

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018—AI25

Endangered and Threatened Wildlife and Plants; Determinations of Prudence for Two Mammal and Four Bird Species in Guam and the Commonwealth of the Northern Mariana Islands and Proposed Designations of Critical Habitat for One Mammal and Two Bird Species

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), have reconsidered whether designating critical habitat for the Mariana fruit bat (*Pteropus mariannus mariannus*), little Mariana fruit bat (*Pteropus tokudae*), Guam Micronesian kingfisher (*Halcyon cinnamomina cinnamomina*), Mariana crow (*Corvus kubaryi*), Guam broadbill (*Myiagra freycineti*), and Guam subspecies of bridled white-eye (*Zosterops conspicillatus conspicillatus*) would be prudent. We propose designation of critical habitat for the Mariana fruit bat, Guam Micronesian kingfisher, and Mariana crow pursuant to the Endangered Species Act of 1973, as amended (Act). We propose designating approximately 10,037 hectares (ha) (24,803 acres (ac)) on the island of Guam for the Mariana fruit bat and the Guam Micronesian kingfisher. For the Mariana crow, we propose designating approximately 9,309 ha (23,004 ac) on the island of Guam and approximately 2,462 ha (6,084 ac) on the island of Rota in the Commonwealth of the Northern Mariana Islands (CNMI). On Guam, the Mariana fruit bat and Guam Micronesian kingfisher proposed critical habitat unit boundaries are identical and the boundaries of the proposed critical habitat for the Mariana crow is contained within these identical boundaries. On Rota, critical habitat is proposed only for the Mariana crow.

We have determined that designation of critical habitat would not be prudent for the little Mariana fruit bat, Guam broadbill, and bridled white-eye because all three species likely are extinct. These species inhabited native forests similar to those required by the Mariana fruit bat, Guam Micronesian kingfisher, and Mariana crow, and the designation of critical habitat for these species on Guam will provide some insurance in the event that any of the

species presumed extinct are rediscovered.

We solicit data and comments from the public on all aspects of this proposal, including data on economic and other impacts. We may revise this proposal to incorporate or address new information received during the comment period.

DATES: *Comments:* Comments from all interested parties must be received by December 16, 2002.

Public Hearings: A public hearing will be held on Rota from 6 to 8 p.m. on Wednesday, November 6, 2002. A public hearing will also be held on Guam from 6 to 8 p.m., Thursday, November 7, 2002. Prior to each public hearing, the Service will be available from 3:30 to 4:30 p.m. to provide information and to answer questions. We also will be available for questions after each of the hearings.

ADDRESSES: The Rota public hearing will be held at the Rota Resort, 2600 Bishop Drive, As Puladan. The Guam public hearing will be held at the Outrigger Guam Resort, 1255 Pale San Vitores Road, Tumon Bay.

Anyone wishing to make oral comments for the record at the public hearing is encouraged to provide a written copy of their statement and present it to us at the hearing. In the event there is a large attendance, the time allotted for oral statements may be limited. Oral and written statements receive equal consideration.

Persons needing reasonable accommodations in order to attend and participate in the public hearing should contact Patti Carroll at 503/231-2080 as soon as possible. In order to allow sufficient time to process requests, please call no later than 1 week before the hearing date.

You may submit your comments and materials concerning this proposal by any one of the following methods:

You may submit comments and information on this proposed rule to Paul Henson, Field Supervisor, Pacific Islands Fish and Wildlife Office, U.S. Fish and Wildlife Service, 300 Ala Moana Boulevard, Room 3-122, Box 50088, Honolulu, HI 96850.

You may hand-deliver written comments to our Pacific Islands Office at the address given above.

You may send comments by electronic mail (e-mail) to: Mariana_CritHab@r1.fws.gov. See the Public Comments Solicited section below for file format and other information about electronic filing.

Availability of Documents: Supporting documentation and references used in the preparation of

this proposed rule and all comments and materials received will be available for public inspection, by appointment, during normal business hours in the Pacific Islands Fish and Wildlife Office in Honolulu at the above address.

FOR FURTHER INFORMATION CONTACT: Paul Henson, Field Supervisor, or Fred Amidon, Fish and Wildlife Biologist, Pacific Islands Fish and Wildlife Office, at the above address (telephone: 808/541-3441; facsimile: 808/541-3470).

SUPPLEMENTARY INFORMATION:**Background**

The Territory of Guam (Guam) is the largest and southernmost of the 16 islands in the Mariana Archipelago. Guam is located at 13° 30' N and 145° E and is approximately 49 kilometers (km) (30 miles (mi)) long and 7 to 15 km (4 to 9 mi) wide. The northern half of Guam is an upraised limestone plateau and the southern half is primarily of volcanic origin with a mountainous topography. The major habitat types found on Guam include limestone forest, grassland, swamp forest (including mangroves), ravine forest, secondary forest, agricultural forest (including coconut plantations), coastal forest, open ground (including pastures and cultivated areas), urban vegetation, and marshland (Fosberg 1960, Mueller-Dombois and Fosberg 1998). The majority of Northern Guam is secondary forest, with large areas cleared for military facilities and business and residential development. Southern Guam is a mosaic of grassland and patches of ravine, limestone, swamp, and secondary forests.

Rota is the fourth largest island in the Mariana Archipelago, and is located 49 km (30 mi) north of Guam at 14° 10' N and 145° E. The island is approximately 18 km (11 mi) long and 4 to 7 km (2.5 to 4 mi) wide. The western half of the island is dominated by an uplifted plateau, the Sabana, which supports a combination of limestone forest, grassland, and agricultural land. The Sabana encompasses 12 km² (5 mi²) at an elevation of 450 meters (m) (1,476 feet (ft)). Steep cliffs border the Sabana on all but the northeast side, where the plateau slopes down to the eastern part of the island, which supports a combination of secondary forest and residential and agricultural lands. Because access is difficult, the cliffs surrounding the Sabana support primary limestone forest. Although approximately 60 percent of Rota is now forested (Falanruw *et al.* 1989), and the native vegetation on Rota is less disturbed than on Guam, much of the forest on Rota is of medium stature and

is degraded by development activities, introduced plants and animals, logging, and the effects of warfare from WWII (Fosberg 1960, Engring *et al.* 1986, NRC 1997, Mueller-Dombois and Fosberg 1998). Prior to human colonization, both Guam and Rota likely were covered with forest and had similar vegetation and habitat types.

Taxonomy, Life History, Distribution, and Habitat

Mariana fruit bat—This species is a medium-sized fruit bat weighing from 330 to 577 grams (g) (12 to 20 ounces (oz)) with a wingspan of 860 to 1,065 millimeters (mm) (34 to 42 inches (in)) (Perez 1972). The abdomen, wings, and head are dark brown, while the back and sides of the neck are golden or pale brown. This species is a member of the Old World fruit bat family Pteropodidae, which is distributed throughout the Old World tropics. The Mariana fruit bat historically inhabited all of the major islands in the Mariana archipelago. This species typically roosts diurnally in colonies in undisturbed native forests and forages widely at night on nectar, fruit, and leaves of at least 22 plant species (Wiles 1983). The Mariana fruit bat is polygynous; colonies usually consist of harems of 2 to 15 females attended by one male and bachelor groups (Wiles 1982a, 1983). Females typically produce a single offspring per year; mating and nursing young have been observed throughout the year (Perez 1972, Wiles 1983, Wiles *et al.* 1995).

During the day, Mariana fruit bats roost in native and non-native trees alone or in groups or colonies of a few to over 800 animals (Wiles 1987, Pierson and Rainey 1992, Worthington and Taisacan 1995). Roosting bats sleep during much of the day but also perform other activities, such as grooming, breeding, and defending roosting territories within the colony (USFWS 1990a). Several hours after sunset, bats depart their roost sites to forage for fruit and other native and non-native plant materials such as leaves and nectar (USFWS 1990a). Little is known about their nightly movements, but fruit bats have been observed foraging as far as 12 km (7 mi) from known roosting sites on Guam (Wiles *et al.* 1995). Radio tracking of the Tongan or white-necked fruit bat (*Pteropus tonganus*) in Samoa indicates that individual animals may travel as far as 15 to 20 km (9 to 12 mi) from their roosts during a night's foraging (Suzanne Nelson, University of Florida, pers. comm., 2002). Similar to the Mariana fruit bat, this species roosts colonially during the day and forages widely at night, feeding on the fruit,

nectar, and leaves of a range of native and non-native plants (Trail 1994, Banack 1998).

At present, only the Guam population of Mariana fruit bat is listed as endangered. A proposed rule to reclassify the Guam population of the species as threatened and also list the population in the CNMI as threatened was published on March 26, 1998 (63 FR 14641).

On Guam, the Mariana fruit bat was historically found throughout native forests. In 1958, Woodside (1958) estimated the population on Guam to number approximately 3,000 fruit bats. By 1995, the island population had been reduced to between 300 and 500 and was restricted primarily to forest on the northern tip of the island (Wiles *et al.* 1995), although there are occasional reports of bats from southern Guam around the Fena Reservoir (Morton and Wiles, in press). Illegal hunting is believed to be one of the major causes of decline in this species, but predation by the brown treesnake (*Boiga irregularis*) also may be an important limiting factor (Wiles 1987). The Mariana fruit bat forages and roosts primarily in native limestone forest, but coconut plantations and coastal forest are occasionally used as well (Wiles 1987, Worthington and Taisacan 1996). Most other species of Pacific fruit bats generally use a variety of forest types, including agricultural forest in close proximity to residential areas (Falunruw 1988, Wiles and Engring 1992, Banack 1998). On Guam, however, residential areas generally are not used by the Mariana fruit bat, probably because they do not provide adequate protection from poaching (USFWS 1990a). Forested areas protected from human intrusion are necessary for conservation of the Mariana fruit bat on Guam.

Little Mariana fruit bat—This species is a small fruit bat weighing approximately 152 g (5 oz) with a wingspan of 650 to 709 mm (25 to 28 in) (Tate 1934, Perez 1972). The abdomen and wings of the little Mariana fruit bat are dark brown while the mantle and sides of the neck are golden or brown. The top of the head is grayish to yellowish brown while the throat is dark brown. This species was a member of the Old World fruit bat family Pteropodidae. It was first described in 1931 (Tate 1934), and is believed to have been endemic to the island of Guam. Only three specimens of this species have been collected, and virtually nothing is known of its life history or distribution. This species typically has been described as "rare" (Baker 1948, Perez 1972). It was last recorded in 1968, when one female was

shot by hunters in mature limestone forest at Tarague Point in Northern Guam (Perez 1972). The little Mariana fruit bat likely is extinct (USFWS 1990a).

Guam Micronesian kingfisher—The Halcyon kingfishers are widespread in the Pacific, Australia, and Southeast Asia. The subspecies *Halcyon cinnamomina cinnamomina* is endemic to Guam. Other subspecies are endemic to Palau and Pohnpei. The Guam Micronesian kingfisher weighs approximately 56 to 76 g (2 to 3 oz) and is sexually dimorphic (Baker 1951). Males have a rusty brown head, neck, upper back, and underparts and a blue tail and wings. Females look similar to the male but the chin, throat, and underparts are white. The Guam Micronesian kingfisher preys on insects and small vertebrates such as skinks and geckoes, which it typically captures on the ground by ambush from exposed perches (Jenkins 1983). This species nests in cavities excavated in soft, rotten wood, and thus requires mature forest harboring relatively large-diameter, mature trees (Marshall 1989). Nesting activity in the wild on Guam was documented to occur primarily between December and July, and the average clutch size was two eggs (Jenkins 1983).

The Guam subspecies was common throughout Guam as recently as 1945 (Marshall 1949), and was found throughout most forest types (Jenkins 1983). Up to 3,000 birds were recorded in 1981 (Engring and Ramsey 1984), but the kingfisher declined rapidly, and now is extinct in the wild. However, a captive population of 63 birds has been established and is maintained at 11 zoos in North America including the Bronx, Philadelphia, and National Zoos (B. Bahner, National Zoological Association, in litt. 2002), and the Guam Division of Marine and Aquatic Resources is initiating a captive translocation program on Guam. Once the brown tree snake is controlled or eradicated, progeny produced by this captive flock can be reintroduced to Guam. Adequate forest habitat containing large trees suitable for nesting is essential to the successful reintroduction of kingfishers to the wild.

Mariana crow—This species is endemic to Guam and Rota, and is one of the few members of the worldwide family Corvidae to inhabit oceanic islands. The Mariana crow is a small, black crow weighing approximately 205 to 270 g (7 to 10 oz) (Baker 1951). Most of the information about the life history of the Mariana crow comes from Rota, where the species is more abundant than on Guam, though still rare (Wiles

1998, Morton *et al.* 1999). The Mariana crow is omnivorous and forages on a wide range of invertebrates, small vertebrates, fruit, seeds, foliage, and bark (USFWS in prep.). Crows forage at all heights in the forest as well as on the ground. The Mariana crow associates in family groups, and pairs defend territories of a size dependent upon the distribution of resources (Morton *et al.* 1999). Prior to population declines on Guam (see below), aggregations of up to 66 birds were often observed prior to the breeding season (Wiles 1998). On Rota, nesting is concentrated between August and February, but active nests have been found in every month but June (Morton *et al.* 1999). Nests are built an average of 7 m (23 ft) off the ground, with nest trees averaging 17 centimeter (cm) (7 in) in diameter (Morton *et al.* 1999). In a 3-year period on Rota, an average of 44 percent of Mariana crow pairs successfully fledged young and averaged 1.2 fledglings per successful nest (Morton *et al.* 1999). On Guam, nest predation and low egg viability seem to account for a much shorter breeding season (Morton 1996).

On Guam, the crow historically was widely distributed in forest habitats, but densities were highest in limestone forests and lowest in grasslands and areas with human settlement (Jenkins 1983, Michael 1987). Similar to other Guam forest birds, the crow disappeared from most of the island with the spread of the brown treesnake, and was restricted to the northern cliff forests by the mid 1970s. The population on Guam now numbers 12 birds, 10 of which were translocated from Rota or mainland zoos (Aguon 2002). This wild population experiences little or no reproductive success, and captive propagation efforts on Guam and in mainland zoos since 1984 have produced few juvenile birds for release (USFWS in prep.).

On Rota, Mariana crows were considered relatively common and widely distributed in 1976 (Pratt *et al.* 1979). The first island-wide survey of crows on Rota in 1982 estimated a population of 1,318 individuals (Engbring *et al.* 1986). Crows still are distributed widely on Rota (Morton *et al.* 1999), but results of several surveys indicate that the crow population has declined since the early 1980s. Differences in survey methods and seasonal variation among surveys has generated debate over the rate of decline in this 20-year period. Surveys using the variable circular plot method have been conducted regularly since 1992, however, and these indicate that the current estimate of 343 to 654 crows represents a decline of roughly 38

percent in the Rota population in the last decade (Fancy *et al.* 1999; Morton *et al.* 1999; USFWS in prep.).

