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[Page 37419-37440]  
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DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018-AF36

Endangered and Threatened Wildlife and Plants; Designation of  
Critical Habitat for the Cactus Ferruginous Pygmy-owl (*Glaucidium  
brasilianum cactorum*)

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

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SUMMARY: We, the U.S. Fish and Wildlife Service (Service), designate critical habitat pursuant to the Endangered Species Act of 1973, as amended (Act), for the cactus ferruginous pygmy-owl (*Glaucidium brasilianum cactorum*). A total of approximately 296,240 hectares (731,712 acres) of riverine riparian and upland habitat are designated. Critical habitat is located in Pima, Cochise, Pinal, and Maricopa counties, Arizona. Section 7 of the Act prohibits destruction or adverse modification of critical habitat by any activity funded, authorized, or carried out by any Federal agency. As required by section 4 of the Act, the Service considered economic and other relevant impacts

[[Page 37420]]

prior to making a final decision on the size and configuration of critical habitat.

EFFECTIVE DATE: August 11, 1999.

ADDRESSES: The complete administrative record for this rule is on file at the U.S. Fish and Wildlife Service, Arizona Ecological Services Field Office, 2321 West Royal Palm Road, Suite 103, Phoenix, Arizona 85021-4951. The complete file for this rule is available for public inspection, by appointment, during normal business hours at the above address.

FOR FURTHER INFORMATION CONTACT: Tom Gatz, Endangered Species Coordinator, at the above address (telephone 602/640-2720 ext. 240; facsimile 602/640-2730).

#### SUPPLEMENTARY INFORMATION:

##### Background

The cactus ferruginous pygmy-owl (referred to as "pygmy-owl" in this final rule) is in the Order Strigiformes and the Family Strigidae. It is a small bird, approximately 17 centimeters (cm) (6<sup>3</sup>/<sub>4</sub> inches (in)) long. Males average 62 grams (g) (2.2 ounces (oz)), and females average 75 g (2.6 oz). The pygmy-owl is reddish brown overall, with a cream-colored belly streaked with reddish brown. Some individuals are grayish brown, rather than reddish brown. The crown is lightly streaked, and paired black-and-white spots on the nape suggest eyes. This species lacks ear tufts, and the eyes are yellow. The tail is relatively long for an owl and is colored reddish brown with darker brown bars. The pygmy-owl is diurnal (active during daylight), and its call, heard primarily near dawn and dusk, is a monotonous series of short notes.

The cactus ferruginous pygmy-owl is one of four subspecies of the ferruginous pygmy-owl. It occurs from lowland central Arizona south through western Mexico to the States of Colima and Michoacan, and from southern Texas south through the Mexican States of Tamaulipas and Nuevo Leon. Only the Arizona population of *Glaucidium brasilianum cactorum* is listed as an endangered species.

The pygmy-owl in Arizona occurs in a variety of scrub and woodland communities, including riverbottom woodlands, woody thickets ("bosques"), Sonoran desertscrub, and semidesert grasslands. Unifying habitat characteristics among these communities are fairly dense woody thickets or woodlands, with trees and/or cacti large enough to provide nesting cavities. The pygmy-owl occurs at low elevations, generally below 1,200 meters (m) (4,000 feet (ft)) (Swarth 1914, Karalus and Eckert 1974, Monson and Phillips 1981, Johnsgard 1988, Enriquez-Rocha et al. 1993).

The pygmy-owl's primary habitats historically were in riparian cottonwood (*Populus fremontii*) forests, but the subspecies currently occurs primarily in Sonoran desertscrub associations and mesquite

bosques consisting of palo verde (*Cercidium* spp.), bursage (*Ambrosia* spp.), ironwood (*Olneya tesota*), mesquite (*Prosopis velutina*, and *P. glandulosa*), acacia (*Acacia* spp.), and giant cacti such as saguaro (*Carnegiea gigantea*) and organ pipe (*Stenocereus thurberi*) (Gilman 1909, Bent 1938, van Rossem 1945, Phillips et al. 1964, Monson and Phillips 1981, Johnson-Duncan et al. 1988, Millsap and Johnson 1988). Primary prey include various reptiles, insects, birds, and small mammals (Proudfoot 1996).

Pygmy-owls are considered non-migratory throughout their range by most authors, and have been reported during the winter months in several locations, including Organ Pipe Cactus National Monument (R. Johnson, unpubl. data 1976, 1980, Tibbitts, pers. comm. 1997). Major Bendire collected pygmy-owls along Rillito Creek near Camp Lowell at present-day Tucson on January 24, 1872. The University of Arizona Bird Collection contains a female pygmy-owl collected on January 8, 1953 (University of Arizona 1995). Similarly, records exist from Sabino Canyon documenting pygmy-owls on December 3, 1941, and December 25, 1950 (U.S. Forest Service, unpubl. data). These winter records demonstrate that pygmy-owls are found within Arizona throughout the year, and do not appear to migrate southward to warmer climates during the winter months.

#### Previous Federal Action

We included *Glaucidium brasilianum cactorum* in our Animal Notice of Review as a category 2 candidate species throughout its range on January 6, 1989 (54 FR 554). Category 2 candidates were defined as those taxa for which we had data indicating that listing was possibly appropriate but for which we lacked substantial information on vulnerability and threats to support proposed listing rules. After soliciting and reviewing additional information, we elevated *G. b. cactorum* to category 1 status throughout its range in our November 21, 1991, Notice of Review (56 FR 58804). Category 1 candidates were defined as those taxa for which we had sufficient information on biological vulnerability and threats to support proposed listing rules but for which issuance of proposals to list were precluded by other higher-priority listing activities. Beginning with our combined plant and animal notice of review published in the Federal Register on February 28, 1996 (61 FR 7596), we discontinued the designation of multiple categories of candidates and only taxa meeting the definition of former category 1 candidates are now recognized as candidates for listing purposes.

On May 26, 1992, a coalition of conservation organizations (Galvin et al. 1992) petitioned us to list the pygmy-owl as an endangered species under the Act. The petitioners also requested designation of critical habitat. In accordance with section 4(b)(3)(A) of the Act, on

March 9, 1993, we published a finding that the petition presented substantial scientific or commercial information indicating that listing of the pygmy-owl may be warranted and commenced a status review of the subspecies (58 FR 13045). As a result of information collected and evaluated during the status review, including information collected during a public comment period, we published a proposed rule to list the pygmy-owl as endangered in Arizona and threatened in Texas on December 12, 1994 (59 FR 63975). We proposed designation of critical habitat in Arizona. After a review of all comments received in response to the proposed rule, we published a final rule on March 10, 1997 (62 FR 10730), listing the pygmy-owl as endangered in Arizona. We determined that listing in Texas was not warranted. We also determined that critical habitat designation for the Arizona population was not prudent.

On October 31, 1997, the Southwest Center for Biological Diversity filed a lawsuit in Federal District Court in Arizona against the Secretary of the Department of the Interior (Secretary) for failure to designate critical habitat for the cactus ferruginous pygmy-owl and the plant, *Lilaeopsis schaffneriana* var. *recurva*, (Huachuca water umbel) (Southwest Center for Biological Diversity v. Babbitt, CIV 97-704 TUC ACM). On October 7, 1998, Alfredo C. Marquez, Senior U.S. District Judge, issued an order stating: "There being no evidence that designation of critical habitat for the pygmy-owl and water umbel is not prudent, the Secretary shall, without further delay, decide whether or not to designate critical habitat for the pygmy-owl and water umbel based on the best scientific and commercial information available."

On November 25, 1998, in response to a motion by the Plaintiffs requesting clarification of the October 7, 1998, order, Judge Marquez further ordered "that within 30 days of the date of this Order, the Secretary shall issue the

[[Page 37421]]

proposed rules for designating critical habitat for the pygmy-owl and water umbel \* \* \* and that within 6 months of issuing the proposed rules, the Secretary shall issue final decisions regarding the designation of critical habitat for the pygmy-owl and water umbel."

On December 30, 1998, we proposed 295,775 ha (730,565 ac) as critical habitat in Arizona for the pygmy-owl (63 FR 71820). On April 15, 1999, we released the draft economic analysis on proposed critical habitat and reopened the public comment period for 30 days (64 FR 18596).

The processing of the December 30, 1998, proposed rule and this final rule does not conform with our Listing Priority Guidance for Fiscal Year 1998 and 1999 published on May 8, 1998 (63 FR 25502). The guidance clarifies the order in which we will process rulemakings

giving highest priority (Tier 1) to processing emergency rules to add species to the Lists of Endangered and Threatened Wildlife and Plants; second priority (Tier 2) to processing final determinations on proposals to add species to the lists, processing new listing proposals, processing administrative findings on petitions (to add species to the lists, delist species, or reclassify listed species), and processing a limited number of proposed and final rules to delist or reclassify species; and third priority (Tier 3) to processing proposed and final rules designating critical habitat. Our Southwest Region is currently working on Tier 2 actions; however, we are undertaking this Tier 3 action in order to comply with the above-mentioned court order.

### Habitat Characteristics

According to early surveys referenced in the literature, the pygmy-owl, prior to the mid-1900s, was "not uncommon," "of common occurrence," and a "fairly numerous" resident of lowland central and southern Arizona in cottonwood forests, mesquite-cottonwood woodlands, and mesquite bosques along the Gila, Salt, Verde, San Pedro, and Santa Cruz rivers and various tributaries (Breninger 1898 in Bent 1938, Gilman 1909, Swarth 1914). Bendire (1888) noted that he had taken "several" along Rillito Creek near Fort Lowell, in the vicinity of present-day Tucson, Arizona. Records indicate that pygmy-owls were initially more common in xeroriparian habitats (very dense thickets bordering dry desert washes) than in more open, desert uplands (Monson and Phillips 1981, Johnson and Haight 1985, Johnson-Duncan et al. 1988, Millsap and Johnson 1988, Davis and Russell 1990). The pygmy-owl was also noted to occur at isolated desert oases supporting small pockets of riparian and xeroriparian vegetation (Howell 1916, Phillips et al. 1964).

The historical use of Sonoran desertscrub habitats by pygmy-owls is not as clear. A disproportionately low number of historical records from desertscrub habitats may be due to the focus of early collection efforts along rivers where humans tended to concentrate, while the upland areas received less survey. Historical records of pygmy-owls do exist for Sonoran desertscrub in areas such as the Santa Catalina foothills and in "groves of giant cactus" near New River, north of present-day Phoenix. Kimball (1921) reported one pygmy-owl in a mesquite tree in the foothills of the Santa Catalina Mountains. Fisher (1893) took 2 pygmy-owl specimens near New River, and observed "several others" in mesquite and large cacti.

The northernmost historical record for the pygmy-owl is from New River, Arizona, approximately 56 kilometers (35 miles) north of Phoenix, where Fisher (1893) reported the pygmy-owl to be "quite common" in thickets of intermixed mesquite and saguaro cactus. Four

eggs were collected in Phoenix, Maricopa County by G.F. Breninger on May 18, 1898, and R.D. Lusk collected five eggs at Cave Creek on April 12, 1895. Pygmy-owls were also detected in central Arizona at the Blue Point Cottonwoods area, at the confluence of the Salt and Verde rivers, in 1897, 1949, 1951, 1964, and 1971 (AGFD unpubl. data, Phillips et al. 1964, Millsap and Johnson 1988). Additionally, pygmy-owls were detected at Dudleyville on the San Pedro River as recently as 1985 and 1986 (AGFD unpubl. data, Hunter 1988).

The easternmost record for the pygmy-owl is from 1985 at the confluence of Bonita Creek and the Gila River (Hunter 1988). Other records from this eastern portion of the pygmy-owl's range include a 1876 record from Camp Goodwin (current day Geronimo) on the Gila River (Aiken 1937), and a 1978 record from Gillard Hot Springs, also on the Gila River (Hunter 1988). Pygmy-owls have been found as far west as the Cabeza Prieta Tanks in 1955 (Monson 1998).

Over the past several decades, pygmy-owls have been primarily found in Sonoran desertscrub communities in southern and southwestern Arizona consisting of palo verde, ironwood, mesquite, acacia, bursage, and columnar cacti (Phillips et al. 1964, Davis and Russell 1984 and 1990, Monson and Phillips 1981, Johnson and Haight 1985, Johnsgard 1988). Recently pygmy-owls have also been found in wooded drainages within semidesert grasslands in southern Arizona (unpubl. data). These sites are closely associated with xeroriparian habitats.

Historically, pygmy-owls were associated with riparian woodlands in central and southern Arizona. Plants present in these riparian communities include cottonwood, willow (*Salix* spp.), ash (*Fraxinus velutina*), and hackberry (*Celtis* spp.). These trees are suitable for cavity nesting, while the density of mid- and lower-story vegetation likely provides necessary protection from predators and an abundance of prey. Mesquite bosque communities are dominated by mesquite trees, and are described as mesquite forests due to the density and large size of the trees. This habitat type provides for all of the necessary habitat components of the pygmy-owl.

