Commission's minimum distance separation requirements with a site restriction of 6.3 kilometers (3.9 miles) south of the community. The coordinates for Channel 298A at Donalsonville are North Latitude 30–59–11 and West Longitude 84–52–34.

DATES: Comments must be filed on or before September 9, 1993, and reply comments on or before September 24, 1993.

ADDRESSES: Federal Communications Commission, Washington, DC 20554. In addition to filing comments with the FCC, interested parties should serve the petitioner, or its counsel or consultant, as follows: Jerry E. White, Seminole-Decatur Radio Company, Route 3, Box 514, Pelham, Georgia 31779 (Petitioner).

FOR FURTHER INFORMATION CONTACT: Nancy J. Walls, Mass Media Bureau, (202) 634–6530.

SUPPLEMENTARY INFORMATION: This is a synopsis of the Commission's Notice of Proposed Rule Making, MM Docket No. 93–205, adopted June 24, 1993, and released July 19, 1993. The full text of this Commission decision is available for inspection and copying during normal business hours in the FCC Reference Center (room 239), 1919 M Street, NW., Washington, DC. The complete text of this decision may also be purchased from the Commission's copy contractors, International Transcription Service, Inc., (202) 857–3800, 1919 M Street, NW., room 246, or 2100 M Street, NW., suite 140, Washington, DC 20037.

Provisions of the Regulatory Flexibility Act of 1980 do not apply to this proceeding.

Members of the public should note that from the time a Notice of Proposed Rule Making is issued until the matter is no longer subject to Commission consideration or court review, all *ex parte* contacts are prohibited in Commission proceedings, such as this one, which involve channel allotments. See 47 CFR 1.1204(b) for rules governing permissible *ex parte* contacts.

For information regarding proper filing procedures for comments, see 47 CFR 1.415 and 1.420.

List of Subjects in 47 CFR Part 73

Radio broadcasting.

Federal Communications Commission.

Michael C. Ruger,

Chief, Allocations Branch, Policy and Rules Division, Mass Media Bureau.

[FR Doc. 93–17484 Filed 7–22–93; 8:45 am]

BILLING CODE 6712–01–M

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018–AB97

Endangered and Threatened Wildlife and Plants; Proposed Rule To List the Southwestern Willow Flycatcher as Endangered With Critical Habitat

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: The Fish and Wildlife Service (Service) announces a 12-month finding for a petition to list the southwestern willow flycatcher (*Empidonax traillii extimus*) as an endangered species under the authority of the Endangered Species Act of 1973, as amended (Act). The Service finds that the petitioned action is warranted and proposes to list the southwestern willow flycatcher as endangered and to designate its critical habitat. The breeding range of this bird includes southern California, Arizona, New Mexico, extreme southern portions of Nevada and Utah, far western Texas, perhaps southwestern Colorado, and extreme northwestern Mexico. Within this region, the species is restricted to dense riparian (streamside) vegetation. The southwestern willow flycatcher is endangered by extensive loss of habitat, brood parasitism, and lack of adequate protective regulations. This proposal, if made final, would implement Federal protection provided by the Act for the southwestern willow flycatcher. The Service seeks data and comments from the public on this proposal.

DATES: Comments from all interested parties must be received by October 21, 1993. Public hearing requests must be received by September 7, 1993.

The Act requires the Service to promptly hold one public hearing on the proposed listing regulation should a person file a request for such a hearing by September 7, 1993. Because of anticipated public interest, the Service will hold three public hearings (See "Public Comments Solicited" section of this proposed rule). Dates of the hearings will be announced in the near future.

ADDRESSES: Comments and materials concerning this proposal should be sent to the Field Supervisor, Arizona Ecological Services Office, U.S. Fish and Wildlife Service, 3616 West Thomas Road, Suite 6, Phoenix, Arizona 85019 (telephone: 602/379–4720; FAX: 602/379–6629). Comments and materials received will be available for public inspection, by appointment, during normal business hours at the above address.

FOR FURTHER INFORMATION CONTACT: Timothy J. Tibbitts, at the above address, or telephone 602–379–4720.

SUPPLEMENTARY INFORMATION:

Background

The southwestern willow flycatcher is a small bird, approximately 15 centimeters (cm) (5.75 inches) in length. It has a grayish-green back and wings, whitish throat, light grey-olive breast, and pale yellowish belly. Two wingbars are visible; the eye ring is faint or absent. The upper mandible is dark, the lower is light. The song is a sneezy "fitz-bew" or "fitzi-bew," the call a repeated "whit."

The southwestern willow flycatcher occurs in riparian habitats along rivers, streams, or other wetlands, where dense growths of willows (*Salix* sp.), *Baccharis*, arrowweed (*Pluchea* sp.) tamarisk (*Tamarix* sp.) or other plants are present, often with a scattered overstory of cottonwood (*Populus* sp.) (Grinnell and Miller 1944, Phillips 1948, Zimmerman 1970, Whitmore 1977, Hubbard 1987, Unitt 1987, Brown and Trosset 1989, Whitfield 1990, Brown 1991). These riparian communities provide nesting and foraging habitat. Throughout the range of *E. t. extimus*, these riparian habitats tend to be rare, widely separated, small and/or linear locales, separated by vast expanses of arid lands. The southwestern willow flycatcher has experienced extensive loss and modification of this habitat and is also endangered by other factors, including brood parasitism by the brown-headed cowbird (*Molothrus ater*) (Unitt 1987).

The southwestern willow flycatcher (Order Passeriformes; Family Tyrannidae) is a subspecies of 1 of the 10 North American species in the genus *Empidonax*. The *Empidonax* flycatchers are renowned as one of the most difficult groups of birds to distinguish by sight, and the taxonomy of the group continues to be revised. The willow flycatcher and alder flycatcher (*E. alnorum*) were once considered a single species, the Traill's flycatcher (*E. traillii*). Some sources (American Ornithologists' Union (AOU) 1983, McCabe 1991) believe *E. traillii* and *E. alnorum*, and all their subspecies, constitute a superspecies, the "*traillii complex*." However, the two species are distinguishable by morphology (Aldrich 1951), song type, habitat use, structure and placement of nests (Aldrich 1953), ecological separation (Barlow and McGillivray 1983), and genetic distinctness (Seutin and Simon 1988).

The breeding range of the alder flycatcher lies generally north of the willow flycatcher and includes inland Alaska, Canada south of the Arctic, and the United States in New England and the northern Midwest.

The southwestern willow flycatcher is one of four subspecies of the willow flycatcher most commonly recognized in North America (Hubbard 1987, Unitt 1987). The breeding range of the widely distributed *E. t. traillii* extends across the northern United States and southern Canada, from New England and Nova Scotia west, through northern Wyoming and Montana, and into British Columbia. *E. t. adastus* breeds from Colorado west of the plains, west through the intermountain/Great Basin states, and into the eastern portions of California, Oregon, and Washington. The breeding range of *E. t. brewsteri* extends from coastal California north from Point Conception, through western Oregon and Washington to Vancouver Island. The breeding range of the southwestern willow flycatcher (*E. t. extimus*) includes southern California, Arizona, New Mexico, extreme southern portions of Nevada and Utah, and western Texas (Hubbard 1987, Unitt 1987). It may also breed in southwestern Colorado, but nesting records are lacking. Records of probable breeding of *E. t. extimus* in Mexico are very few and are restricted to extreme northern Baja California del Norte and Sonora (Unitt 1987, Wilbur 1987). Phillips (1948) suggested that willow flycatchers breeding from northeastern Arizona east to the Rio Grande in New Mexico may be intergrades between *E. t. extimus* and the more northerly subspecies. However, he noted that further examination might extend the known breeding range to the northeast. Subsequent reviews (Hubbard 1987, Unitt 1987) consider northeastern Arizona and all of New Mexico to be within the breeding range of *E. t. extimus*.

The four willow flycatcher subspecies are distinguished primarily by subtle differences in color and morphology. Unitt (1987) noted that "The morphological differences among the races of *E. traillii* are minor, but differ little in magnitude from those distinguishing the species *traillii* from *alnorum*. In *Empidonax*, small differences in morphology may mask large differences in biology."

E. t. extimus was described by A.R. Phillips (1948) from a collection by G. Monson from the lower San Pedro River in southeastern Arizona. The taxonomic validity of *E. t. extimus* was critically reviewed by Hubbard (1987) and Unitt (1987). Hubbard (1987) gave a qualified endorsement of the validity of *E. t. extimus*, recommending continued examination of the taxonomy. Unitt (1987) found that *E. t. extimus* was distinguishable from other willow flycatchers by color and morphology (primarily wing formula), but not overall size. The song dialect of *E. t. extimus* may also be distinguishable from other willow flycatchers (M. Sogge, unpubl. data). The AOU did not include subspecies in its most recent Checklist of North American Birds (AOU 1983). However, the subspecies *E. t. extimus* is accepted by most authors (e.g. Aldrich 1951, Behle and Higgins 1959, Phillips *et al.* 1964, Oberholser 1974, Monson and Phillips 1981, Harris *et al.* 1987, Schlorff 1990, Harris 1991). The Service has also recognized *E. t. extimus* (54 FR 554, 56 FR 58804, 57 FR 39664). Section 3(15) of the Act defines the term "species" as "* * * any subspecies of fish or wildlife or plants, and any distinct population segment of any vertebrate species which interbreeds when mature" [50 CFR 424.02(k)]. Based on the above information, the Service has determined that *E. t. extimus* may be listed under the Act.

The southwestern willow flycatcher nests in thickets of trees and shrubs approximately 4–7 meters (m) (13–23 feet) tall, with a high percentage of canopy cover and dense foliage from 0–4 m (13 feet) above ground. The nest site plant community is typically even-aged, structurally homogeneous, and dense (Brown 1988, Whitfield 1990, Sedgewick and Knopf 1992). Historically, *E. t. extimus* nested primarily in willows and *Baccharis*, with a scattered overstory of cottonwood (Grinnell and Miller 1944, Phillips 1948, Whitmore 1977, Unitt 1987). Following modern changes in riparian plant communities in the Southwest, *E. t. extimus* still nests in willows where available, but is also known to nest in thickets dominated by tamarisk and Russian olive (Zimmerman 1970, Hubbard 1987, Brown 1988). Sedgewick and Knopf (1992) found that sites selected as song perches by male willow flycatchers exhibited higher variability in shrub size than did nest sites and often included large central shrubs. Habitats not selected for either nesting or singing were narrower riparian zones, with greater distances between willow patches and individual willow plants. Nesting willow flycatchers of all subspecies generally prefer areas with surface water nearby (Bent 1960, Stafford and Valentine 1985, Harris *et al.* 1987), but *E. t. extimus* invariably nests near surface water (Phillips *et al.* 1964).

Insufficient information is available to define a minimum habitat patch size that is capable of supporting southwestern willow flycatchers. Habitat patches occupied in the Grand Canyon in 1991 and 1992 varied in size from 0.08 to 0.63 hectare (ha) [0.2 to 1.5 acre (ac)] (M. Sogge, unpubl. data). These figures should be considered very general indications of "suitable" patch size. The Grand Canyon flycatchers using patches of this size and type (dominated by tamarisk) have declined from 11 pairs to 2 pairs and 3 single birds in recent years. Throughout its range, the capability of habitat patches to support southwestern willow flycatchers is confused by the rarity of the subspecies, unstable populations, and other parameters.

The nest is a compact cup of fiber, bark, and grass, typically with feathers on the rim, lined with a layer of grass or other fine, silky plant material, and often has plant material dangling from the bottom (Harrison 1979). The nest cup is approximately 4.5 cm (1.75 inches) in diameter and 3.8 cm (1.5 inches) deep. The outer nest dimensions are approximately 7.7 cm (3 inches) wide and 7.7 cm (3 inches) high, excluding dangling material (Unpubl. notes of Herbert Brown, University of Arizona, Tucson). It is constructed in a fork or on a horizontal branch, 1–4.5 m (3.2–15 feet) above ground in a medium-sized bush or small tree, with dense vegetation above and around the nest (Brown 1988, Whitfield 1990).

The nesting cycle is approximately 28 days. Three or four eggs are laid at 1-day intervals, and incubation begins when the clutch is complete (Bent 1960, Walkinshaw 1966). Eggs are incubated by the female approximately 12 days, and the young fledge approximately 13 days after hatching (King 1955, Harrison 1979). Southwestern willow flycatchers typically raise one brood per year. Whitfield (1990) reported the first known production of a second brood. Other observations of eggs being incubated late in the season (Carothers and Johnson 1975) may also represent renesting.

The southwestern willow flycatcher is a late spring breeder. It is present and singing on breeding territories by mid-May, although its presence and status is often confused by the migrating, singing individuals of the northern subspecies, passing through *E. t. extimus* breeding habitat (D. Kreuper, Bureau of Land Management (BLM), unpubl. data). *E. t. extimus* builds nests and lays eggs in late May and early June and fledges young in early July (Willard 1912, Ligon 1961, Brown 1988, Whitfield 1990, Sogge and Tibbitts 1992). Some

variation in these dates has been observed (Carothers and Johnson 1975, Brown 1988) and may be related to altitude, latitude, and renesting.

The southwestern willow flycatcher is an insectivore. It forages within and occasionally above dense riparian vegetation, taking insects on the wing and gleaning them from foliage (Wheelock 1912, Bent 1960). No information is available on specific prey items.

The migration routes and destination of the southwestern willow flycatcher are not well understood. *Empidonax* flycatchers do not often sing during fall migration, so this means of distinguishing species is not available (Blake 1953, Peterson and Chalif 1973). However, willow flycatchers have been reported to sing and defend winter territories in Mexico and Central America (Gorski 1969, McCabe 1991). *E. t. extimus* most likely winters in Mexico, Central America, and perhaps northern South America (Phillips 1948, Peterson 1990). However, the habitats it uses on wintering grounds are unknown. Tropical deforestation may restrict wintering habitat for this and other neotropical migratory birds (Finch 1991).

Breeding bird survey data for 1965 through 1979 combined the willow and alder flycatchers into a "Traill's flycatcher superspecies," because of taxonomic uncertainty during the 15-year reporting period. These data showed fairly stable numbers in central and eastern North America but strong declines in the West, the region including the range of the southwestern willow flycatcher (Robbins *et al.* 1986).

Unitt (1987) reviewed historical and contemporary records of *E. t. extimus* throughout its range, determining that it had "declined precipitously," and that "although the data reveal no trend in the past few years, the population is clearly much smaller now than 50 years ago, and no change in the factors responsible for the decline seem likely." Data are now available which indicate continued declines in most remaining populations of the subspecies (Brown 1991, Whitfield and Laymon, unpubl. data, Sogge and Tibbitts 1992). Population trends in each state are discussed briefly below.