The best information on the biology and current population size of the Mariana crows on Rota comes from a detailed study of six areas by Morton *et al.* from 1995 to 1999. Morton *et al.* (1999) mapped the locations of all known breeding pairs (n = 85 pairs) on Rota, and estimated the number of additional pairs inhabiting six non-surveyed areas by comparing the habitat in these areas to the surveyed habitats (n = 25 pairs), for a total of 110 breeding pairs on Rota. There likely are additional, nonbreeding crows on Rota, but it is difficult to estimate how many there may be (Morton *et al.* 1999).

Compared to other forest birds of Guam and Rota, Mariana crows have large territories and require relatively large tracts of limestone forest that have low levels of human activity or disturbance (Morton 1996, Morton *et al.* 1999). More forest is necessary to maintain a genetically viable population of crows than for other forest birds on Guam because each pair of crows requires more space than do smaller species. Research on Guam and Rota also indicates that human disturbance can affect nesting success and placement of nest sites (Morton 1996, Morton *et al.* 1999).

Although human persecution of crows has occurred on Rota (National Research Council (NRC) 1997, USFWS in prep.), we believe the threat to the species will not be increased by the designation of critical habitat. The small crow population on Guam is located on refuge lands that overlie military lands where access is highly restricted. On Rota, the proposed critical habitat is occupied by crows, and critical habitat designation thus will not place additional regulatory burdens on the local community that might generate increased persecution of crows. However, we are seeking public input on this important question.

Guam broadbill—This flycatcher was a member of the family Monarchidae. Most of the eight or nine genera in this family are widespread in the tropical Pacific, and many species are endemic to a single island or archipelago (Pratt *et al.* 1987). The Guam broadbill was closely related to congeners in Palau (*Myiagra erythrops*), Chuuk (*M. oceanica*), and Pohnpei (*M. pluto*). The Guam broadbill weighed approximately 12 g (0.4 oz) and had a bluish head, neck, back, wings, and tail and a white throat and light cinnamon breast (Baker 1951). Similar to other monarch flycatchers, the Guam broadbill was insectivorous and fed both by gleaning

prey from twigs and foliage and by hawking insects from the air (Jenkins 1983). This species nested year-round, and nests usually were placed in a fork of branches in understory trees or shrubs (Jenkins 1983). Both sexes incubated eggs and brooded young (Jenkins 1983).

Although once widespread in all but grassland habitats, by 1979 the Guam broadbill was restricted primarily to mature limestone forests along the north end of the island (Jenkins 1983). In 1983, the population was restricted to the Pajon Basin, a small area on the north coast, and was estimated at less than 100 individuals (Beck 1984). The last sightings of this species took place in 1984, one in March in Northwest Field and one in August adjacent to the Navy golf course in Barrigada (52 FR 2239). Since 1984, spring bird surveys and other ornithological activities in areas where this species would likely occur have yielded no observations (Wiles *et al.* 1995). The primary cause of decline likely was predation by the introduced brown treesnake (Savidge 1986, 1987). The Guam broadbill likely is extinct, and the proposed rule to remove this species from the Endangered Species list was published in the **Federal Register** on January 25, 2002 (67 FR 3675).

Bridled white-eye—The white-eye family Zosteropidae is widespread in the Old World tropics and occurs in the tropical Pacific as far east as Samoa. The Guam subspecies of bridled white-eye, *Zosterops conspicillatus conspicillatus*, was endemic to Guam (Baker 1951), and was one of two subspecies in the Mariana Islands (Slikas *et al.* 2000). The bridled white-eye weighed approximately 10.0 g (0.3 oz) and had a white eye ring, greenish yellow back, wings, and tail, and a yellow throat, breast, and abdomen (Baker 1951). Although white-eyes are known to feed on fruit and nectar as well as insects, this subspecies was primarily insectivorous (Jenkins 1983). Similar to other white-eyes, the bridled white-eye on Guam was a flocking bird that displayed little territoriality, even while nesting (Jenkins 1983). Little is known of its nesting habitats on Guam.

The bridled white-eye was recorded historically in virtually all habitats at all elevations on Guam (Jenkins 1983). By the mid 1940s, however, the subspecies had dwindled in southern Guam (Stophet 1946), and in central Guam it was last observed in the early 1960s (Jenkins 1983). By 1983 the population was restricted to northern Guam and was thought to have dropped below 50 individuals (Beck 1984). The last family group, including a fledgling, was

observed in the Pajon Basin in 1982, and the last individual was observed at this site in 1983 (Beck 1984). Since this sighting in 1983, spring bird surveys and other ornithological activities in areas where this species would likely occur have yielded no observations (Wiles *et al.* 1995). The primary cause of decline most likely was predation by the brown tree snake (Savidge 1986, 1987). The Guam subspecies of bridled white-eye likely is extinct.

Threats

The primary factor in the decline and disappearance of native bird and bat species on Guam certainly has been predation by non-native species, including the brown treesnake (on Guam), three species of rat (*Rattus rattus*, *R. norvegicus*, and *R. exulans*), and the mangrove monitor lizard (*Varanus indicus*) (Savidge 1986, 1987). The effects of these predators likely have been most severe on birds, and the brown treesnake in particular has played a major role in the precipitous decline in Guam's native birds (Savidge 1987). Predation by the brown treesnake on juvenile Mariana fruit bats also is associated with the decline of this species on Guam (Wiles *et al.* 1995). On Rota, rats in particular are thought to be a major nest predator of the Mariana crow (Morton *et al.* 1999).

Habitat loss and degradation also have contributed to the decline of native species in the Marianas archipelago. Large areas of Guam were cleared of native vegetation during and immediately after World War II (Fosberg 1960), and the encroachment of weedy non-native plants, especially *Leucaena leucocephala* (tangentangen), has increased since 1945. Over the last five decades, the clearing of land for agricultural, housing, and private development (e.g., golf courses and hotels) continued throughout Guam as tourism and the human population increased. Little development has occurred on military lands since they were first developed after the war. However, recently an area of approximately 100 ha (247 ac) on Andersen Air Force Base was cleared for military training purposes (USAF 2001). Significant areas of native forest and other vegetation types still remain, (Mueller-Dombois and Fosberg 1998).

On both Guam and Rota, some closed canopy forests have been degraded by a combination of human development and road building, alien weeds that flourish in disturbed areas, suppression of forest regrowth by introduced ungulates such as deer (*Cervus mariannus*), pigs (*Sus scrofa*), and on Guam, carabao (*Bubalus bubalis*), and

invasive vines that cover regenerating forest. Between 1945 and 1976 there was approximately a 10 percent increase in forest coverage on Rota (Plentovich *et al.* unpubl. data), but between 1982 and 1995, 5 to 10 percent of closed-canopy forest habitat was lost again to development.

Typhoons are a common occurrence in the Mariana Islands. Guam, for example, has been affected by typhoons in 74 percent of the last 50 years (based on records compiled by U.S. Navy, Joint Typhoon Warning Center). Major typhoons hit Guam in 1961 and 1976 and Rota in 1988 and 1997, causing significant habitat destruction and probably direct mortality of bats and birds. The islands of Tinian and Saipan (CNMI), however, also have sustained major habitat losses and typhoon damage, but have retained their avian communities to a greater degree than has Guam, although some species survive in precariously low numbers (Engbring *et al.* 1986). Habitat loss and damage from typhoons has influenced the abundance of native birds and bats in the Marianas, but these species have evolved in an environment where typhoons have always been a natural occurrence. The habitat alteration caused by these storms has become a serious threat to these species only recently as their populations and distributions have declined for other reasons.

Direct human impacts (e.g., hunting, persecution) do not appear to be a major factor in the decline of forest birds on Guam, although some evidence exists of killing and harassment of crows on Rota (NRC 1997; N. Johnson, CNMI Division of Fish and Wildlife, pers. comm., 2000). The harvest of native birds has been outlawed on Guam since the turn of the century (Executive Order No. 61, Naval Governor of Guam, 1903). In contrast, hunting has had a significant impact on the Mariana fruit bat and little Mariana fruit bat. Fruit bats were hunted extensively for human consumption in the early 1900s (Coults 1931, Baker 1948), and although this hunting was outlawed in 1966, poaching of fruit bats has continued (USFWS 1990a).

Pesticides, disease, and competition with non-native species all have been examined to assess their role in the declines of native forest vertebrates in the Mariana Islands, but none of these variables has been found to have had a major impact on the six species treated in this document (Maben 1982; Grue 1985; Savidge 1986; USFWS 1990a, 1990b).

The likely extinctions of the little Mariana fruit bat, the Guam broadbill,

and the bridled white-eye on Guam probably are attributable to a combination of predation by non-native animals, habitat loss, severe storms, and, in the case of the little Mariana fruit bat, hunting (USFWS 1990a, 1990b). The importance of these factors likely varied among the three species, but the lack of life history information and long-term monitoring data for these three species make it difficult to assess the exact degree of threat in each case.

All six species have been listed under the Federal Endangered Species Act since 1984 and receive protection through section 7 (interagency consultation) and section 9 (take prohibitions). However, the populations of all six species are extremely low or do not occur in the landscape. ESA sections 7 and 9 provide limited protection for unoccupied habitat. On Guam, approximately 9,106 ha (22,500 ac) of military land are included as refuge overlay lands that are managed under cooperative agreements between the Service and the U.S. Navy (Navy) and U.S. Air Force (Air Force) (U.S. Navy and USFWS 1994, and U.S. Air Force and USFWS 1994). However, these overlay lands are managed primarily for the military mission and secondarily for conservation purposes. Approximately 1,700 ha (4,200 ac) of Government of Guam land are zoned as conservation areas under the jurisdiction of the Chamorro Land Trust Commission. However, the Chamorro Land Trust Commission has the authority to change the status of these lands at any time, and we were unable to obtain information about what conservation activities take place on these lands.

On Rota, the critical habitat unit proposed for the Mariana crow includes a small portion of the Sabana Protected Area and most of the Afatung Wildlife Management Area and Ichenchon Bird Sanctuary. The conservation rules in the draft management plan for the Sabana Protected Area (SPAMC 1996) do not specifically address conservation of the Mariana crow, nor do they prohibit activities that have the potential to affect crows or crow habitat, such as forest clearing and hunting of non-protected bird species. Furthermore, this draft plan has not been finalized or implemented. No management documents exist for the Afatung Wildlife Management Area or the Ichenchon Bird Sanctuary.

Previous Federal Action

The six species treated here were listed as endangered along with three other vertebrate species in a final rule published in the **Federal Register** on

August 27, 1984 (49 FR 33881). A review of the status of 12 Guam and CNMI vertebrate species was published on May 18, 1979 (44 FR 29128). This review, which led to the listing of nine species in 1984, resulted from three separate petitions to the Service filed by three Governors or Acting Governors of Guam in 1978, 1979, and 1981, and a fourth petition filed by the International Council for Bird Preservation in 1980. In the Service's Review of Vertebrate Wildlife published December 30, 1981 (47 FR 58454), five of the six species treated in the present proposed rule were included in Category 1. Category 1 candidate species were taxa for which we had sufficient information on biological vulnerability and threats to support preparation of listing proposals. The little Mariana fruit bat was classified as Category 2. Category 2 candidates were taxa for which data in our possession indicated listing was possibly appropriate but for which substantial information on biological vulnerability and threats were not known or on file to support preparation of proposed rules. In a proposed rule published on November 29, 1983 (48 FR 53729), the Service determined endangered status for nine of the 12 species in the four petitions. The final listing rule for the nine species, including the six species treated in the current proposed rule, was published on August 27, 1984 (49 FR 33881).

A proposed rule to designate critical habitat for these six endangered species on Guam was published in the **Federal Register** on June 14, 1991 (56 FR 27485). This proposed rule was withdrawn on April 4, 1994, (59 FR 15696) because most of the lands proposed as critical habitat had by this time been incorporated in the Guam National Wildlife Refuge overlay lands, and the Service therefore determined that critical habitat designation was not prudent because it would not provide these species with any benefit beyond that already provided by the refuge overlay lands.

Since the withdrawal of the proposed critical habitat, several judicial decisions in court cases examining critical habitat determinations have rejected rationales used by the Service in "not prudent" findings. These cases included *Natural Resources Defense Council v. U.S. Department of the Interior*, 113 F. 3d 1121 (9th Cir. 1997) involving the threatened coastal California gnatcatcher, and *Conservation Council for Hawaii v. Babbitt*, 2 F. Supp. 2d 1280 (D. Haw. 1998) involving 245 listed plant species. The decisions in these cases rejected the Service's rationales of "increased

threat" and "no benefit" in the case of the gnatcatcher, and of "increased threat," "no benefit on private lands," and "no additional benefit on federal lands" in the case of the Hawaiian plants.

On April 3, 2000, the Marianas Audubon Society and the Center for Biological Diversity filed a suit to challenge the Service's 1994 withdrawal of critical habitat for the six species. On September 7, 2000, the Service filed a motion to voluntarily remand the withdrawal and non-prudency decision based on the subsequent court decisions. This motion set a deadline of June 3, 2003, for the Service to determine prudency and designate final critical habitat, if prudent, for these six species. On January 25, 2002, the Government of Guam filed a motion for preliminary injunction against the Service to prevent our re-consideration of the 1994 "not prudent" critical habitat determinations for the six species. On February 8, 2002, the Service filed its opposition to the Government of Guam's motion for preliminary injunction. On April 16, 2002, the Guam District Court dismissed the Government of Guam's motion for preliminary injunction and issued a ruling upholding the settlement based on a voluntary remand.

On December 7, 2001, we mailed letters to four major landowners (Chamorro Land Trust Commission, U.S. Air Force, U.S. Navy, and Guam National Wildlife Refuge) on Guam informing them that the Service was in the process of determining the prudency of designating critical habitat for the little Mariana fruit bat, Mariana fruit bat, Mariana crow, Guam broadbill, Guam Micronesian kingfisher, and the bridled white-eye and requested from them information on management of lands that currently or recently (within the past 30 years) support these six species. The letters contained a fact sheet describing the six listed species and critical habitat, the 1991 proposed rule to designate critical habitat, the 1994 withdrawal of the proposed rule, and a questionnaire designed to gather information about land management practices, which we requested be returned to us by January 14, 2002. We received three responses to our landowner mailing with varying types and amounts of information on current land management activities. Some responses included natural resource management plans, cooperative agreements, and descriptions of management activities such as brown treesnake and feral ungulate control.

On February 7 and 8, 2002, the Service met with several landowners

and managers in Guam, including the Navy and Air Force, to obtain more specific information on management activities and suitability of certain habitat areas for these six species. On June 8 and July 31, 2002, we sent to landowners, other stakeholders, and scientific experts a request for comments on copies of draft maps of areas on Guam and Rota identified as being important to the species. The information provided by landowners and managers and scientists during the meetings, in subsequent informal discussions, and in the responses to our written request for comments was considered and incorporated into this proposed rule.