The Arizona upland subdivision of the Sonoran Desert provides an over-story of mature saguaros which are suitable for cavity nesting, as well as large mesquites and other trees which may be used for nesting, as well as perch and cover sites. Saguaro cavities are also used for roosting, perching, and caching food (Scott Richardson, Arizona Game and Fish Department, pers. comm. 1998). The mid- and lower-stories are comprised of a variety of mesquite, palo verde, ironwood, acacia, graythorn (*Ziayphus obtusifolia*), bursage, cholla (*Opuntia* spp.), prickly pear (*Opuntia* spp.), and annual and perennial grass species. As in riparian habitat, the larger trees provide perches for foraging and protection from predators. Adequate vegetation in mid- and lower-stories appears to be important, and likely provides protection from predators and a higher density of prey items including lizards, small

birds and mammals, and insects.

In central and southern Arizona, the pygmy-owl's primary habitats are riparian deciduous forests and woodlands, mesquite bosques, Sonoran desertscrub, and semidesert and Sonoran savanna grasslands with drainages lined with mesquite; although most recent observations have occurred primarily in Sonoran desertscrub associations of palo verde, bursage, ironwood, mesquite, acacia, and giant cacti such as saguaro and organ pipe (Gilman 1909, Bent 1938, van Rossem 1945, Phillips et al. 1964, Monson and Phillips 1981, Johnson-Duncan et al. 1988, Millsap and Johnson 1988, Aaron Flesch pers. comm. 1999). Farther south in northwestern Mexico, pygmy-owls occur in Sonoran desertscrub, Sinaloan thornscrub, and Sinaloan deciduous forest as well as riverbottom woodlands,

[[Page 37422]]

cactus forests, and thornforest (Enriquez-Rocha et al. 1993).

Pygmy-owls at Organ Pipe Cactus National Monument have been detected primarily in relatively dense, lush Arizona uplands desertscrub associations on bajadas. Visually dominant plants at the pygmy-owl sites include saguaros, organ pipe cactus, ironwood, triangle-leaf bursage, foothill paloverde (*C. Microphyllum*), mesquite, whitethorn and catclaw acacia (*Acacia constricta* and *A. greggii*), numerous cholla, prickly pear cacti, ocotillo (*Fouquieria splendens*), various *Lycium* spp., and creosotebush (*Larrea tridentata*) (Smith 1996). In addition to the dense bajada desertscrub habitat described above, pygmy-owls have been documented in several large xeroriparian habitats in lower bajada or valley floor areas that have dense saguaro stands; however, some sites have much less dense adjacent upland areas dominated chiefly by creosotebush. Xeroriparian habitat at these sites consist of mesquites, foothill and blue paloverde (*Cercidium microphyllum* and *C. floridum*), desert willow (*chilopsis lineraris*), catclaw acacia, ironwood, and soapberry (*Sapindus saponaria*) (Smith 1996).

### Critical Habitat

Critical habitat is defined in section 3 of the Act as--(i) the specific areas within the geographic area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) that may require special management consideration or protection and; (ii) specific areas outside the geographic area occupied by a species at the time it is listed, upon determination that such areas are essential for the conservation of the species.

``Conservation" means the use of all methods and procedures that are

necessary to bring an endangered species or a threatened species to the point at which listing under the Act is no longer necessary.

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

Designation of critical habitat can help focus conservation activities for a listed species by identifying areas that contain the physical and biological features that are essential for the conservation of that species. Designation of critical habitat alerts the public as well as land-managing agencies to the importance of these areas.

Critical habitat also identifies areas that may require special management considerations or protection, and may provide protection to areas where significant threats to the species have been identified. Critical habitat receives protection from the prohibition against destruction or adverse modification through required consultation under section 7 of the Act with regard to actions carried out, funded, or authorized by a Federal agency. Section 7 also requires conferences on Federal actions that are likely to result in the adverse modification or destruction of proposed critical habitat. Aside from the protection that may be provided under section 7, the Act does not provide other forms of protection to lands designated as critical habitat.

Section 7(a)(2) of the Act requires Federal agencies to consult with us to ensure that any action authorized, funded, or carried out is not likely to jeopardize the continued existence of a threatened or endangered species, or result in the destruction or adverse modification of critical habitat. "Jeopardize the continued existence" (of a species) is defined as an appreciable reduction in the likelihood of survival and recovery of a listed species. "Destruction or adverse modification" (of critical habitat) is defined as a direct or indirect alteration that appreciably diminishes the value of critical habitat for the survival and recovery of the listed species for which critical habitat was designated. Thus, the definitions of "jeopardy" to the species and "adverse modification" of critical habitat are nearly identical (50 CFR Sec. 402.02).

Designating critical habitat does not, in itself, lead to recovery of a listed species. Designation does not create a management plan, establish numerical population goals, prescribe specific management actions (inside or outside of critical habitat), or directly affect areas not designated as critical habitat. Specific management recommendations for critical habitat are most appropriately addressed

in recovery plans and management plans, and through section 7 consultations.

Critical habitat identifies specific areas that are essential to the conservation of a listed species and that may require special management considerations or protection. Areas that do not currently contain the habitat components necessary for the primary biological needs of a species but are likely to develop them in the future may be essential to the conservation of the species and may be designated as critical habitat.

### Primary Constituent Elements

In accordance with section 3(5)(A)(i) of the Act and regulations at 50 CFR 424.12, in determining which areas to propose as critical habitat, we consider those physical and biological features that are essential to the conservation of the species and that may require special management considerations or protection. These include, but are not limited to, the following:

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

- Food, water, air, light, minerals or other nutritional or physiological requirements;

- Cover or shelter;

- Sites for breeding, reproduction, or rearing of offspring, germination, or seed dispersal; and

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

The primary constituent elements for the pygmy-owl are those habitat components that are essential for the primary biological needs of foraging, nesting, rearing of young, roosting, sheltering, and dispersal, or the capacity to develop those habitat components. The primary constituent elements are found in areas that support or have the potential to support Sonoran riparian deciduous woodlands, Sonoran riparian scrubland, xeroriparian forests, tree-lined drainages in semidesert and Sonoran savanna grasslands, and the Arizona upland subdivision of Sonoran desertscrub (Brown 1994). Within these biotic communities, specific plant associations that are essential to the primary biological needs of the pygmy-owl include, but are not limited to, the following--cottonwood, willow, ash, mesquite, palo verde, ironwood, hackberry, saguaro cactus, and/or organ pipe cactus. Specifically, larger diameter trees and cacti provide not only nesting substrate, but also roosting, perching, foraging, and dispersal habitat, while smaller trees and shrubs provide for the same functions except nesting.

In river floodplains, the presence of surface or subsurface water is important in maintaining pygmy-owl habitat. Riverine riparian

woodlands and thickets are dependent on availability of groundwater at or near the surface

[[Page 37423]]

(Brown 1994). Surface or subsurface moisture may also be important in maintaining various prey species.

## Methods

In developing this final rule, we formed an interconnected system of suitable and potential habitat areas extending from the Mexican border through the northernmost recent pygmy-owl occurrence east of Phoenix. Areas designated as critical habitat meet the definition of critical habitat under section 3 of the Act in that they are within the geographical areas occupied by the species, are essential to the conservation of the species, and are in need of special management considerations or protection.

In an effort to map areas essential to the conservation of the species, we used data on known pygmy-owl locations to initially identify important areas. We then connected these areas based on the topographic and vegetative features believed most likely to support resident pygmy-owls and/or facilitate movement of birds between known habitat areas. Facilitating movement of birds between habitat areas is important for dispersal and gene flow (Beier and Noss 1998). In selecting areas, we avoided private lands to the extent possible if State and Federal lands were present that could meet the conservation needs of the species. However, we are designating critical habitat in some largely privately owned areas, such as the area northwest of Tucson which supports the greatest known concentration of pygmy-owls in Arizona.

In selecting areas of critical habitat, we made an effort to avoid developed areas such as towns, agricultural lands, and other lands unlikely to contribute to pygmy-owl conservation. Given the short period of time in which we were required to complete this final rule, we were unable to map critical habitat in sufficient detail to exclude all such areas. However, within the delineated critical habitat boundaries, only lands containing, or are likely to develop, those habitat components that are essential for the primary biological needs of the pygmy-owl are considered critical habitat. Existing features and structures within this area, such as buildings, roads, aqueducts, railroads, and other features, do not contain, and are not likely to develop, those habitat components and are not considered critical habitat.

In selecting areas as critical habitat, we attempted to exclude areas believed to be adequately protected, or where current management

is compatible with pygmy-owls and is likely to remain so into the future. We excluded National Park lands (Organ Pipe Cactus National Monument and Saguaro National Park) and National Wildlife Refuges (Cabeza Prieta and Buenos Aires National Wildlife refuges). We also excluded non-Federal lands covered by a legally operative incidental take permit for pygmy-owls issued under section 10(a)(1)(B) of the Act. However, we did not exclude areas currently managed in a manner compatible with pygmy-owls where such management may not be assured in the future (e.g., county and State parks).

In addition, lands of the Tohono O'odham Indian Nation are not included in this final rule. We are aware that pygmy-owls and pygmy-owl habitat likely exist on the Nation, and we believe these lands are important to the species' continued existence in Arizona. However, the short amount of time given by the court to designate critical habitat precluded us from adequately coordinating with the Nation to obtain pygmy-owl location and habitat information. In addition, we were unable to assess whether current or future Tribal management is likely to maintain pygmy-owls into the future, although the probable existence of both pygmy-owls and pygmy-owl habitat led us to believe that current management may be compatible with the species. As explained in the "Summary of Changes from the Proposed Rule" section of this final rule, Tribal grazing allotments have also been excluded.

We did not designate all pygmy-owl historical or potential habitat as critical habitat. We only designated those areas that we believe are essential for the conservation of the pygmy-owl and in need of special management or protection.

In summary, the critical habitat areas described below, and protected areas either known or suspected to contain some of the primary constituent elements but not designated as critical habitat (e.g., National Park land, National Wildlife Refuge lands, etc.), constitute our best assessment of areas needed for the species' conservation. Also, we have appointed a Cactus Ferruginous Pygmy-owl Recovery Team that will develop a recovery plan for the species. The experts on this team will conduct a far more thorough analysis than we were able to conduct in the short amount of time allowed by the Court Order. Upon the team's completion of a recovery plan, we will evaluate the plan's recommendations and reexamine areas designated as critical habitat.

### Critical Habitat Designation

In determining areas that are essential for the survival and recovery of the species, we used the best scientific information obtainable in the time allowed by the court. This information included habitat suitability and site-specific species information. To date, limited survey effort or research has been done to identify and define

specific habitat needs of pygmy-owls in Arizona or to completely quantify their distribution. Only preliminary habitat assessment work has begun over small portions of the State, primarily on Bureau of Land Management (BLM) lands.

We emphasized areas containing most of the verified pygmy-owl occurrences, especially recently identified locations. In order to maintain genetic and demographic interchange that will help maintain the viability of a regional metapopulation, we included corridor areas that allow movement between areas supporting pygmy-owls. These corridors or connecting areas, which have not been well surveyed connect recent sites and areas where suitable habitat remain. These corridors or connecting areas, while supporting some habitat suitable for nesting, were primarily included to facilitate dispersal and may contain more foraging, perching, and roosting habitat than actual breeding habitat. While habitat of similar quality occurs outside of these corridors, we anticipate that the use and importance of these corridors will increase over time if and when habitat outside of the corridors becomes unsuitable in the future.

Table 1 shows the approximate acreage of critical habitat designation by county and land ownership. Critical habitat for the pygmy-owl includes river floodplains, Sonoran desertscrub, and semidesert grassland communities in Pima, Pinal, Maricopa, and Cochise counties, Arizona. To provide additional information, we have grouped areas designated into critical habitat units (see maps). A brief description of each unit and our reasons for designating those areas as critical habitat are presented below.

[[Page 37424]]

Table 1.--Approximate Critical Habitat Acreage by County and Land Ownership  
 [Note: acreage estimates are derived from Arizona Land Resource Information System data based on the cited legal

Ownership	County				Total
	Pima	Cochise	Pinal	Maricopa	
FS.....			5,065	33,323	38,388
BLM.....	21,913		69,579		91,492
STATE.....	158,974	2,371	273,541		434,886
PRIVATE.....	61,830	2,461	71,634	68	135,993
OTHER.....	18,166		12,787		30,953

TOTAL.....	260,883	4,832	432,606	33,391	731,712
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### Unit 1

This unit lies between Buenos Aires National Wildlife Refuge and the Tohono O'odham Indian Nation, consisting of primarily State Trust lands, with some dispersed private ownership. This area contains semidesert and Sonoran savanna grasslands with a series of xeroriparian washes extending from the Baboquivari Mountains to Altar and Brawley washes. Uplands primarily consist of grasslands with dispersed mesquite trees, and a very few isolated saguaros in some areas, mostly occurring at the extreme north end of the unit. Dominant tree species in riparian areas include mesquite, ash, and hackberry.