California: All three resident subspecies of the willow flycatcher (*E. t. extimus, E. t. brewsteri*, and *E. t. adastus*) were once considered widely distributed and common in California, wherever suitable habitat existed (Wheelock 1912, Willett 1912, Grinnell and Miller 1944). The historic range of *E. t. extimus* in California apparently included all lowland riparian areas of the southern third of the state. Unitt (1984, 1987) concluded that it was once fairly common in the Los Angeles basin, the San Bernardino/Riverside area, and San Diego County. Willett (1912, 1933) considered the bird to be a common breeder in coastal southern California. Nest and egg collections by H. Brown, discussed in Unitt (1987), suggest the bird was a common breeder along the lower Colorado River near Yuma, in 1902.

All three willow flycatcher subspecies breeding in California have declined, with declines most critical in *E. t. extimus* (Gaines 1988, Schlorff 1990). The southwestern willow flycatcher no longer nests along the lower Colorado River (Hunter *et al.* 1987, Rosenberg *et al.* 1991) and remains only in small, disjunct nesting groups elsewhere in southern California (Unitt 1984 and 1987, Schlorff 1990, Service unpubl. data). Only two nesting groups have been stable or increasing in recent years. One is on private land where threats from livestock grazing have been virtually eliminated (Harris *et al.* 1987, Whitfield 1990). However, after remaining stable or increasing for several years, this group on the South Fork of the Kern River experienced numerical declines in 1991 and 1992. An increase in nesting success in 1992 was attributed to shaking (killing) or removing cowbird eggs or nestlings found in flycatcher nests (Whitfield and Laymon, unpubl. data). The other stable nesting group is on Camp Pendleton (U.S. Marine Corps), where threats from cowbird parasitism have been reduced. Approximately eight other nesting groups are known in southern California, all of which consisted of six or fewer nesting pairs in recent years (Unitt 1987, Schlorff 1990, Service, unpubl. data). Using the most recent information for all areas, approximately 70 pairs and 8 single southwestern willow flycatchers are known to exist in California. Where information on population trends since the mid-1980s is available, most areas show declines. Three recent status reviews considered extirpation from California to be possible, even likely, in the foreseeable future (Garrett and Dunn 1981, Harris *et al.* 1986, Schlorff 1990). The State of California classifies the willow flycatcher as endangered (California Department of Fish and Game (CDFG) 1992).

Arizona: Records indicate that the former range of the southwestern willow flycatcher in Arizona included portions of all major river systems (Colorado, Salt, Verde, Gila, Santa Cruz, and San Pedro) and probably major tributaries. Historical records exist from the Colorado River near Lee's Ferry and near the Little Colorado River confluence (Phillips, pers. comm., cited in Unitt 1987), and along the Arizona-California border (Phillips 1948, Unitt 1987), the Santa Cruz River near Tucson (Swarth 1914, Phillips 1948), the Verde River at Camp Verde (Phillips 1948), the Gila River at Fort Thomas (W.C. Hunter, pers. comm., cited in Unitt 1987), the White River at Whiteriver, the upper and lower San Pedro River (Willard 1912, Phillips 1948), and the Little Colorado River headwaters area (Phillips 1948).

The southwestern willow flycatcher has declined throughout Arizona. Extensive loss and modification of riparian habitats have occurred throughout much of the State, and southwestern willow flycatcher habitat is now largely absent or altered (Phillips 1948, Phillips *et al.* 1964). The subspecies no longer nests on the lower Colorado River (Hunter *et al.* 1987, Rosenberg *et al.* 1991) and is known to persist elsewhere in the State only in several small, widely scattered locations. In the Grand Canyon, several groups of nesting birds declined from a combined high of 11 pairs in 1986 (Brown 1988), to two pairs and three single birds in 1992 (Sogge and Tibbitts 1992). Two and four singing birds, respectively, were recorded at two locations on the middle San Pedro River in the mid-1980s (Arizona Game and Fish Department (AGFD) unpubl. data). These sites have not been surveyed since. However, a third site in that area was occupied until 1979, but no *E. t. extimus* have been found in recent years (AGFD and U.S. Bureau of Reclamation (Reclamation), unpubl. data). Historically occupied habitat on the upper San Pedro is now unsuitable and unoccupied (Kreuper and Corman 1988, D. Kreuper unpubl. data). One to four possible breeding birds were seen from 1985 through 1988 in the Little Colorado River headwaters area known to have supported several small nesting groups (T. Corman, unpubl. data). R. Ohmart (unpubl. data) observed four nesting pairs on the Verde River in central Arizona in 1992. Of 13 river reaches in Arizona studied by Hunter *et al.* (1987), nesting willow flycatchers *(extimus)* were extirpated from eight, declining in two, and present in stable numbers in two. Using the most recent information for all areas, approximately 12 pairs and 3 single *E. t. extimus* are known to exist in the State. The estimated total *E. t. extimus* in Arizona in the late 1980's ranged from 24 to 30 nesting pairs (T. Johnson 1989, Unitt 1987). More recent information does not

warrant increasing that estimate. Where information on population trends since the mid-1980s is available, most areas show declines. In early 1993, catastrophic flooding on the Verde, Gila and San Pedro Rivers damaged many sites inhabited since the mid-1980s and much potential habitat. Unitt (1987) concluded that "Probably the steepest decline in the population levels of *extimus* has occurred in Arizona * * * extimus has been extirpated from much of the area from which it was originally described, the riparian woodlands of southern Arizona." The State of Arizona classifies the willow flycatcher as endangered (AGFD 1988).

New Mexico: Bailey (1928) classified breeding willow flycatchers in New Mexico as *E. t. brewsteri*, according to the then current taxonomy of Oberholser (1918). Because of few records at that time, she believed that either the bird was rare or was overlooked by most observers and collectors. More recently, Hubbard (1987) reviewed and summarized the flycatcher's status in New Mexico. He classified breeding birds in the State as *E. t. extimus* and reported breeding locations that were generally confined to the regions west of the Rio Grande River, with records from the Rio Grande, Chama, Zuni, San Francisco, Gila, and possibly lower Penasco drainages (See also Hubbard 1982). However, he provisionally assigned all willow flycatchers nesting in New Mexico to *extimus*, noting records from the Pecos River and Penasco Creek in the southeast and from near Las Vegas in the northeast.

Both Hubbard (1987) and Unitt (1987) believed that the overall range of *E. t. extimus* had not been reduced in New Mexico, but that habitat and numbers had declined. Unitt (1987) believed the majority of all remaining nesting birds may occur in New Mexico. Areas with 19 and 53 singing flycatchers (assumed to be nesting but possibly migrants) were found on the upper Gila River (Montgomery *et al.* 1985, cited in Suckling *et al.* 1992). Recent information on those nesting areas is not available, and Hubbard (1987) noted that data were lacking for trends of most nesting areas. However, where data were available, they indicated loss of the nesting habitat of a group of 15 breeding pairs as a consequence of rising waters of Elephant Butte Reservoir. The willow flycatcher was considered fairly common in this area on the middle Rio Grande in the late 1970's (Hundertmark 1978). Hubbard hypothesized that some of these birds could have moved upstream, to new shoreline habitat created by the impoundment. Between 1987 and 1990, bird surveys along the Rio Grande River State Park in Albuquerque found a single singing willow flycatcher during the breeding season (Hoffman 1990). In 1992, 71 transects along the Rio Grande River were surveyed for breeding birds, not specifically targeting willow flycatcher habitat. A single willow flycatcher was located near Espanola (Leal, Meyer and Thompson, unpubl. data). Hubbard (1987) estimated that the state population may total 100 pairs. However, he found that the "virtually inescapable" conclusion was that "a decrease has occurred in the population of breeding willow flycatchers in New Mexico over historic time," resulting from habitat loss. The State of New Mexico classifies the willow flycatcher as endangered (NMDGF 1988).

Texas: The eastern edge of the southwestern willow flycatcher's range is in western Texas (Unitt 1987). Collections have been made at Fort Hancock on the Rio Grande (Phillips 1948), in the Guadalupe Mountains (Phillips, pers. comm., cited in Unitt 1987), the Davis Mountains (Oberholser 1974), and from unspecified locales in Brewster County (Wolfe 1956). Wauer (1973 and 1985) considered *E. t. extimus* a rare summer resident in Big Bend National Park. Data are lacking on current population levels and trends in Texas. Loss and modification of habitat may have reduced populations on the Rio Grande and Pecos Rivers.

Utah: The north-central limit of breeding southwestern willow flycatchers is in southern Utah. However, because of possible intergradations with *E. t. adastus*, the exact limits are not well defined and a clinal gradation may exist between the two subspecies (Behle 1985, Unitt 1987). Records that are likely to represent *E. t. extimus* are from the Virgin River (Phillips 1948, Whitmore 1975), Kanab Creek, and along the San Juan and Colorado Rivers (Behle *et al.* 1958 cited in Unitt 1987, Behle and Higgins 1959, Behle 1985). Other reports document the subspecies being present along the Virgin, Colorado, San Juan, and perhaps Paria Rivers (BLM, unpubl. data). Although Behle believed *E. t. extimus* was always rare in southern Utah overall (pers. comm. cited in Unitt 1987), he considered it a locally common breeding resident where habitat existed along the Colorado River and its tributaries in southeastern Utah (Behle and Higgins 1959).

Few data are available on population trends in southern Utah. However, loss and modification of habitat is likely to have reduced populations on the Virgin, Colorado, and San Juan Rivers. These losses have been due to suburban expansion and habitat changes along the Virgin River, inundation by Lake Powell on the Colorado and San Juan Rivers, and encroachment of tamarisk throughout the region (Unitt 1987, BLM unpublished data).

Nevada: Unitt (1987) reported only three records for Nevada, all made before 1962. Unitt (1987) and Hubbard (1987) both considered extreme southern Nevada to be within the subspecies' range. However, no recent data are available on population levels or trends. Habitat may remain along the lower Virgin River and at the inflow of the Virgin River into Lake Mead. However, loss and modification of habitat is likely to have reduced populations on the Virgin and Colorado Rivers.

Colorado: It is unclear whether or not the southwestern willow flycatcher breeds in Colorado. Some authors believe the subspecies may range into extreme southwestern Colorado (e.g. Hubbard 1987); others do not (e.g. Unitt 1987). Several specimens taken in late summer have been identified as *E. t. extimus*, but nesting was not confirmed (Bailey and Niedrach 1965). Phillips (1948) cautioned that willow flycatchers in this region displayed considerable individual variation and may represent intergrades between *E. t. extimus* and *E. t. adastus*. No recent data are available on occurrence, population levels, or trends in this area.

Mexico: Six specimens from Baja California and two from Sonora were discussed by Unitt (1987). He and Phillips (pers. comm., cited in Unitt 1987) believed *E. t. extimus* was not common in northwestern Mexico. Wilbur (1987) was skeptical of its presence as a breeder in Baja California. In the more general treatments of field guides, the willow flycatcher is described as breeding in extreme northwestern Mexico, including northern Baja California (Blake 1953, Peterson and Chalif 1973). No recent data are available on current population levels or trends.

Using the most recent censuses and estimates for all areas, the estimated total of all southwestern willow flycatchers is approximately 230 to 500 nesting pairs (Service, unpubl. data). Unitt (1987) believed the total was "well under" 1,000 pairs, more likely 500. The regional estimates on which these total estimates are based generally date from the late 1980's (e. g. Hubbard 1987, T. Johnson 1989). Virtually all nesting groups monitored since that time have continued to decline (Whitfield 1990, Brown 1991, Sogge and Tibbitts 1992, Whitfield and Laymon, unpubl. data).

The Service included the southwestern willow flycatcher in its January 6, 1989, (54 FR 554) Animal Notice of Review as a category 2 candidate species. A category 2 species is one for which listing may be appropriate, but additional biological information is needed. After soliciting and reviewing additional information, the Service elevated *E. t. extimus* to category 1 candidate status on November 21, 1991 (56 FR 58804). A category 1 species is one for which the Service has on file substantial information to support listing, but a proposal to list has not been issued because it is precluded at present by other listing activity.

On January 25, 1992, a coalition of conservation organizations (Suckling *et al.* 1992) petitioned the Service, requesting listing of *E. t. extimus* as an endangered species, under the Endangered Species Act of 1973, as amended (16 U.S.C. et seq.). The petitioners also appealed for emergency listing and designation of critical habitat. On September 1, 1992 (57 FR 39664), the Service published a finding that the petition presented substantial information indicating that listing may be warranted, and requested public comments and biological data on the status of the southwestern willow flycatcher.

Section 4(b)(3) of the Act requires the Secretary of the Interior to reach a final decision on any petition accepted for review within 12 months of its receipt. This proposal constitutes the final finding on the petitioned action.

Summary of Factors Affecting the Species

Section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 et seq.) and regulations (50 CFR part 424) promulgated to implement the listing provisions of the Act set forth the procedures for adding species to the Federal lists. A species may be determined to be an endangered or threatened species owing to one or more of the five factors described in section 4(a)(1). These factors and their application to the southwestern willow flycatcher (*Empidonax traillii extimus*) are as follows:

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* Large scale losses of southwestern wetlands have occurred, particularly the cottonwood-willow riparian habitats of the southwestern willow flycatcher (Phillips *et al.* 1964, Carothers 1977, Rea 1983, Johnson and Haight 1984, Katibah 1984, Johnson *et al.* 1987, Unitt 1987, General Accounting Office (GAO) 1988, Szaro 1989, Dahl 1990, State of Arizona 1990). Changes in the riparian plant community have resulted in the reduction, degradation, and elimination of nesting habitat for the willow flycatcher, curtailing the ranges, distributions, and numbers of the western subspecies, including *E. t. extimus* (Gaines 1974, Serena 1982, Cannon and Knopf 1984, Klebenow and Oakleaf 1984, Taylor 1986, Schlorff 1990).

Dahl (1990) reviewed estimated losses of wetlands between 1780 and the 1980's in the Southwest: California 91 percent; Nevada 52 percent; Utah 30 percent; Arizona 36 percent; New Mexico 33 percent; and Texas 52 percent. As much as 90 percent of lowland riparian habitat has been lost in Arizona (State of Arizona 1990). Franzreb (1987) noted that "(B)ottomland riparian forests are the most highly modified of natural landscapes in California."

Loss and modification of southwestern riparian habitats have occurred owing to urban and agricultural development, water diversion and impoundment, channelization, livestock grazing, and hydrological changes resulting from these and other land uses. Rosenberg *et al.* (1991) noted that "it is the cottonwood-willow plant community that has declined most with modern river management." Loss of the cottonwood-willow riparian forests has had widespread impact on the distribution and abundance of bird species associated with that forest type (Hunter *et al.* 1987, Hunter *et al.* 1988, Rosenberg *et al.* 1991).