Critical Habitat

Critical habitat is defined in section 3(5)(A) of the Act as—(i) the specific areas within the geographic area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) that may require special management considerations or protection; and, (ii) specific areas outside the geographic area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species (16 U.S.C. 1532(5)(A)). "Conservation," as defined by the Act, means the use of all methods and procedures that are necessary to bring an endangered or a threatened species to the point at which listing under the Act is no longer necessary (16 U.S.C. 1532 (3)).

Critical habitat receives protection under section 7 of the Act through the requirement that Federal agencies insure against destruction or adverse modification of critical habitat with regard to actions they carry out, fund, or authorize. Section 7 also requires conferences on Federal actions that are likely to result in the destruction or adverse modification of proposed critical habitat. Aside from the added protection that may be provided under section 7, the Act does not provide other forms of regulatory protection to lands designated as critical habitat. Because consultation under section 7 of the Act does not apply to activities on private or other non-Federal lands that do not involve a Federal nexus, critical habitat designation would not afford any additional protections under the Act against such activities.

Critical habitat also provides non-regulatory benefits to the species by informing the public and private sectors of areas that are important for species conservation and where management

actions would be most effective. 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 conservation of that species, and can alert the public as well as land-managing agencies to the importance of those areas. Critical habitat also identifies areas that may require special management considerations or protection, and may help provide protection to areas where significant threats to the species have been identified or help to avoid accidental damage to such areas.

In order to be included in a critical habitat designation, the habitat must be "essential to the conservation of the species." Critical habitat designations identify, to the extent known using the best scientific and commercial data available, habitat areas that provide essential life cycle needs of the species (*i.e.*, areas on which are found the primary constituent elements, as defined at 50 CFR 424.12(b)). Section 3(5)(C) of the Act states that not all areas that can be occupied by a species should be designated as critical habitat unless the Secretary determines that all such areas are essential to the conservation of the species. Our regulations (50 CFR 424.12(e)) also state that, "The Secretary shall designate as critical habitat areas outside the geographic area presently occupied by the species only when a designation limited to its present range would be inadequate to ensure the conservation of the species."

Section 4(b)(2) of the Act requires that we take 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 extinction of the species.

Our Policy on Information Standards Under the Endangered Species Act, published on July 1, 1994 (59 FR 34271), provides criteria, establishes procedures, and provides guidance to ensure that decisions made by the Service represent the best scientific and commercial data available. It requires that our biologists, to the extent consistent with the Act and with the use of the best scientific and commercial data available, use primary and original sources of information as the basis for recommendations to designate critical habitat. When determining which areas are critical habitat, a primary source of information should be the listing

package for the species. Additional information may be obtained from a recovery plan, articles in peer-reviewed journals, conservation plans developed by states and counties, scientific status surveys and studies, and biological assessments or other unpublished materials.

Section 4 generally requires that we designate critical habitat at the time of listing and based on what we know at the time of the designation. Habitat is often dynamic, however, and populations may move from one area to another over time. Furthermore, we recognize that designation of critical habitat may not include all of the habitat areas that may eventually be determined to be necessary for the recovery of the species. For these reasons, all should understand that critical habitat designations do not signal that habitat outside the designation is unimportant or may not be required for recovery. Areas outside the critical habitat designation may continue to be available for conservation actions that may be implemented under section 7(a)(1) or subject to the regulatory protections afforded by the section 7(a)(2) jeopardy standard and the section 9 take prohibition, as determined on the basis of the best available information at the time of the action. Similarly, critical habitat designations made on the basis of the best available information at the time of designation will be subject to review in light of future recovery plans, habitat conservation plans (HCP), or other species conservation planning and recovery efforts.

Prudency Determination

Designation of critical habitat is not prudent when one or both of the following situations exists: (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 to the species; or (ii) such designation of critical habitat would not be beneficial to the species (50 CFR 424.12(a)(1)). To determine whether critical habitat would be prudent for each species, we analyzed the potential threats and benefits for each species.

The little Mariana fruit bat, Guam broadbill, and bridled white-eye are believed extinct on Guam. The little Mariana fruit bat was last observed in 1968 and subsequent surveys for this species in the 1970s and 1980s yielded no observations (USFWS 1990a). The Guam broadbill was last observed in 1984 and subsequent forest bird surveys and other ornithological activities in areas where this species would likely

occur have yielded no observations (Wiles *et al.* 1995). A proposed rule to remove the Guam broadbill from the Endangered Species list was published in the **Federal Register** on January 25, 2002 (67 FR 3675). The bridled white-eye was last observed on Guam in 1984 and subsequent forest bird surveys and other ornithological activities in areas where this species would likely occur have yielded no observations (Wiles *et al.* 1995). Therefore, because these species are believed extinct on Guam, we propose that designation of critical habitat for the little Mariana fruit bat, Guam broadbill, and bridled white-eye is not prudent because such designation would be of no benefit to these species. If these species are rediscovered, we may revise this proposal to address the new information (*see* 16 U.S.C. 1532 (5)(B); 50 CFR 424.13(f)).

We examined the evidence available for the Mariana fruit bat, Guam Micronesian kingfisher, and Mariana crow, and did not find that the taking of any of these species would be exacerbated by the designation of critical habitat. There is evidence that Mariana crows and Guam Micronesian kingfishers occasionally are killed on other islands in Micronesia (USFWS in prep., D. Kesler, U.S. Geological Survey, Biological Resources Division, *in litt.*, 2002). However, this is not considered a major factor in the decline of these two bird species on Guam or Rota (USFWS 1990b). We do not believe that designation of critical habitat will lead to increased taking of these species on Guam, but we believe some crows may be harassed in agricultural homestead areas on Rota. Poaching of roosting Mariana fruit bats is considered a major factor in the decline of this species and is still considered an important threat to their conservation (USFWS 1990a). However, because critical habitat designation does not identify the exact location of roost sites, we believe it will not lead to increased Mariana fruit bat poaching.

In the absence of a finding that critical habitat would increase the degree of threat to a listed species, if there are any benefits to critical habitat designation, then a prudent finding is warranted. The potential benefits of critical habitat designation include: (1) The protection of unoccupied areas by the triggering of section 7 consultation, (2) focusing conservation activities on designated areas, and (3) potential public education and awareness benefits accruing to the species. All of the above benefits apply to the Mariana fruit bat, Guam Micronesian kingfisher, and Mariana crow. Therefore, we propose that designation of critical habitat is prudent

for the Mariana fruit bat and Guam Micronesian kingfisher on Guam, and for the Mariana crow on Guam and Rota.

Proposed Critical Habitat Designations

As required by the Act and regulations (section 4(b)(2) and 50 CFR 424.12), we used the best scientific information available to identify areas that contain the physical and biological features that are essential for the conservation of the Mariana fruit bat, Guam Micronesian kingfisher, and Mariana crow. This information included: peer-reviewed scientific publications (e.g., Baker 1951, Jenkins 1983, Wiles *et al.* 1995, NRC 1997); published and draft revised recovery plans (USFWS 1990a, 1990b, 2002); the final listing rule (49 FR 33881); unpublished reports by the Guam Division of Aquatic and Wildlife Resources (GDAWR), CNMI Division of Fish and Wildlife (DFW), and the Service (e.g., Wiles 1982a, Engbring and Ramsey 1984, Morton 1996, Morton *et al.* 1999); aerial photographs and satellite imagery of Guam and Rota; personal communications with scientists familiar with the species and habitats; and responses to critical habitat outreach packages mailed to Federal, Territory of Guam, CNMI, and private landowners. Specific information we used from these sources includes estimates of historic and current distribution, abundance, and territory sizes for the three species, as well as data on resource and habitat requirements. From recovery plans, we considered the recovery objectives and the assessments of the habitat necessary to meet these objectives, as well as life history information.

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 are required to consider those physical and biological features that are essential to the conservation of the species and that may require special management considerations and protection. Such features are termed "primary constituent elements", and include but are not limited to: Space for individual and population growth and for normal behavior; food, water, air, light, minerals and other nutritional or physiological requirements; cover or shelter; sites for nesting and rearing of offspring; and habitats that are protected from disturbance and are representative of the historic geographical and ecological distributions of the species.

The primary constituent elements for each of the three species for which we

are proposing critical habitat are found predominantly in the remaining tracts of mature limestone forest on Guam and Rota. These forests in general are disturbed little by human activities and exhibit the biotic and structural characteristics necessary for foraging, sheltering, roosting, nesting, and rearing of young of the Mariana fruit bat, Guam Micronesian kingfisher, and Mariana crow on Guam, and for these same life functions of the crow on Rota. Guam and Rota experience a high frequency of severe storms, and these regularly and significantly alter forest structure (NRC 1997). Therefore, sufficient habitat area is necessary to absorb the variable impacts of these natural disturbances and still maintain the integrity of the primary constituent elements to support fruit bat, kingfisher, and crow populations. Specific details of primary constituent elements for each species are described below.

Mariana fruit bat—This species feeds on a variety of plant material but is primarily frugivorous (Wiles and Fujita 1992). Specifically, Mariana fruit bats forage on the fruit of at least 28 plant species, the flowers of 15 species, and the leaves of two plant species (Wiles and Fujita 1992). Some of the plants used for foraging include *Artocarpus* sp. (breadfruit), *Carica papaya* (papaya), *Cycas circinalis* (fadang), *Ficus* spp. (figs), *Pandanus tectorius* (kafu), *Cocos nucifera* (coconut), and *Terminalia catappa* (talisa). Many of these plant species are found in a variety of forested habitats on Guam including limestone, ravine, coastal, and secondary forests (Stone 1970, Raulerson and Rhinehart 1991).

During the day, Mariana fruit bats roost in trees in groups or colonies and occasionally alone (Wiles 1987, Pierson and Rainey 1992). These roost sites are an important aspect of their biology because they are used for sleeping, grooming, breeding, and intra-specific interactions (USFWS 1990a). Published reports of roost sites on Guam indicate these sites occur in mature limestone forest and are found within 100 m (328 ft) of 80 to 180 m (262 to 591 ft) tall clifflines (USFWS 1990a). On Guam, Mariana fruit bats prefer to roost in mature fig and *Mammea odorata* (chopak) trees but will also roost in other tree species such as *Casuarina equisetifolia* (gago), *Macaranga thompsonii* (pengua), *Guettarda speciosa* (panao), and *Neisosperma oppositifolia* (fagot) (Wheeler and Aguon 1978; Wiles 1981, 1982b). On other islands in the Mariana Archipelago, Mariana fruit bats have been observed in secondary forest and gago groves (Glass and Taisacan 1988,

Marshall *et al.* 1995, Worthington and Taisacan 1996). Factors involved in roost site selection are not clear, but data from Guam indicate that some sites may be selected for their inaccessibility by humans and thus limited human disturbance. Fruit bats will abandon roost sites if disturbed and have been reported to move to new locations up to 10 km (6 mi) away (USFWS 1990a).

In summary, the primary constituent elements required by the Mariana fruit bat for the biological needs of foraging, sheltering, roosting, and rearing of young are found in areas supporting limestone, secondary, ravine, swamp, agricultural, and coastal forests composed of native and introduced plant species. These forest types provide the primary constituent elements of:

(1) Plant species used for foraging such as breadfruit, papaya, fadang, fig, kafu, coconut palm, and talisa; and
(2) Remote locations, often within 100 m (328 ft) of 80 to 180 m (262 to 591 ft) tall clifflines, with limited exposure to human disturbance, that contain mature fig, chopak, gago, pengua, panao, fagot, and other tree species that are used for roosting and breeding.

Guam Micronesian kingfisher—Jenkins (1983) recorded the Guam Micronesian kingfisher nesting and foraging in northern Guam in mature limestone forest, secondary forests, and coastal forests dominated by coconut trees. Kingfishers also were found historically in southern Guam in ravine and coastal forests (Jenkins 1983). Few data exist about specific kingfisher nest sites on Guam, but in one study nest sites in northern Guam were found in native limestone forest, and the location of these sites within the forest was correlated with closed canopy cover and dense understory vegetation (Marshall 1989). Recent studies of the Pohnpei Micronesian kingfisher (*Halcyon cinnamomina reichenbachii*) have documented that this subspecies also occurs in a wide range of forest types, however, territories of all 14 breeding pairs studied on Pohnpei included at least several hectares of mature native rainforest (D. Kesler, pers. comm., 2002).

Micronesian kingfishers are obligate cavity nesters, and require specific substrates for excavating nest cavities. On Guam, Marshall (1989) found that kingfishers excavated nest cavities in relatively soft, decaying wood in standing dead trees, including *Tristiropsis obtusangula* (faniok), *Pisonia grandis* (umumu), breadfruit, fig, and coconut palm, in the mud nests of *Nasutitermes* spp. termites, and in the root masses of epiphytic ferns. All nest cavities found in trees were in large-

diameter trees (average dbh 42.7 ± 12.7 cm (16.8 ± 5.0 in)), and these trees contained an average of 19 excavations, most of which were incomplete (Marshall 1989). Multiple excavations in suitable nest trees suggest both the importance of these trees as nest sites and the importance of excavation in the kingfishers' courtship and nesting behavior (Jenkins 1983). The links between courtship behavior, excavation activity, and nest substrate requirements have been well documented in the captive population of this species as well (Bahner, *et al.* 1998; S. Derrickson, Conservation Research Center, *in litt.* 2002). Marshall (1989) concluded that the population density of kingfishers on Guam may be limited by the availability of nest sites.

Guam Micronesian kingfishers hold year-round territories which are aggressively defended (Jenkins 1983). Nothing is known about the territory size requirements of Micronesian kingfishers on Guam, but research on the Pohnpei subspecies indicates that territory sizes in upland forest are approximately 10 ha (25 ac) (Kesler, pers. comm., 2001).

Guam Micronesian kingfishers feed both on invertebrates and small vertebrates, including insects, segmented worms, hermit crabs, skinks, geckoes, and possibly other small vertebrates (Marshall 1949, Baker 1951, Jenkins 1983). This species typically forages by perching motionless on exposed perches and swooping down to capture prey on the ground (Jenkins 1983). Guam kingfishers also will capture prey from foliage and have been observed gleaning insects from tree bark (Maben 1982). Marshall (1989) observed no kingfishers foraging in dead trees.

In summary, the primary constituent elements required for the Guam Micronesian kingfisher for the biological needs of foraging, sheltering, roosting, nesting, and rearing of young are found in areas that support limestone, secondary, ravine, swamp, agricultural, and coastal forests containing native and introduced plant species. These forest types include the primary constituent elements of:

(1) Closed canopy and well-developed understory vegetation, large (approximately 43 cm (17 in) dbh), standing dead trees (especially *Tristiropsis obtusangula* (faniok), *Pisonia grandis* (umumu), breadfruit, fig, and coconut palm), mud nests of *Nasutitermes* spp. termites, and root masses of epiphytic ferns for breeding;

(2) Sufficiently diverse structure to provide exposed perches and ground surfaces, leaf litter, and other substrates that support a wide range of vertebrate

and invertebrate prey species for foraging kingfishers; and

(3) Sufficient overall breeding and foraging area to support large kingfisher territories (approximately 10 ha (25 ac)).

