State, or tribal lands on which we consulted in the past for spikedace and loach minnow include irrigation diversion construction and maintenance; flood repair and control; game fish stocking; timber harvest; water diversion and development; reservoir construction; water quality standards; and riparian habitat restoration. Federal agencies involved with these activities include the Natural Resources Conservation Service, Bureau of Reclamation, Environmental Protection Agency, Bureau of Indian Affairs, Indian Health Services, Federal Emergency Management Agency, and the Service.

Federal actions involving issuance of permits to private parties on which we consulted in the past for spikedace and loach minnow include issuance of National Discharge Elimination System permits by the Environmental Protection Agency and issuance of permits under section 404 of the Clean Water Act for dredging and filling in waterways by the Army Corps of Engineers. Private actions for which 404 permits were sought include road and bridge construction, repair and maintenance; flood control and repair; and water diversion construction and repair.

Since the original listing of spikedace and loach minnow in 1986, only three consultations ended in a finding that the proposed action would jeopardize the continued existence of spikedace and/or loach minnow. An additional four proposed actions received draft findings of jeopardy, but for three of those, the requests for consultation were withdrawn and the fourth is still in progress. For the three jeopardy findings, we included changes to projects and recommended or required measures to reduce or eliminate impacts to spikedace and loach minnow and to minimize the potential for take of individuals as follows: Use of available alternative water sources, water conservation measures, development of alternative water quality criteria; toxicity studies with surrogate species; construction and maintenance of barriers to upstream fish movement; monitoring of fish populations; funding nonnative species control and listed fish recovery work; and information and education programs.

In the many biological opinions we prepared that did not result in findings of jeopardy to spikedace and loach minnow, we recommended nonbinding measures to reduce or eliminate impacts to the two species, plus required measures for the purpose of minimizing the potential for take of individuals. Both our recommended and required measures included such things as adjustment in timing of projects to avoid sensitive periods for the species or their habitats; replanting of riparian vegetation; minimization of work and vehicle use in the wetted channel; restriction of riparian and upland vegetation clearing; fencing to exclude livestock and limit recreational use; use of alternative livestock management techniques; monitoring of riparian vegetation, channel morphology, and fish populations; sign installation; protection of buffer zones; avoidance of pollution; cooperative planning efforts; minimization of ground disturbance in the floodplain; use of alternative materials sources; storage of equipment and staging of operations outside the floodplain; use of block nets to exclude fish from the work site; use of sediment barriers; removal of fish from the project area; access restrictions; and use of best management practices to minimize erosion.

As stated above, designation of critical habitat in areas occupied by spikedace or loach minnow is not expected to result in regulatory burden above that already in place due to the presence of the listed species. However, areas designated as critical habitat that are not occupied by the species may require protections similar to those provided to occupied areas under past consultations.

Any activity that would alter the minimum flow or the natural flow regime of any of the 41 stream segments listed above could destroy or adversely modify the critical habitat of either or both species. Such activities include, but are not limited to, groundwater pumping, impoundment, water diversion, and hydropower generation.

Any activity that would significantly alter watershed characteristics of any of the 41 stream segments listed above could destroy or adversely modify the critical habitat of either or both species. Such activities include, but are not limited to, vegetation manipulation, timber harvest, road construction and maintenance, human-ignited prescribed and naturally ignited fire, livestock grazing, mining, and urban and suburban development.

Any activity that would significantly alter the channel morphology of any of the 41 stream segments listed above could destroy or adversely modify the critical habitat of either or both species. Such activities include, but are not limited to, channelization, impoundment, road and bridge construction, deprivation of substrate source, destruction and alteration of riparian vegetation, reduction of available floodplain, removal of gravel or floodplain terrace materials, and excessive sedimentation from mining, livestock grazing, road construction, timber harvest, off-road vehicle use, and other watershed and floodplain disturbances.

Any activity that would significantly alter the water chemistry in any of the 41 stream segments listed above could destroy or adversely modify the critical habitat of either or both species. Such activities include, but are not limited to, release of chemical or biological pollutants into the surface water or connected groundwater at a point source or by dispersed release (non-point).

Any activity that would introduce, spread or augment nonnative aquatic species could destroy or adversely modify the critical habitat of either or both species. Such activities include, but are not limited to, stocking for sport, aesthetics, biological control, or other purposes; use of live bait fish, aquaculture, or dumping of aquarium fish or other species; construction and operation of canals; and interbasin water transfers.

In some cases designation of critical habitat may assist in focusing conservation activities by identifying areas that contain essential habitat features (primary constituent elements), regardless of whether they are currently occupied by the listed species. This identification alerts the public and land management agencies to the importance of an area in the conservation of that species. Critical habitat also identifies areas that may require special management considerations or protection.

If you have questions regarding whether specific activities will likely constitute destruction or adverse modification of critical habitat, contact the Field Supervisor, Arizona Ecological Services Office (see **ADDRESSES** section). Requests for copies of the regulations on listed wildlife and inquiries about prohibitions and permits may be addressed to the U.S. Fish and Wildlife Service, Division of Endangered Species, P.O. Box 1306, Albuquerque, New Mexico 87103 (telephone 505–248–6920; facsimile 505–248–6788).

Economic Analysis

Section 4(b)(2) of the Act requires that we designate critical habitat on the basis of the best scientific and commercial information available and consider the economic and other relevant impacts of designating a particular area as critical habitat. We based this proposal on the best available scientific information, including the recommendations in the species' recovery plan. We will utilize the economic analysis, and take into consideration all comments and information submitted during the public hearing and comment period, to make a final critical habitat designation. We may exclude areas from critical habitat upon a determination that the benefits of such exclusions outweigh the benefits of specifying such areas as critical habitat. We cannot exclude such areas from critical habitat when such exclusion will result in the extinction of the species. We completed a draft economic analysis, which is available for public review and comment. Send your requests for copies of the economic analysis to the Arizona Ecological Services Office (see **ADDRESSES** section).

Secretarial Order 3206: American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act

The stated purpose of Secretarial Order 3206 (Secretarial Order) is to ''clarif(y) the responsibilities of the component agencies, bureaus, and offices of the Department of the Interior and the Department of Commerce, when actions taken under authority of the Act and associated implementing regulations affect, or may affect, Indian lands, tribal trust resources, or the exercise of American Indian tribal rights.'' The Secretarial Order acknowledges the government-to-government relationship with tribes, and the trust responsibility and treaty obligations of the United States toward Indian tribes.

In keeping with the principles cited in the Secretarial Order, we are committed to assisting Indian tribes in developing and expanding tribal programs so that healthy ecosystems are promoted and conservation regulations, such as designation of critical habitat, on tribal lands are unnecessary (Principle 3). In addition to affirmatively assisting Indian tribes who wish assistance with conservation programs, we recognize that tribes are appropriate governmental entities to manage their lands and tribal trust resources and support tribal measures that preclude the need for conservation regulations.

The Secretarial Order also requires us to consult with Indian tribes that might be affected by the designation of critical habitat in an area that might impact tribal trust resources, tribally owned fee lands, or the exercise of tribal rights. In our deliberations over this critical habitat proposal, we identified two categories of possible effects to tribes or tribal resources. These include: (1) effects resulting from designation of critical habitat on Indian lands; and (2) effects on tribal resources, such as water deliveries, resulting from designation of critical habitat on non-tribal lands. We identified the Indian Reservations of the White Mountain, San Carlos, and Yavapai Apache Tribes as containing stream reaches that may be appropriate for designation of critical habitat. Additionally, several tribes, including the Salt River, Ft. McDowell, and Gila River Indian Tribes, are located downstream from designated critical habitat and depend on water deliveries from upstream sources.

Public Law 106–113 and H.R. 3423 prohibit us from using any of our appropriated funds to implement two provisions of the Secretarial order: Principle 3(C)(ii) (prohibiting the imposing of conservation restrictions involving incidental take if the conservation purposes of the restriction can be achieved by reasonable regulation of non-Indian activities) and Appendix section 3(B)(4) (regarding designation of critical habitat, including the requirement that the Service consult with affected tribes). However, portions of Principle 3(C) unaffected by Public Law 106–113 and H.R. 3423 require consultation with affected tribes prior to implementation of any conservation restriction. Moreover, Presidential Memorandum of April 29, 1994, also requires us to consult with the tribes [on matters that affect them], and section 4(b)(2) of the Act requires us to gather information regarding the designation of critical habitat and the effects thereof from all relevant sources, including the tribes. Therefore, although we will not consult pursuant to Appendix section 3(B)(4) of the Secretarial Order, we will consult with the tribes to the extent possible in the time allowed by the court order pursuant to these other authorities.

1. Designation of Critical Habitat on Indian Reservations

Appendix 3(B)(4) of the Secretarial Order also states: ''Critical habitat shall not be designated [on tribal lands] unless it is determined essential to conserve a listed species. In designating critical habitat, the Services shall evaluate and document the extent to which the conservation needs of the listed species can be achieved by limiting the designation to other lands.'' Again, pursuant to Public Law 106–113 and H.R. 3423, we may not expend funds to implement these requirements. However, we must still determine whether all relevant areas, including tribal lands, in fact qualify as critical habitat pursuant to Section 3(5) of the Act. With respect to currently occupied habitat, that provision limits critical habitat to areas ''on which are found those physical and biological features (I) essential to the conservation of the species and (II) which may require special management considerations and protection.'' Moreover, pursuant to Section 4(b)(2) of the Act, we must determine whether to exclude particular areas from designation because the benefits of exclusion outweigh the benefits of including the areas as critical habitat. We spoke with representatives of the White Mountain Apache, San Carlos Apache, and Yavapai Apache Tribes, the three tribes which may have critical habitat for spikedace or loach minnow on their reservations. However, we do not have information on which to base an assessment of whether voluntary tribal measures are adequate to achieve conservation of spikedace and loach minnow on tribal lands. In addition, the short time allowed by the court to complete this critical habitat designation precludes us from engaging in a level of consultation with the tribes on a government-to-government basis, which would enable us to make this required determination.

Given the above, we are not proposing critical habitat on the Fort Apache, San Carlos Apache, or Yavapai Apache Indian Reservations at this time. However, Eagle Creek and the Verde and White Rivers on these reservations may be critical habitat for the spikedace and loach minnow. As provided under section 4(b)(2) of the Act, we are soliciting information as to whether these areas should be designated as critical habitat and will be discussing with the tribes whether their voluntary measures are adequate to conserve these species on tribal lands. We will consider this information in determining which, if any, tribal land should be included in the final designation as critical habitat for spikedace or loach minnow.

2. Effects on Tribal Trust Resources from Critical Habitat Designation on Non-Tribal Lands

We do not anticipate that proposal of critical habitat on non-tribal lands will result in any impact on tribal trust resources or the exercise of tribal rights. However, it is essential in complying with our responsibilities under the Secretarial Order to communicate with all tribes potentially affected by the designation. As stated above, the Salt River, Ft. McDowell, and Gila River Indian Tribes as well as the White Mountain, San Carlos, and Yavapai Apache Tribes are all located downstream from proposed critical habitat for the spikedace and loach minnow. However, many of these tribes either have major impoundments on their reservations or lie below major impoundments, and release of water from such impoundments may be regulated by court decree or other considerations. Therefore, we are soliciting information during the comment period on potential effects to tribes or tribal resources that may result from critical habitat designation.

Public Comments Solicited

It is our intent that any final action resulting from this proposal will be as accurate and as effective as possible. Therefore, we solicit comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, or any other interested party concerning this proposed rule. We particularly seek comments concerning:

(1) The reasons why any habitat should or should not be determined to be critical habitat as provided by section 4 of the Act, including whether the benefits of excluding areas will outweigh the benefits of including areas as critical habitat;

(2) Specific information on the amount and distribution of spikedace and loach minnow habitat, and what habitat is essential to the conservation of the species and why;

(3) Land use practices and current or planned activities in the subject areas and their possible impacts on proposed critical habitat;

(4) Any foreseeable economic or other impacts resulting from the proposed designation of critical habitat, in particular, any impacts on small entities or families; and

(5) Economic and other values associated with designating critical habitat for the spikedace and the loach minnow, such as those derived from nonconsumptive uses (e.g., hiking, camping, birding, enhanced watershed protection, increased soil retention, ''existence values,'' and reductions in administrative costs).

Executive Order 12866 requires each agency to write regulations and notices that are easy to understand. We invite your comments on how to make this proposed rule easier to understand including answers to questions such as

the following: (1) Are the requirements in the document clearly stated? (2) Does the proposed rule contain technical language or jargon that interferes with the clarity? (3) Does the format of the proposed rule (grouping and order of sections, use of headings, paragraphing, etc.) aid or reduce its clarity? (4) Is the description of the proposed rule in the ''Supplementary Information'' section of the preamble helpful in understanding the document? (5) What else could we do to make the proposed rule easier to understand?