Overuse by livestock has been a major factor in the degradation and modification of riparian habitats in the western United States. These effects include changes in plant community structure and species composition and relative abundance of species and plant density. These changes are often linked to more widespread changes in watershed hydrology (Rea 1983, GAO 1988). These changes directly affect the habitat characteristics critical to *E. t. extimus*. Livestock grazing in riparian habitats typically results in reduction of plant species diversity and density, especially palatable broadleaf plants like willows and cottonwood saplings, and is one of the most common causes of riparian degradation (Carothers 1977, Rickard and Cushing 1982, Cannon and Knopf 1984, Klebenow and Oakleaf 1984, GAO 1988, Clary and Webster 1989, Schultz and Leininger 1990).

Increases in willow flycatcher numbers (various subspecies) have followed reduction, modification, or removal of cattle grazing. Taylor (1986) found a negative correlation between recent cattle grazing and abundance of numerous riparian birds, including the willow flycatcher. In an area ungrazed since 1940, his bird counts were five to seven times higher than comparable plots where grazing was terminated in 1960. Harris *et al.* (1987) observed southwestern willow flycatchers to increase by 61 percent over a 5-year period after grazing was reduced. Taylor and Littlefield (1986) found higher numbers of willow flycatchers (*E. t. brewsteri*) correlated with minimal or nonexistent livestock grazing. Klebenow and Oakleaf (1984) listed the willow flycatcher among bird species that declined from abundant to absent in riparian habitats degraded in part by overgrazing. R. Schlorff reported willow flycatchers returning to Modoc County, California, several years after removal of livestock grazing (pers. comm. cited in Valentine *et al.* 1988). Knopf *et al.* (1988) found that, during the summer, willow flycatchers (*E. t. adastus*) were present on winter-grazed pastures but were virtually absent from summer-grazed pastures. The Service believes that documentation of livestock impacts on other willow flycatcher subspecies is relevant to *E. t. extimus*, because linear riparian habitats in arid regions are particularly vulnerable to fragmentation and destruction by livestock. As shady, cool, wet areas providing abundant forage, they are disproportionately preferred by livestock over the surrounding xeric uplands (Ames 1977, Valentine *et al.* 1988, A. Johnson 1989). Suckling *et al.* (1992) noted that most of the areas still known to support southwestern willow flycatchers have low or nonexistent levels of livestock grazing.

Another likely factor in the loss and modification of southwestern willow flycatcher habitat is invasion by the exotic tamarisk. Tamarisk (also called saltcedar) was introduced into western North America from the Middle East in the late 1800s, as an ornamental windbreak and erosion-control plant. It has spread rapidly along southwestern watercourses, typically at the expense of native riparian vegetation, and especially in cottonwood/willow communities. Although tamarisk is present in nearly every southwestern riparian community, its degree of dominance varies. It has replaced some communities entirely, but occurs at a low frequency in others.

The spread and persistence of tamarisk has resulted in significant changes in riparian plant communities. In tamarisk monocultures, the most striking change is the loss of community

structure. The multi-layered community of herbaceous understory, small shrubs, middle-layer willows, and overstory deciduous trees is often replaced by one monotonous layer. Plant species diversity has declined in many areas, and relative species abundance shifted in others. Other effects include changes in percent cover, total biomass, fire cycles, thermal regimes, and perhaps insect fauna (Kerpez and Smith 1987, Carothers and Brown 1991, Rosenberg *et al.* 1991).

Disturbance regimes imposed by man (e.g., grazing, water diversion, flood control, woodcutting, and vegetation clearing) have facilitated the spread of tamarisk (Behle and Higgins 1959, Kerpez and Smith 1987, Hunter *et al.* 1988, Rosenberg *et al.* 1991). Cattle find tamarisk unpalatable. However, they eat the shoots and seedlings of cottonwood and willow, acting as a selective agent to shift the relative abundance of these species (Kerpez and Smith 1987). Degradation and, in some cases, loss of native riparian vegetation have lowered the water table and resulted in the loss of perennial flows in some streams. With its deep root system and adaptive reproductive strategy, tamarisk thrives or persists where surface flow has been reduced or lost.

Manipulation of perennial rivers and streams has resulted in habitats that tend to allow tamarisk to outcompete native vegetation. Construction of dams created impoundments that destroyed native riparian communities. Dams also eliminated or changed flood regimes, which were essential in maintaining native riparian ecosystems. Changing (usually eliminating) flood regimes provided a competitive edge to tamarisk. In contrast to native phreatophytes, tamarisk does not need floods to establish and is intolerant of submersion when young. Diversion of water caused the lowering of near-surface ground water and reduced the relative success of native species in becoming established. Irrigation water containing high levels of dissolved salts also favors tamarisk, which is more tolerant of high salt levels than most native species (Kerpez and Smith 1987).

The rapid spread of tamarisk has corresponded with the decline of the southwestern willow flycatcher. *E. t. extimus* is generally absent where the exotic tamarisk has replaced native riparian vegetation. However, it is not known whether characteristics of tamarisk stands are inherently unsuitable to *E. t. extimus*, or whether tamarisk invasion and willow flycatcher declines are coincidental. However, changes in bird species diversity, corresponding with invasion by tamarisk, are documented. Conversion to tamarisk typically corresponds with reductions or complete loss of bird species strongly associated with cottonwood-willow habitats. These include the yellow-billed cuckoo (*Coccyzus americanus*), summer tanager (*Piranga rubra*), northern oriole (*Icterus galbula*), and the southwestern willow flycatcher (Hunter *et al.* 1987, Hunter *et al.* 1988, Rosenberg *et al.* 1991).

Some authors believe tamarisk may not provide as much thermal protection as native broadleaf species (Hunter *et al.* 1987, Hunter *et al.* 1988). This thermal difference could be important at lower elevations in the Southwest, where extreme high temperatures are common during the bird's midsummer breeding season. Hunter *et al.* (1987) reported the willow flycatcher as one of seven midsummer-breeding builders of open nests that were found in tamarisk at higher elevations but not lower elevations. Nesting *E. t. extimus* have been found in tamarisk at middle elevations [less than 850–1200 m (2700–3500 feet)], on the Colorado River (Brown 1988), the Rio Grande (Hundertmark 1978, Hubbard 1987), and the San Pedro River (Hunter *et al.* 1987). Conversely, *E. t. extimus* is now absent at lower elevations where tamarisk thrives, e.g., the lower Colorado River [approximately 100 m (328 feet)]. Unitt (1987) speculated that at higher elevations and in the eastern portion of its range, some *E. t. extimus* populations may be adapting to tamarisk. It is also possible that tamarisk affects *E. t. extimus* by altering the riparian insect fauna (Carothers and Brown 1991).

Water developments also likely reduced and modified southwestern willow flycatcher habitat. The series of dams along most major southwestern rivers (Colorado, Gila, Salt, Verde, Rio Grande, Kern, San Diegito, and Mojave) have altered riparian habitats downstream of dams through hydrological changes, vegetational changes, and inundated habitats upstream. New habitat is sometimes created along the shoreline of reservoirs, but this habitat (often tamarisk) is often unstable due to fluctuating levels of regulated reservoirs (Grinnell 1914, Phillips *et al.* 1964, Rosenberg *et al.* 1991).

Diversion and channelization of natural watercourses are also likely to have reduced *E. t. extimus* habitat. Diversion results in diminished surface flows, and consequent reductions in riparian vegetation are likely. Channelization often alters stream banks and fluvial dynamics necessary to maintain native riparian vegetation.

Suckling *et al.* (1992) suggested that logging in the upper watersheds of southwestern rivers may constitute another potential threat to the southwestern willow flycatcher. They stated that logging increases the likelihood of damaging floods in southwestern willow flycatcher nesting habitat.

Finally, the willow flycatcher (all subspecies) is listed among neotropical migratory birds which may face loss of wintering habitat owing to tropical deforestation (Finch 1991).

B. *Overutilization for commercial, recreational, scientific, or educational purposes.* The Service is unaware of threats resulting from overutilization.

C. *Disease or predation.* The Service is unaware of any disease which constitutes a significant threat to *E. t. extimus*. Boland *et al.* (1989) found a single case of larval fly parasites in willow flycatcher nestlings in California.

Predation of southwestern willow flycatchers may constitute a significant threat and may be increasing with habitat fragmentation. Where *E. t. extimus* has been extirpated in the lower Colorado River valley, Rosenberg *et al.* (1991) found increases in the great-tailed grackle (*Quiscalus mexicanus*), which preys on the eggs and young of other birds. Whitfield (1990) found predation on *E. t. extimus* nests to be significant. Predation increased with decreasing distance from nests to thicket edges, suggesting that habitat fragmentation may increase the threat of predation.

D. *The inadequacy of existing regulatory mechanisms.* The Migratory Bird Treaty Act (MBTA)(16 U.S.C. 703–712) is the only current Federal protection provided for the southwestern willow flycatcher. The MBTA prohibits "take" of any migratory bird, which is defined as: "* * * to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to pursue, hunt, shoot, wound, kill, trap, capture, or collect * * *." There are no provisions in the MBTA preventing habitat destruction unless direct mortality or destruction of active nests occurs. Under section 7(a) of the Endangered Species Act, any Federal action which may affect a listed species or its habitat is reviewed through consultation with the Service.

The majority of the southwestern willow flycatcher's range lies within California, Arizona, and New Mexico (Phillips 1948, Hubbard 1987, Unitt 1987). All of those States classify the willow flycatcher as endangered (AGFD 1988, NMDGF 1988, CDFG 1992). The willow flycatcher (all subspecies) was

added to the Audubon Blue List of declining, threatened, or vulnerable species in 1980 (Arbib 1979). These State and private designations do not provide regulatory protection of habitat. However, the States of Arizona, California, and New Mexico regulate the capture, handling, transportation and take of the willow flycatcher through game laws, special licenses, and permits for scientific investigation.

E. *Other natural or manmade factors affecting its continued existence.* The riparian habitat of the southwestern willow flycatcher has always been rare and has become more so. Its habitat rarity, and small, isolated populations make the remaining *E. t. extimus* increasingly susceptible to local extirpation through stochastic events such as floods, fire, brood parasitism, predation, depredation, and land development. In early 1993, catastrophic floods in southern California and Arizona damaged or destroyed much of the remaining occupied or potential breeding habitat. Historically, these floods always have destroyed habitat but were also important events in regenerating cottonwood-willow communities. However, with the little southwestern willow flycatcher habitat remaining, widespread events like those of 1993 could destroy virtually all remaining habitat throughout all or a significant portion of the subspecies' range.

The disjunct nature of habitats and small breeding populations also impedes the flow of genetic material between populations and reduces the chance of demographic rescue by migration from adjacent populations. The resulting constraints on the gene pool intensify the external threats to the species.

Brood parasitism by the brown-headed cowbird (*Molothrus ater*) also threatens the southwestern willow flycatcher. Cowbirds lay their eggs in the nests of other, usually smaller, songbirds. The cowbird often removes a number of the hosts' eggs from the nest equal to the number laid by the cowbird. The host species then incubates the cowbird eggs, which hatch after a relatively short incubation (12 days), usually prior to the hosts' own eggs. Thus, the young cowbirds have several advantages over the host's young; they hatch earlier, they are larger, and they are also more aggressive than the host's young. Cowbird nestlings typically outcompete those of the host species for parental care, and the host species' own reproduction is reduced or eliminated (McGeen 1972, Mayfield 1977a, Brittingham and Temple 1983).

The brown-headed cowbird was originally restricted to the Great Plains, where it was strongly associated with American bison (*Bison bison*). As North America was settled, cowbirds became associated with livestock and human agriculture, because of the food sources they provided (Flett and Sanders 1987, Valentine *et al.* 1988). The expansion of agriculture, livestock grazing, and widescale human activities in general caused opening and fragmenting of forest and woodland habitats. Habitat fragmentation is strongly correlated with increased rates of brood parasitism by brown-headed cowbirds (Rothstein *et al.* 1980, Brittingham and Temple 1983, Airola 1986). Some species are likely to have adapted to parasitism over time, particularly prairie nesters in the original range of the cowbird. However, the rapid expansion of the cowbird now brings it into contact with forest and woodland species not adapted to deal with brood parasitism (Hill 1976, Mayfield 1977a).

The brown-headed cowbird was apparently an uncommon bird within the range of *E. t. extimus* until the late 1800's. Since then, the species has greatly expanded in numbers and distribution throughout the region (Laymon 1987). Increases in cowbirds in the San Bernardino Valley between 1918 and 1928 caused "considerable alarm" (Hanna 1928). Although Friedmann *et al.* (1977) reported relatively low rates of parasitism of willow flycatchers in the western United States, this was apparently due to their data (egg sets) being collected prior to the major incursions of cowbirds into Pacific coast riparian habitats (L. Kiff, Western Foundation for Vertebrate Zoology, pers. comm.). Brood parasitism of the willow flycatcher (several subspecies) by brown-headed cowbirds is well documented (Hanna 1928, Rowley 1930, Willett 1933, Hicks 1934, King 1954, Holcomb 1972, Friedmann *et al.* 1977, Garret and Dunn 1981, Harris *et al.* 1987, Brown 1988, 1991, Sedgewick and Knopf 1988, Whitfield 1990, Harris 1991).

The increases in cowbirds in the Southwest and parasitism of *E. t. extimus* and other birds are generally described by the following scenario. The introduction of modern human settlements, livestock grazing, and other agricultural developments resulted in habitat fragmentation. Simultaneously, livestock grazing, and other agricultural developments served as vectors for cowbirds, providing feeding areas in or near host species' nesting habitats (Hanna 1928, Gaines 1974, Mayfield 1977a). Cowbirds may travel almost 7 kilometers (km) (4.2 miles) from feeding sites where livestock congregate, to areas where host species are parasitized (Rothstein *et al.* 1984). These factors increased both the vulnerability of *E. t. extimus* and the likelihood of encounters with cowbirds. Finally, the high edge-to-interior ratio of linear riparian habitats like that of *E. t. extimus* renders birds nesting there particularly vulnerable to parasitism (Airola 1986, Laymon 1987, Harris 1991). Linear riparian habitats are also especially vulnerable to fragmentation by grazing, which further increases both the edge-to-interior ratio, and the threat of parasitism.

The effects of parasitism by brown-headed cowbirds on willow flycatchers include reducing nest success and egg-to-fledging rates, and delaying successful fledging (because of renesting attempts) (Harris 1991). A common response to parasitism is abandonment of the nest (Holcomb 1972). Willow flycatchers may respond to parasitism by ejecting cowbird eggs, by burying them with nesting material and renesting on top of them, or by renesting in another nest (Harris 1991). However, the success of renesting is often reduced because these attempts produce fledglings several weeks later than normal, which may not allow them adequate time to prepare for migration (Harris 1991). Renesting also usually results in smaller clutches, further reducing overall reproductive potential (Holcomb 1974).