Mariana crow—Historically, the distribution of Mariana crows among habitats was similar on Guam and Rota. Crows were known to use secondary, coastal, ravine, and agricultural forests including coconut plantations (Seale 1901, Stophet 1946, Marshall 1949, Baker 1951, Jenkins 1983), but all evidence indicates they were most abundant in native limestone forests (Michael 1987, Morton *et al.* 1999). Mariana crow nests on Guam have been found in 11 tree genera, all but one of which are native, but most nests are located high in emergent fig or *Elaeocarpus joga* (yoga) trees (Morton 1996; C. Aguon, Guam Division of Aquatic and Wildlife Resources, unpubl. data).

On Rota, crows use both mature and secondary limestone forests (Morton *et al.* 1999), but not exclusively (M. Lusk and E. Taisacan unpubl. data). Of 156 nest sites on Rota, 39 percent and 42 percent were in mature and secondary limestone forest, respectively (Morton *et al.* 1999). Between 1992 and 1994, 90 percent ($n = 115$) of observations of perching crows on Rota were in native trees, primarily in middle to low heights of the canopy (M. Lusk and E. Taisacan unpubl. data). Mariana crows nested in 20 tree genera on Rota (Morton *et al.* 1999). Of 161 nest trees found during 1996–99, 63 percent were of four species: fagot, *Eugenia reinwardtiana* (a'abang), *Intsia bijuga* (ifit), and *Premna obtusifolia* (ahgao) (Morton *et al.* 1999). Individual nest trees averaged 16.9 cm (6.7 in) diameter at breast height and 8.7 m (28.5 ft) high. Canopy cover over nest sites averaged 93 percent and was never less than 79 percent. Although 18 percent of the forested area of Rota is tangantangan or some other species of introduced tree (Falanruw *et al.* 1989), no crow nests have been found in any non-native tree species. Nests were located at least 290 m (950 ft) from the nearest road and 62 m (203 ft) from the nearest forest edge, in areas with forest canopy cover that averaged 93 percent. The distances from edges strongly suggest that nesting crows are sensitive to disturbance by humans (Morton *et al.* 1999). No detailed information is available on the historical nest site selection by crows on Guam, but the remaining crows on Guam nest and forage only in primary or mature limestone forest.

In Rota, Morton *et al.* (1999) found that breeding crows on six study areas averaged one pair per 22 ha (50 ac) of

forested habitat, and each territory was dominated by native forest. Pair densities ranged from one per 37 ha (91 ac) in relatively fragmented forest, to as high as one pair per 12 ha (30 ac) in mostly intact limestone forest along a coastal terrace. Territories were aggressively defended from July through January, although established pairs occupied these areas throughout the year.

In addition to habitat for breeding territories, Mariana crows also require habitat for juvenile dispersal. When juvenile Mariana crows leave the nest, they are typically tended by their parents until the following breeding season, a period that ranges from 3 to 18 months (Morton *et al.* 1999). After this parental attendance period, these juveniles enter the non-breeding population of Mariana crows until they are recruited into the adult population at approximately three years of age (Morton *et al.* 1999). Little research has been done on the non-breeding population of crows and their habitat needs, but the territoriality of breeding adults and the time required before juveniles enter the breeding population indicate that foraging habitat outside established territories is needed to maintain juvenile Mariana crows.

Mariana crows may forage at any height in the forest or on the ground (Jenkins 1983, Tomback 1986). The crows forage in at least 18 tree genera, most of which are native (Tomback 1986; Jenkins 1983; C. Aguon, unpubl. data). Mariana crows are omnivorous. They have been observed to feed on a variety of native and non-native invertebrates, reptiles, young rats, and birds' eggs, as well as on the foliage, buds, fruits, and seeds of at least 26 plant species (Jenkins 1983; Tomback 1986; Michael 1987; C. Aguon, unpubl. data).

In summary, the primary constituent elements required by the Mariana crow for the biological needs of foraging, sheltering, roosting, nesting, and rearing of young are found in areas that support limestone, secondary, ravine, swamp, agricultural, and coastal forests composed of native and introduced plant species. These forest types provide the primary constituent elements of:

(1) Emergent and subcanopy trees with dense cover for breeding such as fagot, pengua, ifit, ahgao, aabang, fig, yoga, and faniok;

(2) Sufficient area of predominantly native limestone forest to allow nesting at least 290 m (950 ft) from the nearest road and 62 m (203 ft) from the nearest forest edge and to support Mariana crow breeding territories (approximately 12 to

37 ha (30 to 91 ac)) and foraging areas for nonbreeding juvenile crows; and

(3) Standing dead trees and plant species such as *Aglaia mariannensis* (maypunayo), breadfruit, coconut palm, fagot, *Hibiscus tiliaceus* (pago), ifit, tangentangen, *Ochrosia mariannensis* (langiti), kafu, ahgao, fig, and yoga for foraging.

Criteria Used To Identify Proposed Critical Habitat

We used several criteria to identify and select lands proposed for designation as critical habitat. For the Mariana fruit bat (Guam only) and Mariana crow, we began with all areas that are currently occupied. The Guam subspecies of Micronesian kingfisher is currently extirpated in the wild, so no habitat currently is occupied. We then examined unoccupied forested lands on Guam containing the primary constituent elements that are needed for the conservation of each species (see explanation below). We identified which unoccupied areas on Guam were needed for the conservation of each species using recovery habitat identified in recovery plans and information on the historical distribution of each species. Within the area of historical distribution, we gave preference to lands that provided the largest tracts of native forest and were more recently occupied by each species. We determined the boundaries of proposed critical habitat units by the extent of suitable forest containing the primary constituent elements. The location of these suitable forests in many areas coincided with the boundaries of military reservations, national wildlife refuges, and conservation areas on Guam. We also included some small non-forested areas interspersed with forested areas because of their potential for reforestation. We did not include urban and agricultural lands because they generally do not contain the primary constituent elements, do not meet the definition of critical habitat, and are not likely to be restored to native forest.

On Guam, we identified two units for each species using the guidelines provided by the Mariana fruit bat recovery plan (1990a), Guam forest bird recovery plan (1990b), and recommendations by the Mariana crow recovery team for the draft revised recovery plan (USFWS in prep). On Rota, we identified one unit for the Mariana crow using guidelines from the draft revised recovery plan (USFWS in prep). For the conservation of the Mariana crow, these recovery plans call for established populations in northern Guam, southern Guam, and on Rota.

The establishment of two geographically separated populations on Guam is important to decrease the risk of extinction of the species as a result of localized, stochastic events such as typhoons and disease outbreaks (Dobson and May 1986, NRC 1997). A long-accepted view developed from ecological research is that the existence of more than one population increases the long-term likelihood of species' persistence (Raup 1991, Meffe and Carroll 1996). The specific areas proposed as critical habitat in northern and southern Guam were selected based upon their current status as blocks of largely forested land containing the primary constituent elements required by each species. These areas include the last relatively large blocks of native forest on the island within each species' historical range.

Within the proposed critical habitat unit boundaries, only lands containing one or more of the primary constituent elements are proposed as critical habitat. Existing features and structures within the boundaries of the mapped units, such as buildings, roads, aqueducts, antennas, water tanks, agricultural fields, paved areas, lawns, and other urban landscaped areas do not contain the primary constituent elements and therefore are not proposed as critical habitat. Federal actions limited to those areas, therefore, would not trigger a section 7 consultation, unless they affect the species and/or primary constituent elements in adjacent critical habitat.

Section 3(5)(A)(ii) of the Act provides that areas outside the geographical area currently occupied by the species may meet the definition of critical habitat upon determination that they are essential for conservation of the species. We included unoccupied habitat in the proposed critical habitat for the Guam Micronesian kingfisher and Mariana crow on Guam because, as explained below, we believe the currently occupied habitat alone would not provide for the conservation of the species.

Guam Micronesian kingfisher—The last wild kingfisher on Guam was seen in 1988 and this subspecies is believed extinct in the wild (Beck *et al.* 2001). The total population now consists of 63 birds in 11 captive breeding institutions (Bahner, *in litt.* 2002). Because the Guam Micronesian kingfisher is extinct in the wild and all suitable habitat presently is unoccupied, inclusion of unoccupied areas containing the primary constituent elements is essential to the conservation of this species. Recovery to the point where the protection afforded by listing is no

longer necessary will require restoration of the Guam Micronesian kingfisher through release of captive birds and subsequent natural dispersal in areas of Guam that formerly were inhabited but that are not now occupied.

Mariana crow—The critical habitat unit proposed for the Mariana crow on Rota reflects the recovery goal of maintaining a population of at least 75 breeding pairs on Rota and the Recovery Team's estimation of areas necessary to meet this goal (USFWS in prep). The lands proposed as critical habitat for the Mariana crow on Rota support at least 63 breeding pairs (Morton *et al.* 1999). We included all areas identified in the revised recovery plan as high priority, and incorporated lower priority areas known or believed to harbor crows to provide additional habitat to support the non-breeding crow population and create greater connectivity between high-priority areas.

On Guam, the distribution and abundance of Mariana crows have declined precipitously over the last three decades (USFWS in prep.). Currently, the population consists of 12 birds occupying 777 ha (1,920 ac) located in the munitions storage area of Andersen Air Force Base in northern Guam. This current distribution represents an 85 percent reduction in range from the estimated distribution in 1994 (5,112 ha, 12,633 ac) reported by Wiles *et al.* (1995).

Mariana crows are territorial; each pair defends an area of a size determined by forest type and structure (Morton *et al.* 1999). The maximum density or carrying capacity of crow pairs in a particular area depends on both habitat quality (for foraging and breeding) and the spatial arrangement of territories. On Rota, Mariana crow territories ranged from 12 to 37 ha (30 to 91 ac) in size with an average of one pair per 22 ha (54 ac) (Morton *et al.* 1999). The currently occupied area on Guam (777 ha; 1,920 ac) could be expected to support only about 35 pairs, which is less than the 75 pairs recommended by the recovery team and therefore too small to support a Mariana crow population large enough to be considered safe from extinction.

Because of the territorial nature of the Mariana crow, its small total population size, limited range, vulnerability to environmental threats, and recovery goals set for the species, inclusion of certain currently unoccupied areas on Guam that contain the primary constituent elements is essential to the conservation of the species. Recovery to the point where listing is no longer necessary will require restoration of Mariana crows on Guam through natural

dispersal, translocation, and/or release of captive birds in areas that were formerly inhabited but that are not currently occupied. Unoccupied areas adjacent to currently occupied areas are needed for recovery to allow expansion of the existing population and help alleviate threats associated with small population size. Specifically, the 12 crows currently found on Andersen Air Force Base in northern Guam do not constitute a viable population of this species. These animals are unlikely to increase their numbers to a self-sustaining level in the area they presently occupy, even with human intervention. For this population to persist in the long-term, it must expand onto adjacent lands that now are unoccupied.

Mariana fruit bat—Although the current population of Mariana fruit bats on Guam is small and most bats roost in a limited area, the foraging behavior and diverse diet of the fruit bats cause them to use most of the island for foraging, as documented by Wiles *et al.* (1995). Thus, all of the proposed critical habitat for this species is used for foraging and/or roosting and is considered to be occupied.

Proposed Critical Habitat Designation

Lands proposed as critical habitat for the Mariana fruit bat, Guam Micronesian kingfisher, and Mariana crow occur in two units for each species on Guam, one in northern Guam and one in southern Guam (see justification above), and in one unit for the Mariana crow on Rota. Because the primary constituent elements for each of the three species occur predominantly in the remaining tracts of native forest on Guam and Rota, the size, shape, and locations of the proposed critical habitat units largely represent these tracts of forest. The proposed northern unit on Guam is the same for the fruit bat and kingfisher, and the proposed southern unit on Guam is the same for all three species. The northern unit proposed for the Mariana crow is slightly smaller than for the Mariana fruit bat or Guam Micronesian kingfisher because of differences in the conservation goals set for each species in the recovery plans (USFWS 1990a, 1990b, in prep). The smaller extent of the proposed critical habitat for the Mariana crow on Guam reflects the lower target population size for Guam indicated in the revised recovery plan and the proposed critical

habitat unit for the crow on Rota (USFWS, in prep.).

The proposed critical habitat units provide the full range of primary constituent elements needed by these three species, including a variety of undeveloped, forested areas that are used for foraging, roosting, shelter, nesting, and raising offspring. The approximate area and land ownership within each unit are shown in Table 1. Proposed critical habitat includes land under Federal, Territorial, Commonwealth, and private ownership, with Federal lands being managed by the Department of Defense and the Department of the Interior. All of the proposed critical habitat on Guam currently is occupied by the Mariana fruit bat. Approximately 8 percent of proposed critical habitat on Guam currently is occupied by the Mariana crow, but 52 percent was occupied as recently as 1994. None of the proposed lands on Guam are currently occupied by the Guam Micronesian kingfisher, but all were occupied historically. On Rota, all of the proposed critical habitat is occupied by the Mariana crow. A brief description of each unit for each species and reasons for proposing it as critical habitat are presented below.

TABLE 1.—APPROXIMATE AREA (HECTARES, ACRES) OF PROPOSED CRITICAL HABITAT UNITS BY LAND OWNERSHIP

Unit	Federal*	GovGuam	Private	Total
Unit A. Northern Guam:				
Mariana fruit bat & Guam Micronesian kingfisher	5,149 ha (12,724 ac)	591 ha (1,461 ac)	63 ha (153 ac)	5,803 ha (14,338 ac)
Mariana crow	4,997 ha (12,346 ac)	39 ha (97 ac)	39 ha (97 ac)	5,075 ha (12,540 ac)
Unit B. Southern Guam: All species				
	2,880 ha (7,116 ac)	551 ha (1,363 ac)	803 ha (1,985 ac)	4,234 ha (10,464 ac)
Unit C. Rota: Mariana crow				
	2,258 ha (5,581 ac)	204 ha (503 ac)	2,462 ha (6,084 ac)
Total:				
Mariana fruit bat & Guam Micronesian kingfisher	8,029 ha (19,840 ac)	1,142 ha (2,825 ac)	866 ha (2,138 ac)	10,037 ha (24,803 ac)
Mariana crow	7,877 ha (19,463 ac)	2,848 ha (7,041 ac)	1,046 ha (2,585 ac)	11,771 ha (29,089 ac)

*Federal lands are under the ownership or jurisdiction of the Department of Defense or U.S. Fish and Wildlife Service.