This unit is located in the Altar Valley, which recently has had several pygmy-owls documented. Not until 1998 had systematic surveys in this unit and adjacent areas been initiated; as a result, at least nine new pygmy-owl sites have been found (Harris Environmental Group, Inc. 1998; AGFD unpubl. data; Aaron Flesch, pygmy-owl surveyor, pers. comm. 1999). These new sites are located in riparian and xeroriparian habitats and wooded drainages within semidesert grassland and Sonoran savanna grassland communities. Since the turn of the century, many areas that were historical semidesert and Sonoran savanna grasslands in the Altar Valley have developed into habitats similar to Sonoran desertscrub (Brown 1994). It is unclear at this time what role this transition has played in the distribution of pygmy-owls in the region.

Habitat in Unit 1 is suitable for nesting and dispersal habitat for pygmy-owls; however, nesting opportunities are generally greater in the washes because of a higher incidence of large diameter trees that may provide cavities for nesting. This unit is important for conservation of the species because it contains several pygmy-owl sites and it is close to other recent or currently active sites on the nearby refuge. It also provides opportunities for demographic and genetic interchange between pygmy-owls in Mexico and the United States as well as expansion of populations for recovery. Critical habitat in this area, together with protected lands on the refuges, National Monument, and habitat on the Nation, constitutes a large block of pygmy-owl habitat.

### Unit 2

This unit connects habitat on the Tohono O'odham Indian Nation to habitat in Saguaro National Park West and Tucson Mountain County Park. Ownership in this area is primarily BLM, State Trust, Bureau of Reclamation, Pima County, and some private lands. The area consists of Sonoran desertscrub, mesquite bosques interspersed by washes, and some retired agricultural lands. This east-west habitat corridor, together

with the "Garcia Strip" of the Nation, includes suitable habitat for occupancy, movement, and genetic interchange of pygmy-owls between the Nation and the western Tucson region.

### Unit 3

This narrow unit connects suitable habitat in Unit 2 and Saguaro National Park west to Unit 4, which has the highest known concentration of pygmy-owls in Arizona. The land ownership in this area is mostly private. The area consists of Sonoran desertscrub, mesquite bosques interspersed by washes, and some retired agricultural lands. This area includes a recent pygmy-owl site west of Interstate 10 and provides a connection to habitat in the northwest Tucson region. Because of existing and past land management practices and development, this area contains the narrowest habitat linkage among other areas of critical habitat.

Few options currently exist for movement of pygmy-owls in this portion of their known range based on our limited knowledge of their movement among areas at this time (Scott Richardson, pers. comm. 1998). The pygmy-owl's flight pattern typically consists of a series of short, direct flights, perching in trees or shrubs usually less than 100 m (328 ft) apart (Glenn Proudfoot, pers. comm, 1999 and Scott Richardson, pers. comm. 1999).

### Unit 4

This unit is located in the northwest portion of Tucson north of Interstate 10 and contains the highest known concentration of pygmy-owls in Arizona. This unit contains mostly private and County lands. The area includes known locations of pygmy-owls and adjacent habitats and is bounded by La Cholla Boulevard to the east, Cortaro Road to the south, Interstate 10 to the west, and the Tortolita Mountains to the north. In the immediate Tucson area, and to the south of Unit 4, very little suitable habitat remains due to residential, commercial, and agricultural development. Historically, these upland and riparian areas may have supported pygmy-owls. The area of critical habitat contains stands of ironwood, acacia, and saguaro, mesquite bosques, and several washes, and includes the most contiguous and highest quality pygmy-owl habitat based on current information (Scott Richardson, pers. comm. 1998; Wilcox et al. 1999).

### Units 5a and 5b

Unit 5 includes 2 habitat corridors that connect habitat in Unit 4 to riparian habitats to the north on the Gila River (5a) and to the east on San Pedro River (5b). Land ownership is mostly BLM, State

Trust, and private. This area also includes recent pygmy-owl occurrences in southern Pinal County, although only a limited number of surveys have been conducted to determine if pygmy-owls are present in much of this area. Relatively intact riparian woodland habitats still remain along much of these portions of the Gila and San Pedro rivers. These units contain historical pygmy-owl locations and/or areas thought to contain suitable upland

[[Page 37425]]

habitat (Dave Krueper, BLM, pers. comm. 1998).

Limited habitat assessment has been completed within these corridors and few historical or current pygmy-owl occurrences have been documented. However, the BLM has conducted some habitat assessments on their lands in Unit 5a and rated the habitat suitability for pygmy-owls as moderate to high (Dave Krueper, pers. comm. 1998). We included these two corridors primarily because they constitute areas for dispersal, and also for nesting where nesting habitat is present. Upon field review of habitats present in both of these units, we believe they could facilitate movement through these areas, which would act as dispersal corridors. In addition to dispersal habitat, nesting habitat is also present in uplands with saguaros and in washes where large diameter trees are present. The majority of the nesting habitat in this region is in Unit 5a, although some large diameter trees are also located in some of the washes in Unit 5b, and may contain some potential nesting cavities. Where possible, we avoided the higher elevation areas, which likely provide lower quality habitat.

We are only beginning to understand the importance of upland habitat to the pygmy-owl. Although historical observations of pygmy-owls were almost exclusively in riparian woodlands (Breninger 1898 in Bent 1938), almost all of the recent records of pygmy-owls have been in Sonoran desertscrub, and mesquite bosque upland areas, semidesert grasslands, and washes. Based on the current information, we believe these two corridors (5a and 5b) provide a high potential for supporting resident and/or dispersing pygmy-owls through this area. Without these habitat linkages, demographic and genetic connectivity and exchange may not be maintained between known populations in the greater Tucson region and riparian habitats in the Gila and San Pedro rivers.

## Unit 6

This unit includes the riparian woodlands of the middle and lower San Pedro River and a portion of the Gila River. There were four pygmy-owls documented in the mid-1980s from lower San Pedro River woodlands. Similar riparian woodlands and associated upland habitats with saguaro cactus are present along the San Pedro upstream (south) to

approximately the town of Cascabel.

The San Pedro River riparian corridor connects to the Gila River to the north. This section of the Gila River also contains riparian woodland habitats, which we believe are suitable for pygmy-owls (Dr. Roy Johnson, National Park Service (Retired) pers. comm. 1998). We are designating these areas as critical habitat because of the importance, based on the early records of naturalists during the late 1800s and early 1900s, of riparian woodland habitats, the presence of suitable habitat, and the linkage these areas provide to other historical locations and suitable habitat to the north.

## Unit 7

This unit links riparian habitat on the Gila River to other upland habitats and ultimately to the remaining woodland habitat along the Salt River where pygmy-owls were collected in the 1940s and 1950s and where this species was recorded in the early 1970s. Land ownership in this area is primarily BLM, State Trust, Forest Service, and some dispersed private. Although recent surveys have not located pygmy-owls in riparian areas in this unit, riparian woodland habitats remain along portions of the Salt River in this area (Roy Johnson pers. comm. 1998), and we cannot rule out pygmy-owl use of the area because pygmy-owls may use areas only periodically and may not be detected. In delineating critical habitat in this unit, we considered elevation, topographic features, and existing developed areas and determined that a habitat linkage that includes Sonoran upland desertscrub will provide connectivity and suitable habitats between riparian woodland habitats along the Gila and Salt rivers.

## Available Conservation Measures

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

Section 7(a) of the Act requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is designated or proposed. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR

Sec. 402. Section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of 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 consultation with us.

Section 7(a)(4) of the Act and regulations at 50 CFR Sec. 402.10 require Federal agencies to confer with us on any action that is likely to result in destruction or adverse modification of proposed critical habitat. Conferencing on proposed critical habitat for the pygmy-owl was not requested by any Federal agency.

Activities on Federal lands that may affect the pygmy-owl or its critical habitat will require section 7 consultation. Activities on private or State lands requiring a permit from a Federal agency, such as a permit from the U.S. Army Corps of Engineers under section 404 of the Clean Water Act, or a section 402 permit from the Environmental Protection Agency, will be subject to the section 7 consultation process. Federal actions not affecting the species, as well as actions on non-Federal lands that are not federally funded or permitted will not require section 7 consultation.

Section 4(b)(8) of the Act requires us to describe in any proposed or final regulation that designates critical habitat those activities involving a Federal action that may destroy or adversely modify such habitat or that may be affected by such designation. Activities that may destroy or adversely modify critical habitat include those that alter the primary constituent elements to the extent that the value of critical habitat for both the survival and recovery of the pygmy-owl is appreciably diminished. We note that such activities may also jeopardize the continued existence of the species. Such activities may include, but are not limited to:

(1) Removing, thinning, or destroying vegetation, whether by burning or mechanical, chemical, or other means (e.g., woodcutting, bulldozing, overgrazing, construction, road building, mining, herbicide application, etc.);

(2) Water diversion or impoundment, groundwater pumping, or other activity that alters water quality or quantity to an extent that riparian vegetation is significantly affected; and

(3) Recreational activities that appreciably degrade vegetation.

[[Page 37426]]

If you have questions regarding whether specific activities will constitute adverse modification of critical habitat, contact the Field Supervisor, Arizona Ecological Services Field Office (see ADDRESSES section). Requests for copies of the regulations on listed wildlife and inquiries about prohibitions and permits may be addressed to the U.S.

Fish and Wildlife Service, Branch of Endangered Species/Permits, P.O. Box 1306, Albuquerque, New Mexico 87103 (telephone 505-248-6920, facsimile 505-248-6922).

Designation of critical habitat could affect Federal agency activities including, but not limited to:

(1) Regulation of activities affecting waters of the United States by the Army Corps of Engineers under section 404 of the Clean Water Act;

(2) Regulation of activities affecting point source pollution discharges into waters of the United States by the Environmental Protection Agency under section 402 of the Clean Water Act;

(3) Regulation of water flows, damming, diversion, and channelization by Federal agencies; and

(4) Regulation of grazing, mining, or recreation by the BLM or Forest Service.

### Summary of Comments and Recommendations

In the December 30, 1998, proposed rule, all interested parties were requested to submit comments or information that might bear on the designation of critical habitat for the pygmy-owl (63 FR 71820). The first comment period closed March 1, 1999. The comment period was reopened from April 15 to May 15, 1999, to once again solicit comments on the proposed rule and to accept comments on the draft economic analysis (72 FR 18596). Comments received from March 2 to April 14, 1999, were entered into the administrative record during the second comment period.

All appropriate State and Federal agencies, county governments, scientific organizations, and other interested parties were contacted and invited to comment. In addition, newspaper notices inviting public comment were published in the following newspapers in Arizona: Arizona Republic, Tucson Citizen, Arizona Daily Star, Sierra Vista Herald, Green Valley News and Sun, The Bulletin, The Tombstone Tumbleweed, and Nogales International. The inclusive dates of these publications were January 4 to 12, 1999, for the initial comment period; January 26 to February 4, 1999, to advertise the public hearings; and April 21 to 29, 1999, for the second comment period.

We held three public hearings on the proposed rule, including at Coolidge (February 10, 1999), Sierra Vista (February 11, 1999), and Tucson, Arizona (February 12, 1999). The hearings were also held to solicit comments on the proposed rule to designate critical habitat for the Huachuca water umbel, *Lilaeopsis Schaffneriana* var. *recurva* (63 FR 71838). A notice of hearings and locations was published in the Federal Register on January 26, 1999 (64 FR 3923). A total of 89 people attended the public hearings, including 10 in Coolidge, 28 in Sierra Vista, and 51 in Tucson. Transcripts of these hearings are available

for inspection (see ADDRESSES section).

We requested four Arizona ornithologists, who are familiar with this species and were not on the appointed Cactus Ferruginous Pygmy-owl Recovery Team, to peer review the proposed critical habitat designation. However, only one of the peer reviewers submitted comments. He concluded that "sound scientific information about habitat requirements and movements is the most essential matter related to the conservation of the CFPO (pygmy-owl)." Further, he summarized, "I oppose this designation because it is not based on adequate scientific data, and also because it detracts from the path of gathering good data by wasting public resources on needless, time-consuming actions related to bureaucratic process, not species conservation."

We received a total of 21 oral and 268 written comments during the 2 comment periods. Of those oral comments, 4 supported critical habitat designation, 16 were opposed to designation, and 1 provided additional information but did not support or oppose the proposal. Of the written comments, 59 supported designation, 182 were opposed to it, and 21 provided additional information only, or were nonsubstantive or not relevant to the proposed designation. In total, oral and written comments were received from 10 Federal agencies, 7 State agencies, 9 local governments, and 242 private organizations, companies, or individuals.

All comments received were reviewed for substantive issues and new data regarding critical habitat and the pygmy-owl. Comments of a similar nature are grouped into 9 issues relating specifically to critical habitat. These are addressed in the following summary.