McCabe (1991) downplayed the significance of cowbird parasitism as a threat to any species except Kirtland's warbler (*Dendroica kirtlandii*). However, perhaps reflecting his regional perspective, he characterized the high parasitism rates on willow flycatchers reported by Trautman (1940 cited in McCabe 1991) and Sedgwick and Knopf (1988) as aberrant (56 percent and 41 percent, respectively). McCabe considered the high rates the result of the " * * * linear configuration of the habitat * * * (c)owbirds lay eggs in songbird nests closest to cover edge." The vast majority of southwestern willow flycatcher habitat is very linear. McCabe's monograph focussed on the combined "Traill's flycatcher" superspecies, which comprises *E. t. traillii* and *E. alnorum* in marshy habitats in the upper Midwest, where parasitism rates ranged from 3 percent to 19 percent.

Brittingham and Temple (1983) considered "high" parasitism rates (percent of nests parasitized) to be 24 percent, with some as high as 72 percent. Mayfield (1977a) thought a species (or population) might be able to survive a 24 percent parasitism rate, but

that losses much higher than that "would be alarming." Parasitism rates of 72 percent to 83 percent on Kirtland's warbler (Mayfield 1977b) resulted in a precipitous population decline. Where they are known, parasitism rates for *E. t. extimus* are capable of causing similar declines. In California, parasitism rates ranged from 50 percent to 80 percent between 1987 and 1992, when an estimated population size decreased from 44 nesting pairs to 28 (Whitfield 1990, Harris 1991, Whitfield and Laymon, unpubl. data). These parasitism rates were considered minimum measures, because several nests were abandoned each year owing to unknown causes, which could have included parasitism. Brown (1988) reported an average 50 percent parasitism rate in the Grand Canyon between 1982 and 1987. Although his estimated population increased from 2 pairs to 11 during that period, it has since decreased back to 2 nesting pairs (Brown 1991, Sogge and Tibbitts 1992). Harris (1991) believed that the parasitism rates observed on the Kern River in 1987 (68 percent of all nests, 88 percent of all nest territories) were high enough to prevent *E. t. extimus* from recolonizing lowland riparian habitat, even if such habitat were restored.

Rothstein *et al.* (1980), Stafford and Valentine (1985), and Harris (1991) believed parasitism may be correlated with elevation, being more severe at lower elevations. Coupled with greater loss of lowland (desert) riparian habitat, the effects of habitat loss and parasitism are compounded. However, cowbirds now appear to be increasing at higher elevations (Hanka 1985).

In addition to causing habitat degradation and facilitating brood parasitism, livestock grazing in and near riparian areas may also threaten the southwestern willow flycatcher through direct mortality. Livestock in riparian habitats sometimes make physical contact with nests, resulting in destruction of nests and spilling out eggs or nestlings. All known documentations of this threat involve *E. t. brewsteri*, perhaps because virtually all known remaining populations of *E. t. extimus* are in ungrazed habitats (Serena 1982, Harris *et al.* 1987, Whitfield and Laymon, unpubl. data). Livestock grazing likely affects *E. t. extimus* by disrupting nesting behavior or upsetting nests. Valentine *et al.* (1988) studied willow flycatchers in California from 1983 through 1987, when 11 of their 20 recorded nesting attempts failed. They found that "* * * [p]rior to reduction of grazing intensity in 1987, livestock accounted for 36% of the failed nests or 20% of all nesting attempts. In addition, livestock destroyed four successful nests shortly after the young had fledged." Stafford and Valentine (1985) reported that three of eight (37.5 percent) willow flycatcher nests in their study site were probably destroyed by cattle. Flett and Sanders (1987) documented no nest upsets due to livestock, but noted the vulnerability of nests to upset, owing to their placement low in willow clumps (see also Serena 1982).

The southwestern willow flycatcher's preference for, and former abundance in, floodplain areas that are now largely agricultural may indicate a potential threat from pesticides. Where flycatcher populations remain, they are sometimes in proximity to agricultural areas, with the associated pesticides and herbicides. Without appropriate precautions, these agents may potentially affect the southwestern willow flycatcher through direct toxicity or effects on their insect food base. No quantitative data on this potential threat are known at this time.

Recreation that is focused on riparian areas, particularly during warm summer breeding months, may also constitute a threat to *E. t. extimus*. Taylor (1986) found a possible correlation between recreational activities and decreased riparian bird abundance. Blakesley and Reese (1988) reported the willow flycatcher (probably *E. t. adastus*) as one of seven species negatively associated with campgrounds in riparian areas in northern Utah. It is unknown whether these possible effects involve impacts to habitat or disturbance of nesting birds.

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by this species in determining to propose this rule. Based on this evaluation, the preferred action is to list the southwestern willow flycatcher as endangered. Threatened status would not be appropriate because the large proportion of historic habitat loss already constitutes extinction throughout a significant portion of the species' range. The rationale for proposing critical habitat is provided in the "Critical Habitat" section of this proposed rule.

Critical Habitat

Critical habitat, as defined by Section 3(5)(A) of the Act, means:

(i) The specific areas within the geographical 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 geographical 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.

Section 4(a)(3) of the Act requires that critical habitat be designated to the maximum extent prudent and determinable concurrently with the determination that a species is endangered or threatened. Critical habitat is being proposed for the southwestern willow flycatcher to include riparian areas along streams and rivers in southern California, Arizona, and New Mexico. The following areas are proposed as critical habitat:

1. California, Riverside and San Bernardino counties: Approximately 25 km (16 miles) of the Santa Ana River, from Rio Road downstream to Prado Flood Control Basin Dam.
2. California, San Diego County: Approximately 33 km (20 miles) of the Santa Margarita River, from the unnamed trail at T6S, R3W, Section 34) downstream to northbound Interstate 5.
3. California, San Diego County: Approximately 38 km (24 miles) of the San Luis Rey River, from Mission Road downstream to northbound Interstate 5.
4. California, San Diego County: Approximately 27 km (15 miles) of the San Diegito River, from southbound Interstate 15 downstream to northbound Interstate 5.
5. California, San Diego County: Approximately 8 km (5.5 miles) of the San Diego River, from Carlton Hills Boulevard downstream to the Second San Diego Aqueduct.
6. California, San Diego County: Approximately 5.5 km (3.3 miles) of the Tijuana River, from Larsen Field downstream to the windmill at T19S, R2W, Section 4.
7. California, San Diego County: Approximately 34 km (21 miles) of the South Fork of the Kern River, from the confluence of Canebrake Creek downstream to Isabella Lake Dam, including Isabella Lake.
8. Arizona, Cochise County: Approximately 87 km (54 miles) of the San Pedro River from the Hereford Bridge downstream to eastbound Interstate 10 at Benson.
9. Arizona; Cochise, Pima and Pinal Counties: Approximately 106 km (66 miles) of the San Pedro River from the Gaging Station near Aguaja Canyon downstream to the confluence with the Gila River, including Cook's Lake.

10. Arizona, Yavapai and Gila Counties: Approximately 145 km (90 miles) of the Verde River, from Sob Canyon downstream to Horseshoe Reservoir, including Peck's Lake and Tavasci Marsh.
11. Arizona, Yavapai County: Approximately 40 km (25 miles) of Wet Beaver Creek and Beaver Creek, from the unnamed tributary drainage on the north side of Wet Beaver Creek, just east of Hog Hill, downstream to the confluence of Beaver Creek and the Verde River.
12. Arizona, Yavapai County: Approximately 37 km (23 miles) of West Clear Creek, from the unnamed tributary drainage on the south, at Bull Hole, downstream to the Verde River.
13. Arizona, Coconino County: Approximately 52 km (32 miles) of the Colorado River, from river mile 39 downstream to river mile 71.5. (River mile 0 = Lee's Ferry).
14. Arizona, Apache County: Approximately 48 km (30 miles) of the West, East, and South Forks of the Little Colorado River, and the Little Colorado River, from the diversion ditch at T8N, R28E, Section 16, upstream to Forest Road 113 on the West Fork, upstream to Forest Road 113 on the East Fork, and upstream to Joe Baca Draw on the South Fork.
15. New Mexico, Bernalillo County: Approximately 32 km (20 miles) of the Rio Grande River, from the Alameda Boulevard bridge in northern Albuquerque downstream to southbound Interstate 25.
16. New Mexico, Catron and Grant Counties: Approximately 63 km (39 miles) of the Gila River and the East and West Forks of the Gila River, from El Rincon on the Gila River upstream to Hell's Hole Canyon on the West Fork of the Gila River, and upstream to the confluence of Taylor Creek and Beaver Creek on the East Fork of the Gila River.
17. New Mexico, Grant and Hidalgo Counties: Approximately 90 km (56 miles) of the Gila River, from the confluence of Hidden Pasture Canyon downstream to the confluence of Steeple Rock Canyon.
18. New Mexico, Catron County: Approximately 105 km (65 miles) of the San Francisco River, from the confluence of Trail Canyon downstream to San Francisco Hot Springs.
19. New Mexico, Catron County: Approximately 60 km (37 miles) of the Tularosa River and Apache Creek, from the confluence of the Tularosa and San Francisco Rivers upstream, to the source of the Tularosa River near the continental divide, and upstream on Apache Creek to the confluence with Whiskey Creek.

A total of approximately 1,038 km (643) miles of stream and river are being proposed as critical habitat. The areas described were chosen for critical habitat designation because they contain the remaining known southwestern willow flycatcher nesting sites, and/or formerly supported nesting southwestern willow flycatchers, and/or have the potential to support nesting southwestern willow flycatchers. All areas contain, or with recovery will contain, suitable nesting habitat in a patchy, discontinuous distribution. This distribution is partially the result of natural regeneration patterns of riparian vegetation (e.g. cottonwood-willow). The distribution of these habitat patches is expected to shift over time. Because of this spatial and temporal distribution of habitat patches, it is important that the entirety of the proposed river reaches be designated critical habitat. All areas contain some unoccupied habitat or former (degraded) habitat, needed to recover ecosystem integrity and support larger southwestern willow flycatcher numbers during the species' recovery. A number of separate, protected, healthy populations of southwestern willow flycatchers are needed to protect the species from extinction. Protection of this proposed critical habitat would be essential for the conservation of the species. The southwestern willow flycatcher is already extirpated from a significant portion of its former range.

The Service is required to base critical habitat proposals on the best available scientific information (50 CFR 424.12). In determining what areas to propose as critical habitat, the Service considers those physical and biological features that are essential to the conservation of the species and that may require special management considerations or protection. Such requirements include, but are not limited to, the following: (1) Space for individual and population growth; (2) food, water, air, light, minerals, or other nutritional or physiological requirements; (3) cover or shelter; (4) sites for breeding, reproduction, rearing of offspring, germination, or seed dispersal; and generally, (5) habitats that are protected from disturbance or are representative of the historic geographical and ecological distributions of a species. The Service also considers primary constituent elements of critical habitat, which may include, but are not limited to, the following: roost sites, nesting grounds, spawning sites, feeding sites, seasonal wetland or dryland, water quality or quantity, host species or plant pollinator, geological formation, vegetation type, tide, and specific soil types.

The Service is proposing to designate as critical habitat areas which provide, or with rehabilitation will provide, the following physical and biological features and primary constituent elements:

- Space for individual and population growth.
- Food, water (seasonal wetland), air, light, minerals, and other nutritional or physiological requirements.
- Cover, shelter, and roost sites.
- Sites for breeding, reproduction, and rearing of offspring.
- Habitats (vegetation type, feeding sites and nesting grounds) that are protected from disturbance or are representative of the historic geographical and ecological distributions of the species.

For all areas of critical habitat proposed here, these physical and biological features and primary constituent elements are provided or will be provided by thickets of riparian shrubs and small trees and adjacent surface water. Specifically, critical habitat must provide surface water throughout the May through September breeding season. Constituent elements include the riparian ecosystem above the water's surface or within 100 m (328 feet) of the water's edge. Constituent elements include riparian thickets of shrubs and small trees above or within 100 m (328 feet) of surface water, or areas where such vegetation may become established.

Designation of critical habitat is not prudent when the species is threatened by taking or other human activity, and identification of critical habitat can be expected to increase the degree of such threat, or when designation of critical habitat would not be beneficial to the species (50 CFR 424.12(a)(1)).

The Service has determined that designation of critical habitat for the southwestern willow flycatcher is prudent. The Service has no evidence that any taking or similar human activity could be expected to increase in degree as a result of the identification of critical habitat. Although currently rare, the southwestern willow flycatcher is not highly sought out by recreational bird watchers. It is not one of the highly-publicized specialty bird species which draws millions of bird watchers annually to the southwestern United States. The majority of the critical habitat areas proposed are in remote locales, where intentional or accidental take or disturbance by humans are

unlikely. Impacts from recreational bird watching or taking are not currently known to exist and are not likely to be increased as a result of designation of critical habitat.

The southwestern willow flycatcher is a neotropical migratory bird, present in its breeding habitat from May until August or September. It then migrates to wintering grounds in Mexico, Central America, and perhaps northern South America (Gorski 1969, McCabe 1991). Nesting habitat, and especially potentially recoverable nesting habitat, would not be adequately protected by prohibitions of the Act against take of the species; especially during the nonbreeding season when the species is not present. Designation of critical habitat will benefit the southwestern willow flycatcher by conserving and enhancing the components of current and potential nesting habitat.

The southwestern willow flycatcher is endangered by extensive loss of nesting habitat and is now extirpated across much of its former breeding range. The Service may designate as critical habitat areas outside the geographical area presently occupied by a species when a designation limited to its present range would be inadequate to ensure the conservation of the species (50 CFR 424.12(e)). Such designation of critical habitat is necessary for the southwestern willow flycatcher, in order to allow recovery of the physical and biological features and constituent elements of nesting habitat and to provide space for population growth and ensure the conservation and recovery of the species (50 CFR 424.12(b)).

Critical habitat is not determinable when the information required to perform the required analysis of impacts of the designation is lacking, or the biological needs of the species are not sufficiently well known to permit identification of an area as critical habitat (50 CFR 424.12(a)(2)). With respect to the southwestern willow flycatcher, sufficient information is available to perform the required analysis of impacts of critical habitat designation. The Service also possesses sufficient information on the biological needs of the species to permit identification of the primary constituent elements of critical habitat.