Mariana Fruit Bat

Proposed Unit A: Northern Guam

Proposed Unit A consists of approximately 5,803 ha (14,338 ac) encompassing much of the undeveloped areas on the northern end of Guam. This proposed area includes both units of the Commander U.S. Naval Forces Marianas (COMNAVMAIANAS) Communications Annex and former Federal Aviation Administration (FAA) land currently administered by the

Pacific Division of Base Realignment and Closure (PACDIV BRAC). The proposed unit also includes Andersen Air Force Base, the Guam National Wildlife Refuge, private property located near Uruno Basin and Jinapsen Beach, the Anao Conservation Area, private property at Janum Point, and Government of Guam lands located between the cliffline and coastline from Janum Point to Campanaya Point. The vegetation in proposed Unit A consists of coastal, limestone, agricultural, and

secondary forests composed of native and introduced plant species and contains the full range of primary constituent elements needed for the conservation of the Mariana fruit bat. This proposed unit is important because it contains the only known Mariana fruit bat colony on Guam and large areas of current foraging and roosting habitat. This area also contains all the known historical roost sites along the northern coast of Guam and many of the reported foraging sites used by bats in northern

Guam since 1981 (*see Wiles et al.* 1995 for details). Unit A also encompasses all the essential conservation areas identified in the Mariana fruit bat recovery plan (USFWS 1990a).

The proposed areas in Unit A are divided into three sections. The first section consists of a thin projection of forested land between the coastline and approximately 1.0 km (0.6 mi) inland that extends from the boundary between the Communications Annex and former Air Force Harmon Annex and the boundary of Andersen Air Force Base. This section does not include the housing and other developed areas on the Communications Annex and former FAA land. The second section consists of most of the forested land between the southern boundary of Andersen Air Force Base and the coastline from Ritidian to Pati Points but does not include the housing, airfields, and other developed areas on Andersen Air Force Base, the recently cleared cargo drop zone in Northwest Field on Andersen Air Force Base, private land in the Uruno Basin below the cliffline (elevation: 122 m, 400 ft), and private land along Jinapsan Beach below the 12-meter (40-ft) elevation contour. The third section consists of the thin projection of forested land between the coastline and approximately 1 km (0.6 mi) inland that extends from Campanaya Point to the border of Andersen Air Force Base at Anao Point.

Proposed Unit B: Southern Guam

Unit B consists of approximately 4,234 ha (10,464 ac) encompassing much of the forested areas in central southern Guam. This proposed unit includes lands in the Bolanos Conservation Area, much of the COMNAVMARIANAS Ordnance Annex, and private property at Sinaje, Mapao, and Bubulao. This unit consists of limestone, agricultural, secondary, swamp, and ravine forests composed of native and introduced species and contains the full range of primary constituent elements needed for recovery of the Mariana fruit bat. Unit B contains the area occupied by the only known population of fruit bats in southern Guam, including large areas of foraging and roosting habitat in areas like the Fena Lake Watershed. Unit B also encompasses essential conservation areas identified in the Mariana fruit bat recovery plan (USFWS 1990a).

The critical habitat proposed in Unit B consists of three sections. The main section includes most of the forested areas within the Ordnance Annex and forested area above the 244-m (800-ft) elevation contour in the Sinaje region near Mount Lamlam. The second

section consists of the forested areas at the headwaters of the Bubulao and Ugum Rivers and the forested areas along and between both rivers until their confluence approximately 1 km (0.6 mi) above Talofof Falls. The third section consists of the forested areas outside Ordnance Annex that occur along and between the Maagas and Mahlac Rivers near where they converge and become the Talofof River.

Guam Micronesian Kingfisher

Proposed Unit A: Northern Guam

Proposed Unit A consists of approximately 5,803 ha (14,338 ac) encompassing much of the undeveloped areas on the northern end of Guam. This section includes both units of the COMNAVMARIANAS Communications Annex, former FAA land currently administered by PACDIV BRAC, Andersen Air Force Base, the Guam National Wildlife Refuge, private property located in the Uruno Basin and along Jinapsan Beach, the Anao Conservation Area, private property at Janum Point, and Government of Guam lands located between the cliffline and coastline from Janum Point to Campanaya Point. The vegetation in proposed Unit A consists of coastal, limestone, agricultural, and secondary forests composed of native and introduced species that contain the full range of primary constituent elements required for the recovery of the Guam Micronesian kingfisher on northern Guam. Unit A includes forested areas along the northwest and northeast coasts of the island that were occupied by Guam Micronesian kingfishers in the 1970s and early 1980s (Drahos 1977, Maben and Aguon 1980, 1981) as well as other forested areas in northern Guam that supported high densities of Guam Micronesian kingfishers in 1981 (Engbring and Ramsey 1984). Unit A also encompasses essential conservation areas in the northern Guam forest bird recovery plan (USFWS 1990b).

The proposed areas in Unit A are divided into three sections. The first section consists of a thin projection of forested land between the coastline and approximately 1 km (0.6 mi) inland that extends from the boundary between the Communications Annex and former Air Force Harmon Annex and the boundary of Andersen Air Force Base. This section does not include the housing and other developed areas on the Communications Annex and former FAA land. The second section consists of most of the forested land between the southern boundary of Andersen Air Force Base and the coastline from Ritidian to Pati Points. This section does

not include the housing, airfields, and other developed areas on Andersen Air Force Base; the recently cleared cargo drop zone in Northwest Field on Andersen Air Force Base; private land in the Uruno Basin below the cliffline (elevation: 122 m, 400 ft); and private land along Jinapsan Beach below the 12-m (40-ft) elevation contour. The third section consists of the thin projection of forested land between the coastline and approximately 1 km (0.6 mi) inland that extends from Campanaya Point to the border of Andersen Air Force Base at Anao Point.

Proposed Unit B: Southern Guam

Proposed Unit B consists of approximately 4,234 ha (10,464 ac) encompassing much of the forested areas in central southern Guam. This unit contains part of the Bolanos Conservation Area, much of the COMNAVMARIANAS Ordnance Annex, and private property at Sinaje, Mapao, and Bubulao. This proposed unit consists of limestone, secondary, agricultural, swamp, and ravine forests composed of native and introduced species and contains the full range of primary constituent elements required for the recovery of the kingfisher in southern Guam. This unit is important because it includes the location of the last known observations (Fena Lake region 1963–1964) of Guam Micronesian kingfishers in southern Guam (Drahos 1977). Unit B also contains some of the largest tracts of forest remaining in southern Guam and is believed to be essential for the conservation of the Guam Micronesian kingfisher.

The critical habitat proposed in Unit B consists of three sections. The main section includes most of the forested areas within the Ordnance Annex and forested area above the 244-m (800-ft) elevation contour in the Sinaje region near Mount Lamlam. The second section consists of the forested areas at the headwaters of the Bubulao and Ugum Rivers and the forested areas along and between both rivers until their confluence approximately 1 km (0.6 mi) above Talofof Falls. The third section consists of the forested areas outside Ordnance Annex that occur along and between the Maagas and Mahlac Rivers near where they converge and become the Talofof River.

Mariana Crow

Proposed Unit A: Northern Guam

Proposed Unit A consists of approximately 5,075 ha (12,540 ac) of forested land encompassing the northern end of Guam. This proposed unit includes forested areas on

Andersen Air Force Base, Guam National Wildlife Refuge, COMNAVMARIANAS Communications Annex, and private property at Uruno Basin and Jinapsan Beach. Unit A includes limestone, secondary, agricultural, and coastal forests composed of native and non-native plants and contains the full range of primary constituent elements needed for recovery of the Mariana crow on Guam. This unit includes the area occupied by the last 12 Mariana crows in the munitions storage area on Andersen Air Force Base, much of the 1994 historical distribution of Mariana crows in northern Guam (Wiles *et al.* 1995), and the areas that contained the highest densities of crows in northern Guam in 1981 (Engbring and Ramsey 1984). Approximately 15 percent of the unit currently is occupied by the Mariana crow. Unit A also contains some of the largest tracts of mature limestone forest remaining on Guam and is identified as important recovery habitat in the draft revised Mariana crow recovery plan (USFWS in prep.).

The proposed areas in Unit A can be divided into two sections. The first section consists of the forested land (Federal, Territory, and private) between the southern boundary of Andersen Air Force Base and the coastline between Ritidian and Pati Point, not including the housing, airfields, and other developed areas on Andersen Air Force Base, the recently cleared cargo drop zone in Northwest Field on Andersen Air Force Base, private land in the Uruno Basin below the cliffline (elevation: 122 m, 400 ft), and private land along Jinapsan Beach below the 12-m (40-ft) elevation contour. The second section consists of forested areas on the Communications Annex between the coastline near Haputo Beach and Route 3, including forested areas on the northern part of the base near the antennae fields.

Proposed Unit B: Southern Guam

Proposed Unit B consists of approximately 4,234 ha (10,464 ac) of forested land encompassing much of central southern Guam. This proposed unit contains sections of the Bolanos Conservation Area, COMNAVMARIANAS Ordnance Annex, and private property at Sinaje, Mapao, and Bubulao. Unit B is composed of limestone, secondary, swamp, agricultural, and ravine forests consisting of native and non-native plants and contains the full range of primary constituent elements needed for recovery of the species on southern Guam. This unit includes sites of some of the last known observations of

Mariana crows in southern Guam. Specifically, Mariana crows were observed in the forests around Fena Lake and Alamagosa Springs on the Ordnance Annex between 1963 and 1965 (Drahos 1977). This unit also encompasses some of the last remaining large tracts of native forest on southern Guam and is identified as important recovery habitat in the draft revised Mariana crow recovery plan (USFWS in prep.).

The critical habitat proposed in Unit B consists of three sections. The main section includes most of the forested areas within the Ordnance Annex and forested area above the 244-m (800-ft) elevation contour in the Sinaje region near Mount Lamlam. The second section consists of the forested areas at the headwaters of the Bubulao and Ugum Rivers and the forested areas along and between both rivers until their confluence approximately 1 km (0.6 mi) above Talofofu Falls. The third section consists of the forested areas outside Ordnance Annex that occur along and between the Maagas and Mahlac Rivers near where they converge and become the Talofofu River.

Proposed Unit C: Rota

Proposed Unit C consists of approximately 2,462 ha (6,084 ac) of forested land encompassing much of the undeveloped areas on Rota. This proposed unit contains the Afatung Wildlife Management Area, I Chenchon Bird Sanctuary, and forested areas on public and private lands around the Sabana and Sinapalu plateaus. Unit C is composed of limestone, secondary, agricultural, coastal, and ravine forests consisting of native and non-native plants and contains the full range of primary constituent elements needed for recovery of the Mariana crow on Rota. This unit includes the known breeding territories of at least 63 Mariana crow pairs and possibly those of an additional 25 crow pairs on Rota (Morton *et al.* 1999). This unit also includes all the areas identified as important conservation areas in the draft revised Mariana crow recovery plan (USFWS in prep.).

The critical habitat proposal in Unit C consists of five sections. The first section includes the Afatung Wildlife Management Area in the Pali region and the forested areas in the Finata, Alaguan, and I Koridot regions. The second section includes the I Chenchon Bird Sanctuary and the forested areas in the I Chiugai and As Dudo regions of eastern Rota. The third unit consists of much of the forested areas in the As Matmos, Mochong, Lalayak, Pekngasu, and I Batko regions as well as the

forested areas adjacent to the Rota Resort. The fourth section includes much of the forested areas in the Mananana, Uyulan Hulo, Sailgai Hulo, Gayauga, Lempanai, and Lupok regions. The fifth section includes much of the forested areas, as well as some of the grassland areas, in the Talakhaya and Gaonan regions of southern Rota.

Effects of Critical Habitat Designation

Section 7 Consultation

Section 7(a) of the Act requires Federal agencies, including the Service, to ensure that actions they fund, authorize, or carry out are not likely to destroy or adversely modify critical habitat by appreciably diminishing the value of the critical habitat for the survival and recovery of the species. Individuals, organizations, states, local governments, and other non-Federal entities are affected by the designation of critical habitat only if their actions occur on Federal lands, require a Federal permit, license, or other authorization, or involve Federal funding.

Section 7(a) of the Act requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is designated or proposed. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402. Section 7(a)(4) requires Federal agencies to confer with us on any action that is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed critical habitat. Conference reports provide conservation recommendations to assist the agency in eliminating conflicts that may be caused by the proposed action. The conservation recommendations in a conference report are only advisory. We may adopt the formal conference report as the biological opinion when critical habitat is designated, if no significant new information or changes in the action alter the content of the opinion (see 50 CFR 402.10(d)).

If a species is listed or critical habitat is designated, section 7(a)(2) of the Act requires Federal agencies to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of such a species or destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency (action agency) must enter into consultation with us.

If we issue a biological opinion concluding that a project is likely to result in the destruction or adverse modification of critical habitat, we also provide reasonable and prudent alternatives to the project, if any are identifiable. Reasonable and prudent alternatives are defined at 50 CFR 402.02 as alternative actions identified during consultation that can be implemented in a manner consistent with the intended purpose of the action, that are consistent with the scope of the Federal agency's legal authority and jurisdiction, that are economically and technologically feasible, and that the Director believes would avoid destruction or adverse modification of critical habitat. Reasonable and prudent alternatives can vary from slight project modifications to extensive redesign or relocation of the project. Costs associated with implementing a reasonable and prudent alternative are similarly variable.

Regulations at 50 CFR 402.16 require Federal agencies to reinitiate consultation on previously reviewed actions in instances where critical habitat is subsequently designated and the Federal agency has retained discretionary involvement or control over the action or such discretionary involvement or control is authorized by law. Consequently, some Federal agencies may request reinitiation of consultation with us on actions for which formal consultation has been completed if those actions may affect designated critical habitat.

Actions on Federal lands that may affect critical habitat on Guam for the Mariana fruit bat, Guam Micronesian kingfisher, or Mariana crow would require section 7 consultation. Activities that may affect these species on private, Government of Guam, or CNMI lands but require 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 Federal funding (e.g., from the Federal Highway Administration, FAA, Federal Emergency Management Agency, or Natural Resources Conservation Service) also will continue to be subject to the section 7 consultation process.

Section 4(b)(8) of the Act requires us to evaluate briefly in any proposed or final regulation that designates critical habitat those Federal actions that may adversely modify such habitat or that may be affected by such designation. Activities that may result in the destruction or adverse modification of critical habitat include those that alter the primary constituent elements to an extent that the value of critical habitat for both the survival and recovery of the

Mariana fruit bat, Guam Micronesian kingfisher, or Mariana crow is appreciably reduced. Activities that may directly or indirectly adversely affect the proposed critical habitat would include, but are not limited to:

(1) Removing, thinning, or destroying Mariana fruit bat, Guam Micronesian kingfisher, or Mariana crow forest habitat by burning, mechanical, chemical, or other means (e.g., woodcutting, grading, overgrazing, construction, road building, mining, herbicide application, etc.).

(2) Appreciably decreasing habitat value or quality through introduction or promotion of potential nest predators, disease or disease vectors, vertebrate or invertebrate food competitors, invasive plant species, forest fragmentation, overgrazing, augmentation of feral ungulate populations, water diversion or impoundment, groundwater pumping or other activities that alter water quality or quantity to an extent that affects vegetation structure, or activities that increase the risk of fire.