Issue 1: Biological Justification and Primary Constituent Elements

1a) Comment: How could the Service determine areas essential for conservation of the species since little is known about their habitat needs? Designation of critical habitat should be delayed until it is determinable and better information becomes available on the species. Stale, inaccurate data were used in the proposal.

Service Response: Under sections 4(a)(3)(A) and 4(b)(6)(C) of the Act, critical habitat must, to the maximum extent prudent and determinable, be designated at the time of listing. If there is insufficient information to perform the required impact analysis of designation, or the biological needs of the species are not sufficiently known to permit identification of an area as critical habitat, it may be delayed up to 1 year. On December 12, 1994, we published a proposed rule to list the pygmy-owl as endangered with critical habitat (59 FR 63975). On March 19, 1997, we published a final rule listing this species as endangered. In that final rule, we determined that designation of critical habitat was not prudent, because of the potential harm to the species from publishing precise location maps as required for critical habitat designation (62 FR 10730). Given

the amount of time since the pygmy-owl was listed as endangered (over 20 months), a "not determinable finding" is no longer possible. Because of the October 7, 1998, court order, we must now designate critical habitat using the best information currently available.

Although much additional biological information for this species is needed, some of its biological needs are known. In making this designation, we reviewed all pygmy-owl records within the historical range of this subspecies in Arizona. To the extent possible, given the short time available, we utilized the most current scientific literature; vegetation descriptions; information from outside sources such as species experts, agencies, and others; and field reconnaissance of specific areas in developing this final rule.

1(b) Comment: The Service, in partnership with counties and municipalities, needs to develop science-based surveys and studies to determine recovery efforts needed.

Service Response: We agree that additional surveys and ecological studies are needed. We are currently working with Pima County in their efforts to conduct comprehensive studies within the County, that will serve as the foundation for their Habitat Conservation Plan, which is currently under development. We encourage others to complete surveys and life history studies on their lands to assist them in managing for pygmy-owls. We welcome new partnerships with any entity in order to conserve pygmy-owls.

[[Page 37427]]

1(c) Comments: There is no biological justification or analysis to designate unoccupied areas or use a "connect the dots approach" in determining areas as critical habitat. Some areas in Units 1, 2, 5b, 6, and 7 are not connected by habitat and should not be included.

Service Response: Much of the area designated as critical habitat has never been surveyed for pygmy-owls. Therefore, it is unknown if owls are currently present. We designated critical habitat in areas that include sites we believed were essential for the conservation of the species and those needing special management considerations. Pygmy-owls may be present in those areas. We also believe areas between recent sightings play an important role and are essential to conservation of the species for the following reasons--(1) it is unknown if owls are in fact using these areas due to the lack of past survey effort; (2) areas of suitable or potentially suitable habitat located between areas of known owl occurrence are very important to allow pygmy-owls to colonize new areas; (3) they provide areas where pygmy-owls can disperse or facilitate movement between occupied areas for genetic interchange; and (4) they require special management considerations.

There are some areas within the critical habitat boundaries that,

by definition of the primary constituent elements, are not critical habitat. We have provided additional habitat element descriptions where possible for each mapping unit to assist landowners and managers in identifying areas containing these elements or where these elements have the potential to develop on their lands. Refer to the description of each unit within this final rule.

Much of southern Arizona contains areas that provide potentially suitable habitat that may support pygmy-owls. However, as directed in section 3(5)(A)(i and ii) of the Act, we have only designated those areas that we believe are essential to conservation of the species. Pygmy-owls may be present in some of those areas, but many areas have not yet been surveyed.

(1d) Comment: How could the Service determine critical habitat when it doesn't know what viable populations are necessary to recover the species?

Service Response: A population viability analysis for this species has not been undertaken, however, we are required to designate critical habitat to the maximum extent prudent and determinable using existing information. Although population viability information will be useful in developing a recovery strategy for the species, it is not required to make this determination of critical habitat. A population viability analysis is unavailable for many species due to the lack of demographic information, habitat requirements, and other information required for an analysis. Studies to determine viable population levels for the pygmy-owl could not be conducted within the time frame given by the court and are not required by the Act for designation of critical habitat.

1(e) Comment: Critical habitat should not be designated until a recovery plan is completed.

Service Response: Although having a recovery plan in place is extremely helpful in identifying areas as critical habitat, the Act does not require a plan be prepared prior to such designation. Section 4(c) specifically requires that critical habitat be designated at the time a species is listed, or within 1 year if not determinable at listing. Once a recovery plan is finalized, we may revise the critical habitat described in this final rule if appropriate, to reflect the goals and recovery strategy of the recovery plan.

1(f) Comments: Only riparian areas should be designated since Sonoran desertscrub is only marginal habitat for pygmy-owls in Arizona. The Service should stress riparian restoration in recovery efforts for the pygmy-owl.

Service Response: At the time the pygmy-owl was listed, it was almost exclusively known from historical records to occur in riparian woodlands and mesquite bosques. Since these early records, all active sites have been located in Sonoran desertscrub, xeroriparian, or desert grassland habitats. Based on our current knowledge, both riparian and

other habitat types appear to be important.

1(g) Comments: The habitat assessment key should have been used to identify areas of critical habitat. Some areas that rated low using this key were designated critical habitat, such as in Units 1 and 5b. Why were these two units included since they are of low quality? Why was Unit 1 designated when there have never been owls present?

Service Response: The BLM developed a habitat assessment key for its use to prioritize areas to survey that may be suitable for pygmy-owls. Not enough information is currently known regarding range-wide habitat requirements to develop a key with specific criteria that would apply to all habitats. Habitats where pygmy-owls have been found in the greater Tucson area are vastly different from other areas of the State, such as Organ Pipe Cactus National Monument and the Altar Valley. The BLM methodology uses specific habitat evaluation criteria to assess distinct habitats found on their lands within specific regions of the State. The BLM believes, and we concur, that it would be inappropriate to use this methodology to identify areas of critical habitat and to evaluate other habitats throughout the State since many of these criteria do not apply to other regions. We are not aware of any completed habitat assessments using the BLM methodology within Units 1 or 5b.

When we originally proposed critical habitat in December, 1998, there was only one documented record of a pygmy-owl in Unit 1. Although very few surveys had been completed in this area previously, potential habitat was present and we believed this area was important to the species. Since then, intensive surveys have been initiated in this unit and the nearby refuge. As a result, nine pygmy-owl sites have been found (Harris Environmental Group 1998; Aaron Flesch, pers. comm. 1999; AGFD unpubl. data 1999). Therefore, we consider this unit essential for recovery of the species. Likewise, other areas we have designated have little survey data to date. Areas where pygmy-owls are not currently known to exist because of lack of or limited survey efforts may also have pygmy-owls. We encourage landowners and managers with suitable habitat described in this rule to conduct surveys for pygmy-owl. We agree that Unit 5b likely contains limited nesting habitat; however, the mesquite-lined washes in this unit provide, at a minimum, dispersal habitat for owls moving between Units 4 and 6.

1(h) Comment: Critical habitat boundaries do not appear to reflect habitat; rather they follow squared-off, arbitrary lines.

Service Response: We are required to describe critical habitat (50 CFR Sec. 424.12(c)) with specific limits using reference points and lines as found on standard topographic maps of the area. Due to the time constraints imposed by the court, the absence of detailed vegetation maps, we followed roads, railroads, and section or township lines wherever possible to delineate the critical habitat boundaries. Some pygmy-owl unsuitable habitat areas may be included in these mapped

areas. Under 50 CFR Sec. 424.12(d), when several habitat areas are located in proximity to one another, an inclusive area may be designated as critical habitat.

(1i) Comments: Why are some areas that do not appear to have suitable pygmy-owl habitat or to contain any of the primary constituent elements included as critical habitat? Only those areas with these constituent elements

[[Page 37428]]

should be designated (15 USC Sec. 1532 (5)(A) and 50 CFR Sec. 424.12).

Service Response: As previously stated in this document, due to time constraints, we were not able to eliminate areas within the critical habitat boundaries that do not contain, or do not have the reasonable likelihood of ever containing, the primary constituent elements necessary for the pygmy-owl. However, any areas that do not, and cannot, support these elements are, by definition, not considered to be critical habitat, even though they are within the identified boundaries.

(1j) Comments: Areas with reduced value as pygmy-owl habitat should not be included. Commenters cited the following factors as to why their lands had little value as pygmy-owl habitat--lack of some primary constituent elements, "low-quality" habitat, nearby major roads, schools, or high-density housing, and lack of saguaros or ironwoods. Some areas may not be suitable because they are adjacent to planned developments such as future road-widening projects or housing developments.

Service Response: We have documented the presence of pygmy-owls near developed lands, roads, and areas that possess some, but not all, of the primary constituent elements. Therefore, we are including areas near developed lands that contain at least some primary constituent elements as critical habitat because owls use these areas. We believe these areas also play an important role for pygmy-owls for some of their life history requirements such as foraging or dispersal. We can not exclude areas as critical habitat because of projected projects or proposed activities, unless the economic impact outweighs the benefit to the species (section 4(b)(2) of the Act). Although ironwoods are commonly found at sites in the northwest Tucson area (Wilcox et al. 1999), numerous other historical and recent sites lack ironwoods. Therefore, we do not believe ironwoods are specifically a necessary component for pygmy-owls. Further research is needed to fully understand this species' habitat needs and life history requirements.

(1k) Comment: You should not only designate currently occupied sites, but also sites with suitable or potential habitat that was previously occupied, and also dispersal habitat.

Service Response: The Act (section 3(5)(C)) states that not all

areas capable of being occupied by the species should be designated as critical habitat unless we determine that such designation is essential to the species' conservation. In determining what areas are critical habitat, we considered areas and constituent elements that are essential to the conservation of the species and that may require special protection or management considerations (50 CFR Sec. 424.12(b)). Thus, not all areas occupied or potentially occupied by a species are eligible for designation. Our rationale for not designating all occupied pygmy-owl sites as critical habitat are discussed in the section entitled "Critical Habitat Designation." Due to time constraints and because of a lack of survey data to indicate documented pygmy-owl presence, we cannot assert that pygmy-owls are not present in a particular area designated as critical habitat. This critical habitat designation contains areas that may be important for pygmy-owl dispersals.

(11) Comments: There was no scientific basis for the constituent elements described in the proposed rule. The definition of constituent elements should be expanded to include dispersal habitat such as creosote bush and grasslands. The constituent elements described are vague (violating 50 CFR Sec. 424.12(c)) and are overly inclusive, and should include the required greater detail defining structure, species richness, and juxtaposition of riparian and xeroriparian areas with adjacent upland habitat types. Identified corridors are not based on known movement of owls, and appear to be sheer guesswork.

Service Response: The primary constituent elements described in this final rule are elements for which we have evidence of use by pygmy-owls in Arizona. Smaller diameter trees and shrubs, though not suitable nesting structure, appear suitable for dispersal movements and/or support prey species for pygmy-owls (Proudfoot, pers. comm. 1999). Pure stands of extensive grassland do not support primary constituent elements; however, grasslands with scattered mesquites or other trees or shrubs provide dispersal and foraging habitat and drainages within grasslands containing trees with cavities may also provide suitable nesting habitat. Information regarding movement of pygmy-owls gathered in Arizona and Texas was used to determine suitability of dispersal corridors.

To date, pygmy-owl habitat studies have been limited to descriptive studies in the greater Tucson area. Habitat in this study area is vastly different from sites elsewhere in the State with historical and recent pygmy-owl sightings. In addition to this Tucson habitat study (Wilcox et al. 1999), we are aware of two additional habitat studies that are scheduled to begin in the summer of 1999, which will analyze habitats where other pygmy-owls are found in the State. These additional studies will examine habitats used by pygmy-owls in areas containing very different habitats compared to previous studies. Random sites will also be studied in the state to determine use versus

availability. These studies will provide valuable information about the habitat needs of pygmy-owls and will be useful to us and others in meeting the conservation needs of the species.

As noted earlier, pygmy-owls use a variety of habitats. We have described in the greatest detail possible in this final rule the constituent elements important to pygmy-owls known at this time. If new information later becomes available as a result of the above mentioned or other studies regarding the habitat needs of this species, we will then evaluate whether a revision of designated critical habitat is warranted. In addition, as new habitat information becomes available that can further refine habitat definitions and descriptions, it will be used in future section 7 consultations and recovery planning for the pygmy-owl.

Issue 2: Take of Private Property/Additional Burdens on Private Landowners

(2a) Comment: The designation of critical habitat would constitute "taking" of private property rights; thus a takings implications assessment, as required by Executive Order 12630, must be conducted.

Service Response: The designation of critical habitat has no effect on non-Federal actions taken on private land, even if the private land is within the mapped boundary of designated critical habitat. Critical habitat has possible effects on activities by private landowners only if the activity involves Federal funding, a Federal permit, or other Federal action. If such a Federal nexus exists, we will work with the landowner and the appropriate Federal agency to ensure that the landowner's project can be completed without jeopardizing the species or adversely modifying critical habitat.