Our practice is to make comments, including names and home addresses of respondents, available for public review during regular business hours. Individual respondents may request that we withhold their home address from the rulemaking record, which we will honor to the extent allowable by law. There also may be circumstances in which we would withhold from the rulemaking record a respondent's identity, as allowable by law. If you wish us to withhold your name and/or address, you must state this prominently at the beginning of your comment. However, we will not consider anonymous comments. We will make all submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, available for public inspection in their entirety.

In accordance with our policy published on July 1, 1994 (59 FR 34270), we will seek the expert opinions of at least three appropriate and independent specialists regarding this proposed rule. The purpose of such review is to ensure listing decisions are based on scientifically sound data, assumptions, and analyses. We will send copies of this proposed rule immediately following publication in the **Federal Register** to these peer reviewers. We will invite these peer reviewers to comment, during the public comment period, on the specific assumptions and conclusions regarding the proposed designation of critical habitat.

We will consider all comments and information received during the comment period on this proposed rule during preparation of a final rulemaking. Accordingly, the final decision may differ from this proposal.

Public Hearings

We have scheduled three public hearings at the following places and times:

December 15, 1999, from 7:00–9:00 p.m.

1. Eastern Arizona College Activity Center, Lee Little Theater, 1014 N. College Avenue, Thatcher, Arizona
2. Western New Mexico University, White Hall Auditorium, 1000 College Street, Silver City, New Mexico

December 16, 1999, from 7:00–9:00 p.m.

Camp Verde Unified Schools, Multi-Use Complex Theater, 280 Camp Lincoln Road, Camp Verde, Arizona

Required Determinations

Regulatory Planning and Review

In accordance with the criteria in Executive Order 12866, this rule is a significant regulatory action. The Office of Management and Budget reviewed this document. We prepared a draft economic analysis of this proposed action to determine the economic consequences of designating the specific areas as critical habitat. The draft economic analysis is available for public review and comment during the comment period on this proposed rule (see **ADDRESSES** section of this rule). The proposed rule, if made final, will not significantly impact entitlements, grants, user fees, loan programs, or the rights and obligations of their recipients. This rule will not raise novel legal or policy issues.

Regulatory Flexibility Act (5 U.S.C. 601 et seq.)

In the economic analysis, we determined that designation of critical habitat will not have a significant effect on a substantial number of small entities.

Small Business Regulatory Enforcement Fairness Act (5 U.S.C. 804(2))

In our economic analysis, we determined that designation of critical habitat will not cause (a) any effect on the economy of $100 million or more, (b) any increases in costs or prices for consumers; individual industries; Federal, State, or local government agencies; or geographic regions, or (c) any significant adverse effects on competition, employment, investment, productivity, innovation, or the ability of U.S.-based enterprises to compete with foreign-based enterprises.

Unfunded Mandates Reform Act (2 U.S.C. 1501 et seq.)

As outlined in our economic analysis, this rule does not impose an unfundated mandate on State, local or tribal governments or the private sector of more than $100 million or greater in any year. The proposed rule, if made final, does not have a significant or unique effect on State local or tribal governments or the private sector. A statement containing the information required by the Unfunded Mandates Reform Act (2 U.S.C. 1531 *et seq.*) is not required.

Takings

In accordance with Executive Order 12630, this rule does not have significant takings implications, and a takings implication assessment is not required. This proposed rule, if made final, will not ''take'' private property. However, we will evaluate whether the value of private property is altered by it being designated as critical habitat on a case by case basis. Critical habitat designation is only applicable to Federal lands and to private lands if a Federal nexus exists. We do not designate private lands as critical habitat unless the areas are essential to the conservation of a species.

Federalism

In accordance with Executive Order 13132, this proposed rule, if made final, will not affect the structure or role of States, and will not have direct, substantial, or significant effects on States. As previously stated, critical habitat is applicable to Federal lands and to non-Federal lands only when a Federal nexus exists.

In keeping with Department of the Interior and Department of Commerce policy, the Service requested information from and coordinated development of this critical habitat proposal with appropriate State resource agencies in Arizona and New Mexico, as well as during the listing process. In addition, both States have representatives on our recovery team for this species. We will continue to coordinate any future designation of critical habitat for spikedace and loach minnow with the appropriate State agencies.

Civil Justice Reform

In accordance with Executive Order 12988, the Department of the Interior's Office of the Solicitor determined that this rule does not unduly burden the judicial system and meets the requirements of sections 3(a) and 3(b)(2) of the Order. The Office of the Solicitor will review the final determination for this proposal. We will make every effort to ensure that the final determination contains no drafting errors, provides clear standards, simplifies procedures, reduces burden, and is clearly written such that litigation risk is minimized.

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

This rule does not contain any information collection requirements for which Office of Management and Budget approval under the Paperwork Reduction Act is required.

National Environmental Policy Act

It is our position that, outside the Tenth Circuit, we do not need to prepare environmental analyses as defined by the NEPA in connection with designating critical habitat under the Endangered Species Act of 1973, as amended. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244). This assertion was upheld in the courts of the Ninth Circuit (*Douglas County* v. *Babbitt*, 48 F.3d 1495 (9th Cir. Ore. 1995), *cert. denied* 116 S. Ct. 698 (1996). However, when the range of the species includes States within the Tenth Circuit, such as that of the spikedace and loach minnow, pursuant to the Tenth Circuit ruling in *Catron County Board of Commissioners* v. *U.S. Fish and Wildlife Service*, 75 F.3d 1429 (10th Cir. 1996), we undertake a NEPA analysis for critical habitat designation. Send your requests for copies of the draft environmental assessment for this proposal to the Arizona Ecological Services Office (see **ADDRESSES** section).

References Cited

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

Author

The primary author of this notice is Paul J. Barrett (see **ADDRESSES** section).

List of Subjects in 50 CFR Part 17

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

Proposed Regulation Promulgation

Accordingly, we propose to amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations as set forth below:

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 ''minnow, loach'' and ''spikedace'' under ''FISHES'' 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							
*	*	*	*	*	*	*	
Minnow, loach	Tiaroga (= Rhinichthys) cobitis.	U.S.A. (AZ, NM), Mexico.	entire	T	247	§ 17.95(e)	NA
*	*	*	*	*	*	*	
Spikedace	Meda fulgida	U.S.A. (AZ, NM), Mexico.	entire	T	236	§ 17.95(e)	NA
*	*	*	*	*	*	*	

3. Amend § 17.95(e) by adding critical habitat for the spikedace (*Meda fulgida*) in the same alphabetical order as this species occurs in § 17.11(h).

§ 17.95 Critical habitat—fish and wildlife.

* * * * *

(e) *Fishes.*

* * * * *

SPIKEDACE (Meda fulgida)

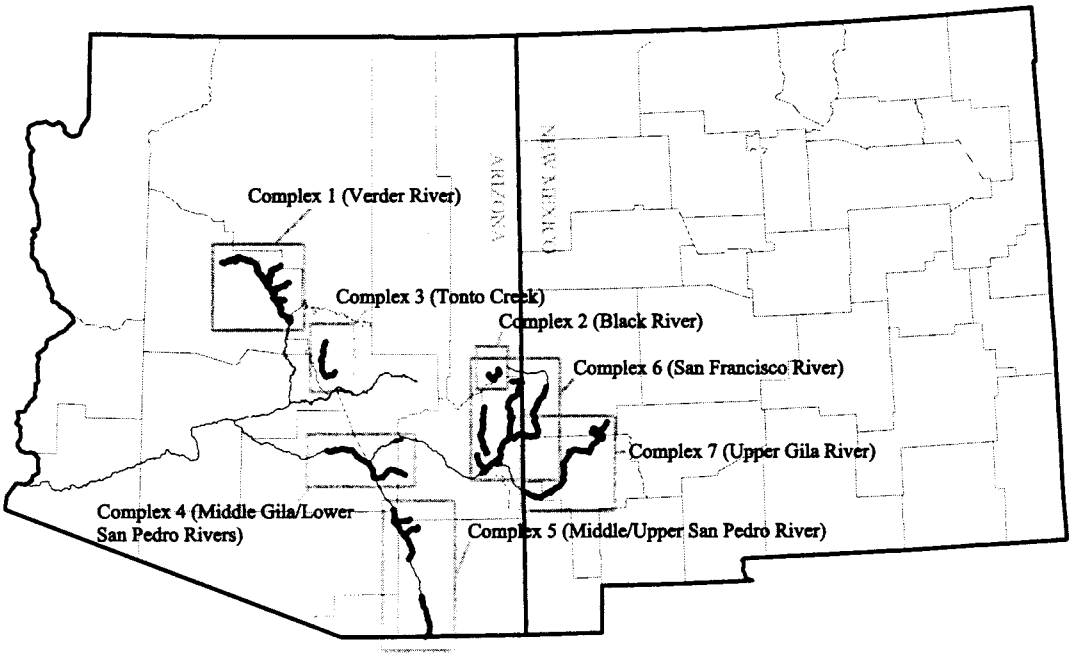
1. Critical habitat units are depicted for Apache, Cochise, Gila, Graham, Greenlee, Navajo, Pima, Pinal, and Yavapai Counties, Arizona, and Catron, Grant, and Hidalgo Counties, New Mexico, on the maps and as described below.

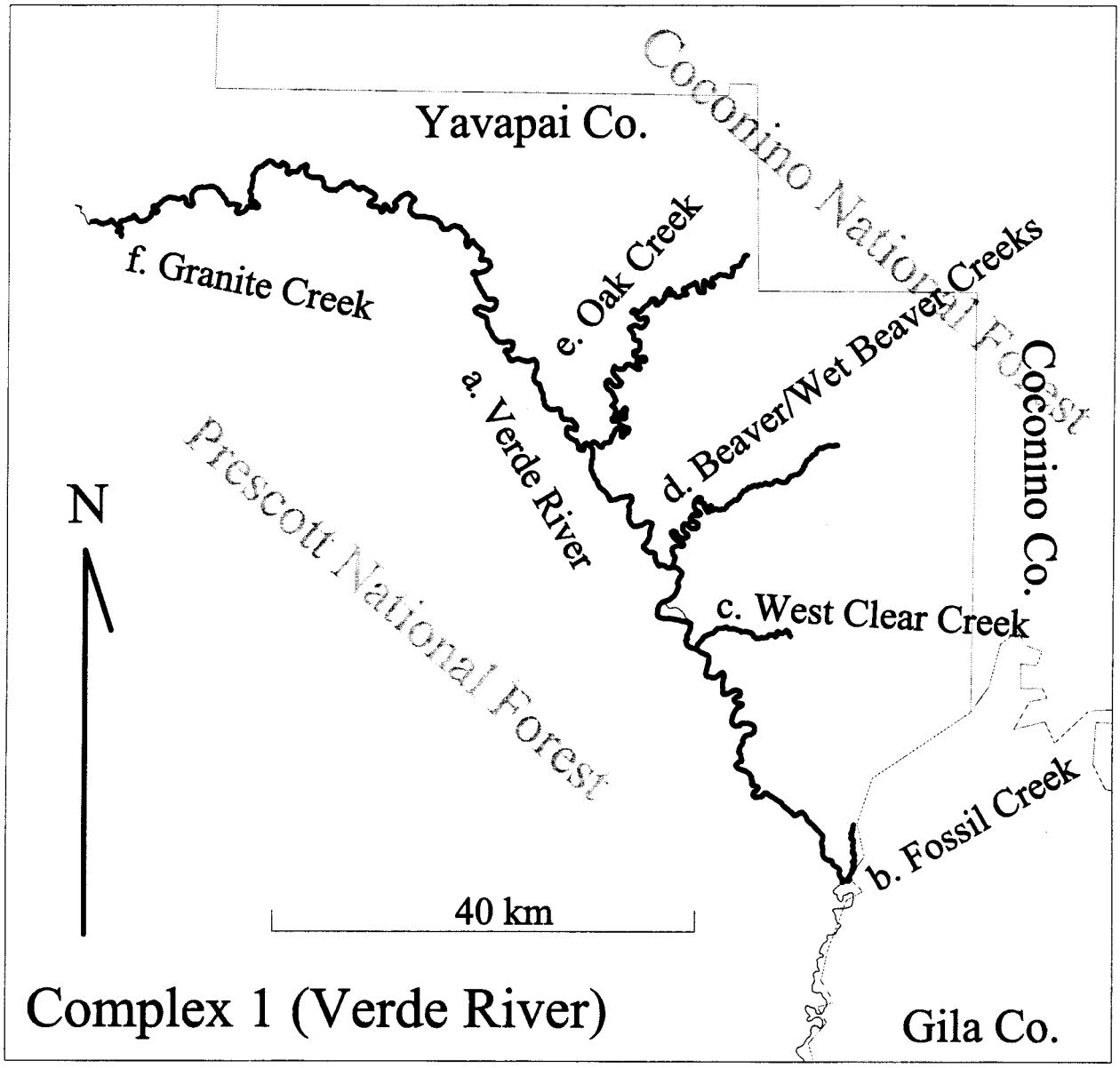
2. Critical habitat includes the stream channels within the identified stream reaches indicated on the maps below and areas within these reaches potentially inundated by high flow events.