To portray the Federal actions that might be affected by a critical habitat designation, we first compare the section 7 requirements for actions that may affect critical habitat with the requirements for actions that may affect a listed species. Section 7 prohibits actions funded, authorized, or carried out by Federal agencies from jeopardizing the continued existence of a listed species or destroying or adversely modifying the listed species' critical habitat. Actions likely to "jeopardize the continued existence" of a species are those that would appreciably reduce the likelihood of both the survival and recovery of a listed species. Actions likely to result in the destruction or adverse modification of critical habitat are those that would appreciably reduce the value of critical habitat for both the survival and recovery of the listed species.

Federal agencies already consult with us on activities in areas currently occupied by these species to ensure that their actions are not likely to jeopardize the continued existence of these species. These actions include, but are not limited to:

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

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

(3) Development on private, Government of Guam, or CNMI lands involving Federal permits or funding such as Housing and Urban Development projects;

(4) Military training or similar activities of the U.S. Air Force or Navy on lands under their jurisdiction at Andersen Air Force Base or COMNAVMARIANAS Communications and Ordnance Annex;

(5) Construction of communication sites licensed by the Federal Communications Commission;

(6) Road construction or maintenance, funded or approved by the Federal Highway Administration; or

(7) Disaster relief activities funded by the Federal Emergency Management Agency.

If you have questions regarding whether specific activities would constitute adverse modification of critical habitat, please contact the Field Supervisor, Pacific Islands Ecological Services Field Office (see **ADDRESSES** section). Requests for copies of the regulations on listed wildlife and plants and inquiries about prohibitions and permits should be directed to the U.S. Fish and Wildlife Service, Conservation Planning and Permit Program at the same address.

Critical Habitat Definition Exclusions

Some areas providing habitat essential to the species may not require special management or protection and therefore would not fall within the ESA definition of critical habitat (16 U.S.C. 1532(5)(A)(i)). Adequate special management or protection is provided by a legally operative plan or agreement that addresses the maintenance and improvement of the primary constituent elements important to the species and manages for the long-term conservation of the species. If any areas containing the primary constituent elements are currently being managed to address the conservation needs of the Mariana fruit bat, Guam Micronesian kingfisher, and Mariana crow and do not require special management or protection, we may exclude such areas from the proposed rule because they would not meet the definition of critical habitat in section 3(5)(A)(i) of the Act.

We use the following three criteria to determine if a plan provides adequate management or protection: (1) A current plan specifying the management actions must be complete and provide sufficient conservation benefit to these species, (2) the plan must provide assurances that the conservation management strategies will be implemented, and (3) the plan must provide assurances that the conservation management strategies will be effective. In determining if management strategies are likely to be implemented, we consider whether: (a) A management plan or agreement exists that specifies the management actions

being implemented or to be implemented; (b) there is a timely schedule for implementation; (c) there is a high probability that the funding source(s) or other resources necessary to implement the actions will be available; and (d) the party(ies) have the authority and long-term commitment to the agreement or plan to implement the management actions, as demonstrated, for example, by a legal instrument providing enduring protection and management of the lands. In determining whether an action is likely to be effective, we consider whether: (a) The plan specifically addresses the management needs, including reduction of threats to these species; (b) such actions have been successful in the past; (c) there are provisions for monitoring and assessment of the effectiveness of the management actions; (d) and adaptive management principles have been incorporated into the plan.

Based on information provided to us by landowners and managers to date, we have been unable to identify any areas on Guam or Rota that are adequately managed and protected to address the threats to the Mariana fruit bat, Guam Micronesian kingfisher, and Mariana crow so as to qualify for exclusion under the Act's definition of critical habitat. Several areas are covered under current management plans and are being managed in a manner that meets some of the conservation needs of the Mariana fruit bat, Guam Micronesian kingfisher, or Mariana crow, but the management does not adequately reduce the primary threats to these species.

The Sikes Act Improvements Act of 1997 (Sikes Act) requires each military installation that includes land or water suitable for the conservation and management of natural resources to have completed, by November 17, 2001, an Integrated Natural Resources Management Plan (INRMP). An INRMP integrates implementation of the military mission of the installation with stewardship of the natural resources found there. Each INRMP includes an assessment of the ecological needs on the installation, including needs to provide for the conservation of listed species; a statement of goals and priorities; a detailed description of management actions to be implemented to provide for these ecological needs; and a monitoring and adaptive management plan. We consult with the military on the development and implementation of INRMPs for installations with listed species. We believe that bases that have completed and approved INRMPs that address the needs of the species generally do not meet the definition of critical habitat

discussed above, because they require no additional special management or protection. Therefore, we do not include these areas in critical habitat designations if they meet the following three criteria: (1) A current INRMP must be complete and provide sufficient conservation benefit to the species; (2) the plan must provide assurances that the conservation management strategies will be implemented; and (3) the plan must provide assurances that the conservation management strategies will be effective, by providing for periodic monitoring and revisions as necessary. If all of these criteria are met, then the lands covered under the plan would not meet the definition of critical habitat. To date, no military installation on Guam has completed a final INRMP that provides sufficient management and protection for the Mariana fruit bat, Guam Micronesian kingfisher, or Mariana crow, although many of the projects described in these documents are generally beneficial to Guam's natural environment and recovery of listed species.

Economic Exclusions

Section 4(b)(2) of the Act requires that we designate critical habitat on the basis of the best scientific and commercial information available, and that we consider the economic and other relevant impacts of designating a particular area as critical habitat. We may exclude areas from critical habitat designation if the benefits of exclusion outweigh the benefits of designation, provided the exclusion will not result in the extinction of the species. We are conducting an analysis of the economic impacts of designating the proposed areas as critical habitat and will use this information in our final determination. A notice of availability of the draft economic analysis will be published in the **Federal Register**.

In most instances the benefits of excluding Habitat Conservation Plan (HCP) areas from critical habitat designations have outweighed the benefits of including them. Currently, there are no HCPs on Guam that include the Mariana fruit bat, Guam Micronesian kingfisher, or Mariana crow as a covered species. However, the Service is working with the CNMI to develop an HCP to address impacts to the Mariana crow associated with the development of agricultural homesteads on Rota. The proposed agricultural homesteads are not included in the proposed critical habitat, but the anticipated conservation areas are. In the event that future HCPs are developed within the boundaries of designated critical habitat, assistance

will be available to applicants to promote protection and management of habitat areas essential for the conservation of these species. Opportunities may exist to locate development and habitat modification activities in nonessential areas, or to mitigate activities within essential habitat areas so that such activities will not adversely modify the critical habitat. The Service will provide technical assistance and work closely with applicants throughout the development of any future HCPs to identify lands essential for the long-term conservation of the Mariana fruit bat, Guam Micronesian kingfisher, and Mariana crow as well as conservation measures for those lands.

Public Comments Solicited

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

(1) The reasons why any area should or should not be determined to be critical habitat as provided by section 4 of the Act and 50 CFR 424.12(a)(1), including whether the benefits of designation will outweigh any threats to these species due to designation;

(2) Specific information on the current or former numbers and distribution of Mariana fruit bats, Guam Micronesian kingfishers, and Mariana crows, and what habitat is essential to the conservation of these species and why;

(3) Whether lands within proposed critical habitat are currently being managed to address conservation needs of the Mariana fruit bat, Guam Micronesian kingfisher, and Mariana crow;

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

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

(6) Whether future development and approval of conservation measures (e.g., Conservation Agreements, Safe Harbor Agreements, etc.) should be excluded from critical habitat and, if so, by what mechanism;

(7) Whether military lands covered under an approved INRMP should be excluded from critical habitat;

(8) Economic and other values associated with designating critical habitat for the Mariana fruit bat, Guam Micronesian kingfisher, and Mariana crow, such as those derived from non-consumptive uses (e.g., hiking, camping, bird-watching, enhanced watershed protection, improved air quality, increased soil retention, "existence values," and reductions in administrative costs); and

(9) Whether our approach to critical habitat designation could be improved or modified in any way to provide for greater public participation and understanding, or to assist us in accommodating public concern and comments.

If we receive information that any of the areas proposed as critical habitat are currently being managed and protected to adequately address the conservation needs of the Mariana fruit bat, Guam Micronesian kingfisher, or Mariana crow, we may exclude such areas from any final designation as not meeting the definition of critical habitat in section 3(5)(A) of the Act.

In anticipation of public interest, public hearings have been scheduled on Rota for November 6, 2002, and on Guam for November 7, 2002, (*see ADDRESSES* section). Prior to each public hearing, the Service will be available to provide information and to answer questions. We also will be available for questions after each of the hearings. Anyone wishing to make oral comments for the record at the public hearing is encouraged to provide a written copy of their statement and present it to us at the hearing. In the event there is a large attendance, the time allotted for oral statements may be limited. Oral and written statements receive equal consideration.

Persons needing reasonable accommodations in order to attend and participate in the public hearing should contact Patti Carroll at 503/231-2080 as soon as possible. In order to allow sufficient time to process requests, please call no later than one week before the hearing date.

If you wish to comment, you may submit your comments and materials concerning this proposal by any one of several methods (*see ADDRESSES* section). If submitting comments by electronic format, please submit them in ASCII file format and avoid the use of special characters and encryption. Please include "Attn: RIN 1018-AI25" and your name and return address in your e-mail message. Please note that the e-mail address Mariana_CritHab@r1.fws.gov will be closed at the termination of the public comment period.

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

Peer Review

Our policy published on July 1, 1994 (59 FR 34270), directs us to seek the expert opinions of at least three appropriate and independent specialists regarding this proposed rule. We plan to expand this review to increase the number of reviewers. The purpose of such review is to ensure listing and critical habitat decisions are based on scientifically sound data, assumptions, and analyses. We will send copies of this proposed rule to these peer reviewers immediately following publication in the **Federal Register**. We will invite the peer reviewers to comment, during the public comment period, on the proposed designations of critical habitat. We will consider all comments and data received during the 60-day comment period on this proposed rule during preparation of a final decision on the proposed critical habitat. Accordingly, the final decision may differ from this proposal.

Clarity of the Rule

Executive Order 12866 requires each agency to write regulations and notices that are easy to understand. We invite your comments on how to make this proposed rule easier to understand, including answers to questions such as the following: (1) Are the requirements in the proposed rule clearly stated? (2) Does the proposed rule contain technical language or jargon that interferes with the clarity? (3) Does the format of the proposed rule (grouping and order of sections, use of headings,

paragraphing, etc.) aid or reduce its clarity? (4) Is the description of the proposed rule in the supplementary information section of the preamble helpful in understanding the document? (5) Is the background information useful and is the amount appropriate? (6) What else could we do to make the proposed rule easier to understand?

Send a copy of any comments that concern how we could make this rule easier to understand to: Office of Regulatory Affairs, Department of the Interior, Room 7229, 1849 C Street, NW, Washington, DC 20240. You may e-mail your comments to this address: Execsec@ios.doi.gov.

Required Determinations

Regulatory Planning and Review

In accordance with Executive Order 12866, this proposal is a significant rule reviewed by the Office of Management and Budget (OMB). We have prepared a draft economic analysis of this proposed action. We will use this analysis to meet the requirement of section 4(b)(2) of the ESA to consider the economic and other consequences of designating the proposed areas as critical habitat and may exclude an area from critical habitat if it is determined that the benefits of such exclusion outweigh the benefits of designating it, unless failure to designate such area as critical habitat would lead to the extinction of the Mariana fruit bat, Guam Micronesian kingfisher, or Mariana crow. This draft analysis will be available for public comment before any final decision on the proposed designation. The availability of the draft economic analysis will be announced in the **Federal Register**.

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

The following discussion of the potential economic impacts of this proposed rule reflects the views of the Service, only. This discussion is based upon the information regarding potential economic impact that is available to the Service at this time. This assessment of economic effect may be modified prior to final rulemaking based upon development and review of the economic analysis being prepared pursuant to section 4(b)(2) of the ESA and E.O. 12866. This analysis is for the purposes of compliance with the Regulatory Flexibility Act and does not reflect the position of the Service on the type of economic analysis required by the judicial decision in *New Mexico Cattle Growers Assn. v. U.S. Fish & Wildlife Service*, 248 F.3d 1277 (10th Cir. 2001).

Under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*, as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996), whenever an agency is required to publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effects of the rule on small entities (*i.e.*, small businesses, small organizations, and small government jurisdictions). However, no regulatory flexibility analysis is required if the head of the agency certifies the rule will not have a significant economic impact on a substantial number of small entities. A "substantial number" of small entities is more than 20 percent of those small entities affected by the regulation, out of the total universe of small entities in the industry or, if appropriate, industry segment. SBREFA amended the Regulatory Flexibility Act (RFA) to require Federal agencies to provide a statement of the factual basis for certifying that the rule will not have a significant economic effect on a substantial number of small entities. SBREFA also amended the RFA to require a certification statement. Based on current information, the Service proposes to certify that this proposed rule will not have a significant effect on a substantial number of small entities.

We must determine whether the proposed rulemaking will affect a substantial number of small entities. According to the Small Business Administration, small entities include small organizations, such as independent non-profit organizations, and small governmental jurisdictions, including school boards and city and town governments that serve fewer than 50,000 residents, as well as small businesses (13 CFR 121.201). Small businesses include manufacturing and mining concerns with fewer than 500 employees, wholesale trade entities with fewer than 100 employees, retail and service businesses with less than \$5 million in annual sales, general and heavy construction businesses with less than \$27.5 million in annual business, special trade contractors doing less than \$11.5 million in annual business, and agricultural businesses with annual sales less than \$750,000. To determine if potential economic impacts to these small entities are significant, we consider the types of activities that might trigger regulatory impacts under this rule as well as the types of project modifications that may result. In general, the term significant economic impact is meant to apply to a typical

small business firm's business operations.

To determine if the rule would affect a substantial number of small entities, we consider the number of small entities affected within particular types of economic activities (*e.g.*, housing development, grazing, oil and gas production, timber harvesting, *etc.*). We apply the "substantial number" test individually to each industry to determine if certification is appropriate. In estimating the numbers of small entities potentially affected, we also consider whether their activities have any Federal involvement; some kinds of activities are unlikely to have any Federal involvement and so will not be affected by critical habitat designation.

Designation of critical habitat only affects activities conducted, funded, or permitted by Federal agencies; non-Federal activities are not affected by the designation. In areas where the species are present, Federal agencies are already required to consult with us under section 7 of the Act on activities that they fund, permit, or implement that may affect Mariana fruit bats, Mariana crows, and Guam Micronesian kingfishers. If these critical habitat designations are finalized, Federal agencies must also consult with us if their activities may affect designated critical habitat. However, in areas where the species are present, we do not believe this will result in any additional regulatory burden on Federal agencies or their applicants because consultation would already be required because of the presence of the listed species, and the duty to avoid adverse modification of critical habitat would not trigger additional regulatory impacts beyond the duty to avoid jeopardizing the species.