Section 4(b)(8) requires, for any proposed or final regulation that designates critical habitat, a brief description and evaluation of those activities (public or private) that may adversely modify such habitat or may be affected by such designation. Such activities may include:

(1) Removing, thinning, or destroying riparian vegetation. Activities which remove, thin, or destroy riparian vegetation, by mechanical, chemical (herbicides or burning), or biological (grazing) means degrade or remove constituent elements for southwestern willow flycatcher that are necessary for sheltering, feeding, and breeding.

(2) Water diversion or impoundment, groundwater pumping, or any other activity which may alter the quantity or quality of surface or subsurface water flow. Activities which alter the quantity or quality of surface or subsurface water flow may affect riparian vegetation, food availability, or the general suitability of the site for nesting.

(3) Overstocking or other mismanagement of livestock. Excessive use of riparian areas and adjacent areas for livestock grazing may affect the volume and composition of riparian vegetation, facilitate brood parasitism by brown-headed cowbirds, and physically disturb nests.

(4) Development of recreational facilities and off-road vehicle operation. Activities which facilitate recreational activities may affect riparian vegetation, reduce space for individual and population growth, and inhibit normal behavior.

Federal actions that may affect a listed species are reviewed through consultation between the funding or authorizing agency and the Service. The purpose of these consultations is to ensure that activities are carried out in a manner that is consistent with the conservation of the species. Federally authorized or funded activities that may be subject to consultation include grazing programs, clearing of riparian habitat, water diversion, and recreational development. Federal agencies that may be required to consult with the Service on one or more of these activities include the Bureau of Land Management, Bureau of Reclamation, USDA Forest Service, and the U.S. Marine Corps.

Section 4(b)(2) of the Act requires the Service to consider economic and other impacts of designating any particular area as critical habitat. Section 4(b)(2) authorizes the Service to exclude any area from critical habitat designation if the Service determines the benefits of excluding the area outweigh the benefits of including it, except that the Service may not exclude an area if the Service determines that doing so would result in extinction of the species. Pursuant to 50 CFR 424.19, the Service will consider the economic and other relevant impacts of the proposed designation of critical habitat for the southwestern willow flycatcher in light of all additional relevant information obtained before making a decision on whether to issue a final rule.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Endangered Species Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages and results in conservation actions by Federal, State, and private agencies, groups, and individuals. The Act provides for possible land acquisition and cooperation with the States and authorizes recovery plans for all listed species. The protection required of Federal agencies and the prohibitions against taking and harm are discussed, in part, below.

Section 7(a) of the Act, as amended, 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 critical habitat, if any is being designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402. Section 7(a)(4) requires Federal agencies to confer informally with the Service on any action that is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed critical habitat. If a species is listed subsequently, 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 to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with the Service. General types of activities and agencies involved that may affect the species were identified in the "Critical Habitat" section of this proposed rule.

The Act and implementing regulations found at 50 CFR 17.21 set forth a series of general prohibitions and exceptions that apply to all endangered wildlife. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to take (includes harass, harm, pursue, hunt, shoot, wound, kill, trap, or collect; or to attempt any of these), import or export, ship in interstate commerce in the course of commercial activity, or sell or offer for sale in interstate or foreign commerce any listed species. It also is

illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that has been taken illegally. Certain exceptions apply to agents of the Service and state conservation agencies.

Permits may be issued to carry out otherwise prohibited activities involving endangered wildlife species under certain circumstances. Regulations governing permits are at 50 CFR 17.22 and 17.23. Such permits are available for scientific purposes, to enhance the propagation or survival of the species, and/or for incidental take in connection with otherwise lawful activities.

In some instances, permits may be issued for a specified time to relieve undue economic hardship that would be suffered if such relief were not available. This species is not in trade, and such permit requests are not expected.

Public Comments Solicited

The Service intends that any final action resulting from this proposal will be as accurate and as effective as possible. Therefore, comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, or any other interested party concerning this proposed rule are hereby solicited. Comments particularly are sought concerning:

(1) Biological, commercial trade, or other relevant data concerning any threat (or lack thereof) to this species;

(2) The location of any additional populations of this species and the reasons why any habitat should or should not be determined to be critical habitat as provided by Section 4 of the Act;

(3) Additional information concerning the range, distribution, and population size of this species;

(4) Current or planned activities in the subject area and their possible impacts on this species; and

(5) Any foreseeable economic and other impacts resulting from the proposed designation of critical habitat.

Final promulgation of the regulation on this species will take into consideration the comments and any additional information received by the Service, and such communications may lead to a final regulation that differs from this proposal.

The Endangered Species Act provides for a public hearing on this proposal, if requested. Because of public interest anticipated and already expressed, the Service will hold public hearings in the following locations: San Diego, California; Tucson, Arizona; and Las Cruces, New Mexico. A public hearing will be conducted in each of these cities from 6 p.m. to 9 p.m., on dates yet to be determined. The dates and specific locations for these public hearings will be made public in accordance with 50 CFR § 424.16. The Service may decide to limit oral statements to 3, 5, or 10 minutes, depending on the number of parties who want to give such statements. There are no limits to the length of any written statement presented at the hearings or mailed to the Service. Oral comments presented at the public hearings are given the same weight and consideration as comments presented in written form. If the scheduled public hearings are insufficient to provide all individuals with an opportunity to speak, anyone not accommodated will be asked to submit their comments in writing.

National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to Section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination was published in the **Federal Register** on October 25, 1983 (48 FR 49244).

References Cited

A complete list of all references cited herein, as well as others, is available upon request from the Field Supervisor, Arizona Ecological Services Field Office (see **ADDRESSES** above).

Author

The primary author of this proposed rule is Timothy J. Tibbitts, Arizona Ecological Services Office (see **ADDRESSES** above).

List of Subjects in 50 CFR Part 17

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

Proposed Regulations Promulgation

Accordingly, it is hereby proposed 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. It is proposed to amend § 17.11(h) by adding the following, in alphabetical order under Birds, to the List of Endangered and Threatened Wildlife:

§ 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						
*	*	*	*	*	*	*	*
Birds							
*	*	*	*	*	*	*	*
Flycatcher, southwestern willow.	*Empidonax traillii extimus.*	U.S.A. (AZ, CA, CO, NM, UT, TX), Mexico.	Entire	E		17.95(b)	NA
*	*	*	*	*	*	*	*

3. It is further proposed to amend 50 CFR § 17.95(b) by adding critical habitat of the southwestern willow flycatcher, in the same alphabetical order as the species occurs in § 17.11(h).

§ 17.95 Critical habitat—fish and wildlife.

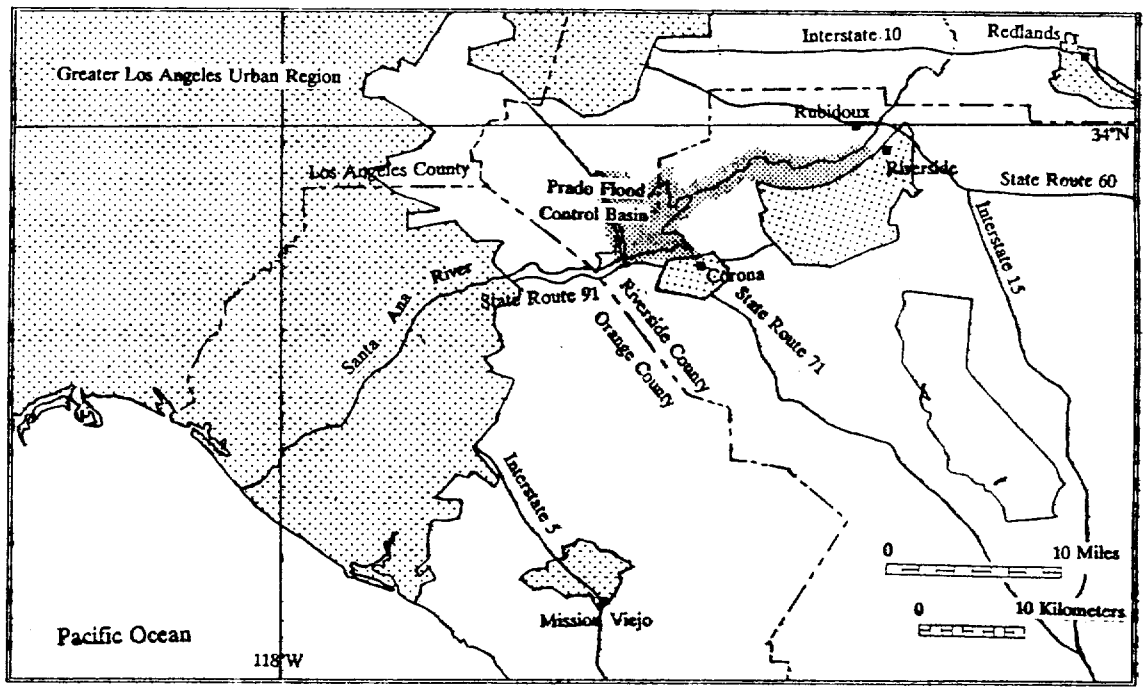
(b) * * *

* * * * * *

Southwestern Willow Flycatcher (*Empidonax traillii extimus*)

California: Areas of land and water as follows:

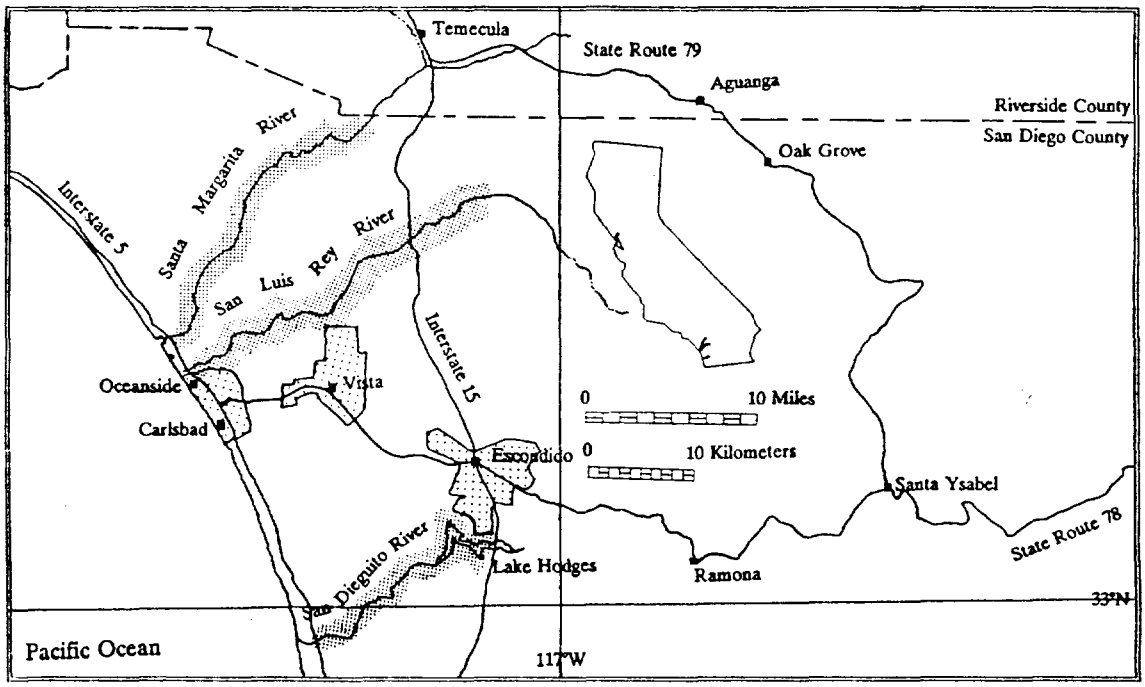
Riverside and San Bernardino Counties: Santa Ana River from Rio Road (T2S, R5W, no surveyed section but at 34° 59' 00" North, 117° 25' 15" West) downstream to Prado Flood Control Basin Dam (T3S, R7W, Section 20). The boundaries include areas with surface water (main river channel and all associated side channels, backwaters, pools, and marshes) throughout the May-September breeding season, and areas where such surface water no longer exists owing to habitat degradation but may be recovered with habitat rehabilitation. The boundaries also include areas within 100 meters (328 feet) of the edge of surface water described above. This includes areas with thickets of riparian shrubs and trees, and areas where such riparian vegetation does not currently exist but may become established with natural regeneration or habitat rehabilitation.



San Diego County: Santa Margarita River from the unnamed trail at T8S, R3W, Section 34) downstream to northbound Interstate 5 (T11S, R5W, Section 19). The boundaries include areas with surface water (main river channel and all associated side channels, backwaters, pools, and marshes) throughout the May-September breeding season, and areas where such surface water no longer exists owing to habitat degradation but may be recovered with habitat rehabilitation. The boundaries also include areas within 100 meters (328 feet) of the edge of surface water described above. This includes areas with thickets of riparian shrubs and trees, and areas where such riparian vegetation does not currently exist but may become established with natural regeneration or habitat rehabilitation.

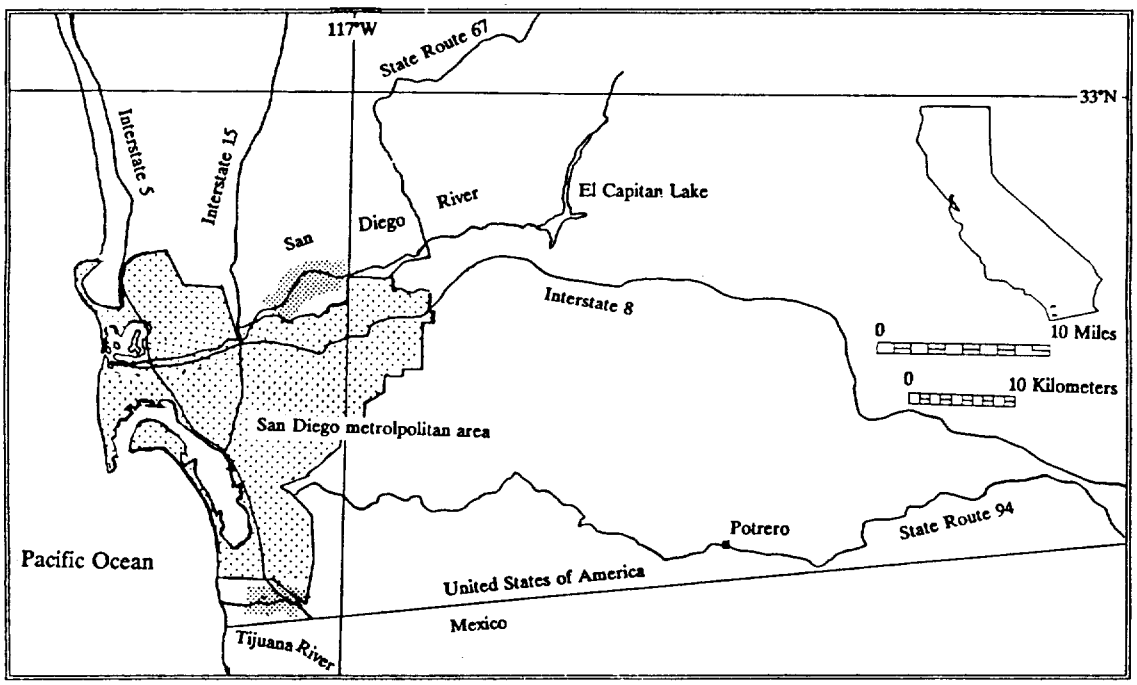
San Diego County: San Luis Rey River from Mission Road (T9S, R2W, Section 27) downstream to northbound Interstate 5 (T11S, R5W, Section 22). The boundaries include areas with surface water (main river channel and all associated side channels, backwaters, pools, and marshes) throughout the May-September breeding season, and areas where such surface water no longer exists owing to habitat degradation but may be recovered with habitat rehabilitation. The boundaries also include areas within 100 meters (328 feet) of the edge of surface water described above. This includes areas with thickets of riparian shrubs and trees, and areas where such riparian vegetation does not currently exist but may become established with natural regeneration or habitat rehabilitation.