Executive Order 12630 requires that Federal actions that may affect the value or use of private property be accompanied by a takings implication assessment. As discussed in our response to Issue 9, (McKenney et al. 1999), the economic analysis found that designation of critical habitat would have no economic effect above that already imposed by listing. The primary effect of critical habitat designation on private property is to identify areas important for the conservation of the species. In addition, if a Federal action

[[Page 37429]]

occurs on those private lands, such as issuance of a Clean Water Act section 404 permit, the Federal action agency would be required to consult with us pursuant to section 7 of the Act if that action may affect the pygmy-owl or its critical habitat. In Arizona, all private landowners that have applied for a section 10 take permit to allow them incidental take of a federally listed species have been issued permits, and all projects that have completed the section 7 consultation process have gone forward.

(2b) Comments: The designation of critical habitat would place an additional burden on landowners above and beyond what the listing of the species would require. The number of section 7 consultations will increase; large areas where no pygmy-owls are known to occur will now be subject to section 7 consultation. Many Federal agencies have been making a "no effect" call within unoccupied suitable habitat. Now, with critical habitat there will be "may effect" determinations, and section 7 consultation will be required if any of the constituent elements are present.

Service Response: If a Federal agency funds, authorizes, or carries out an action that may affect either the pygmy-owl or its critical habitat, the Act requires that the agency consult with us under section 7 of the Act. For a project to affect critical habitat, it must affect the habitat features important to the pygmy-owl, which are the primary constituent elements described in this final rule. Our view is and has been that any Federal action within the geographic area occupied by the species that affects these habitat features should be considered a situation that "may affect" the pygmy-owl and should undergo section 7 consultation. This is true whether or not critical habitat is designated, even when the particular project site within the larger geographical area occupied by the species is not known to be currently occupied by an individual pygmy-owl. All areas designated as critical habitat are within the geographical area occupied by the species, so Federal actions affecting essential habitat features of the species should undergo consultation. Thus, the need to conduct section 7 consultation should not be affected by critical habitat designation. As in the past, the action agency will continue to make the determination as to whether their project may affect a species even when the particular site is not known to be currently occupied by an individual pygmy-owl.

Issue 3: National Environmental Policy Act.

Comment: The designation of critical habitat constitutes a major Federal action significantly affecting the quality of the human environment. An environmental impact statement (EIS) should be prepared.

Service Response: We have determined that Environmental Assessments (EAs) and EISs, as defined under the authority of the National Environmental Policy Act of 1969 (NEPA), need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Act. We published a notice outlining our reasons for this determination in the Federal Register in October, 1983 (48 FR 49244).

Issue 4: Lands with Habitat Conservation Permits to be Excluded from Critical Habitat.

Comments: It is illegal and unscientific to withdraw critical habitat designation from land covered by an approved or future Habitat Conservation Plan (HCP) incidental take permit. Critical habitat

protects land essential for conservation, which is a higher standard than a HCP permit which only assures that jeopardy would not occur. The HCP take permit has no public process analysis or scientific accountability. HCPs should maintain constituent elements. Regional HCPs are preferred to individual permits. Individual HCPs should not be approved until a regional HCP is completed in Pima County.

Service Response: Before we issue a section 10 permit, we must determine that the HCP provides for the conservation of the species. As a part of the permit evaluation process, we must determine whether our action of issuing the section 10 permit is likely to jeopardize the continued existence of the species or result in adverse modification of critical habitat. Thus, when a HCP is approved through a section 10 permit, we will have already determined that critical habitat would not be adversely modified. HCP permits for lands over 5 acres in size are required to go through the NEPA process that involves public participation and comment. Monitoring and adaptive management are important components of the HCP process to ensure that needed actions are taken and that actions can be modified, as needed, as new information is collected.

We agree that maintaining the primary constituent elements is an important consideration in developing HCPs. In addition, we strongly support regional multiple-species HCPs such as the one currently under development by Pima County, and we encourage this broad-based approach to others within the region. Experience gained from development of similar plans indicates that because of their complexity, these plans typically take a year or more to complete. We encourage landowners and members of the public in the region to participate in this planning effort; however, we realize that it would be unrealistic for some to wait until the county's plan is finalized. We cannot preclude any applicant from pursuing an individual HCP pending the development of a regional plan.

Issue 5: Section 7 Consultation and Section 9.

(5a) Comments: How will the Service conduct section 7 consultations on land immediately adjacent to critical habitat; would additional buffers be required?

Service Response: We address all direct, indirect, inter-related, and interdependent effects of projects under section 7 consultation, which could include effects to areas outside of the immediate project area (downstream effects, for example). However, if a project is adjacent to, but not within, critical habitat and has no direct or indirect effect on critical habitat, that would be acknowledged in the section 7 Biological Opinion, and only effects to the species would be addressed.

(5b) Comment: Section 9 does not fully protect habitat absent a critical habitat designation because critical habitat can include unoccupied habitat. There is a clear distinction between the

``jeopardy" and ``adverse modification of critical habitat" prohibitions. In its final rule listing the pygmy-owl as endangered, the Service states that clearing of unoccupied habitat is not a section 9 ``take." The courts have consistently held that for a party to assert that removal or disturbance of vegetation from an area will result in take of an endangered species, such a party must demonstrate that the species is present in the area or otherwise using it for essential behavioral functions. Where there is no owl, there is no take.

Service Response: We agree that section 9 does not protect unoccupied habitat, i.e., areas from which the pygmy-owl has been extirpated. However, as discussed in our response to comment 2(b) above, section 7 requires consultation on Federal actions that may affect a listed species or its critical habitat. An action agency may determine that a project may affect a species even when the particular site is not known to be currently occupied by an individual pygmy-owl. It is our view that actions affecting suitable pygmy-owl habitat within the known range of the pygmy-owl, whether or not that area has been designated as critical habitat and whether or not it is known to

[[Page 37430]]

currently support an individual, should undergo review under section 7.

Issue 6: Designation by Specific Land Ownership.

(6a) Comments: Designation of critical habitat is not necessary on non-Federal lands because vast tracts of Federal and Tribal lands are already protected. For instance, over 87% of Pima County is owned by the government; the Service should move the owls to those lands.

Service Response: The Act defines critical habitat as those areas essential to the conservation of the species and that are in need of special management considerations or protection. We agree that Federal lands provide a significant amount of the habitat currently occupied by the pygmy-owl, and that those lands are essential to the species' conservation. However, much of the currently occupied habitat is on non-Federal land, especially in Pima County. As stated in the proposed rule, we tried to avoid designation on non-Federal lands except when those lands are, because of their location or the habitat they support, necessary to ensure pygmy-owl conservation. We do not believe that Federal and Tribal lands alone, are adequate to ensure the species' conservation.

(6b) Comments: Exemption of Federal lands such as National Parks and National Wildlife Refuges is illegal, violating 50 CFR Sec. 424.12, and draft guidance exhibit 2, pp 5, 11-12, which states that lands must be evaluated regardless of ownership. None of those lands have an owl plan, and there is no basis to claim that future management will be consistent with critical habitat protections. The Service does not have

the statutory authority to exclude areas because it feels their current management is compatible with pygmy-owls, and the benefits from exclusion must be greater than that of inclusion.

Service Response: In determining what areas are critical habitat, we consider physical and biological features that are essential to the conservation of the species and that may require special management considerations or protection (50 CFR Sec. 424.14(b)). Organ Pipe Cactus National Monument, Saguaro National Park, and Buenos Aries and Cabeza National Wildlife refuges provide important habitat for the pygmy-owl. These areas were excluded from designation not simply because of ownership, but because we believe these areas are managed in such a way that provides for natural values, including protection of threatened and endangered species. We believe that these specific areas are managed and likely will continue to be managed in a manner compatible with pygmy-owl needs, and are therefore not in need of special management considerations or protection.

(6c) Comments: Exemption of Tribal lands is illegal, and there is no evidence that current densities on Tribal lands are as high as historical levels, nor that the population is increasing. The Service states that, because the owl occurs on the reservation, Tribal management is compatible with pygmy-owls. Failure to designate critical habitat on Tribal lands violates the Equal Protection Clause of the United States Constitution and the Administrative Procedures Act.

Service Response: Given the lack of species' location and habitat information on Tribal lands available at the time of drafting the proposed rule, we were unable to thoroughly assess either the status of the species on those lands, or the management practices currently employed by the tribes. The court's order required publication of a proposed rule within only 30 days and a final rule in 6 months. Given the extensive preparation and review requirements of publishing a proposed rule, our staff had but a few days to develop the critical habitat maps and determine what areas are both essential to the species' conservation and in need of special management considerations or protection. Further, Secretarial Order 3206 requires significant coordination with Tribal governments, as well as several specific determinations, prior to proposing Tribal land as critical habitat. The 30 days allowed by the court precluded the analyses and coordination that would have been necessary before proposing critical habitat on Tribal lands. We therefore based our proposal on the best scientific and commercial information available, as required by the Act.

(6d) Comments: To designate State trust lands because they are owned by the State is arbitrary, capricious, discriminatory, and unlawful; they should be treated as private lands. The Service considers State lands as public lands and therefore assumes that the limitations of use resulting from designation of critical habitat will not adversely affect the landowner. The Service did not justify the

assumption that State lands require special management considerations.

Service Response: We first identified areas essential to the conservation of the species. We looked first to Federal, then State lands to develop a configuration that would include most occupied pygmy-owl sites, connected across the species' range. Our reasoning was that the Act clearly puts the largest share of the burden on Federal agencies and Federal lands in conserving listed species. The Act also considers the states to be important partners in species' conservation efforts. Where possible, we therefore proposed Federal and State lands as the primary areas to concentrate pygmy-owl recovery, with private lands included where necessary. As stated in the economic analysis and this final rule, we do not believe the designation of critical habitat will have adverse economic effects on any landowner, including the State of Arizona, above and beyond the effects of listing of the species (McKenney et al. 1999).

Future management practices of State trust lands are uncertain in areas we have determined essential to the recovery of this species and may in some instances not be compatible with conservation efforts; therefore, we believe that designation of these lands is warranted. We believe that designation of these and other lands as critical habitat does not result in additional economic or other effects to the landowner above that which would occur from listing the species.

Issue 7: Legal and Procedural Comments.

(7a) Comments: The Service did not consult, nor allow for an appropriate level of involvement with, the State of Arizona, counties, and cities in areas proposed as critical habitat.

Service Response: In regard to the role of local governments in decisions to determine critical habitat, the Act requires we "give actual notice of the proposed regulation (including the complete text of the regulation) to \* \* \* each county or equivalent jurisdiction in which the species is believed to occur, and invite the comment of such agency, and each jurisdiction" (section 4(b)(5)(A)(ii) of the Act). Due to the limited time allowed by the court and plaintiffs, we were not able to individually contact all of the entities that could be affected by this proposal; however, we notified each affected county, several cities, and many special interest groups of the proposed rule and draft economic analysis. All entities, including the State and local municipalities, were given ample opportunity, during two separate public comment periods and three public hearings, to submit their concerns and have them addressed in the final rule. Numerous local, city, county, State, and Federal agencies provided comments during two public comment periods and three public hearings; we reviewed and considered these comments in developing this final rule.

(7b) Comments: The court order was not to designate critical habitat, but

rather to reconsider whether it was prudent to do so. The court referred to only 12 of the 28 items of evidence the Service provided in its original "not prudent" determination. Designation of critical habitat provides no additional benefits to the species and can lead to increased threats from bird watchers or retaliation against the species as happened with the Mexican wolf. The Service lacks sufficient original information and its original not prudent finding was correct until future research is done.

Service Response: The Act requires the Secretary, "to the extent prudent and determinable," to designate critical habitat concurrently with listing a species as threatened or endangered. Regulations under 50 CFR Sec. 424.12(a)(1) state that critical habitat is not prudent when one or both of the following situations exist--(i) 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 (ii) designation of critical habitat would not be beneficial to the species.

We determined in our final rule listing the species as endangered (62 FR 10730) that critical habitat designation would increase the threat of harassment of owls by bird watchers and increase the potential for vandalism. The court found this determination to be arbitrary and capricious, and remanded the "not prudent" finding to us.

As stated in our economic analysis (McKenney et al. 1999), we believe that designation of critical habitat for the pygmy-owl provides no significant additional impacts or benefits to the species beyond that which would occur, or is provided, through listing the species as endangered. While we believe this argument fits the second argument for a "not prudent" finding, the court order cited a previous finding in the 9th Circuit (Natural Resources Defense Council v. Department of Interior; 113 F3d 1121, 1126) that it was Congress' intent that the imprudence exception be a rare exception. This and other statements in the court order led us to believe that another "not prudent" finding based on the available information would be inconsistent with the court order.

(7c) Comment: The biological benefits of critical habitat are outweighed by the benefits of exclusion.