Even if the duty to avoid adverse modification does not trigger additional regulatory impacts in areas where the species is present, designation of critical habitat could result in an additional economic burden on small entities due to the requirement to reinstate consultation for ongoing Federal activities. We have reviewed 209 informal consultations and 37 formal consultations conducted on the Mariana fruit bat, Mariana crow, and Guam Micronesian kingfisher on Guam since these species were listed in 1984. In addition, we reviewed nine informal consultations conducted on the island of Rota, CNMI, since 1984. No formal consultations have been conducted on Rota since the Mariana crow was listed. Consultations on Federal grants to State wildlife programs, which do not affect small entities, were not reviewed for this proposed rule. Seventy-seven of the

209 informal consultations on Guam and three of the five informal consultations on Rota were conducted in response to requests for technical assistance or species lists for different locations on Guam and Rota. The majority of these requests were made by Federal agencies, some on their behalf by private consultants or contractors. Of the 246 total consultations on Guam, 57 informal and 20 formal consultations involved at least one of the species involved in this proposed rule. Of the nine consultations on Rota, six involved the Mariana crow.

Of the 20 formal consultations on Guam, two may have involved a small entity. Both of these concerned proposals by the Urunau Resort Corporation to have contractors conduct topographic survey work on private and Federal lands for a potential access road through Navy property to private lands. The Mariana fruit bat and Mariana crow were reported from the action areas. The biological opinions (Pacific Islands Fish and Wildlife Office log numbers 1-2-90-F-027 and 1-2-91-F-08) concluded that the proposed action would not result in jeopardy to either species. The reasonable and prudent measures required in the biological opinions to avoid or minimize incidental take of these species did not include major modifications to the proposed action that placed a significant economic burden on Urunau Resort Corporation. We do not believe this constitutes a substantial number of small entities (*see* earlier discussion on substantial number). Of the remaining 18 formal consultations on Guam involving the Mariana fruit bat, Mariana crow, and/or Guam Micronesian kingfisher, ten were conducted on behalf of the Air Force and eight were conducted on behalf of the Navy. In all of these consultations, the Service concluded that the proposed actions would not result in jeopardy to these three listed species.

Of the 57 informal consultations on Guam, one may have concerned a small entity (private individuals, consulting firms, or non-profit organizations). The proposed action in this case, the gathering of a large Chamorro family on the Guam National Wildlife Refuge, was determined not likely to adversely affect listed species, and was subject only to minor restrictions under a special use permit for the refuge. We do not believe this instance constitutes a substantial number of small entities (*see* earlier discussion on substantial number). Four informal consultations were conducted on behalf of Government of Guam agencies. One action was determined not likely to adversely affect listed species, and the other was determined

to have no effect on listed species. A third was determined not likely to adversely modify the critical habitat proposed in 1991. The fourth consultation on behalf of the Government of Guam concerned technical assistance from the Service, and resulted in no regulatory action by the Service or economic burden on the Government of Guam. We conclude, however, that the Government of Guam is not a small entity.

Of the six informal consultations on Rota that concerned the Mariana crow, none concerned a small entity and all consultations were conducted on behalf of the Government of the CNMI. Four of these consultations were requests for technical assistance or species lists and resulted in no regulatory action by the Service or economic burden on the Government of the CNMI. The remaining two actions were determined not likely to adversely affect the Mariana crow. We concluded, however, that the Government of the CNMI is not a small entity.

The remaining 52 informal consultations on Guam exclusively involved the following Federal agencies: U.S. Air Force (27 consultations), U.S. Department of the Navy (14 consultations), U.S. Department of Agriculture (four consultations), U.S. Fish and Wildlife Service (3 consultations), U.S. Army Corps of Engineers (2 consultations), U.S. Department of the Army (one consultation), and Natural Resources Conservation Service (formally the Soil Conservation Service) (one consultation). None of these agencies is a small entity. Of these consultations, seven included critical habitat proposed in 1991, and these proposed actions were determined not likely to adversely modify proposed critical habitat. Of the remaining 45 consultations, 38 concluded with our concurrence that the proposed action either would have no effect on, or was not likely to adversely affect, listed species; five consultations were responses to requests for either species lists or technical assistance and did not conclude with a regulatory determination; one concluded with a request by the Service for more information; and one concluded with a determination that the proposed action, Navy training maneuvers, was likely to adversely affect the Mariana crow.

In areas where the species clearly are not present, designation of critical habitat could trigger additional review of Federal activities under section 7 of the Act that otherwise would not be required. The majority of activities in the proposed critical habitat areas for

the Mariana fruit bat, Mariana crow, and Guam Micronesian kingfisher that have Federal involvement likely will concern the U.S. Navy or Air Force. As mentioned above, however, only 77 of 246 informal consultations on Guam completed under section 7 of the Act involved any of the species for which critical habitat is being proposed. As a result, we cannot easily identify future consultations that may result from the listed status of the species or the increment of additional consultations that may be required by this critical habitat designation. Furthermore, a large proportion of the proposed designation on Guam is currently unoccupied by these species. Therefore, for the purposes of this review and certification under the Regulatory Flexibility Act, we are assuming that any future consultations in the area proposed as critical habitat on Guam likely will result from the critical habitat designations.

Of the total land area proposed as critical habitat on Guam for the Mariana fruit bat, Mariana crow, and Guam Micronesian kingfisher, approximately 9 percent is private land, 11 percent is Government of Guam land, and 80 percent is Federal land. Of the total land area proposed as critical habitat for the Mariana crow on Rota, approximately 8 percent is private land and 92 percent is Government of the CNMI land. Much of the land within the proposed critical habitat units has limited potential for development because of the remote locations, lack of access, and rugged terrain of these lands. On non-Federal lands, activities that lack Federal involvement would not be affected by the proposed critical habitat designations. Activities of an economic nature that are likely to occur on non-Federal lands in the area encompassed by these proposed designations consist of improvements to and construction of roads, communications and tracking facilities, and other infrastructure; residential and tourist-related development; ranching and farming; and recreational use such as camping, picnicking, game hunting, and fishing. With the exception of communications and tracking facilities improvements by the FAA or the Federal Communications Commission, road building or improvement by the Federal Highways Authority, and water or sewer system development by the Corps of Engineers, these activities are unlikely to have Federal involvement. On lands that are or may be in agricultural production, the types of activities that might trigger a consultation include irrigation ditch system projects that may require section

404 authorizations from the Corps of Engineers, and watershed management and restoration projects sponsored by the Natural Resources Conservation Service (NRCS). However the NRCS restoration projects typically are voluntary, and the irrigation ditch system projects within lands that are in agricultural production are rare and may affect only a small percentage of the small entities within these proposed critical habitat designations. Therefore, analysis of currently available information indicates that the proposed rule would not affect a substantial number of small entities. We are not aware of any commercial activities on the Federal lands included in these proposed critical habitat designations.

In general, two different mechanisms in section 7 consultations could lead to additional regulatory requirements. First, if we conclude, in a biological opinion, that a proposed action is likely to jeopardize the continued existence of a species or adversely modify its critical habitat, we can offer "reasonable and prudent alternatives." Reasonable and prudent alternatives are alternative actions that can be implemented in a manner consistent with the scope of the Federal agency's legal authority and jurisdiction, that are economically and technologically feasible, and that would avoid jeopardizing the continued existence of listed species or would result in adverse modification of critical habitat. A Federal agency and an applicant may elect to implement a reasonable and prudent alternative associated with a biological opinion that has found jeopardy or adverse modification of critical habitat. An agency or applicant could alternatively choose to seek an exemption from the requirements of the Act or proceed without implementing the reasonable and prudent alternative. However, unless an exemption were obtained, the Federal agency or applicant would be at risk of violating section 7(a)(2) of the Act if it chose to proceed without implementing the reasonable and prudent alternatives.

Secondly, if we find that a proposed action is not likely to jeopardize the continued existence of a listed animal species, we may identify reasonable and prudent measures designed to minimize the amount or extent of take and require the Federal agency or applicant to implement such measures through non-discretionary terms and conditions. However, the Act does not prohibit the take of listed plant species or require terms and conditions to minimize adverse effect to critical habitat. We may also identify discretionary conservation recommendations designed to minimize

or avoid the adverse effects of a proposed action on listed species or critical habitat, help implement recovery plans, or to gather information that could contribute to the recovery of the species.

Based on our experience with section 7 consultations for all listed species, virtually all projects—including those that, in their initial proposed form, would result in jeopardy or adverse modification determinations in section 7 consultations—can be implemented successfully with, at most, the adoption of reasonable and prudent alternatives. Furthermore, these measures must be economically feasible, consistent with the intended purpose of the action, and within the scope of authority of the Federal agency involved in the consultation (*see* 50 CFR. 404.2, definition of reasonable and prudent alternative). Based on our consultation history, we can describe the general kinds of actions that may be identified in future reasonable and prudent alternatives. These are based on our understanding of the needs of the species and the threats they face, especially as described in the final listing rule and in this proposed critical habitat designation, as well as our experience with the listed species in Guam and Rota. The kinds of actions that may be included in future reasonable and prudent alternatives include, but are not limited to, management of competing non-native species and predators, restoration of degraded habitat, construction of protective fencing, and regular monitoring. Therefore, such measures are not likely to result in a significant economic impact to a substantial number of small entities.

As required under section 4(b)(2) of the Act, we are conducting an analysis of the potential economic and other impacts of this proposed critical habitat designation, and we will make that analysis available for public review and comment before finalizing these designations.

In summary, we are considering whether this proposed rule would result in a significant economic effect on a substantial number of small entities. Currently available information indicates it would not affect a substantial number of small entities. Approximately 11 percent of the lands proposed as critical habitat on Guam are on Government of Guam lands. In addition, approximately 92 percent of the lands proposed as critical habitat on Rota are on Government of the CNMI lands. The Territory of Guam and CNMI are not small entities. Approximately nine percent of the lands proposed as

critical habitat on Guam and eight percent of lands proposed as critical habitat on Rota are on private lands. As discussed earlier, many of the actions likely to occur on the private land parcels included in this proposal are not likely to require any Federal authorization. In the remaining areas, section 7 application, the only trigger for regulatory impact under this rule, largely would be limited to a subset of the area proposed. The most likely future section 7 consultations resulting from this rule would be for informal consultations on actions proposed by the military, federally funded land and water conservation projects, species-specific surveys and research projects, and watershed management and restoration projects sponsored by NRCS. These consultations likely would occur on only a subset of the total number of parcels and, therefore, are not likely to affect a substantial number of small entities. This rule would result in project modifications only when proposed Federal activities would destroy or adversely modify critical habitat. While this may occur, it is not expected frequently enough to affect a substantial number of small entities. Even if it did occur, we would not expect it to result in a significant economic impact, as the measures included in reasonable and prudent alternatives must be economically feasible and consistent with the proposed action. Thus, currently available information indicates that the proposed designation of critical habitat for the Mariana fruit bat, Mariana crow, and Guam Micronesian kingfisher will not have a significant economic impact on a substantial number of small entities, and an initial regulatory flexibility analysis is not required. However, should the economic analysis of this rule indicate otherwise, we will revisit this determination.

Executive Order 13211

On May 18, 2001, the President issued Executive Order 13211, on regulations that significantly affect energy supply, distribution, and use. Executive Order 13211 requires agencies to prepare Statements of Energy Effects when undertaking certain actions. Though current information indicates this proposed rule would be a significant regulatory action under Executive Order 12866, it is not expected to significantly affect energy supplies, distribution, or use. Therefore, this action is not a significant energy action and no Statement of Energy Effects is required.

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

In accordance with the Unfunded Mandates Reform Act (2 U.S.C. 1501 August 25, 2000 *et seq.*):

(a) This rule, as proposed, will not “significantly or uniquely” affect small governments. A Small Government Agency Plan does not appear to be required. Small governments would be affected only to the extent that any programs having Federal funds, permits, or other authorized activities would have to ensure that their actions will not adversely affect the critical habitat. However, as discussed above, these actions are currently subject to similar restrictions through the listing protections of the species, and further restrictions are not anticipated to result from critical habitat designation of occupied areas. In our economic analysis, we will evaluate the impact of designating unoccupied areas where section 7 consultations would not have occurred but for the critical habitat designation.

(b) This rule, as proposed, will not produce on State, local, or Tribal governments or the private sector a Federal mandate of \$100 million or greater in any year, so it would not meet the criteria for a “significant regulatory action” under the Unfunded Mandates Reform Act.

Takings

In accordance with Executive Order 12630 (“Government Actions and Interference with Constitutionally Protected Private Property Rights”), we have preliminarily analyzed the potential takings implications of the proposed critical habitat designation in a preliminary takings implication assessment, which indicates that this proposed rule would not pose significant takings implications.

Federalism

In accordance with Executive Order 13132, the proposed rule does not have significant Federalism effects. A Federalism assessment is not required. As discussed above, the designation of critical habitat in areas currently occupied by the Mariana fruit bat and Mariana crow would have little incremental impact on the Government of Guam or the CNMI and their activities. The designations may have some benefit to the Government of Guam and the CNMI in that the areas essential to the conservation of these species are more clearly defined, and the primary constituent elements of the habitat necessary to the survival of these species are identified. While this

3. Amend § 17.95 by adding the same order as the species appear in § 17.11:

a. In paragraph (a), critical habitat for the Mariana fruit bat (*Pteropus mariannus mariannus*); and

b. In paragraph (b), critical habitat for the Mariana crow (*Corvus kubaryi*) and Guam Micronesian kingfisher (*Halcyon cinnamomina cinnamomina*), as set forth below.

§ 17.95 Critical habitat—fish and wildlife.

(a) *Mammals.*

* * * * *

Mariana Fruit Bat (*Pteropus mariannus mariannus*)

(1) Critical habitat units for the Mariana fruit bat are depicted for the Territory of Guam.

(2) Within these areas, the primary constituent elements required by the Mariana fruit bat for the biological needs of foraging, sheltering, roosting, and rearing of young are found in areas supporting limestone, secondary, ravine, swamp, agricultural, and coastal forests composed of native or introduced plant species. These forest types provide the primary constituent elements of:

(i) Plant species used for foraging such as *Artocarpus* sp. (breadfruit), *Carica papaya* (papaya), *Cycas circinalis* (fadang), *Ficus* spp. (fig), *Pandanus tectorius* (kafu), *Cocos nucifera* (coconut palm), and *Terminalia catappa* (talisai).