3. Within these areas, the primary constituent elements include, but are not limited to, those habitat components that are essential for the primary biological needs of foraging, sheltering, and reproduction. These elements include the following: (1) Permanent, flowing, unpolluted water; (2) living areas for adult spikedace with slow to swift flow velocities in shallow water with shear zones where rapid flow borders slower flow, areas of sheet flow at the upper ends of mid-channel sand/gravel bars, and eddies at downstream riffle edges; (3) living areas for juveniles with slow to moderate water velocities in shallow water with moderate amounts of instream cover; (4) living areas for the larval stage with slow to moderate flow velocities in shallow water with abundant instream cover; (5) sand, gravel, and cobble substrates with low to moderate amounts of fine sediment and substrate embeddedness; (6) pool, riffle, run, and backwater components of the streams; (7) low stream gradient; (8) water temperatures in the approximate range of 1–30 °C (35–85 °F) with natural diurnal and seasonal variation; (9) abundant aquatic insect food base; (10) periodic natural flooding; (11) a natural, unregulated hydrograph, or if flows are modified or regulated, then a hydrograph that demonstrates an ability to support a native fish community; and (12) few or no predatory or competitive nonnative species present.

4. Arizona (Gila and Salt River Meridian (GSRM) and New Mexico (New Mexico Principal Meridian (NMPM)): Areas of land and water as follows (physical features were identified using USGS 7.5′ quadrangle maps; river reach distances were derived from digital data obtained from Arizona Land Resources Information System (ALRIS) and New Mexico Resource Geographic Information System (RGIS)):

Map 1. Locations of river complexes for spikedace (*Meda fulgida*) in Arizona and New Mexico.





SPIKEDACE (Meda fulgida)

Complex 1. Yavapai County, Arizona

a. Verde River for approximately 171.3 km (106.5 mi), extending from the confluence with Fossil Creek in GSRM, T.11N., R.6E., NE1/4 Sec. 25 upstream to Sullivan Dam in GSRM, T.17N., R.2W., NW1/4 Sec. 15.

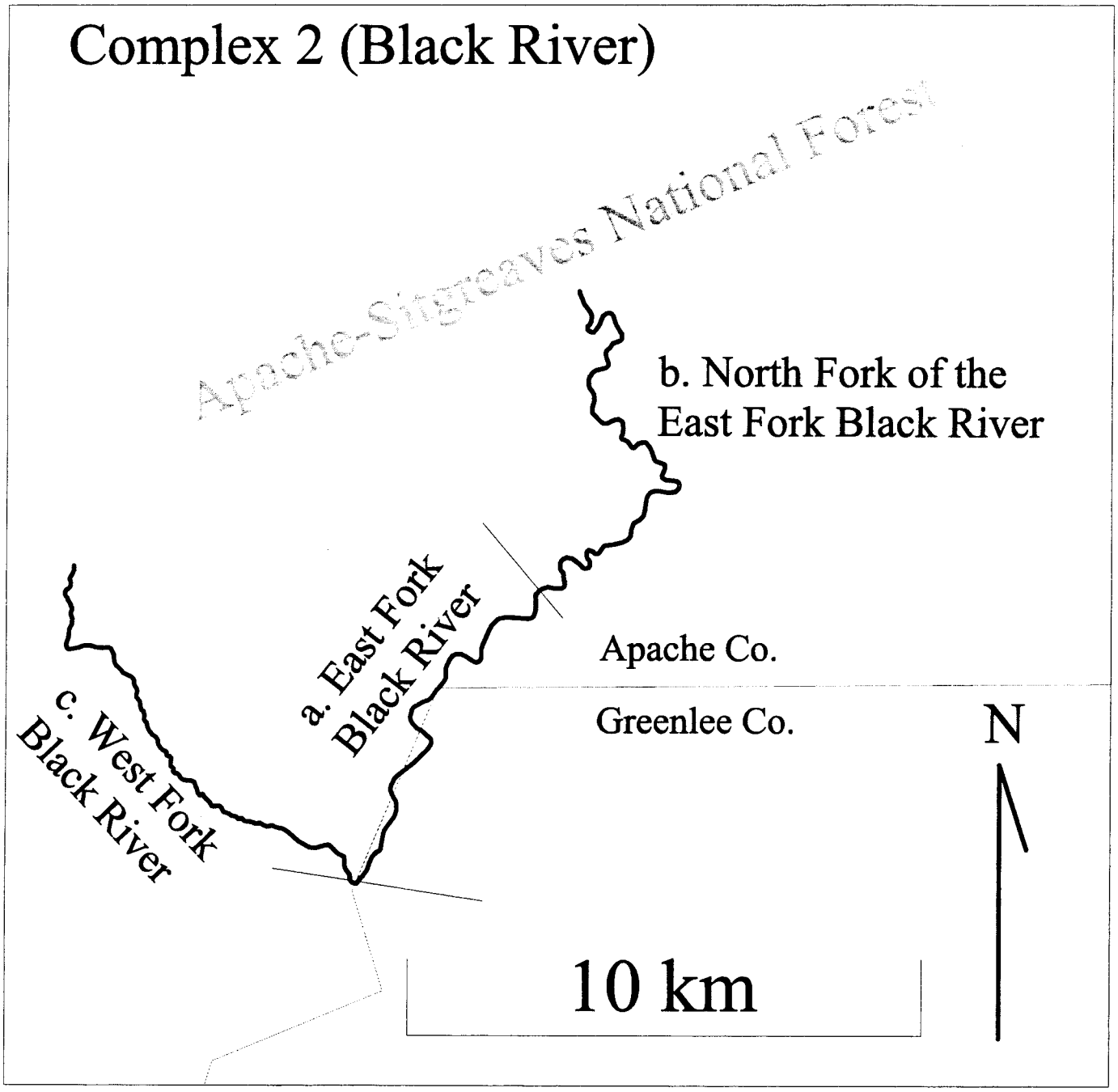
b. Fossil Creek for approximately 7.6 km (4.7 mi), extending from the confluence with the Verde River in GSRM, T.11.N., R.6E., NE1/4 Sec. 25 upstream to the confluence with an unnamed tributary from the northwest in GSRM, T.11 1/2N., R.7E., center Sec. 29.

c. West Clear Creek for approximately 11.6 km (7.2 mi), extending from the confluence with the Verde River in GSRM, T.13N., R.5E., center Sec. 21, upstream to the confluence with Black Mountain Canyon in GSRM, T.13N., R.6E., SE1/4 Sec. 17.

d. Beaver Creek/Wet Beaver Creek for approximately 33.4 km (20.8 mi), extending from the confluence with the Verde River in GSRM, T.14N., R.5E., SE1/4 Sec. 30 upstream to the confluence with Casner Canyon in GSRM, T.15N., R.6E., NW1/4 Sec. 23.

e. Oak Creek for approximately 54.4 km (33.8 mi), extending from the confluence with the Verde River in GSRM, T.15N., R.4E., SE1/4 Sec. 20 upstream to the confluence with an unnamed tributary from the south in GSRM, T.17N., R.5E., SE1/4, NE1/4 Sec. 24.

f. Granite Creek for approximately 2.3 km (1.4 mi), extending from the confluence with the Verde River in GSRM, T.17N., R.2W., NE1/4 Sec. 14 upstream to a spring in GSRM, T.17N., R.2W., SW1/4, SW1/4, Sec. 13.

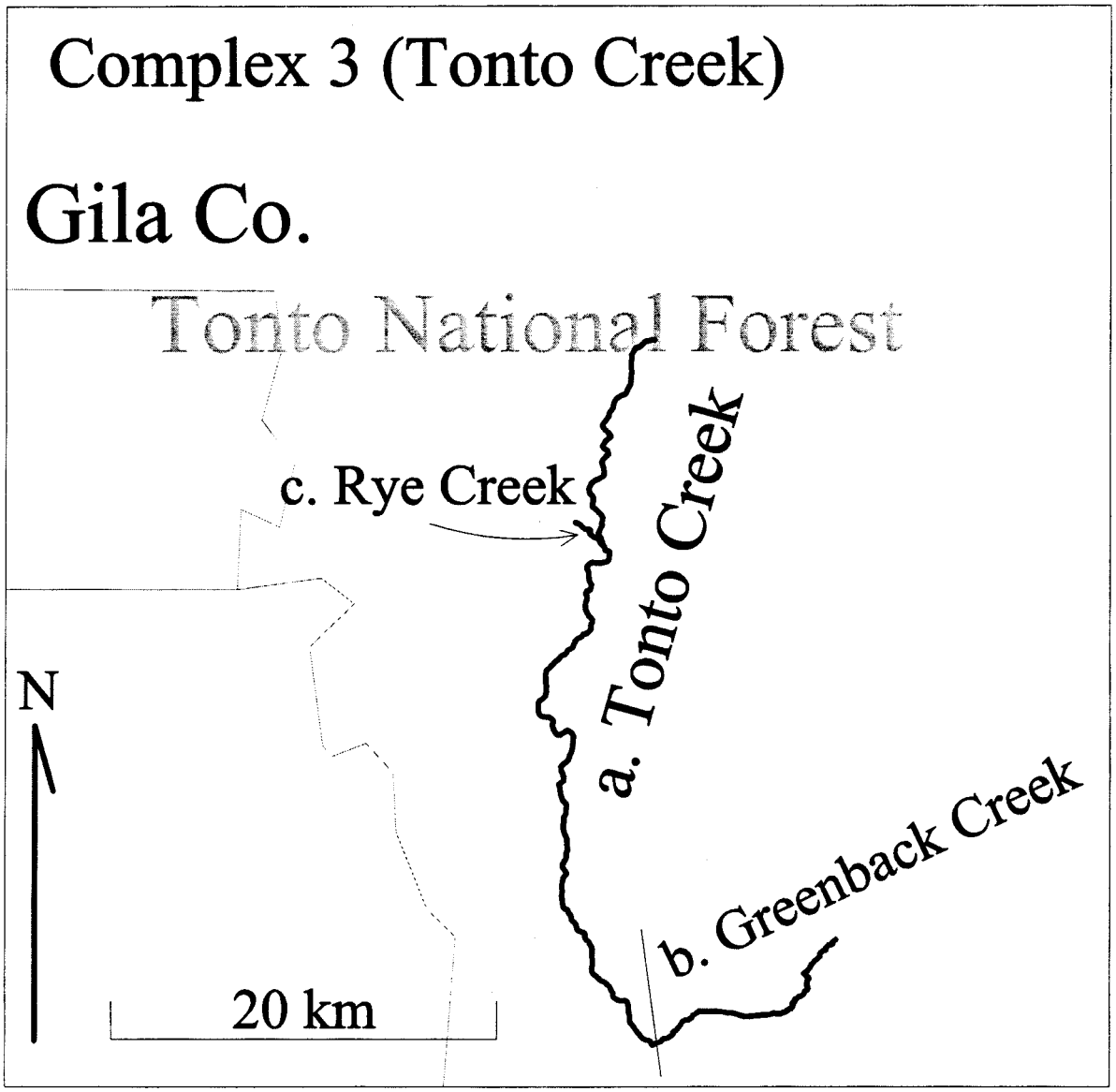


Complex 2. Apache and Greenlee Counties, Arizona

a. East Fork Black River for approximately 8.2 km (5.1 mi), extending from the confluence with the West Fork Black River in GSRM, T.4N., R.28E., SE1/4 Sec. 11 upstream to the confluence with Deer Creek in GSRM, T.5N., R.29E., NW1/4 Sec. 30.

b. North Fork of the East Fork Black River for approximately 11.6 km (7.2 mi), extending from the confluence of the East Fork Black River and Deer Creek in GSRM, T.5N., R.29E., NW1/4 Sec. 30 upstream to the confluence with Boneyard Creek in GSRM, T5N, R29E, SW1/4 Sec. 5.

c. West Fork Black River for approximately 10.3 km (6.4 mi), extending from the confluence with the East Fork Black River in GSRM, T.4N, R.28E., SE1/4 Sec. 11 upstream to the confluence with Hay Creek in GSRM, T.5N., R.28E., SE1/4, Sec. 19.