Service Response: Section 4(b)(2) of the Act and 50 CFR Sec. 424.19 requires us to consider excluding areas from critical habitat designation if we determine that the benefits of exclusion outweigh the benefits of designating the area as critical habitat, unless that exclusion will lead to extinction of the species concerned. As discussed in this final rule, we have determined that no adverse economic or other effects will result from this critical habitat

designation (McKenney et al. 1999). Therefore, no areas were found where the benefits of exclusion outweighed the benefits of including the areas as critical habitat.

(7d) Comments: The Service must consider the entire range, including Mexico, in determining areas of critical habitat. The Service has never found that the Arizona population is a distinct population segment from the Mexican population.

Service Response: Regulations at 50 CFR Sec. 424.12(h) state that critical habitat shall not be designated within foreign countries or in other areas outside of United States jurisdiction. We agree that the status of the species in Mexico will be an important consideration in recovery of the species in Arizona. However, maintenance of a healthy population in the U.S. also depends on areas within the pygmy-owls' historical U.S. range, and we have determined that those areas are essential to the species' conservation.

(7e) Comment: The Service failed to comply with a number of required determinations, including Executive Orders 12291, 12630, 12866, and 50 CFR Secs. 424.12(c)(d), and Sec. 424.19 as well as the Regulatory Flexibility Act and the Unfunded Mandates Reform Act.

Service Response: These Executive Orders and other Acts are discussed in the "Required Determinations" section of this final rule. Issues pertaining to 50 CFR Sec. 424.14(c)(d) and 424.19 are addressed elsewhere in this final rule.

(7f) Comment: Critical habitat will have potential impacts on water resource use by Arizona and local agencies. How has the Service coordinated with these groups to resolve water resources issues?

Service Response: This final rule does not authorize our jurisdiction over water rights, and we do not anticipate impact to local economies or citizens as a result of this designation as we state elsewhere in this rule. Critical habitat designation does not, in itself, restrict groundwater pumping or water diversions; nor does it in anyway restrict or usurp water rights or violate State or Federal water laws. Local agencies, governments, and individuals have had the opportunity to provide comments during two comment periods, and three public hearings. We will work with these groups during the section 7 consultation process as necessary to ensure their activities comply with the Act and other Federal and State laws.

(7g) Comment: Designation of critical habitat on Arizona State trust lands violates the Arizona-New Mexico Enabling Act of 1910.

Service Response: Under the provisions of the Arizona and New Mexico Enabling Act, in 1910, Congress granted title to certain Federal lands within the borders of Arizona to the State of Arizona for the purpose of creating a trust to provide financial support to the Arizona common schools, universities, and other public institutions operated by the State. However, the State trust created under the Enabling Act is not immune from the operation of otherwise applicable Federal law,

including the Endangered Species Act. Further, we do not anticipate that critical habitat designation will affect the State's ability to utilize their trust lands in a manner that will provide financial support to State institutions. Even if there are situations where a State activity requires Federal authorization or funding, we do not anticipate any restrictions beyond those that may result from listing the pygmy-owl as endangered.

(7h) Comments: Critical habitat should not have been proposed before an economic and other impacts analysis was completed, and the opportunity to comment on the economic analysis and the proposed rule was limited. Several requests were received to extend the public comment period.

Service Response: We are not required to conduct an economic analysis at the time critical habitat is initially proposed. We published in the Federal Register (63 FR 71820) the availability of the proposed rule and invited public comment which we used to develop a draft economic analysis (McKenney et al. 1999). We invited public comments for 30 days on this draft analysis, which we believe was sufficient given the short-time frame ordered by the court. Because of the court-ordered time frame, we were not able to extend the public comment period.

(7i) Comment: Maps and descriptions provided are vague and violate the Act and 50 CFR Sec. 424.12(c).

Service Response: This final rule contains the required legal descriptions of areas designated as critical habitat. The accompanying maps are for illustration purposes. If additional clarification is necessary, contact the Arizona Ecological Service Field Office (see ADDRESSES section). We identified specific areas referenced by specific legal description, roads, railroads, and other landmarks, which are found on standard topographic maps.

[[Page 37432]]

(7j) Comment: Once land is designated as critical habitat it will likely result in a panoply of Federal, State, and local land use laws, and restrictions or extra procedures.

Service Response: We are unaware of any information that indicates any new State or local laws, restrictions, or procedures will result from critical habitat designation. Should any State or local regulation be promulgated as a result of this rule, this would be outside of the authority of the Service under the Act. The comment is correct in that projects funded, authorized, or carried out by Federal agencies, and that may affect critical habitat, must undergo consultation under section 7 of the Act on the effects of the action on critical habitat. However, as stated elsewhere in this final rule, we do not expect the result of those consultations to result in any restrictions that would

not be required as a result of listing the pygmy-owl as an endangered species.

(7k) Comment: Additional areas not identified in the proposed rule should be designated critical habitat.

Service Response: Section 4(b)(4) of the Act requires that designation of critical habitat undergo the regulation promulgation procedures identified under 5 U.S.C. 553. That is, areas designated as critical habitat must first be proposed as such. Thus, we cannot make significant additions in the final rule to the areas included in the proposed rule. Designation of such areas would require new proposed and final rules. The Act explicitly states that not all suitable or occupied habitat be designated as critical habitat, rather only those essential for the conservation of the species (50 CFR Sec. 424.12 (e)).

The pygmy-owl recovery team is currently developing a recovery plan for this species. During the development of a recovery strategy, the team will not only closely examine areas designated as critical habitat but also all lands within the listed population, to determine their importance and role in the recovery of the species. This process will allow substantially more in-depth analysis than we were afforded by the court and plaintiffs to designate critical habitat. If the recovery team, as a result of new information or analysis, further refines those areas designated in this final rule or identifies additional areas which they determine are essential to the conservation of the species, we will evaluate whether a revision of critical habitat is warranted at that time.

Issue 8: Specific Projects and Activities.

(8a) Comments: Critical habitat would affect specific projects such as erosion control measures on Brawley Wash and fire management in the Altar and Falcon Valley regions. Grazing would be affected by designation on private lands.

Service Response: Critical habitat designations only apply to Federal lands, or federally funded or authorized projects on private lands. If there is no Federal nexus or involvement, then additional considerations are not necessary (see Issue 2 above). Where a Federal nexus exists, designation of critical habitat does not preclude projects or activities such as riparian restoration, erosion control, fire management, or grazing if they do not cause an adverse modification of critical habitat. We will work with landowners within designated critical habitat and Federal agencies that are required to consult with us under section 7 of the Act to ensure that land management will not adversely modify critical habitat. We also encourage landowners to restore riparian habitats including erosion control measures, and we can provide financial and technical assistance through our Partners for Fish and Wildlife Program.

(8b) Comment: Designation of areas with existing pipelines and aqueducts would be affected and should be excluded. Routine maintenance

of trails should be excluded.

Service Response: Periodic maintenance of existing pipelines, roads, trails, or aqueducts would not typically constitute adverse modification of critical habitat. These areas generally lack the primary constituent elements described in this rule, and it is our intention to exclude such areas by definition. If maintenance would require removal of constituent elements, and Federal involvement is part of that activity, then section 7 consultation may be necessary.

(8c) Comment: Designation of critical habitat may compromise wildfire prevention and suppression activities in those areas.

Service response: We agree that wildfire prevention and suppression activity is very important to protect human life and property, and also from a resource protection standpoint. Fire protection of areas designated as critical habitat will be essential to ensure the conservation of the species. We will work with all landowners and managers responsible for these activities to ensure adequate fire prevention and suppression measures are in place and to protect resource values. Only fire prevention and suppression activity undertaken or funded by a Federal agency would require consultation under section 7 of the Act. Non-Federal activities will not be affected by critical habitat designation.

Issue 9: Economic Impacts.

(9a) Comment: The assumption applied in the economic analysis that the designation of critical habitat will cause no impacts above and beyond those caused by listing of the species is faulty, legally indefensible, and contrary to the ESA. "Adverse modification" and "jeopardy" are different, will result in different impacts, and should be analyzed as such in the economic analysis.

Service Response: The designation of critical habitat for the pygmy-owl has been evaluated in the economic context known as "with" and "without" the rule. It was found that the survival of the pygmy-owl makes it necessary that any adverse modification of its habitat would jeopardize the species. Under this condition, any and all economic consequences would be due to the jeopardy call under section 7 of the Act, and an adverse modification without a jeopardy call would not occur. Further, it is our position that both within and outside of critical habitat, Federal agencies should consult under the jeopardy standard if a proposed action is (1) within the geographic areas occupied by the species, whether or not owls have been detected on the specific project site; (2) the project site contains habitat features that can be used by the species; and (3) the proposed action is likely to adversely affect that habitat. The economic consequences identified during the comment period are all due to the listing of the pygmy-owl and not the designation of critical habitat. The economic analysis of designating critical habitat determined that the same regulatory process is in place "with" as well as "without" the rule, and

consequently found no economic effects.

(9b) Comment: The proposed designation of critical habitat will impose economic hardship on private landowners and businesses. There is an expressed concern that the proposed critical habitat designation would have serious financial implications for commercial and residential development businesses. It is suggested that designation would result in reduced property values, lost tax revenues, lost jobs, and foregone economic activity.

Service Response: As stated in the economic analysis, the proposed rule to designate critical habitat for the pygmy-owl is not adding any new requirements to the current regulatory process. Since the adverse modification standard for critical habitat and the jeopardy standard are almost identical, the listing of the pygmy-owl itself initiated the requirement for consultation. This

[[Page 37433]]

critical habitat designation adds no additional requirements not already in place due to the species' listing.

(9c) Comment: There is an expressed concern that the delay in acquiring Federal permits or the inability to acquire permits for further development, as a result of section 7 consultation, would be an economic hardship to both developers and homeowner associations.

Service Response: The requirement for Federal agency consultation under section 7 of the Act for actions they carry out, fund, or authorize on Federal or non-Federal lands resulted from listing of the species, and no new requirements are imposed by critical habitat designation.

(9d) Comment: There is an expressed concern that the value and security of bonds issued to construct public infrastructure might be threatened by critical habitat designation.

Service Response: Bonds issued by non-Federal entities that are not insured by the Federal Government do not constitute a Federal nexus. However, an incidental take permit issued under section 10 of the Act would still be required if a taking of the pygmy-owl is possible. The designation of critical habitat does not add any additional requirements to the section 10 incidental take permit process.

(9e) Comment: There is an expressed concern that all property owners who will be adversely affected by the designation of critical habitat should be provided just compensation.

Service Response: This designation of critical habitat will not add any additional restrictions and will not affect property owners beyond those restrictions resulting from the listing of the pygmy-owl as endangered.

(9f) Comment: Critical habitat may disrupt current and future Federal, State, and County land management activities and cause

economic losses.

Service Response: Federal agencies are required to consult with us when a species is listed under the Act. State and County entities are not required to consult with us unless a Federal nexus exists. The designation of critical habitat does not add any new requirements or restrictions.

(9g) Comment: The designation will have harmful impacts on the quality of life, education, and economic stability of small towns. There is an expressed concern that the proposed critical habitat designation will change water diversions, groundwater pumping, road maintenance and land development.

Service Response: As stated in the economic analysis, the proposed rule to designate critical habitat for the pygmy-owl is not adding any new requirements to the regulatory process. Since the adverse modification standard of critical habitat and the jeopardy standard are nearly identical, the listing of the pygmy-owl itself placed the requirement for consultation. This final rule to designate critical habitat adds no additional requirements that were not already in place due to the species' listing.

(9h) Comment: There is an expressed concern that the designation would limit the construction of much needed schools, colleges, and community and recreation centers, thereby threatening the ability of small towns affected by the designation to expand and diversify their economy and to improve education.

Service Response: As previously stated, this final rule designating critical habitat will not impose additional restrictions on private, cities, counties, State or Federal lands. Restrictions already in place due to the listing of the pygmy-owl require consultation with us when there is a Federal nexus. Any limitations or restrictions on construction were imposed due to the species' listing. Additional restrictions are not expected.

(9i) Comment: There is an expressed concern that the economic stability of the towns of Kearny, Hayden, and Winkelman, as well as Pinal and Gila counties, depends on the continued operation of their mining complex, and further regulatory costs would threaten the corporation.

Service Response: Critical habitat designation will not add new restrictions beyond those imposed by the listing of the pygmy-owl.

(9j) Comment: The Service's designation of critical habitat has not adequately considered potential economic implications. There is opposition to the fact that the Service did not prepare an initial regulatory flexibility analysis to address potential impact to small businesses, as required under the Regulatory Flexibility Act.

Service Response: The proposed rule was published under very tight time constraints by the court order on December 24, 1998. At that time we prepared a record of compliance (ROC) that the proposed critical

habitat designation would not have a significant economic impact on small entities. A detailed analysis was initiated by a private firm under contract and subsequently, we distributed a draft of the economic analysis for a 30-day public comment period ending in May, 1999. The findings of the economic analysis indicate that the designation of critical habitat adds no new restrictions on economic activity that were not due to the listing of the pygmy-owl. Therefore, there are no economic effects on small entities attributable to this final rule, and a regulatory impact analysis is not required.