San Diego County: San Diegito River from southbound Interstate 15 (T13S, R2W, no section surveyed, but at 33° 3' 45" North, 117° 4' 00" West) downstream to northbound Interstate 5 (T14S, R4W, Section 12). The boundaries include areas with surface water (main river channel and all associated side channels, backwaters, pools, and marshes) throughout the May-September breeding season, and areas where such surface water no longer exists owing to habitat degradation but may be recovered with habitat rehabilitation. The boundaries also include areas within 100 meters (328 feet) of the edge of surface water described above. This includes areas with thickets of riparian shrubs and trees, and areas where such riparian vegetation does not currently exist but may become established with natural regeneration or habitat rehabilitation.

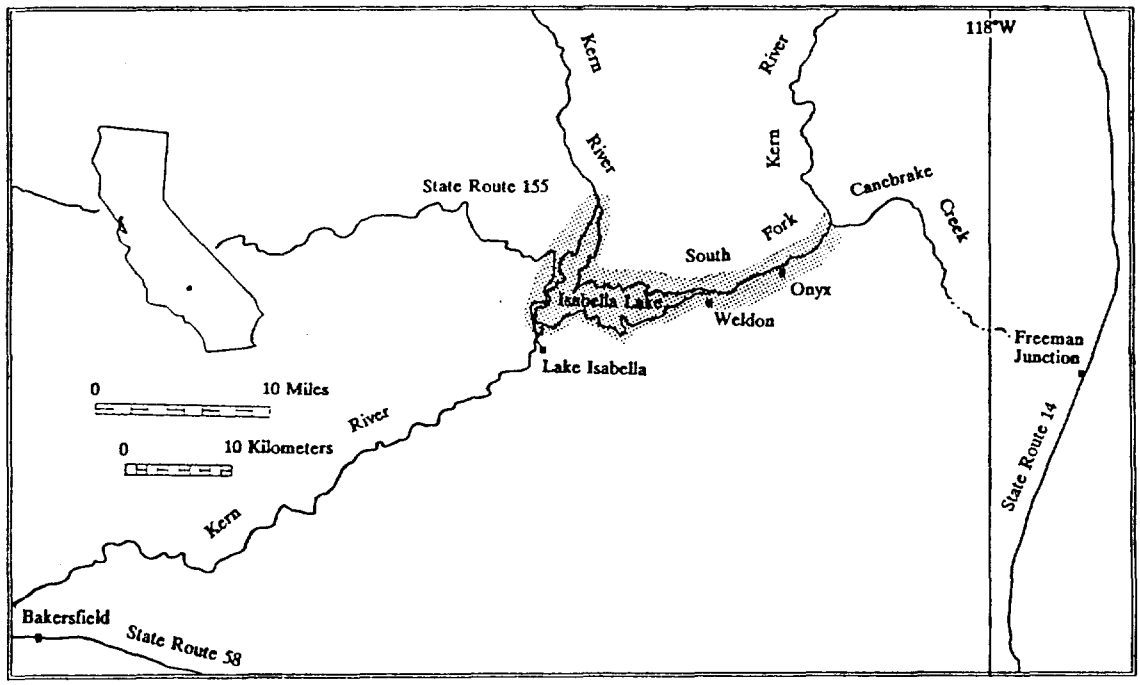


San Diego County: San Diego River from Carlton Hills Boulevard (T15S, R1W, no section surveyed, but at 32° 50′ 45″ North, 117° 59′ 30″ West) downstream to the Second San Diego Aqueduct T15S, R2W, no section surveyed, but at 32° 49′ 30″ North, 117° 3′ 45″ West). The boundaries include areas with surface water (main river channel and all associated side channels, backwaters, pools, and marshes) throughout the May-September breeding season, and areas where such surface water no longer exists owing to habitat degradation but may be recovered with habitat rehabilitation. The boundaries also include areas within 100 meters (328 feet) of the edge of surface water described above. This includes areas with thickets of riparian shrubs and trees, and areas where such riparian vegetation does not currently exist but may become established with natural regeneration or habitat rehabilitation.

San Diego County: Tijuana River from Larsen Field (T19S, R2W, Section 1) downstream to the windmill at T19S, R2W, Section 4. The boundaries include areas with surface water (main river channel and all associated side channels, backwaters, pools, and marshes) throughout the May-September breeding season, and areas where such surface water no longer exists owing to habitat degradation but may be recovered with habitat rehabilitation. The boundaries also include areas within 100 meters (328 feet) of the edge of surface water described above. This includes areas with thickets of riparian shrubs and trees, and areas where such riparian vegetation does not currently exist but may become established with natural regeneration or habitat rehabilitation.



Kern County: South Fork of the Kern River from the confluence of Canebrake Creek (T25S, R36E, Section 30) downstream to Isabella Lake Dam (T26S, R33E, Section 19), including Isabella Lake. The boundaries include areas with surface water (main river channel and all associated side channels, backwaters, pools, and marshes) throughout the May-September breeding season, and areas where such surface water no longer exists owing to habitat degradation but may be recovered with habitat rehabilitation. The boundaries also include areas within 100 meters (328 feet) of the edge of surface water described above. This includes areas with thickets of riparian shrubs and trees, and areas where such riparian vegetation does not currently exist but may become established with natural regeneration or habitat rehabilitation.



Arizona: Areas of land and water as follows:

Conchise County: San Pedro River from the Hereford Bridge (T23S, R22E, Section 9), downstream to eastbound Interstate 10 bridge at Benson (T17S R20E, Section 11). The boundaries include areas with surface water (main river channel and all associated side channels, backwaters, pools, and marshes) throughout the May-September breeding season, and areas where such surface water no longer exists owing to habitat degradation but may be recovered with habitat rehabilitation. The boundaries also include areas within 100 meters (328 feet) of the edge of surface water described above. This includes areas with thickets of riparian shrubs and trees, and areas where such riparian vegetation does not currently exist but may become established with natural regeneration or habitat rehabilitation.

Cochise, Pima and Pinal Counties: San Pedro River from the Gaging Station near Aguaja Canyon (T12S, R18E, Section 19), downstream to the confluence with the Gila River (T5S, R15E, Section 23). The boundaries include areas with surface water (main river channel and all associated side channels, backwaters, pools, and marshes) throughout the May-September breeding season, and areas where such surface water no longer exists owing to habitat degradation but may be recovered with habitat rehabilitation. The boundaries also include areas within 100 meters (328 feet) of the edge of surface water described above. This includes areas with thickets of riparian shrubs and trees, and areas where such riparian vegetation does not currently exist but may become established with natural regeneration or habitat rehabilitation.

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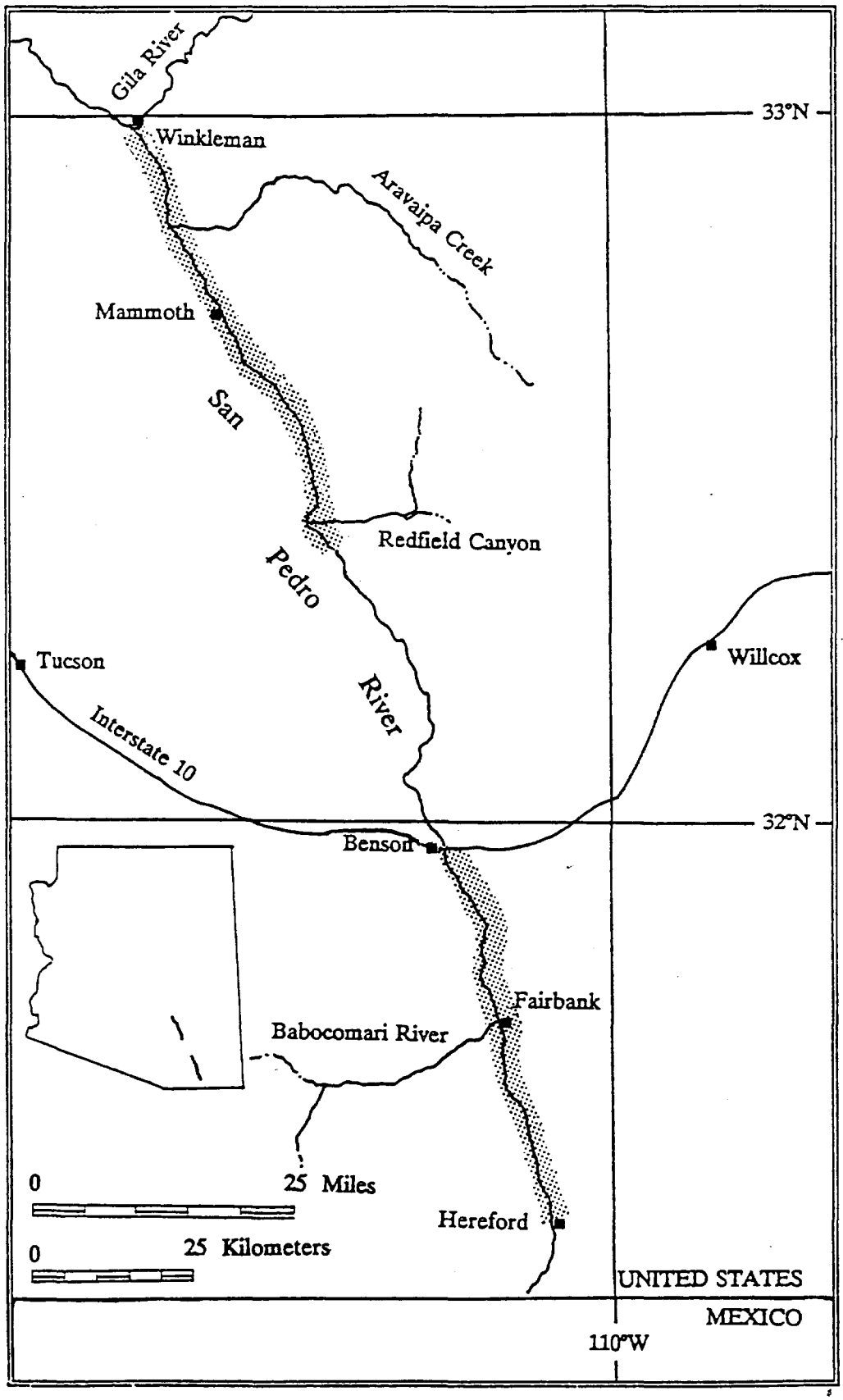

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Yavapai and Gila Counties: Verde River from Sob Canyon (T17N, R3E, Section 29) to its inflow into Horseshoe Reservoir (T8N, R6E, Section 15), including Peck's Lake and Tavasci Marsh. The boundaries include areas with surface water (main river channel and all associated side channels, backwaters, pools, and marshes) throughout the May-September breeding season, and areas where such surface water no longer exists owing to habitat degradation but may be recovered with habitat rehabilitation. The boundaries also include areas within 100 meters (328 feet) of the edge of surface water described above. This includes areas with thickets of riparian shrubs and trees, and areas where such riparian vegetation does not currently exist but may become established with natural regeneration or habitat rehabilitation.

Yavapai County: Wet Beaver Creek and Beaver Creek from the unnamed tributary drainage on the north side of Wet Beaver Creek, just east of Hog Hill (T15N, R7E, Section 14), downstream to the confluence of Beaver Creek and the Verde River (T14N, R5E, Section 30). The boundaries include areas with surface water (main river channel and all associated side channels, backwaters, pools, and marshes) throughout the May-September breeding season, and areas where such surface water no longer exists owing to habitat degradation but may be recovered with habitat rehabilitation. The boundaries also include areas within 100 meters (328 feet) of the edge of surface water described above. This includes areas with thickets of riparian shrubs and trees, and areas where such riparian vegetation does not currently exist but may become established with natural regeneration or habitat rehabilitation.

Yavapai County: West Clear Creek from the unnamed tributary drainage on the south, at Bull Hole (T14N, R7E, Section 36), downstream to the Verde River (T13N, R5E, Section 17). The boundaries include areas with surface water (main river channel and all associated side channels, backwaters, pools, and marshes) throughout the May-September breeding season, and areas where such surface water no longer exists due to habitat degradation but may be recovered with habitat rehabilitation. The boundaries also include areas within 100 meters (328 feet) of the edge of surface water described above. This includes areas with thickets of riparian shrubs and trees, and areas where such riparian vegetation does not currently exist but may become established with natural regeneration or habitat rehabilitation.