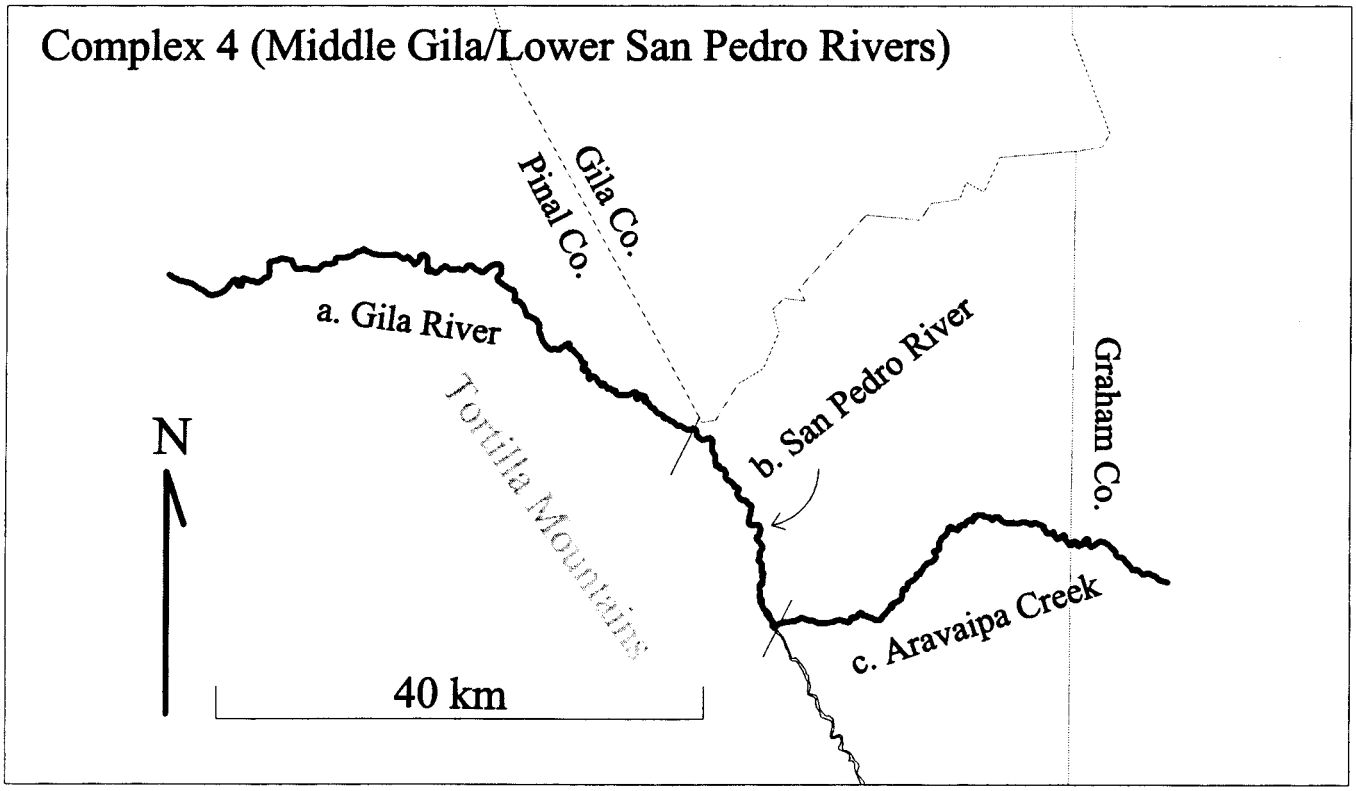


Complex 3. Gila County, Arizona

a. Tonto Creek for approximately 47.0 km (29.2 mi), extending from the confluence with Greenback Creek in GSRM, T.5N., R.11E., NW1/4 Sec. 8 upstream to the confluence with Houston Creek in GSRM, T.9N., R.11E., NE1/4, Sec. 18.

b. Greenback Creek for approximately 13.5 km (8.4 mi), extending from the confluence with Tonto Creek in GSRM, T.5N., R.11E., NW1/4 Sec. 8 upstream to Lime Springs in GSRM, T.6N., R.12E., SW1/4 Sec. 20.

c. Rye Creek for approximately 2.1 km (1.3 mi), extending from the confluence with Tonto Creek in GSRM, T.8N., R.10E., NE1/4 Sec. 24 upstream to the confluence with Brady Canyon in GSRM, T.8N., R.10E., NE1/4 Sec. 14.

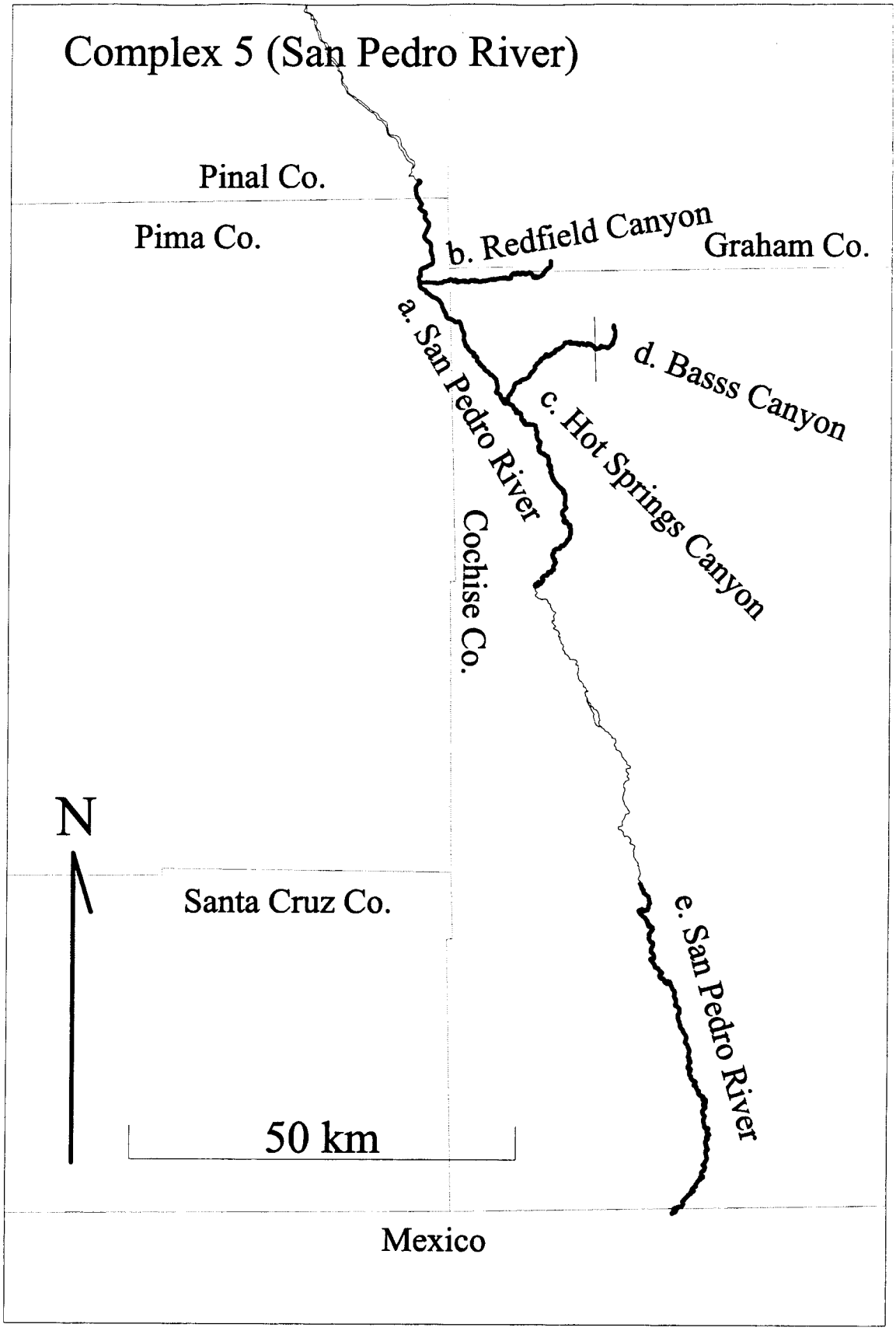


Complex 4. Graham and Pinal Counties, Arizona

a. Gila River for approximately 62.8 km (39.0 mi), extending from Ashurst-Hayden Dam in GSRM, T.4S., R.11E., NW1/4 Sec. 8 upstream to the confluence with the San Pedro River in GSRM, T.5S., R.15E., center Sec. 23.

b. San Pedro River for approximately 21.4 km (13.3 mi), extending from the confluence with the Gila River in GSRM, T.5S., R.15E., center Sec. 23 upstream to the confluence with Aravaipa Creek in GSRM, T.7S., R.16E., center Sec. 9.

c. Aravaipa Creek for approximately 45.3 km (28.1 mi), extending from the confluence with the San Pedro River in GSRM, T.7S., R.16E., center Sec. 9 upstream to the confluence with Stowe Gulch in GSRM, T.6S., R.19E., SE1/4 of the NE1/4 Sec. 35.


Complex 5 (San Pedro River)
Pinal Co.
Pima Co.
b. Redfield Canyon
Graham Co.
a. San Pedro River
d. Basss Canyon
c. Hot Springs Canyon
Cochise Co.
N
Santa Cruz Co.
e. San Pedro River
50 km
Mexico

Complex 5. Cochise, Graham, and Pima Counties, Arizona.

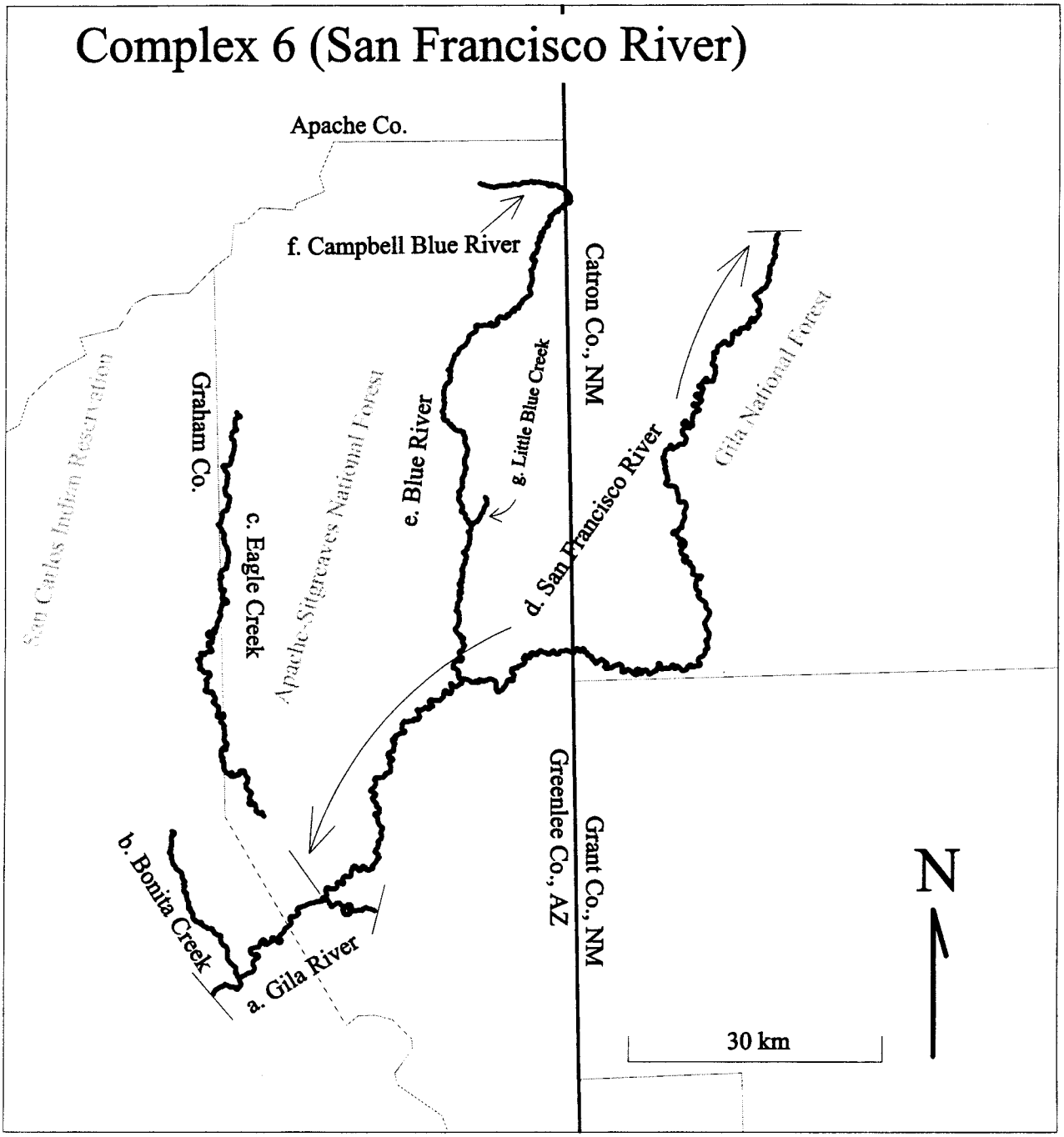
a. San Pedro River for approximately 73.6 km (45.8 mi), extending from the confluence with Alder Wash in GSRM, T.10S., R.18E., SW1/4 Sec.22 upstream to the confluence with Ash Creek in GSRM, T.16S., R.20E., SE1/4 Sec. 6.