(9k) There is a concern that the different jurisdictions impacted by critical habitat designation should be addressed separately; impacts should be addressed as individual cases, not collectively.

Service Response: If the economic analysis would have detected economic effects attributable to the critical habitat designation, then those effects would have been enumerated for each of the areas of critical habitat and would have been estimated for each type of land and management involved. This information would have been used by the Secretary of the Department of the Interior to determine if the benefits of exclusion of the land outweighed the benefits of including the land as critical habitat. There are no economic effects attributable to critical habitat designation so the issue of separating economic effects is a moot point.

#### Summary of Changes From the Proposed Rule

Below is a summary of the changes made to the legal descriptions for the cactus ferruginous pygmy-owl critical habitat designation. The maps included in the proposed rule accurately depicted the critical habitat proposed by the rule. Based on the comments we received, we discovered that several areas within the proposed critical habitat were not accurately described by the legal descriptions in the proposed rule, although the areas were accurately depicted on the maps. As discussed below, we are clarifying the legal descriptions in this final designation to conform to the area depicted by the maps, which remain unchanged.

Changes in the legal descriptions below are of three types: (1) The result of typographical errors discovered after publication of the proposed rule; (2) corrections in sectional descriptions resulting from the use of more up-to-date Public Land Survey System data obtained from the Arizona Land Resource Information System (ALRIS) to more closely reflect mapped information of the proposed rule; and (3) clarification of the description for Tucson Mountain County Park, the boundary of which was obtained from Pima County Public Works and is more up-to-date than that depicted on the BLM map cited in the proposed rule and which was available from ALRIS.

[[Page 37434]]

Unit 1:

T. 19 S., R. 7 E.  
T. 19 S., R. 8 E.  
T. 21 S., R. 7 E.

Unit 2:

T. 14 S., R. 11 E.  
T. 14 S., R. 12 E.

Unit 5b:

T. 9 S., R. 14 E.

Unit 6:

T. 4 S., R. 14 E.  
T. 6 S., R. 15 E.  
T. 6 S., R. 16 E.  
T. 8 S., R. 16 E.  
T. 9 S., R. 18 E.  
T. 11 S., R. 18 E.  
T. 12 S., R. 19 E.

Unit 7:

T. 1 N., R. 9 E.

As a result of using ALRIS data for ownership, the acres summary in Table 1 also changed. The total acres increased by about 1% with the greatest change in Pinal County where BLM's total was reduced and the "Other" category picked up that reduction. This is largely due to acreage originally identified as BLM that was actually Bureau of Reclamation when the newer data sets were analyzed. The remaining acreage differences are attributed to the differing methods of determining acres. For the proposed rule, sections and ownership were roughly counted and totaled manually by visual inspection of the cited maps. Subsequently, digital information was obtained from ALRIS and Pima County, which was used to create the updated version of Table 1 (as well as the legal descriptions).

Finally, as mentioned previously, lands in Tribal grazing allotments are excluded from critical habitat. We determined that pygmy-owl conservation could be adequately ensured without designation

of the approximately 240 acres.

## Economic Analysis

Section 4(b)(2) of the Act requires us to designate critical habitat on the basis of the best scientific and commercial information available and to consider the economic and other relevant impacts of designating a particular area as critical habitat. We may exclude areas from critical habitat upon a determination that the benefits of such exclusions outweigh the benefits of specifying such areas as part of critical habitat. We cannot exclude areas from critical habitat if such exclusion would result in the extinction of the species concerned.

Economic effects caused by listing the pygmy-owl as endangered and by other statutes are the baseline upon which critical habitat is imposed. The economic analysis must then examine the incremental economic and conservation effects of the critical habitat addition. Economic effects are measured as changes in national income, regional jobs, and household income. An analysis of the economic effects of pygmy-owl critical habitat designation was prepared (McKenney et al. 1999) and made available for public review (April 15-May 15, 1999; 64 FR 18597). The final analysis, which reviewed and incorporated public comments, concluded that no economic impacts are expected from critical habitat designation above and beyond that already imposed by listing the pygmy-owl. The only possible economic effects of critical habitat designation are on activities funded, authorized, or carried out by a Federal agency. These activities would be subject to section 7 consultation if they may affect critical habitat. However, activities that may affect critical habitat may also affect the species, and would thus be subject to consultation regardless. Also, changes or mitigating measures that might increase the cost of the project would only be imposed as a result of critical habitat if the project adversely modifies or destroys that critical habitat. We believe that any project that would adversely modify or destroy critical habitat would also jeopardize the continued existence of the species and that reasonable and prudent alternatives to avoid jeopardizing the species would also avoid adverse modification of critical habitat. Thus, no regulatory burden or additional costs would accrue because of critical habitat above and beyond that resulting from listing.

A copy of the economic analysis and description of the exclusion process with supporting documents are included in our administrative record and may be obtained by contacting our office (see ADDRESSES section).

## Required Determinations

## Regulatory Planning and Review

In accordance with Executive Order 12866, we submitted this action for review by the Office of Management and Budget. Because the economic analysis identified no economic benefits from excluding any of the proposed critical habitat areas, we made a determination to designate all proposed critical habitat units. No inconsistencies with other agencies' actions and/or effects on entitlements, grants, user fees, loan programs, or the rights and obligations of their recipients, were identified in the economic analysis. This rule does not raise novel legal or policy issues.

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

In the economic analysis we determined that designation of critical habitat will not have a significant effect on a substantial number of small entities. As discussed in that document and in this final rule, designation of critical habitat will not restrict any actions beyond those already resulting from listing the pygmy-owl. We recognize that some towns, counties, and private entities are considered small entities in accordance with the Regulatory Flexibility Act, however, they also are not affected by the designation of critical habitat because no additional restrictions will result from this action.

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

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

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

In the economic analysis we determined that no effects would occur to small governments as a result of critical habitat designation.

#### Takings

In accordance with Executive Order 12630, this rule does not have significant takings implications, and a takings implication assessment is not required. This designation will not "take" private property and will not alter the value of private property. Critical habitat designation is only applicable to Federal lands and to private lands if a Federal nexus exists.

## Federalism

This rule will not affect the structure or role of States, and will not have direct, substantial, or significant effects on States. As previously stated, critical habitat is only applicable to Federal lands and to non-Federal lands when a Federal nexus exists, and in the economic analysis we determined that no economic impacts would result from critical habitat designation.

[[Page 37435]]

## Civil Justice Reform

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

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

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

## National Environmental Policy Act

We have determined that EAs and EISs, as defined under the authority of the National Environmental Policy Act of 1969 (NEPA), need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Act. We published a notice outlining our reasons for this determination in the Federal Register in October, 1983 (48 FR 49244).

## Government-to-Government Relationship With Tribes

In accordance with the President's memorandum of April 29, 1994, "Government-to-Government Relations with Native American Tribal Governments" (59 FR 22951) and 512 DM 2: We understand that we must relate to federally recognized Tribes on a Government-to-Government basis. Secretarial Order 3206 American Indian Tribal Rights, Federal-Tribal Trust Responsibilities and the Endangered Species Act states that "Critical habitat shall not be designated in such areas an area that may impact Tribal trust resources unless it is determined

essential to conserve a listed species. In designating critical habitat, we shall evaluate and document the extent to which the conservation needs of a listed species can be achieved by limiting the designation to other lands." Pygmy-owl critical habitat does not contain any Tribal lands nor lands that we have identified as impacting Tribal trust resources.

References Cited

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

Authors

The primary author of this notice is Mike Wrigley (see ADDRESSES section).

List of Subjects in 50 CFR Part 17

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

For the reasons given in the preamble, we amend 50 CFR part 17 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. In Sec. 17.11(h) revise the entry for "Pygmy-owl, cactus ferruginous" under "BIRDS" to read as follows:

Sec. 17.11 Endangered and threatened wildlife.

\* \* \* \* \*

(h) \* \* \*

Species	Vertebrate population where
-----	-----

Critical listed	Special habitat	rules	Historic range	endangered or threatened	Status	When
	Common name		Scientific Name			
-----						
-----						
Birds						
*	*	*	*	*	*	*
Pygmy-owl, cactus ferruginous..... E	600 Sec. 17.95	17.95	Glaucidium brasilianum NA cactorum.	U.S.A. (AZ, TX), Mexico.	AZ	(b)
*	*	*	*	*	*	*
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3. Amend section 17.95(b) by adding critical habitat for the cactus ferruginous pygmy-owl (*Glaucidium brasilianum cactorum*) in the same alphabetical order as this species occurs in 17.11(h).

Sec. 17.95 Critical habitat--fish and wildlife.

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(b) Birds.

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Cactus ferruginous pygmy-owl (*Glaucidium brasilianum cactorum*)

1. Critical habitat units are depicted for Pima, Cochise, Pinal, and Maricopa counties, Arizona, on the maps below. The maps are for reference only; the areas in critical habitat are legally described below.

2. Within these areas, the primary constituent elements are those habitat components that are essential for the primary biological needs of foraging, nesting, rearing of young, roosting, sheltering, and dispersal or the capacity to develop those habitat components. The primary constituent elements are found in areas that support, or have the potential to support, riparian forests, riverbottom woodlands, xeroriparian forests, and semidesert grassland, and the Arizona upland subdivision of Sonoran desertscrub. Within these vegetation communities, specific plant associations that are essential for the primary biological needs of the cactus ferruginous pygmy-owl include, but are not limited to, the following vegetation: cottonwood, willow, ash, mesquite, palo verde, ironwood, hackberry, saguaro cactus, and/or organ pipe

cactus.

3. Critical habitat does not include non-Federal lands covered by a legally operative incidental take permit for the cactus ferruginous pygmy-owl issued under section 10(a) of the Act, nor Indian Tribal grazing allotments.

Unit 1. Pima County, Arizona. From BLM map Sells, Ariz. 1979, Atascosa Mts., Ariz. 1979.

Gila and Salt Principal Meridian, Arizona: T. 17 S., R. 8 E., secs. 1 to 3, E $\frac{1}{2}$  sec. 4, E $\frac{1}{2}$  sec. 9, secs. 10 to 16, 21 to 36; T. 17 S., R. 9 E., that portion of sec. 1 lying west of St. Hwy 286, secs. 2 to 10, those portions of secs. 11, 12, and 14 lying west of St. Hwy 286, secs. 15 to 22, those portions of secs. 23 and 26 lying west of St. Hwy 286, secs. 27 to 34, that portion of sec. 35 lying west of St. Hwy 286; T. 18 S., R. 7 E., sec. 1, those portions of secs. 2 and 11 lying east of Papago Indian Reservation Bdy, sec. 12, those portions of secs. 13, 14, 24, 25, and 36 lying east of Papago Indian Reservation Bdy; T. 18 S., R. 8 E., secs. 1 to 36; T. 18 S., R. 9 E., that portion of sec. 2 lying west of Hwy 286, secs. 3 to 10, those portions of secs. 11 and 14 lying west of St. Hwy 286, secs. 15 to 22, those portions of secs. 23, 26, 27 and 28 lying

[[Page 37436]]

west and north of St. Hwy 286, secs. 29 to 31, those portions of secs. 32 and 33 lying west and north of St. Hwy 286; T. 19 S., R. 7 E., those portions of secs. 1, 12, 13, 14, and 23 lying east of Papago Indian Reservation Bdy, secs. 24 and 25, those portions of secs. 26 and 34 lying east of Papago Indian Reservation Bdy, secs. 35, 36; T. 19 S., R. 8 E., secs. 1 to 12, N $\frac{1}{2}$  sec. 13, secs. 14 to 21, W $\frac{1}{2}$  sec. 22, S $\frac{1}{2}$  sec. 26, S $\frac{1}{2}$  & NW $\frac{1}{4}$  sec. 27, secs. 28 to 35; T. 19 S., R. 9 E., sec. 6; T. 20 S., R. 7 E., secs. 1, 2, those portions of secs. 3, 9, and 10 lying east of Papago Indian Reservation Bdy, secs. 11 to 15, those portions of secs. 16, 17, and 21 lying east of Papago Indian Reservation Bdy, secs. 22 to 27, those portions of secs. 28, 29, 32, and 33 lying east of Papago Indian Reservation Bdy, secs. 34 to 36; T. 20 S., R. 8 E., secs. 2 to 11, 14 to 23, 27 to 33; T. 21 S., R. 7 E., secs. 1 to 4, those portions of secs. 5 and 8 lying east of Papago Indian Reservation Bdy, secs. 9 to 16, those portions of secs. 17 and 20 lying east of Papago Indian Reservation Bdy, secs. 21 to 27, those portions of secs 28 and 29 lying east of Papago Indian Reservation Bdy, that portion of sec. 33 lying north of Papago Indian Reservation Bdy, secs. 34 to 36; T. 21 S., R. 8 E., secs. 4 to 9; T. 22 S., R. 7 E., secs. 1 to 3, 10 to 15, 22 to 25; T. 22 S., R. 8 E., S $\frac{1}{2}$  SW, SW $\frac{1}{4}$  SE $\frac{1}{4}$  sec. 18, W $\frac{1}{2}$  & W $\frac{1}{2}$  E $\frac{1}{2}$  sec. 19, that

portion of sec. 20 outside Buenos Aires NWR Bdy, secs. 29, 30.