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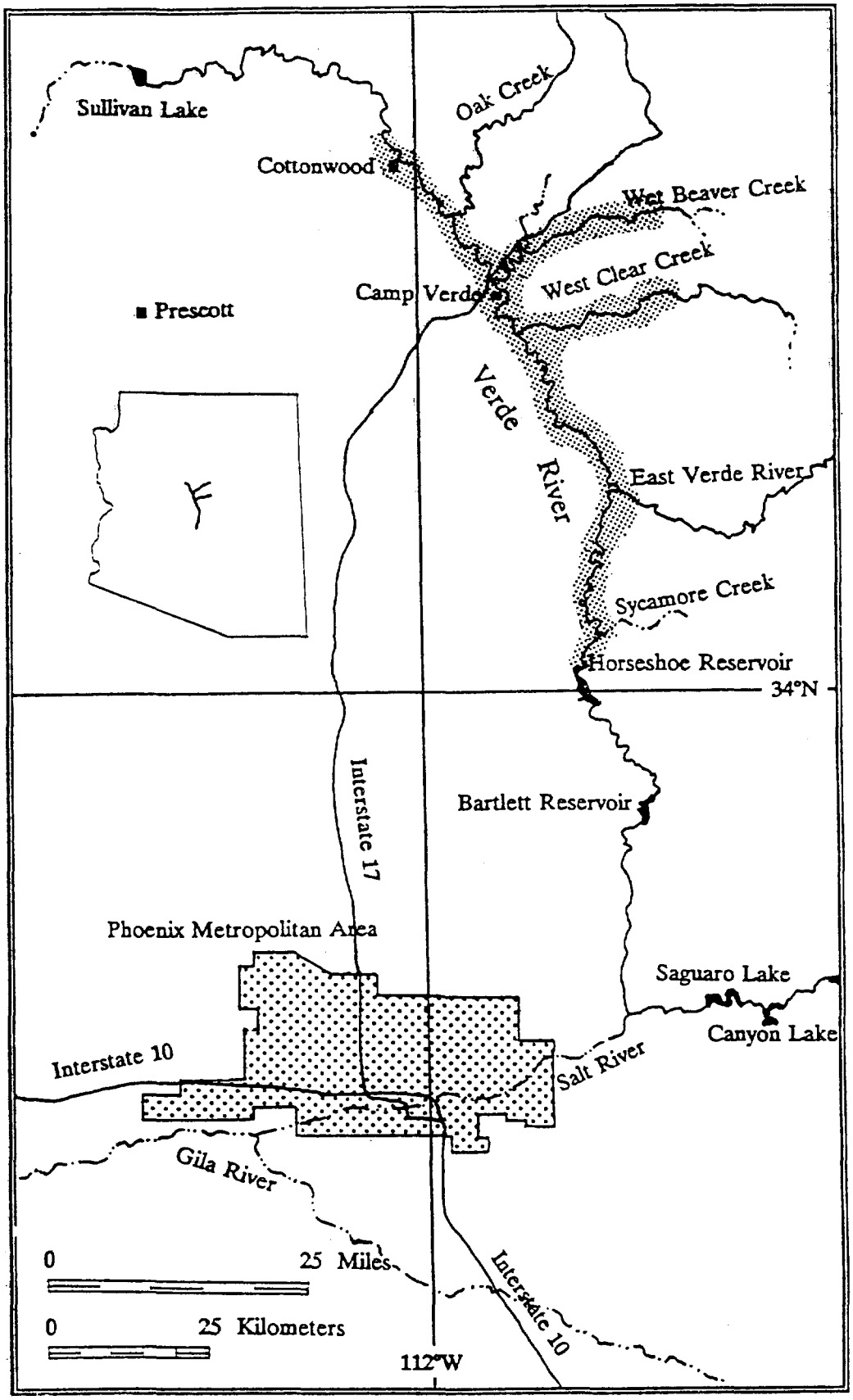

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Coconino County: Colorado River from river mile 39 (T35N, R5E, Section 16) downstream to river mile 71.5 (T31N, R5E Section 8). (River mile 0 = Lee's Ferry). The boundaries include areas with surface water (main river channel and all associated side channels, backwaters, pools and marshes) throughout the May-September breeding season, and areas where such surface water no longer exists owing to habitat degradation but may be recovered with habitat rehabilitation. The boundaries also include areas within 100 meters (328 feet) of the edge of surface water described above. This includes areas with thickets of riparian shrubs and trees, and areas where such riparian vegetation does not currently exist but may become established with natural regeneration or habitat rehabilitation.

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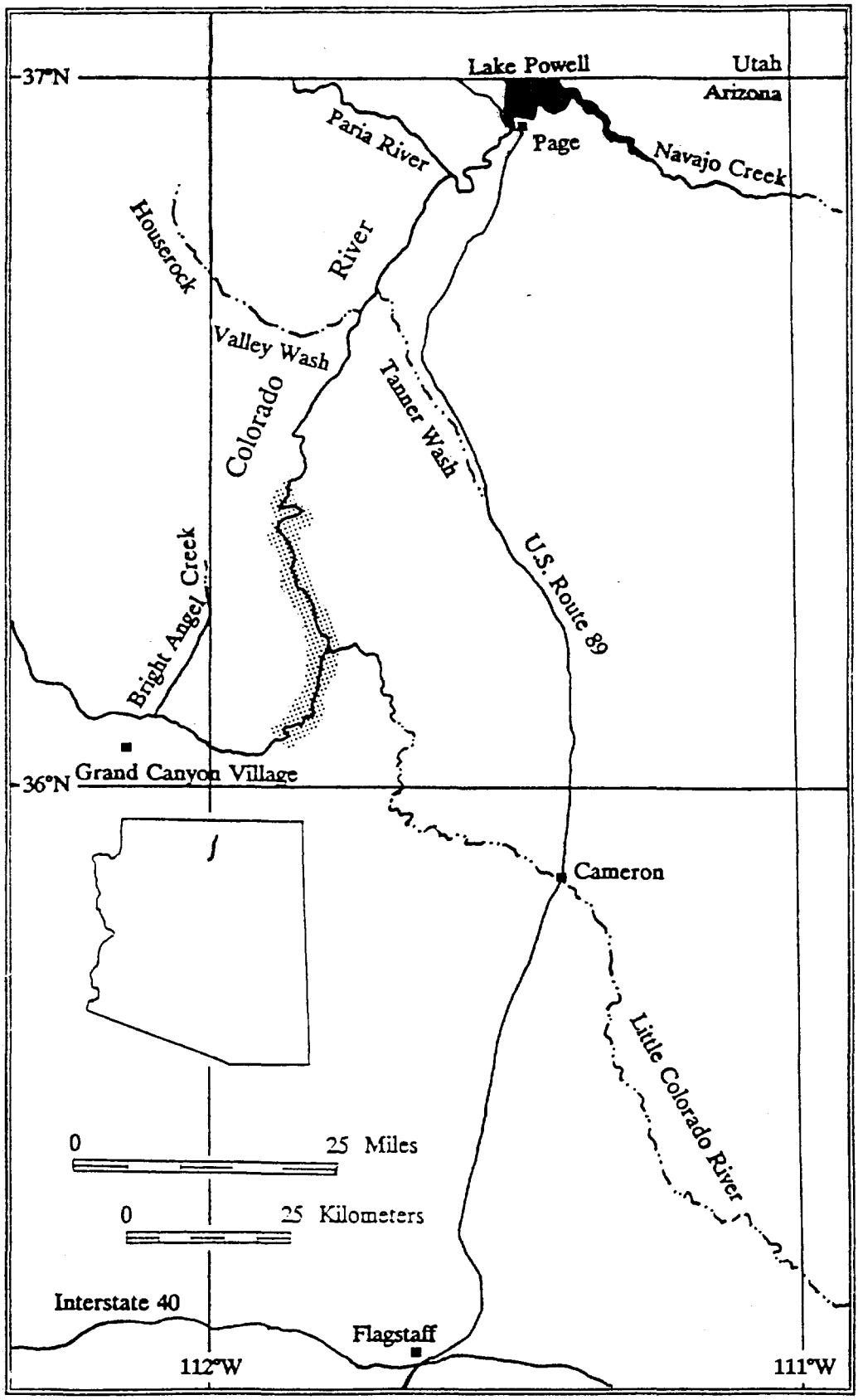

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Apache County: Little Colorado River, and the West, East, and South Forks of the Little Colorado River from the diversion ditch at T8N, R28E, Section 16, upstream to Forest Road 113 on the West Fork (T7N, R27E, Section 33), upstream to Forest Road 113 on the East Fork (T6N, R27E, Section 10), and upstream to Joe Baca Draw on the South Fork (T8N, R28E, Section 34). The boundaries include areas with surface water (main river channel and all associated side channels, backwaters, pools, and marshes) throughout the May-September breeding season, and areas where such surface water no longer exists owing to habitat degradation but may be recovered with habitat rehabilitation. The boundaries also include areas within 100 meters (328 feet) of the edge of surface water described above. This includes areas with thickets of riparian shrubs and trees, and areas where such riparian vegetation does not currently exist but may become established with natural regeneration or habitat rehabilitation.

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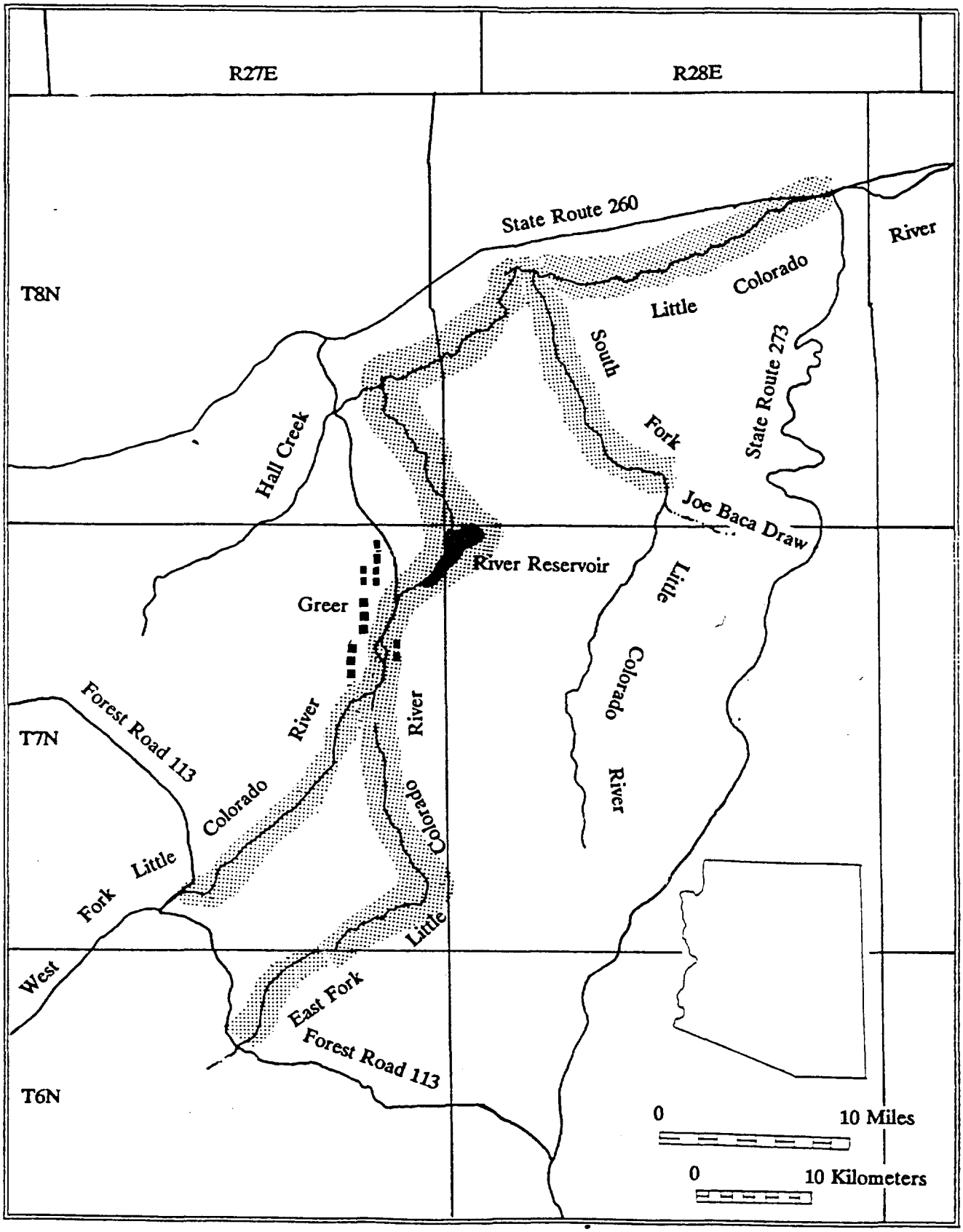

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New Mexico: Areas of land and water as follows:

Bernalillo County: Rio Grande River from the Alameda Boulevard bridge in northern Albuquerque (T11N, R3E, Section 8) downstream to southbound Interstate 25 (T8N, R2E, Section 1). The boundaries include areas with surface water (main river channel and all associated side channels, backwaters, pools, and marshes) throughout the May–September breeding season, and areas where such surface water no longer exists owing to habitat degradation but may be recovered with habitat rehabilitation. The boundaries also include areas within 100 meters (328 feet) of the edge of surface water described above. This includes areas with thickets of riparian shrubs and trees, and areas where such riparian vegetation does not currently exist but may become established with natural regeneration or habitat rehabilitation.

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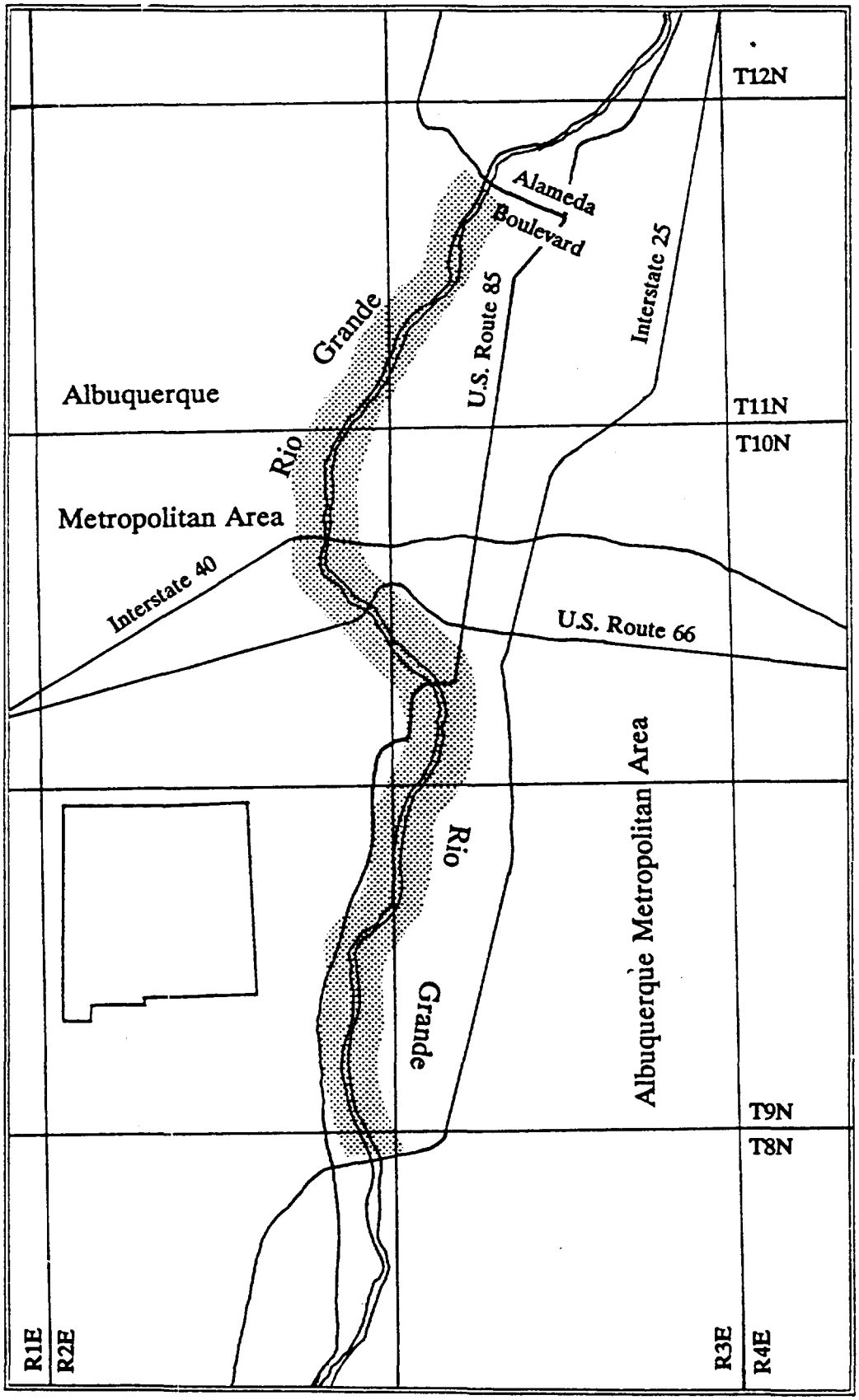