b. Redfield Canyon for approximately 22.3 km (13.9 mi), extending from the confluence with the San Pedro River in GSRM, T.11S., R.18E., SW1/4 Sec. 34 upstream to the confluence with Sycamore Canyon in GSRM, T.11S., R.20E., NW1/4 Sec. 28.

c. Hot Springs Canyon for approximately 19.1 km (11.8 mi), extending from the confluence with the San Pedro River in GSRM, T.13S., R.19E., west center Sec. 23 upstream to the confluence with Bass Canyon in GSRM, T.12S., R.20E., NE1/4 Sec. 36.

d. Bass Canyon for approximately 5.1 km (3.2 mi), extending from the confluence with Hot Springs Canyon in GSRM, T.12S., R.20E., NE1/4 Sec. upstream to the confluence with Pine Canyon in GSRM, T.12S., R.21E., center Sec. 20.

e. San Pedro River for approximately 60.0 km (37.2 mi), extending from the confluence with the Babocomari River in the San Juan de las Boquillas y Nogales land grant upstream to the U.S. border with Mexico in GSRM, T.24S., R.22E., Sec. 19.



Complex 6. Graham and Greenlee Counties, Arizona and Catron County, New Mexico

a. Gila River for approximately 36.3 km (22.6 mi), extending from the Brown Canal diversion at the head of the Safford Valley in GSRM, T.6S., R.28E., SE1/4 Sec. 30 upstream to the confluence with Owl Canyon in GSRM, T.5S., R.30E., SW1/4 Sec. 30.

b. Bonita Creek for approximately 23.5 km (14.6 mi), extending from the confluence with the Gila River in GSRM, T.6S., R.28E., SE1/4 Sec. upstream to the confluence with Martinez Wash in GSRM, T.4S., R.27E., SE1/4 Sec.27.

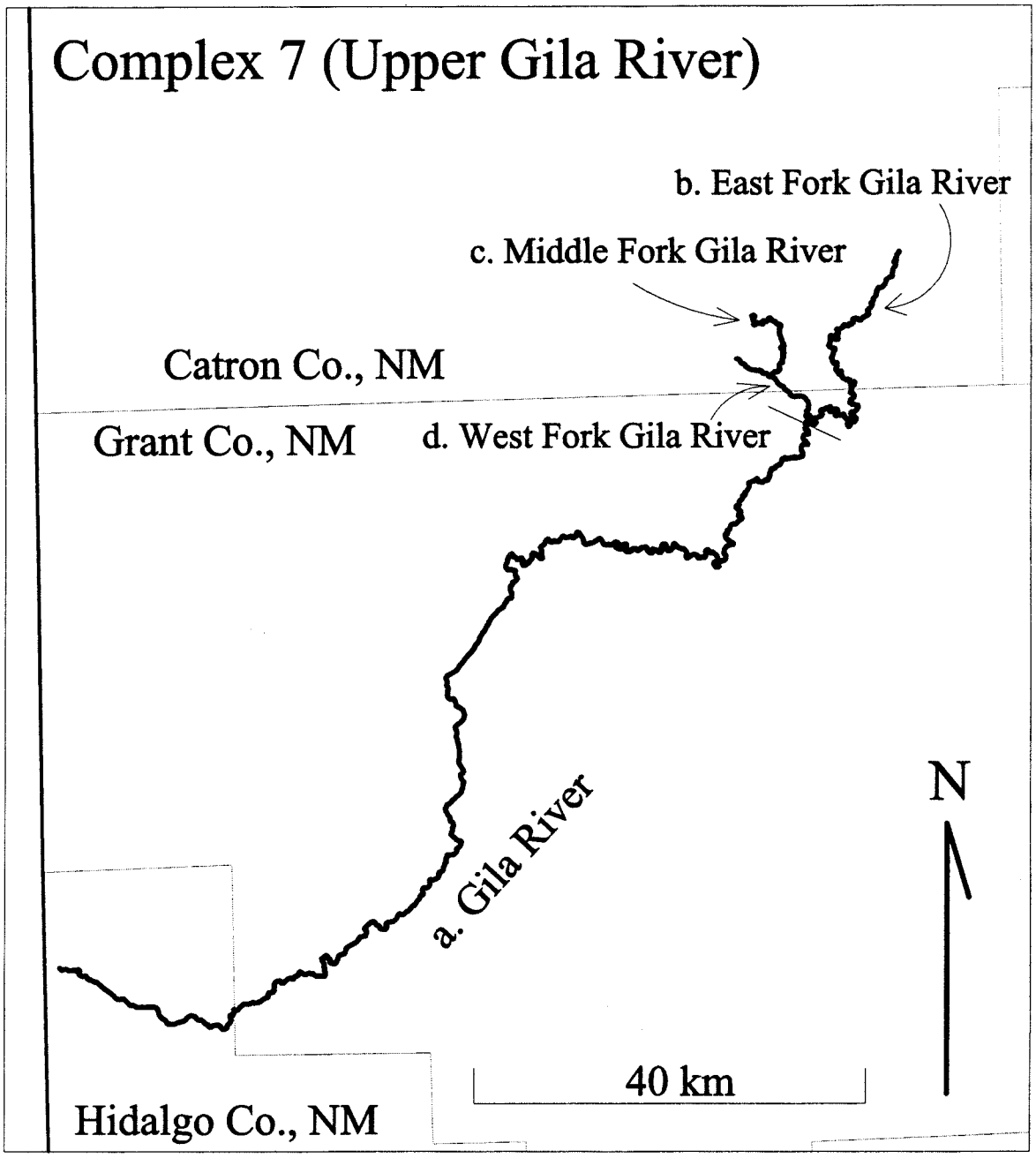
c. Eagle Creek for approximately 72.8 km (45.2 mi), extending from the Phelps-Dodge diversion dam in GSRM, T.4S., R.28E., NW1/4 Sec. 23 upstream to the confluence of Dry Prong and East Eagle Creeks in GSRM, T.2N., R.28E., SW1/4 Sec. 20; but excluding lands of the San Carlos Apache Reservation.

d. San Francisco River for approximately 181.5 km (118.2 mi), extending from the confluence with the Gila River in GSRM, T.5S., R.29E., SE1/4 Sec. 21 upstream to the confluence with the Tularosa River in the NMPM, T.7S., R.19W., SW1/4 Sec. 23.

e. Blue River for approximately 81.9 km (51.0 mi), extending from the confluence with the San Francisco River in GSRM, T.2S., R.31E., SE1/4 Sec. 31 upstream to the confluence of Campbell and Dry Blue Creeks in NMPM, T.7S., R.21W., SE1/4 Sec. 6.

f. Campbell Blue Creek for approximately 13.1 km (8.2 mi), extending from the confluence with Dry Blue Creek in NMPM, T.7S., R.21W., SE1/4 Sec. 6 upstream to the confluence with Coleman Creek in GSRM, T.4 1/2 N., R.31E., SW1/4 of the NE1/4 Sec. 32.

g. Little Blue Creek for approximately 4.5 km (2.8 mi), extending from the confluence with the Blue River in GSRM, T.1S., R.31E., center Sec. upstream to the mouth of a box canyon in GSRM, T.1N., R.31E., NE1/4 SE1/4 Sec. 29.



Complex 7. Grant and Catron Counties, New Mexico.

a. Gila River for approximately 164.4 km (102.2 mi), extending from the confluence with Moore Canyon in NMPM, T.18S., R.21W., SE1/4 SW1/4 Sec. 31 upstream to the confluence of the East and West Forks of the Gila River in NMPM, T.13S., T.13W., center Sec. 8.

b. East Fork Gila River for approximately 42.1 km (26.1 mi), extending from the confluence with the West Fork Gila River in NMPM, T.13S., R.13W., center Sec. 8 upstream to the confluence of Beaver and Taylor Creeks in NMPM, T.11S., R.12W., NE1/4 Sec. 17.

c. Middle Fork Gila River for approximately 12.3 km (7.7 mi), extending from the confluence with the West Fork Gila River in NMPM, T.12S., R.14W., SW1/4 Sec. 25 upstream to the confluence with Big Bear Canyon in NMPM, T.12S., R.14W., NW1/4 Sec. 2.

d. West Fork Gila River for approximately 12.4 km (7.7 mi), extending from the confluence with the East Fork Gila River in NMPM, T.13S., R.13W., center Sec. 8 upstream to the confluence with EE Canyon in NMPM, T.12S., R.14W., east boundary of Sec. 21.

* * * * *

4. Amend § 17.95(e) by adding critical habitat for the loach minnow (*Tiaroga* (=*Rhinichthys*) *cobitis*) in the same alphabetical order as this species occurs in § 17.11(h):

§ 17.95 Critical habitat—fish and wildlife.

* * * * *

(e) *Fishes.*

* * * * *

LOACH MINNOW (Tiaroga (=Rhinichthys) cobitis)

1. Critical habitat units are depicted for Apache, Cochise, Gila, Graham, Greenlee, Pima, Pinal, and Yavapai Counties, Arizona, and Catron and Grant Counties, New Mexico on the maps and as described below.

2. Critical habitat includes the stream channels within the identified stream reaches indicated on the maps below and areas within these reaches potentially inundated by high flow events.

3. Within these areas, the primary constituent elements include, but are not limited to, those habitat components that are essential for the primary biological needs of foraging, sheltering, and reproduction. These elements include the following: (1) Permanent flowing, unpolluted water; (2) living areas for adults with moderate to swift flow velocities in shallow water with gravel, cobble, and rubble substrates; (3) living areas for juveniles with moderate to swift flow velocities in shallow water with sand, gravel, cobble, and rubble substrates; (4) living areas for larval loach minnow with slow to moderate velocities in shallow water with sand, gravel, and cobble substrates and abundant instream cover; (5) spawning areas with slow to swift flow velocities in shallow water with uncemented cobble and rubble substrate; (6) low amounts of fine sediment and substrate embeddedness; (7) riffle, run, and backwater components present in the aquatic habitat; (8) low to moderate stream gradient; (9) water temperatures in the approximate range of 1–30°C (35–85°F) with natural diurnal and seasonal variation; (10) abundant aquatic insect food base; (11) periodic natural flooding; (12) a natural, unregulated hydrograph, or if flows are modified or regulated, then a hydrograph that demonstrates a retained ability to support a native fish community; and (13) few or no predatory or competitive nonnative species present.