Unit 2. Pima County, Arizona. From BLM map Silver Bell Mts., Ariz. 1977.

Gila and Salt Principal Meridian, Arizona: T. 13 S., R. 9 E., secs. 31 to 36; T. 13 S., R. 10 E., secs. 31 to 36; T. 13 S., R. 12 E., those portions of secs. 31 to 34 lying within Tucson Mountain County Park; T. 14 S., R. 9 E., secs. 1 to 12; T. 14 S., R. 10 E., secs. 1 to 12; T. 14 S., R. 11 E., that portion of secs. 1 and 2 lying within the Tucson Mountain County Park, secs. 5 to 8, 10, 11, those portions of secs. 12 and 13 lying within Tucson Mountain County Park, secs. 14 and 15; T. 14 S., R. 12 E., those portions of secs. 1 to 25, lying within Tucson Mountain County Park; T. 14 S. R. 13 E., those portions of secs. 7, 18, 19, 28, 29, and 30 lying within Tucson Mountain County Park. (Note: Areas described for Tucson Mountain County Park do not match the Silver Bell Mts., Ariz. BLM map cited above. This description is based on more recent information obtained from Pima County Public Works.)

Unit 3. Pima County, Arizona. From BLM map Silver Bell Mts., Ariz. 1977.

Gila and Salt Principal Meridian, Arizona: T. 12 S., R. 12 E., those portions of secs. 8 and 9 lying south and west of Interstate 10, secs. 17, 20, and 29.

Unit 4. Pima and Pinal Counties, Arizona. From BLM maps Casa Grande, Ariz. 1979, Silver Bell Mts., Ariz. 1977.

Gila and Salt Principal Meridian, Arizona: T. 10 S., R. 11 E., secs. 1 to 36; T. 10 S., R. 12 E., secs. 4 to 9, 16 to 21, 28 to 33; T. 11 S., R. 11 E., secs. 1 to 5, 9 to 15, secs. 23, 24; T. 11 S., R. 12 E., secs. 3 to 10, 14 to 30, N $\frac{1}{2}$  sec. 31, secs. 32 to 36; T. 11 S., R. 13 E., secs. 19, 28 to 33; T. 12 S., R. 12 E., secs. 1 to 4, those portions of secs. 8 and 9 lying north and east of Interstate 10, secs. 10 to 14, 23, 24, that portion of sec. 25 lying north of W. Cortaro Farms Road, that portion of sec. 26 lying north of W. Cortaro Farms Road and north and east of Interstate 10; T. 12 S., R. 13 E., secs. 4 to 9, 16 to 21, those portions of secs. 29 and 30 lying north of W. Cortaro Farms Road.

Unit 5a. Pinal County, Arizona. From BLM maps Mesa, Ariz. 1979, Casa Grande, Ariz. 1979.

Gila and Salt Principal Meridian, Arizona: T. 5 S., R. 11 E., secs. 1 to 36; T. 6 S., R. 11 E., secs. 1 to 36; T. 7 S., R. 11 E., secs. 1 to 36; T. 8 S., R. 11 E., secs. 1 to 36; T. 9 S., R. 11 E., secs. 1 to 36.

Unit 5b. Pinal County, Arizona. From BLM maps Casa Grande, Ariz. 1979, Mammoth, Ariz. 1986.

Gila and Salt Principal Meridian, Arizona: T. 8 S., R. 15 E., secs. 1 to 36; T. 9 S., R. 12 E., secs. 1 to 36; T. 9 S., R. 13 E., secs. 1 to 36; T. 9 S., R. 14 E., secs. 1 to 31; T. 9 S., R. 15 E.,

secs. 1 to 12, 14 to 21, 28 to 30.

Unit 6. Cochise, Pima, and Pinal Counties, Arizona. From BLM maps Mesa, Ariz. 1979, Globe, Ariz. 1986, Mammoth, Ariz. 1986, and Tucson, Ariz. 1979.

Gila and Salt Principal Meridian, Arizona: T. 4 S., R. 9 E., those portions of secs. 1, 12, 13, and 24 lying east of U.S. Hwy 89; T. 4 S., R. 10 E., secs. 1 to 5, that portion of sec. 6 lying east of U.S. Hwy 89, secs. 7 to 24; T. 4 S., R. 11 E., secs. 7 to 36; T. 4 S., R. 12 E., secs. 1 to 12; T. 4 S., R. 13 E., that portion of sec. 1 lying south and west of St. Hwy 177, secs. 2 to 12; T. 4 S., R. 14 E., those portions of secs. 5, 6, 7, 8, 16, and 17 lying south and west of St. Hwy 177, secs. 18, 20, those portions of secs. 21, 22, 26, and 27, lying south and west of St. Hwy 177, secs. 28, 29, 33, and 34, that portion of sec. 35 lying south and west of St. Hwy 177; T. 5 S., R. 14 E., those portions of secs. 1 and 2 lying south and west of St. Hwy 177, secs. 3, 11, 12; T. 5 S., R. 15 E., those portions of secs. 6, 7, 8, 9, and 10 lying south and west of St. Hwy 177, that portion of sec. 14 lying south and west of the Pinal and Gila Counties boundary (all within Pinal County), that portion of sec. 15 lying south of St. Hwy 177 and west of the Pinal and Gila Counties boundary (all within Pinal County), secs 16 to 22, that portion of sec. 23 lying south and west of the Pinal and Gila Counties boundary (all within Pinal County), that portion sec. 24 lying west of St. Hwy 77 and south of Pinal and Gila Counties boundary (all within Pinal County), that portion of sec. 25 lying south and west of St. Hwy 77 and north and east of San Manuel Railroad, those portions of secs. 26 and 36 lying north and east of San Manuel Railroad; T. 5 S., R. 16 E., those portions of secs. 30 and 31 lying south and west of St. Hwy 77; T. 6 S., R. 15 E., that portion of sec. 1 lying north and east of San Manuel Railroad; T. 6 S., R. 16 E., that portion of sec. 5 lying south and west of St. Hwy 77, that portion of sec. 6 lying south and west of St. Hwy 77 and north and east of San Manuel Railroad, that portion of sec. 7 lying north and east of San Manuel Railroad, that portion sec. 8 lying south and west of St. Hwy 77 and north and east of San Manuel Railroad, those portions of secs. 9 and 16 lying south and west of St. Hwy 77, those portions of secs. 17 and 20 lying east of San Manuel Railroad, those portions of secs. 21 and 28 lying west of St. Hwy 77, those portions of secs. 29 and 32 lying east of San Manuel Railroad, that portion of sec. 33 lying west of St. Hwy 77; T. 7 S., R. 16 E., that portion of sec. 4 lying west of St. Hwy 77, secs. 5 to 8, those portions of secs. 9, 10, and 15 lying south and west of St. Hwy 77, secs. 16 to 21, those portions of secs. 22, 23, 25, and 26 lying south and west of St. Hwy 77, secs. 27 to 35, that portion of sec. 36 lying south and west of St. Hwy 77; T. 8 S., R. 16 E., that portion of sec. 1 lying south and west of St. Hwy 77, secs. 2

to 12, that portion of sec. 13 lying east of Camino Rio Road, secs. 15 to 22, 28 to 32; T. 8 S., R. 17 E., that portion of sec. 6 south and west of St. Hwy 77, that portion of section 7 west of St. Hwy 77 and west of River Road, that portion of sec. 17 lying south and west of River Road, that portion of sec. 18 south and west of River Road and north and east of a line defined by Camino Rio Road where it runs southeasterly from the west boundary of sec. 18 to its intersection with St. Hwy 77 then southeasterly along St. Hwy 77 to its intersection with Old State Hwy 77 then along Old State Hwy 77 to its intersection with the south boundary of sec. 18, that portion of sec. 19 lying east of Old State Highway 77, those portions of secs. 20, 28, and 29 lying south and west of River Road, that portion of sec. 30 lying east of Old State Hwy 77 and St. Hwy 77, sec. 32, that portion of sec. 33 lying west of River Road; T. 9 S., R. 16 E., secs. 5 to 8; T. 9 S., R. 17 E., those portions of secs. 3 and 4 lying west of River Road, sec. 9, those portions of secs. 10, 14, and 15 lying west of River Road, NE $\frac{1}{4}$  sec. 22, those portions of secs. 23, 24, and 25 west of River Road; T. 9 S., R. 18 E., those portions of secs. 30, 31 and 32 west of River Road; T. 10 S., R. 18 E., those portions of secs. 5, 6, 7, and 8 lying north and east of Redington Road, sec. 9, those portions of secs. 16, 17, and 21 lying north and east of Redington Road, secs. 22 and 27, those portions of secs. 28 and 33 lying east of Redington Road, sec. 34; T. 11 S., R. 18 E., sec. 2, those portions of secs. 3 and 10 lying east of Redington Road, secs. 11 and 14, those portions of secs. 15 and 22 lying east of Redington Road, secs. 23 and 26, that portion of sec. 27 lying east of Redington Road, that portion of sec. 34 lying east of Redington Road and west of Cascabel Road, that portion of sec. 35 lying west of Cascabel Road; T. 12 S., R. 18 E., that portion of sec. 2 west of Cascabel Road, that portion of sec. 3 lying east of Redington Road, those portions of secs. 11, 12, and 13 lying west of Cascabel Road; T. 12 S., R. 19 E., those portions of secs. 18, 19, 29, and 30 lying west of Cascabel Road, sec. 31, that portion of sec. 32 and 33 lying west of Cascabel Road; T. 13 S., R. 19 E., that portion of sec. 4 lying west of Cascabel Road, sec. 5, those portions of secs. 9, 10, and 15 lying west of Cascabel Road.

Unit 7. Maricopa and Pinal Counties, Arizona. From BLM maps Theodore Roosevelt Lake, Ariz. 1981 and Mesa, Ariz. 1979.

Gila and Salt Principal Meridian, Arizona: T. 3 N., R. 7 E., that portion of sec. 33 lying easterly of Salt River Indian Reservation Bdy, secs. 34 to 36; T. 3 N., R. 8 E., secs. 31 to 33; T. 2 N., R. 7 E., secs. 1 to 3, those portions of secs. 4, 5, 6 and 7 lying south and east of

Salt River Indian Reservation Bdy, secs. 8 to 17, that portion of sec. 18 lying south and east Salt River Indian Reservation Bdy, secs. 19 to 25, E \1/2\ sec. 26, E \1/2\ sec. 35, sec. 36; T. 2 N., R. 8 E., secs. 4 to 8, 18, 19, 25 to 36; T. 2 N., R. 9 E., secs. 30, 31; T. 1 N., R. 9 E., secs. 6, 7, 18 to 21, 27 to 30, 34 to 36; T. 1 N., R. 10 E., secs. 31, 32; T. 1 S., R. 9 E., secs. 1 to 3, 10 to 15, 22 to 26, those portions of secs. 27, 35 and 36 lying north and east of U.S. Hwy 60/89; T. 1 S., R. 10 E., secs. 5 to 8, 17 to 20, 29 to 32; T. 2 S., R. 9 E., that portion of sec 1 lying north and east of U.S. Hwy 60/89; T. 2 S., R. 10 E., secs. 1 to 5, those portions of secs. 6, 7 and 8 lying north and east of U.S. Hwy 60/89, secs. 9 to 16, that portion of sec. 17 lying north and east of U.S. Hwy 60/89 and south and east of U.S. Hwy 89, that portion of sec. 20 lying east of U.S. Hwy 89, secs. 21 to 28, those portions of secs. 29 and 32 lying east of U.S. Hwy 89, secs. 33 to 36: T. 3 S., R. 10 E., secs. 1 to 4, those portions of secs. 5 and 8 lying east of U.S. Hwy 89, secs. 9 to 16, those portions of secs. 17, 18, and 19 lying east of U.S. Hwy 89, secs. 20 to 29, those portions of secs. 30 and 31 lying east of U.S. Hwy 89, secs. 32 to 36.

BILLING CODE 4310-55-P

[[Page 37438]]

[GRAPHIC] [TIFF OMITTED] TR12JY99.027

[[Page 37439]]

[GRAPHIC] [TIFF OMITTED] TR12JY99.028

[[Page 37440]]

[GRAPHIC] [TIFF OMITTED] TR12JY99.029

Dated: June 30, 1999.  
Donald J. Barry,  
Assistant Secretary for Fish and Wildlife and Parks.  
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