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Catron and Grant Counties: Gila River and the East and West Forks of the Gila River from El Rincon Creek on the Gila River (T13S, R14W, Section 36) upstream to Hell's Hole Canyon on the West Fork of the Gila River (T12S, R15W, Section 4), and upstream to the confluence of Taylor Creek and Beaver Creek on the East Fork of the Gila River (T11S, R12W, Section 17). The boundaries include areas with surface water (main river channel and all associated side channels, backwaters, pools, and marshes) throughout the May–September breeding season, and areas where such surface water no longer exists owing to habitat degradation but may be recovered with habitat rehabilitation. The boundaries also include areas within 100 meters (328 feet) of the edge of surface water described above. This includes areas with thickets of riparian shrubs and trees, and areas where such riparian vegetation does not currently exist but may become established with natural regeneration or habitat rehabilitation.

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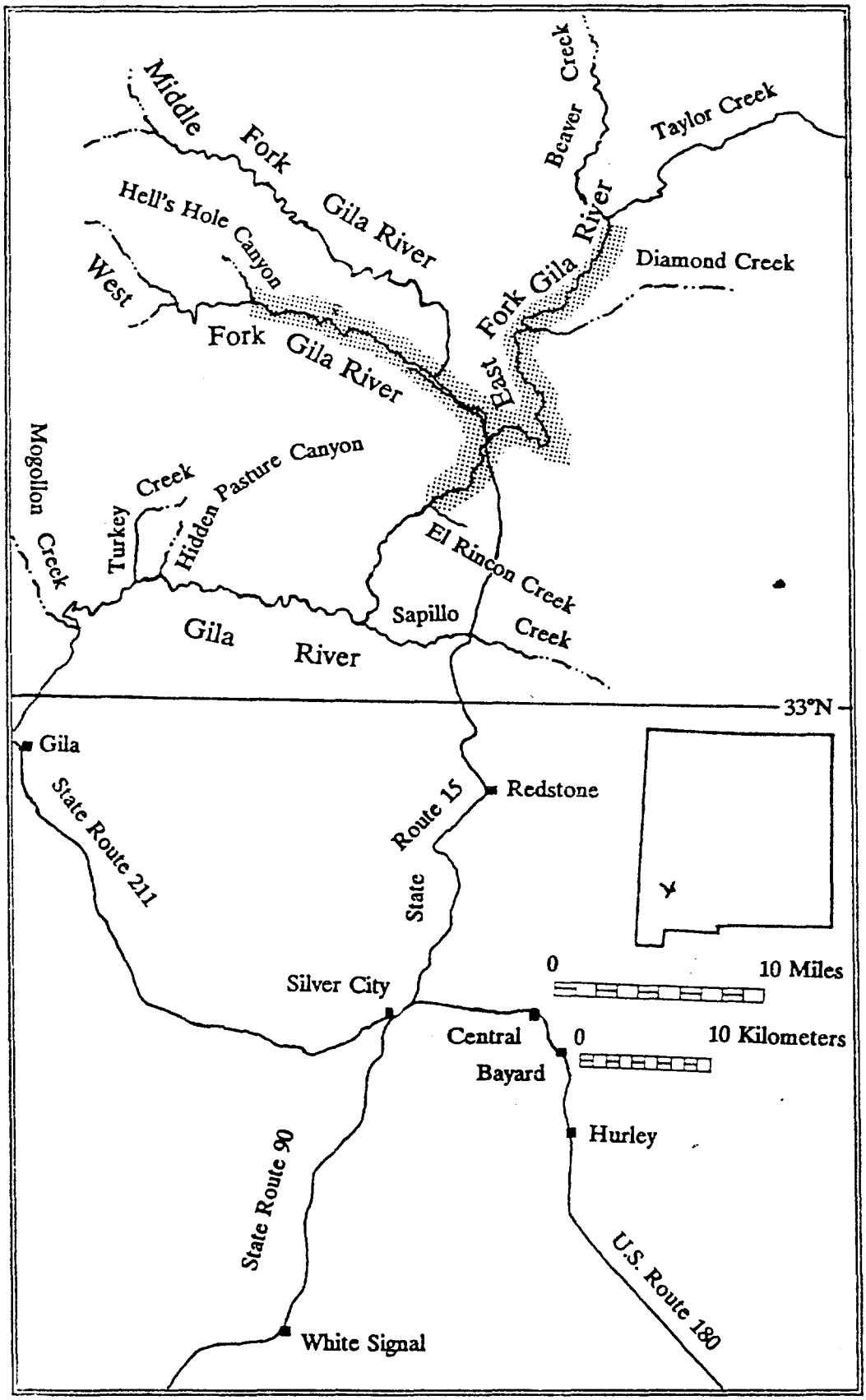

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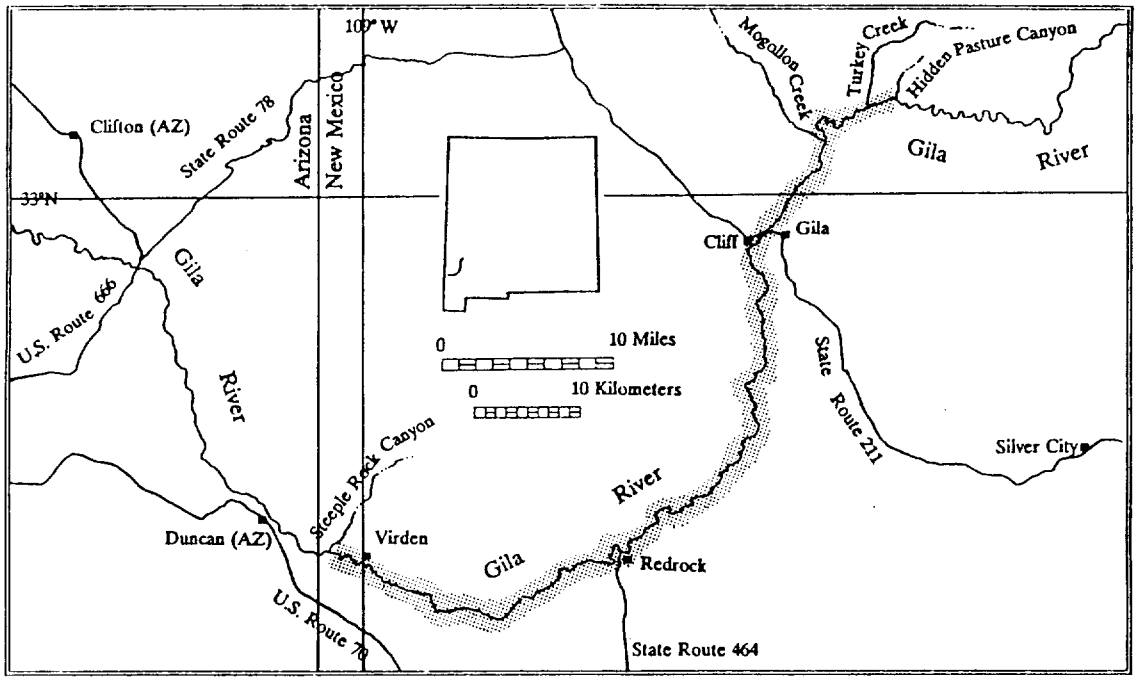
Grant and Hidalgo Counties: Gila River from the confluence of Hidden Pasture Canyon (T14S, R16W, Section 14) downstream to the confluence of Steeple Rock Canyon (T18S, R21W, Section 33). The boundaries include areas with surface water (main river channel and all associated side channels, backwaters, pools, and marshes) throughout the May–September breeding season, and areas where such surface water no longer exists owing to habitat degradation but may be recovered with habitat rehabilitation. The boundaries also include areas within 100 meters (328 feet) of the edge of surface water described above. This includes areas with thickets of riparian shrubs and trees, and areas where such riparian vegetation does not currently exist but may become established with natural regeneration or habitat rehabilitation.



Catron County: San Francisco River from the confluence of Trail Canyon (T6S, R20W, Section 4) downstream to San Francisco Hot Springs, near the confluence with Box Canyon (T12S, R20W, Section 23). The boundaries include areas with surface water (main river channel and all associated side channels, backwaters, pools, and marshes) throughout the May-September breeding season, and areas where such surface water no longer exists owing to habitat degradation but may be recovered with habitat rehabilitation. The boundaries also include areas within 100 meters (328 feet) of the edge of surface water described above. This includes areas with thickets of riparian shrubs and trees, and areas where such riparian vegetation does not currently exist but may become established with natural regeneration or habitat rehabilitation.

Catron County: Tularosa River and Apache Creek from the confluence of the Tularosa and San Francisco Rivers (T7S, R19W, Section 23) upstream, to the source of the Tularosa River near the continental divide (T4S, R15W, Section 33), and upstream on Apache Creek to the confluence with Whiskey Creek (T4S, R18W, Section 25). The boundaries include areas with surface water (main river channel and all associated side channels, backwaters, pools, and marshes) throughout the May-September breeding season, and areas where such surface water no longer exists owing to habitat degradation but may be recovered with habitat rehabilitation. The boundaries also include areas within 100 meters (328 feet) of the edge of surface water described above. This includes areas with thickets of riparian shrubs and trees, and areas where such riparian vegetation does not currently exist but may become established with natural regeneration or habitat rehabilitation.

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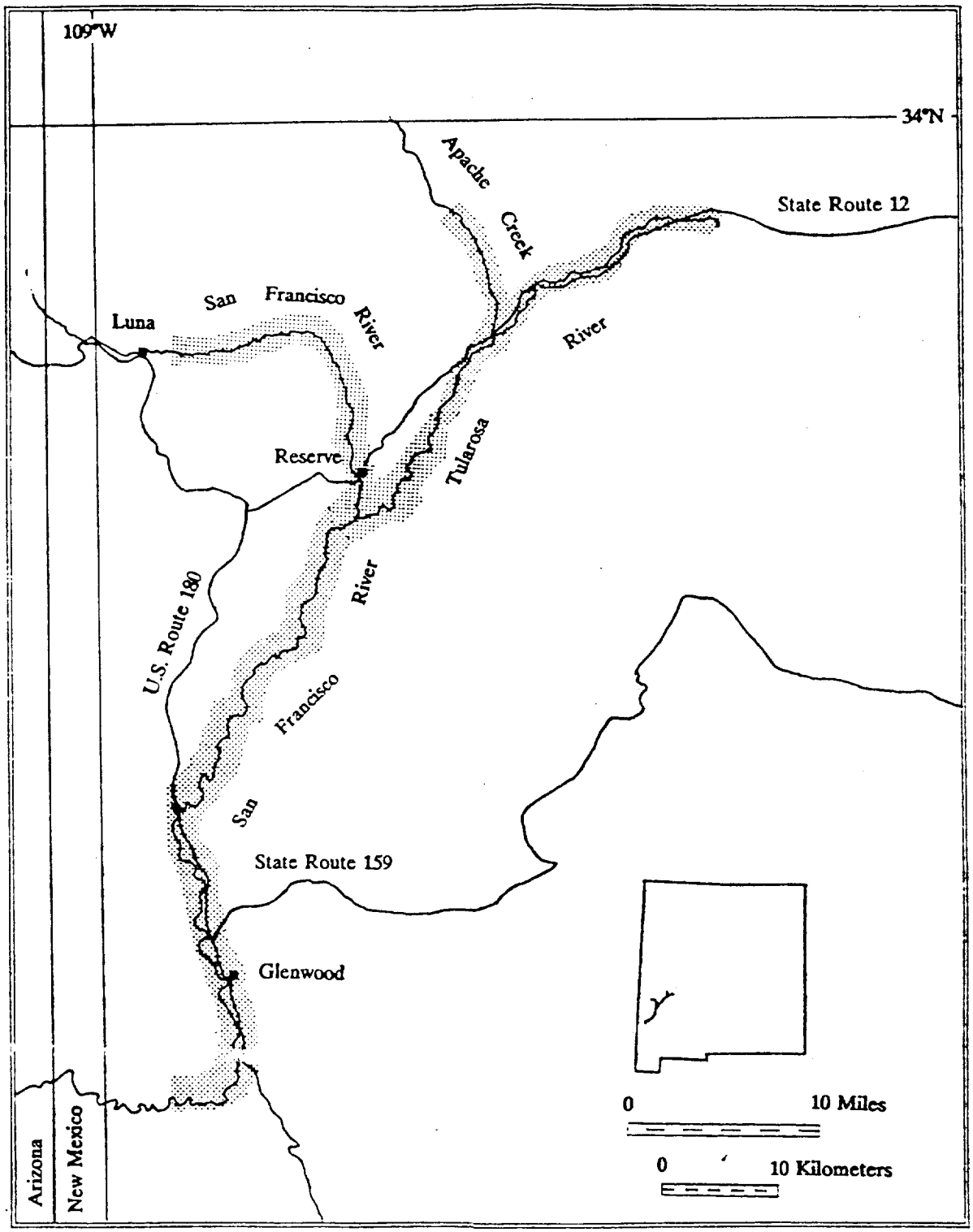

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Dated: July 12, 1993.

Richard N. Smith,

Acting Director, Fish and Wildlife Service.

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