4. Arizona (Gila and Salt River Meridian (GSRM)) and New Mexico (New Mexico Principal Meridian (NMPM)): Areas of land and water as follows (physical features were identified using USGS 7.5' quadrangle maps; river reach distances were derived from digital data obtained from Arizona Land Resources Information System (ALRIS) and New Mexico Resource Geographic Information System (RGIS)):

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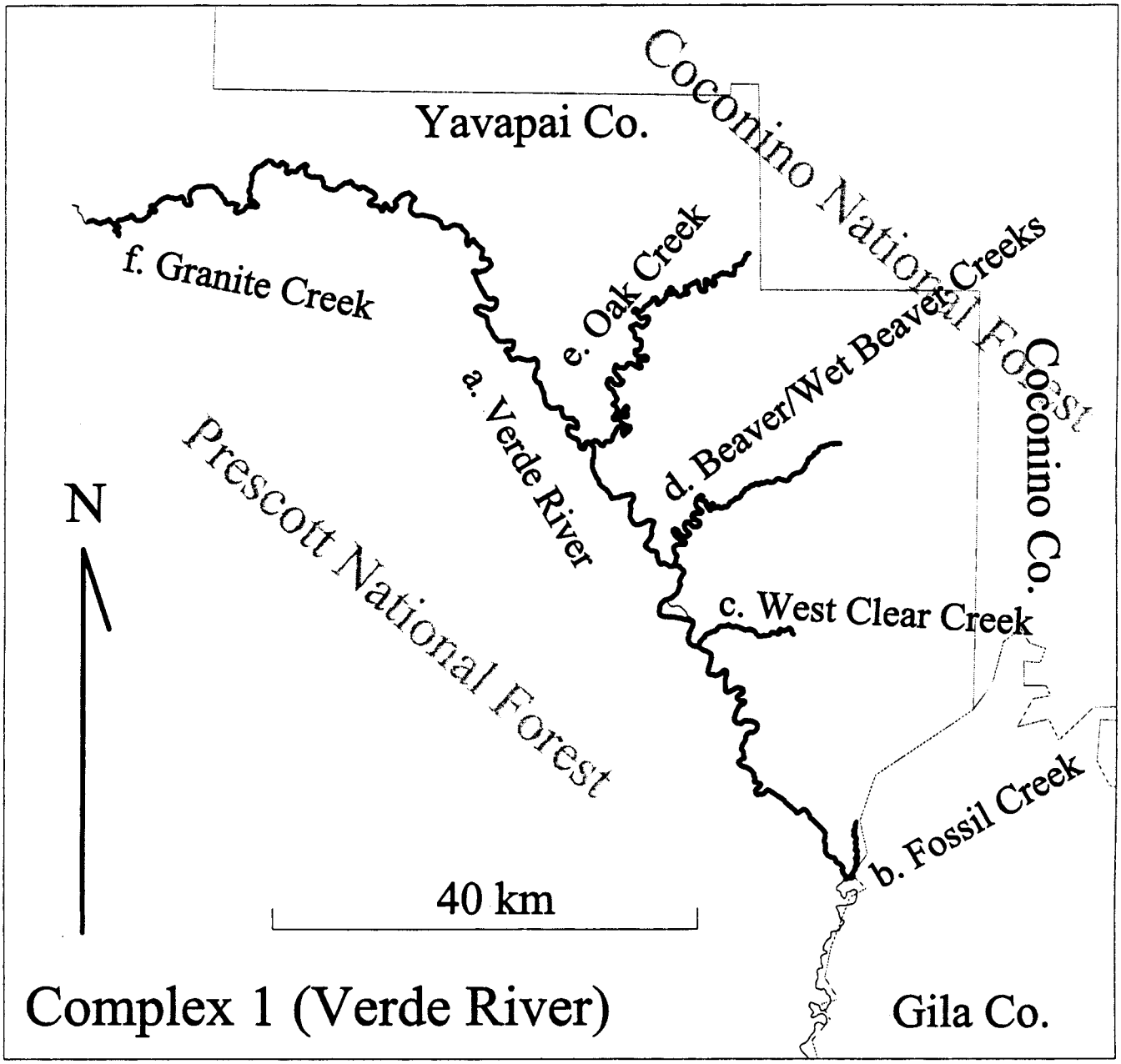


LOACH MINNOW (Tiaroga (=Rhinichthys) cobitis)

Complex 1. Yavapai County, Arizona

a. Verde River for approximately 171.3 km (106.5 mi), extending from the confluence with Fossil Creek in GSRM, T.11N., R.6E., NE1/4 Sec. 25 upstream to Sullivan Dam in GSRM, T.17N., R.2W., NW1/4 Sec. 15.

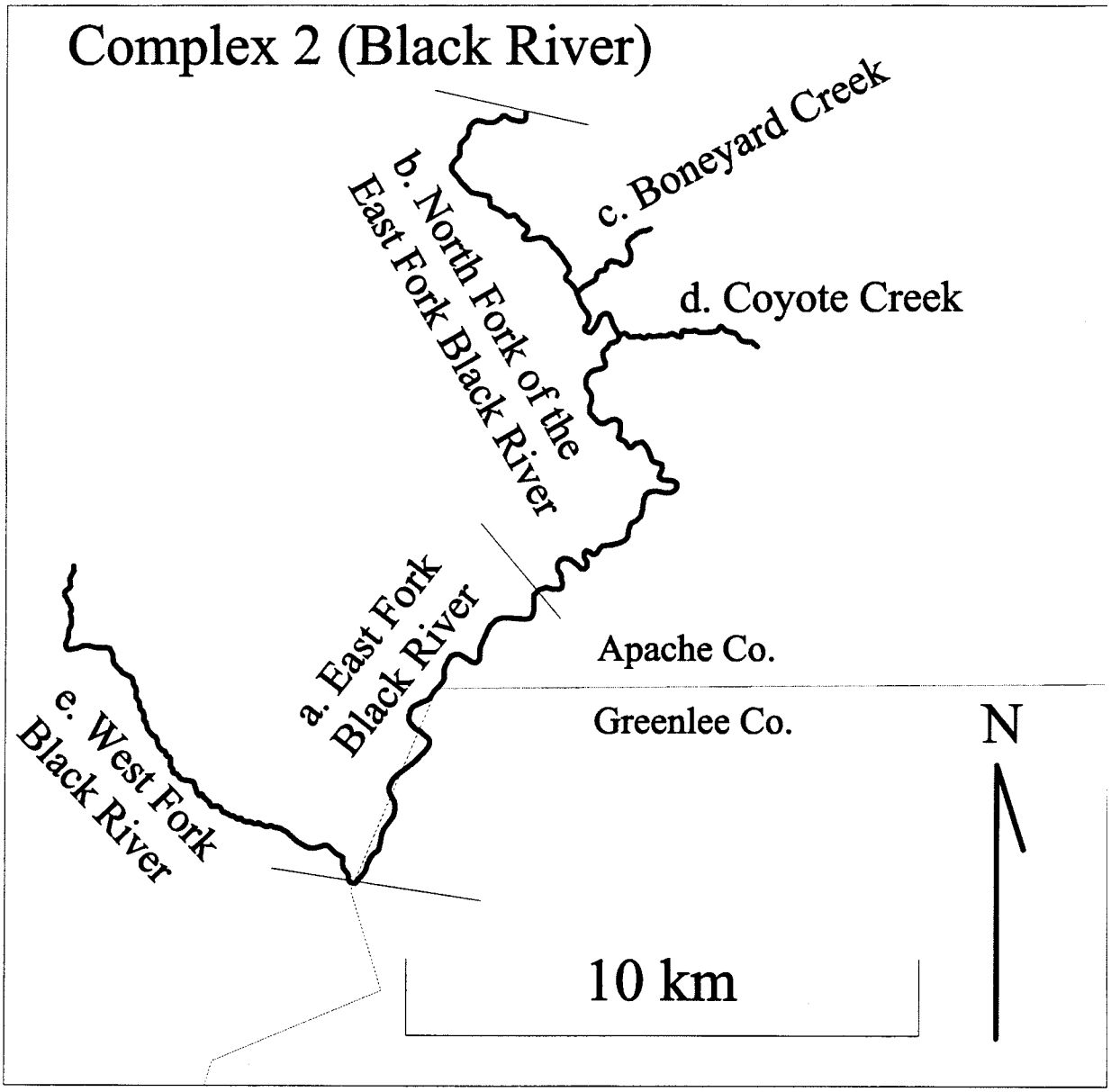
b. Fossil Creek for approximately 7.6 km (4.7 mi), extending from the confluence with the Verde River in GSRM, T.11N., R.6E., NE1/4 Sec. 25 upstream to the confluence with an unnamed tributary from the northwest in GSRM, T.11 1/2N., R.7E., center Sec. 29.

c. West Clear Creek for approximately 11.6 km (7.2 mi), extending from the confluence with the Verde River in GSRM, T.13N., R.5E., center Sec. 21, upstream to the confluence with Black Mountain Canyon in GSRM, T.13N., R.6E., SE1/4 Sec. 17.

d. Beaver Creek/Wet Beaver Creek for approximately 33.4 km (20.8mi), extending from the confluence with the Verde River in GSRM, T.14N., R.5E., SE1/4 Sec. 30 upstream to the confluence with Casner Canyon in GSRM, T.15N., R.6E., NW1/4 Sec. 23.

e. Oak Creek for approximately 54.4 km (33.8 mi), extending from the confluence with the Verde River in GSRM, T.15N., R.4E., SE1/4 Sec. 20 upstream to the confluence with an unnamed tributary from the south in GSRM, T.17N., R.5E., SE1/4, NE1/4 Sec. 24.

f. Granite Creek for approximately 2.3 km (1.4 mi), extending from the confluence with the Verde River in GSRM, T.17N., R.2W., NE1/4 Sec. 14 upstream to a spring in GSRM, T.17N., R.2W., SW1/4, SW1/4, Sec. 13.



Complex 2. Apache and Greenlee Counties, Arizona

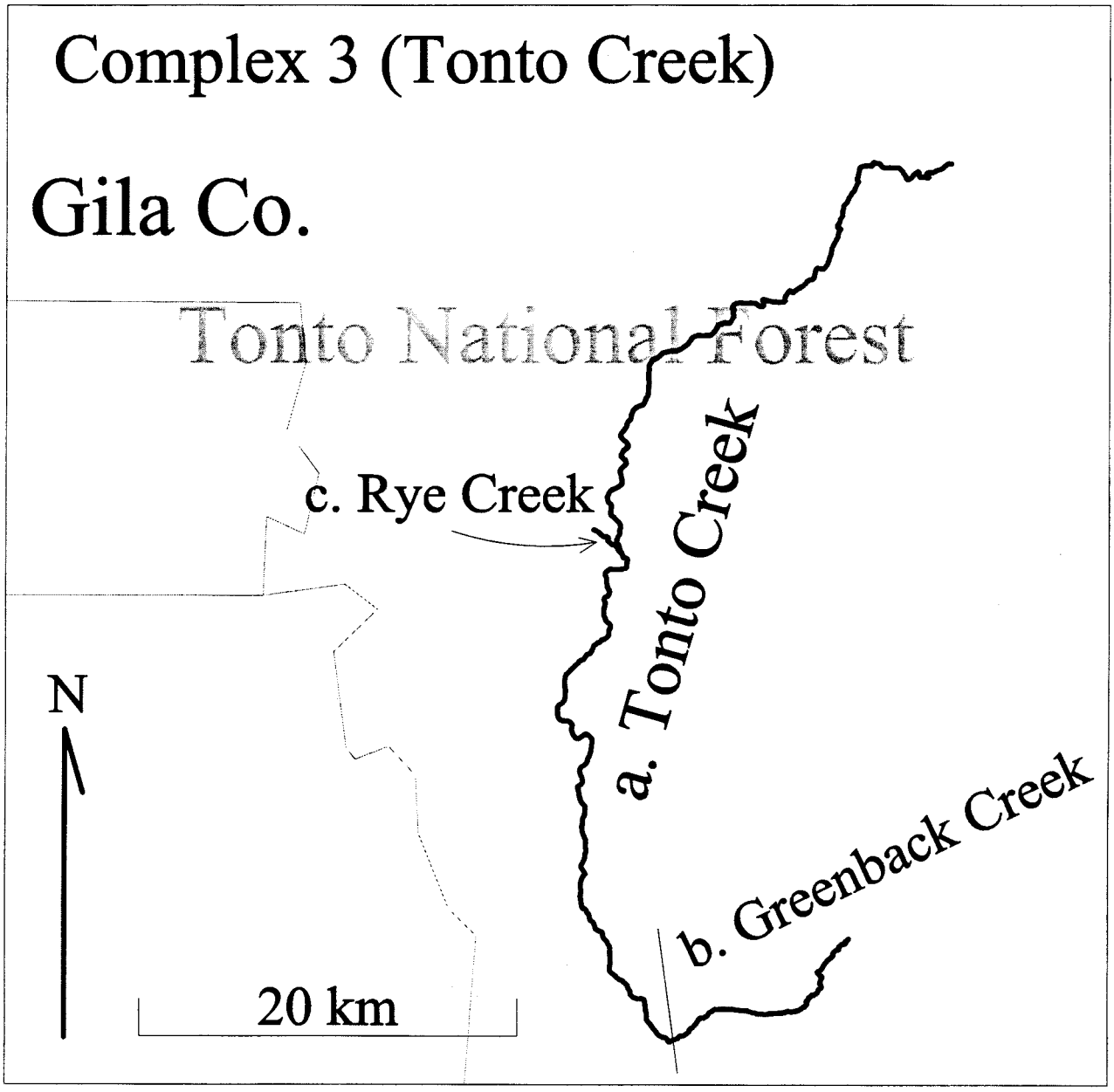
a. East Fork Black River for approximately 8.2 km (5.1 mi), extending from the confluence with the West Fork Black River in GSRM, T.4N., R.28E., SE1/4 Sec. 11 upstream to the confluence with Deer Creek in GSRM, T.5N., R.29E., NW1/4 Sec. 30.

b. North Fork of the East Fork Black River for approximately 18.0 km (11.2 mi), extending from the confluence of the East Fork Black River and Deer Creek in GSRM, T.5N., R.29E., NW1/4 Sec. 30 upstream to the confluence with an unnamed tributary flowing from the east in GSRM, T.6N., R.29E., center Sec. 30.

c. Boneyard Creek for approximately 2.3 km (1.4 mi), extending from the confluence with the North Fork of the East Fork Black River in GSRM, T.5N., R.29E., SW1/4 Sec. 5 upstream to the confluence with an unnamed tributary flowing from the east near Clabber City in GSRM, T.6N., R.29E., SE1/4 SE1/4 Sec. 32.

d. Coyote Creek for approximately 3.1 km (2.0 mi), extending from the confluence with the North Fork of the East Fork Black River in GSRM, T.5N., R.29E., NE1/4 Sec. 8 upstream to the confluence with an unnamed tributary flowing from the south in GSRM, T.5N., R.19E., NW1/4 Sec. 10.

e. West Fork Black River for approximately 10.3 km (6.4 mi), extending from the confluence with the East Fork Black River in GSRM, T.4N., R.28E., SE1/4 Sec. 11 upstream to the confluence with Hay Creek in GSRM, T.5N., R.28E., SE1/4, Sec. 19.

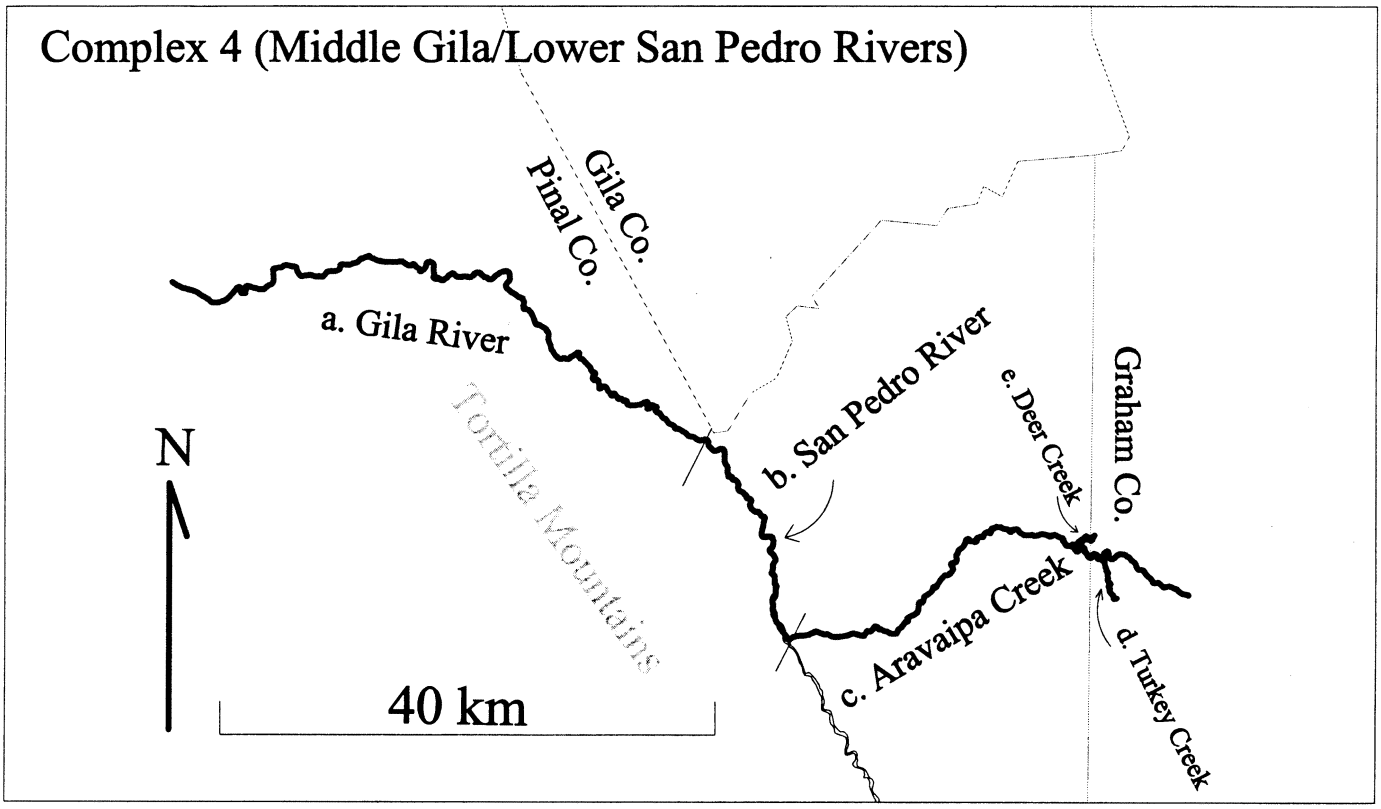


Complex 3. Gila County, Arizona

a. Tonto Creek for approximately 70.3 km (43.7 mi), extending from the confluence with Greenback Creek in GSRM, T.5N., R.11E., NW1/4 Sec. 8 upstream to the confluence with Haigler Creek in GSRM, T.10N., R.12E., NW1/4, Sec. 14.

b. Greenback Creek for approximately 13.5 km (8.4 mi), extending from the confluence with Tonto Creek in GSRM, T.5N., R.11E., NW1/4 Sec. 8 upstream to Lime Springs in GSRM, T.6N., R.12E., SW1/4 Sec. 20.

c. Rye Creek for approximately 2.1 km (1.3 mi), extending from the confluence with Tonto Creek in GSRM, T.8N., R.10E., NE1/4 Sec. 24 upstream to the confluence with Brady Canyon in GSRM, T.8N., R.10E., NE1/4 Sec. 14.



Complex 4. Graham and Pinal Counties, Arizona

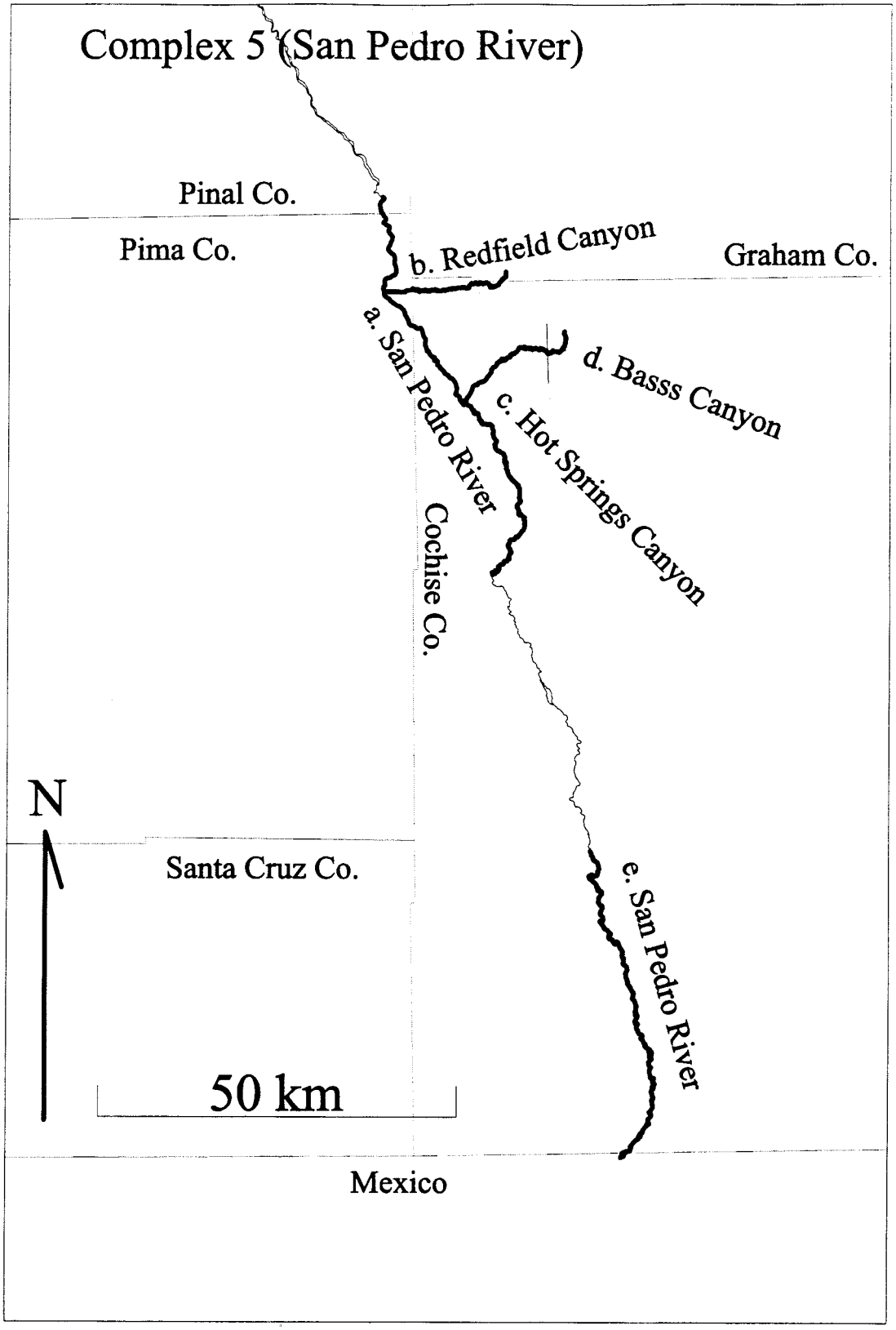
a. Gila River for approximately 62.8 km (39.0 mi), extending from Ashurst-Hayden Dam in GSRM, T.4S., R.11E., NW1/4 Sec. 8 upstream to the confluence with the San Pedro River in GSRM, T.5S., R.15E., center Sec. 23.

b. San Pedro River for approximately 21.4 km (13.3 mi), extending from the confluence with the Gila River in GSRM, T.5S., R.15E., center Sec. 23 upstream to the confluence with Aravaipa Creek in GSRM, T.7S., R.16E., center Sec. 9.

c. Aravaipa Creek for approximately 45.3 km (28.1 mi), extending from the confluence with the San Pedro River in GSRM, T.7S., R.16E., center Sec. 9 upstream to the confluence with Stowe Gulch in GSRM, T.6S., R.19E., SE1/4 of the NE1/4 Sec. 35.

d. Turkey Creek for approximately 4.3 km (2.7 mi), extending from the confluence with Aravaipa Creek in GSRM, T.6S., R.19E., center Sec. 19 upstream to the confluence with Oak Grove Canyon in GSRM, T.6S., R.19E., SW1/4 Sec. 32.

f. Deer Creek for approximately 3.6 km (2.3 mi), extending from the confluence with Aravaipa Creek in GSRM, T.6S., R.18E., SE1/4 of the SE1/4 Sec. 14 upstream to the boundary of the Aravaipa Wilderness at GSRM, T.6S., R.18E., east boundary Sec. 13.



Complex 5. Cochise, Graham, and Pima Counties, Arizona

a. San Pedro River for approximately 73.6 km (45.8 mi), extending from the confluence with Alder Wash in GSRM, T.10S., R.18E., SW1/4 Sec. 22 upstream to the confluence with Ash Creek in GSRM, T.16S., R.20E., SE1/4 Sec. 6.

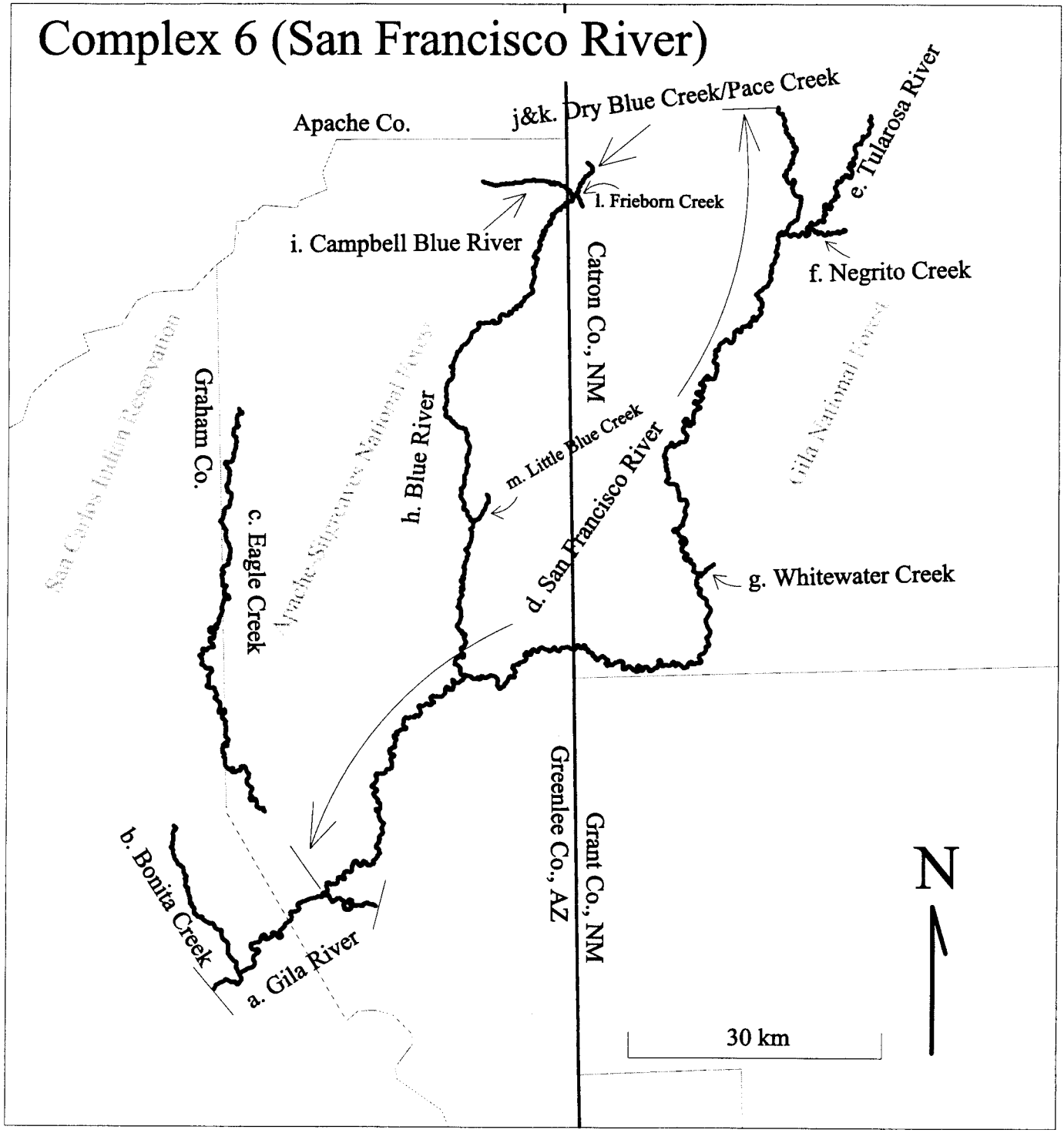
b. Redfield Canyon for approximately 22.3 km (13.9 mi), extending from the confluence with the San Pedro River in GSRM, T.11S., R.18E., SW1/4 Sec. 34 upstream to the confluence with Sycamore Canyon in GSRM, T.11S., R.20E., NW1/4 Sec. 28.

c. Hot Springs Canyon for approximately 19.1 km (11.8 mi), extending from the confluence with the San Pedro River in

GSRM, T.13S., R.19E., west center Sec. 23 upstream to the confluence with Bass Canyon in GSRM, T.12S., R.20E., NE1/4 Sec. 36.

d. Bass Canyon for approximately 5.1 km (3.2 mi), extending from the confluence with Hot Springs Canyon in GSRM, T.12S., R.20E., NE1/4 Sec. upstream to the confluence with Pine Canyon in GSRM, T.12S., R.21E., center Sec. 20.

e. San Pedro River for approximately 60.0 km (37.2 mi), extending from the confluence with the Babocomari River in the San Juan de las Boquillas y Nogales land grant upstream to the U.S. border with Mexico in GSRM, T.24S., R.22E., Sec. 19.



Complex 6. Graham and Greenlee Counties, Arizona and Catron County, New Mexico

a. Gila River for approximately 36.3 km (22.6 mi), extending from the Brown Canal diversion at the head of the Safford Valley in GSRM, T.6S., R.28E., SE1/4 Sec. 30 upstream to the confluence with Owl Canyon in GSRM, T.5S., R.30E., SW1/4 Sec. 30.

b. Bonita Creek for approximately 23.5 km (14.6 mi), extending from the confluence with the Gila River in GSRM, T.6S., R.28E., SE1/4 Sec. upstream to the confluence with

Martinez Wash in GSRM, T.4S., R.27E., SE1/4 Sec. 27.

c. Eagle Creek for approximately 72.8 km (45.2 mi), extending from the Phelps-Dodge diversion dam in GSRM, T.4S., R.28E., NW1/ 4 Sec. 23 upstream to the confluence of Dry Prong and East Eagle Creeks in GSRM, T.2N., R.28E., SW1/4 Sec. 20; but excluding lands of the San Carlos Apache Reservation.

d. San Francisco River for approximately 203.3 km (126.3 mi), extending from the confluence with the Gila River in GSRM, T.5S., R.29E., SE1/4 Sec. 21 upstream to the mouth of The Box canyon in NMPM, T.6S., R.19W., SW1/4 of the NW1/4 Sec. 2.

e. Tularosa River for approximately 30.0 km (18.6 mi), extending from the confluence with the San Francisco River in NMPM, T.7S., R.19W., SW1/4 Sec. 23 upstream to NMPM, T.6S., R.18W, south boundary Sec. 1.

f. Negrito Creek for approximately 6.8 km (4.2 mi), extending from the confluence with the Tularosa River in NMPM, T.7S., R.18W., SW1/4 of the NW1/4 Sec. 19 upstream to the confluence with Cerco Canyon in NMPM, T.7S., R.18W., west boundary Sec. 22.

g. Whitewater Creek for approximately 1.8 km (1.2 mi), extending from the confluence with the San Francisco River in NMPM, T.11S., R.20W., SE1/4 Sec. 27 upstream to the confluence with Little Whitewater Creek in NMPM, T.11S., R.20W., SE1/4 Sec. 23.

h. Blue River for approximately 81.9 km (51.0 mi), extending from the confluence with the San Francisco River in GSRM, T.2S., R.31E., SE1/4 Sec. 31 upstream to the confluence of Campbell and Dry Blue Creeks in NMPM, T.7S., R.21W., SE1/4 Sec. 6.

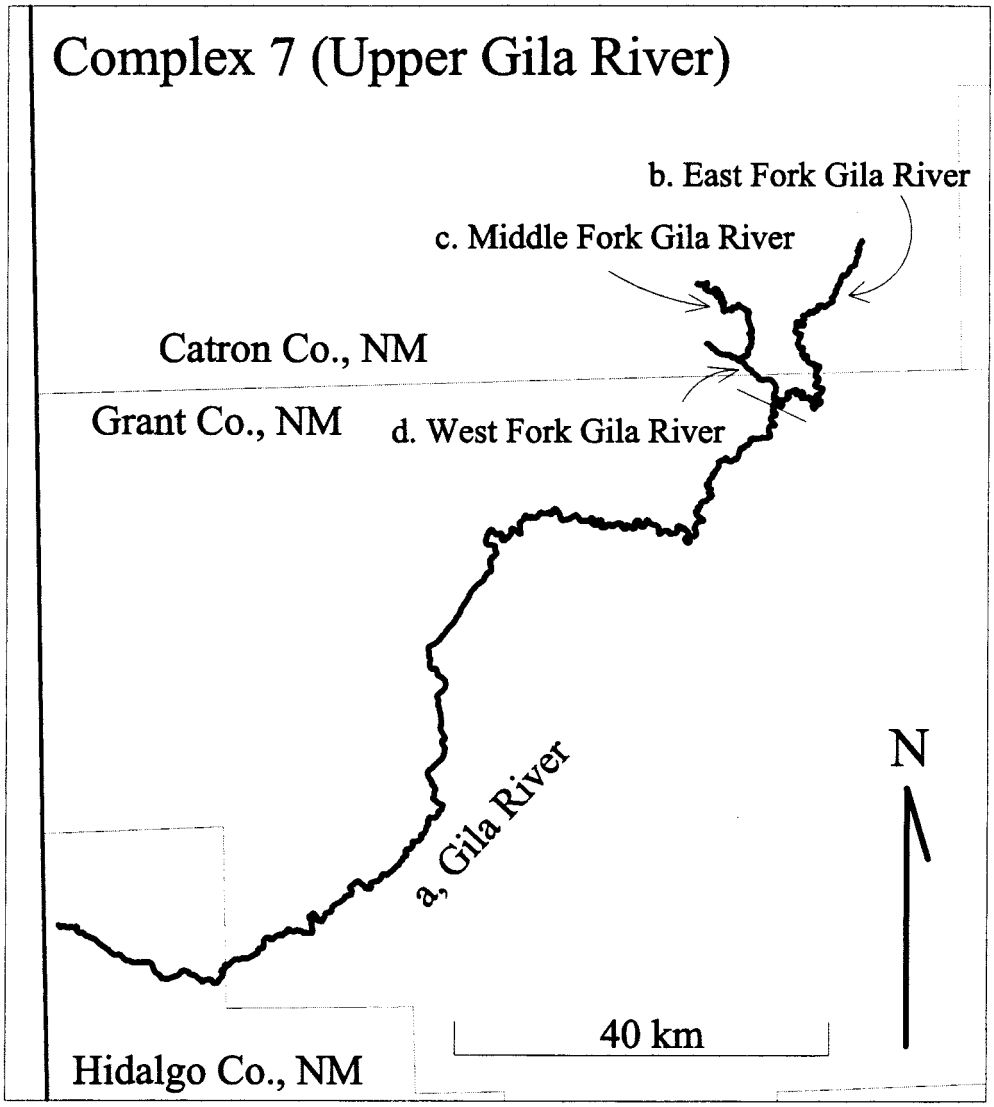
i. Campbell Blue Creek for approximately 13.1 km (8.2 mi), extending from the confluence with Dry Blue Creek in NMPM, T.7S., R.21W., SE1/4 Sec. 6 upstream to the confluence with Coleman Creek in GSRM, T.4 1/2 N., R.31E., SW1/4 of the NE1/4 Sec. 32.

j. Dry Blue Creek for approximately 4.7 km (3.0 mi), extending from the confluence with Campbell Blue Creek in NMPM, T.7S., R.21W., SE1/4 Sec. 6 upstream to the confluence with Pace Creek in NMPM, T.6S., R.21W., SW1/4 Sec.

k. Pace Creek for approximately 1.2 km (0.8 mi), extending from the confluence with Dry Blue Creek in NMPM, T.6S., R.21W., SW1/4 Sec. 28 upstream to the barrier falls in NMPM, T.6S., R.21W., SE1/4 Sec. 29.

l. Frieborn Creek for approximately 1.8 km (1.1 mi), extending from the confluence with Dry Blue Creek in NMPM, T.7S., R.21W., SW1/4 NW1/4 Sec. 5 upstream to the confluence with an unnamed tributary flowing from the south in NMPM, T.7S., R.21W., NE1/4 SW1/4 Sec. 8.

m. Little Blue Creek for approximately 4.5 km (2.8 mi), extending from the confluence with the Blue River in GSRM, T.1S., R.31E., center Sec. upstream to the mouth of a box canyon in GSRM, T.1N., R.31E., NE1/4 SE1/4 Sec. 29.



Complex 7. Grant and Catron Counties, New Mexico

a. Gila River for approximately 164.4 km (102.2 mi), extending from the confluence with Moore Canyon in NMPM, T.18S., R.21W., SE1/4 SW1/4 Sec. 31 upstream to the confluence of the East and West Forks of the Gila River in NMPM, T.13S., T.13W., center Sec. 8.

b. East Fork Gila River for approximately 42.1 km (26.1 mi), extending from the confluence with the West Fork Gila River in NMPM, T.13S., R.13W., center Sec. 8 upstream to the confluence of Beaver and Taylor Creeks in NMPM, T.11S., R.12W., NE1/4 Sec. 17.

c. Middle Fork Gila River for approximately 19.1 km (11.8 mi), extending from the confluence with the West Fork Gila River in NMPM, T.12S., R.14W., SW1/4 Sec. 25 upstream to the confluence with Brothers West Canyon in NMPM, T.11S., R.14W., NE1/4 Sec. 33.

d. West Fork Gila River for approximately 12.4 km (7.7 mi), extending from the confluence with the East Fork Gila River in NMPM, T.13S., R.13W., center Sec. 8 upstream to the confluence with EE Canyon in NMPM, T.12S., R.14W., east boundary of Sec. 21.

Dated: November 30, 1999.

Donald J. Barry,

Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 99–32019 Filed 12–7–99; 10:20 am]

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