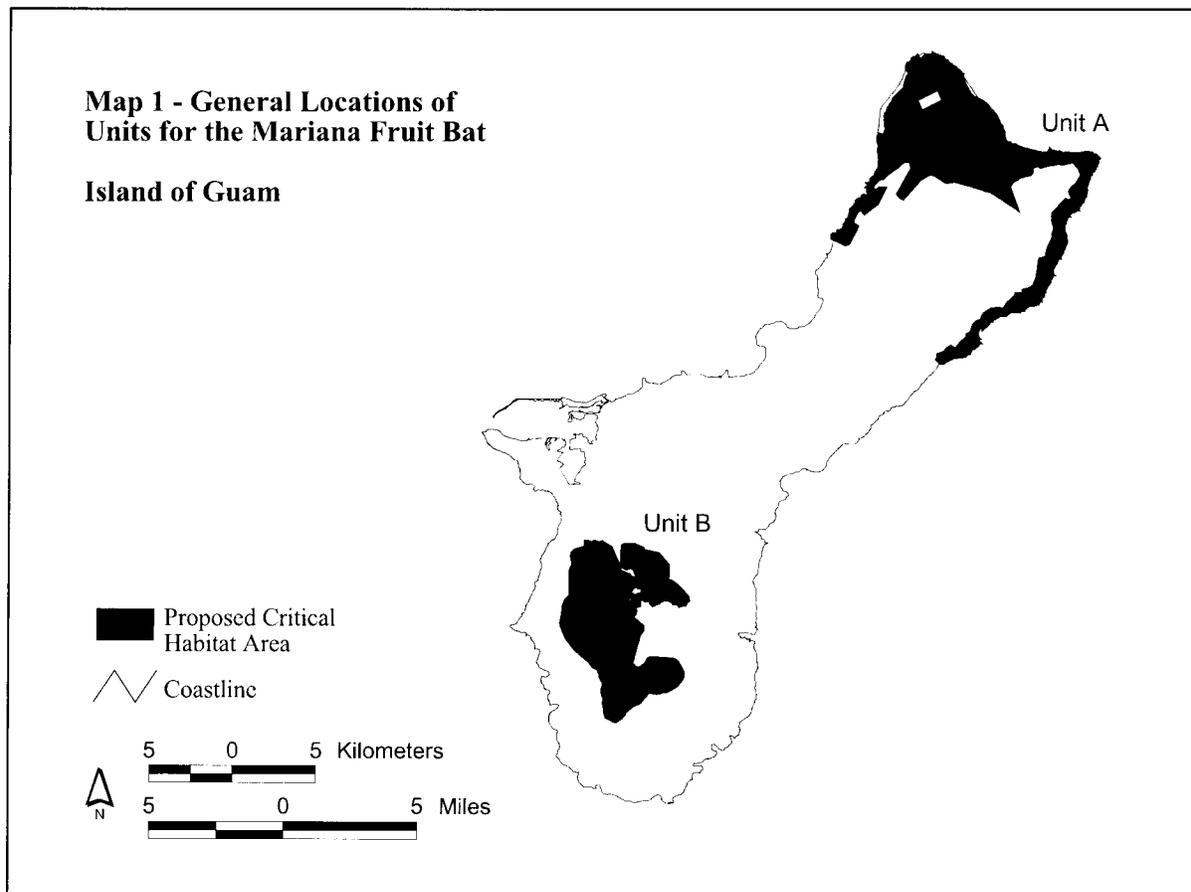
(ii) Remote locations, often within 100 m (328 ft) of 80 to 100 m (262 to 591 ft) tall clifflines, with limited exposure

to human disturbance, that contain mature fig, *Mammea odorata* (chopak), *Casuarina equisetifolia* (gago), *Macaranga thompsonii* (pengua), *Guettarda speciosa* (panao), and *Neisosperma oppositifolia* (fagot), and other tree species that are used for roosting and breeding.

(3) Critical habitat does not include existing features and structures within the boundaries of the mapped units, such as buildings, roads, aqueducts, antennas, water tanks, agricultural fields, paved areas, lawns, and other urban landscaped areas not containing one or more of the primary constituent elements.

(4) **Note:** Map 1—General Locations of Units for Mariana Fruit Bat—follows:

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(5) Northern Guam, Unit A, Mariana fruit bat (5,803 ha; 14,338 ac).

(i) Unit A consists of 106 boundary points with the following coordinates in UTM Zone 55 with the units in meters using World Geodetic System 1984 (WGS84): 269645, 1491989; 269464, 1492175; 269501, 1492206; 269493, 1492433; 269892, 1492587; 270039, 1492791; 270215, 1492895; 270407,

1492769; 270592, 1492782; 270860, 1493156; 271182, 1493403; 271268, 1493585; 271268, 1493643; 271436, 1493753; 271559, 1494014; 271607, 1494236; 271813, 1494415; 272043, 1494477; 272129, 1494724; 272413, 1495015; 272655, 1495146; 272822, 1495101; 272918, 1495177; 273101, 1495192; 273263, 1495136; 273431, 1495202; 274161, 1496022; 274173,

1496089; 274601, 1496017; 274599, 1496283; 274931, 1496366; 275216, 1496545; 275446, 1497148; 275593, 1498173; 275675, 1498164; 276008, 1498280; 276052, 1498688; 276156, 1498965; 276437, 1499560; 276381, 1499660; 276493, 1500036; 276358, 1500432; 276358, 1500432; 276358, 1500435; 276374, 1500948; 277097, 1501696; 277216, 1501626; 277395,

1501709; 277565, 1501788; 277367,
 1502247; 277556, 1502519; 277738,
 1502614; 278104, 1503226; 277931,
 1503680; 277528, 1504079; 276540,
 1503998; 275541, 1503775; 275456,
 1503878; 274960, 1503661; 275017,
 1503428; 275017, 1503428; 274919,
 1503336; 274350, 1503193; 273846,
 1502898; 273696, 1502636; 273683,
 1502394; 274082, 1501289; 272625,
 1502266; 271544, 1502611; 270399,
 1502902; 270276, 1502896; 269976,
 1502855; 269819, 1502894; 269127,
 1503348; 268873, 1503326; 268324,
 1502996; 267317, 1501835; 267067,
 1502058; 267891, 1503624; 267799,
 1504039; 267471, 1504118; 267162,
 1503935; 266993, 1503750; 266419,

1503365; 266115, 1503073; 265990,
 1503021; 265865, 1503010; 265532,
 1502708; 265443, 1502458; 265558,
 1502239; 265719, 1502249; 265928,
 1502401; 266157, 1502406; 265972,
 1502034; 265720, 1501528; 265451,
 1501304; 265451, 1501304; 265035,
 1500959; 264833, 1501228; 264547,
 1501077; 264338, 1500650; 264260,
 1500311; 264547, 1500113; 264060,
 1499171; 263865, 1499073; 263276,
 1499383.

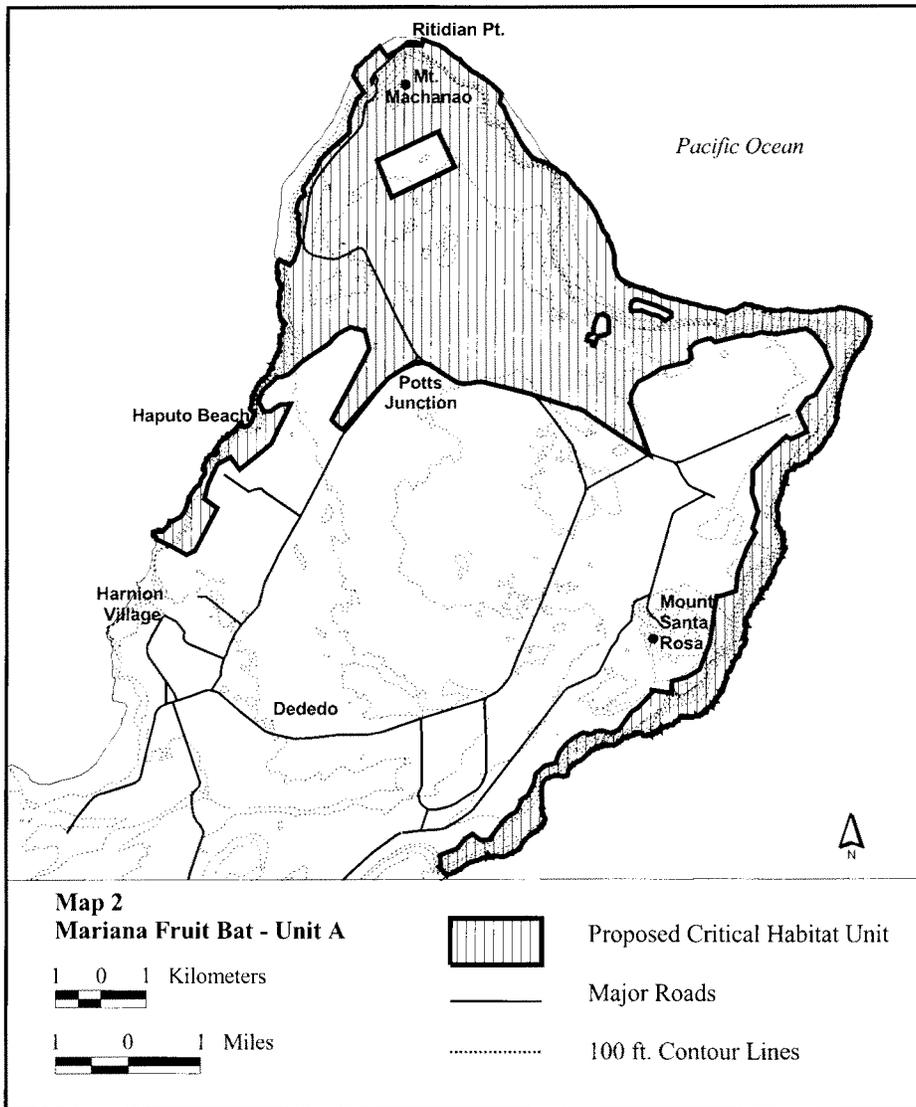
(ii) Excluding three areas:
 (A) Bounded by the following four points (133 ha, 328 ac): 268056, 1507791; 269417, 1508433; 269771, 1507647; 268377, 1506972.

(B) Bounded by the following 15 points (17 ha, 43 ac): 272711, 1503822;

272730, 1503928; 272767, 1503961;
 272872, 1503975; 272859, 1504070;
 272879, 1504214; 272949, 1504372;
 273070, 1504396; 273184, 1504331;
 273199, 1503977; 273041, 1503917;
 272949, 1503912; 272884, 1503703;
 272828, 1503710; 272818, 1503785.

(C) Bounded by the following 12 points (20 ha, 48 ac): 273808, 1504727; 274234, 1504592; 274579, 1504430; 274572, 1504328; 274444, 1504247; 274295, 1504355; 274146, 1504389; 273930, 1504484; 273795, 1504464; 273686, 1504470; 273659, 1504585; 273707, 1504687.

(iii) **Note:** Map 2 of Unit A for Mariana fruit bat follows:



(6) Southern Guam, Unit B, Mariana fruit bat (4,234 ha; 10,464 ac):

(i) Unit B consists of 184 boundary points with the following coordinates in UTM Zone 55 with the units in meters

using World Geodetic System 1984 (WGS84): 248002, 1474589; 247650, 1474901; 247495, 1475129; 247271,

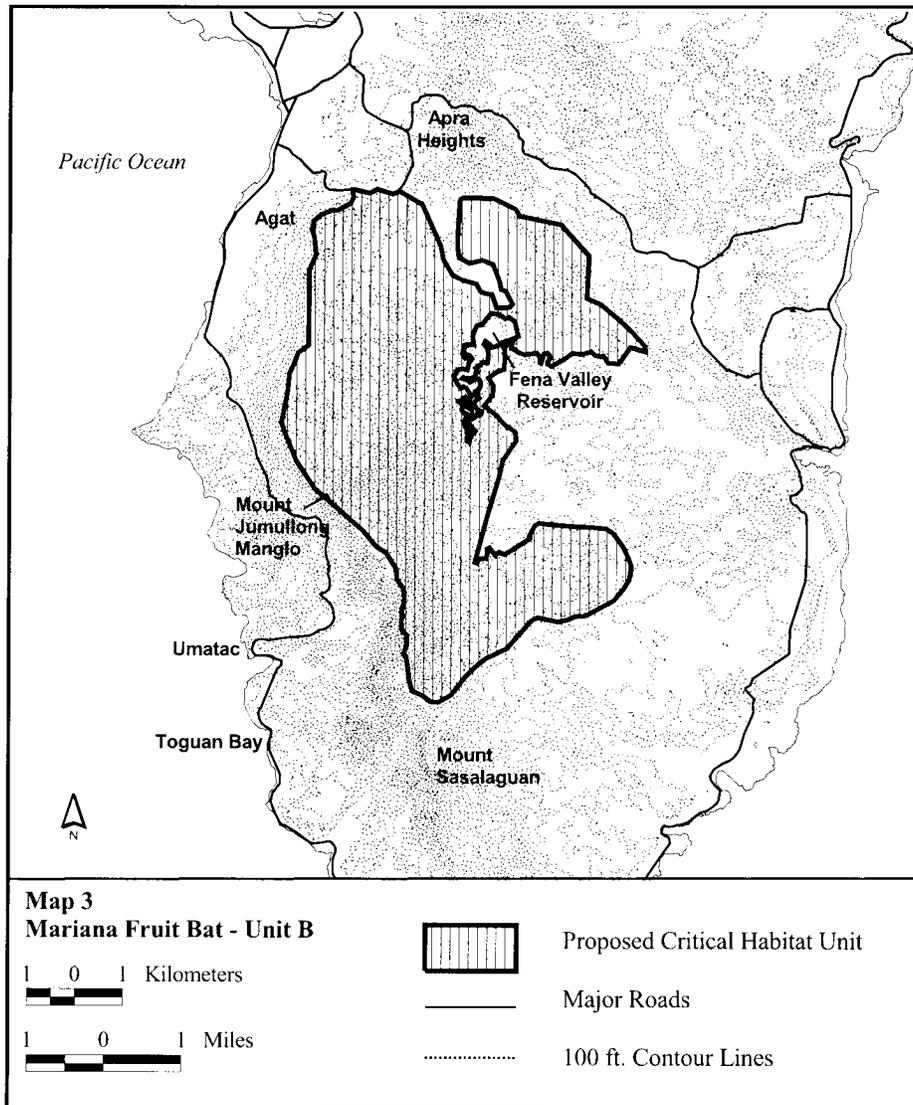
1475466; 247014, 1476083; 246950, 1476271; 247074, 1476899; 247118, 1477285; 247235, 1477541; 247293, 1477723; 247508, 1477876; 247522, 1479447; 247658, 1479766; 247629, 1480138; 247571, 1480291; 247586, 1480324; 247611, 1480465; 247782, 1480608; 248018, 1480694; 248088, 1480673; 248307, 1480797; 248380, 1480844; 248434, 1480948; 248420, 1481047; 248423, 1481115; 248490, 1481114; 248732, 1481047; 248758, 1481043; 248787, 1481048; 248930, 1481119; 249268, 1481028; 249316, 1481047; 249377, 1481077; 249428, 1481064; 249874, 1480811; 250243, 1479980; 250246, 1479973; 250253, 1479957; 250272, 1479915; 250316, 1479645; 250511, 1479330; 250724, 1479237; 250997, 1479153; 251074, 1479008; 251187, 1478955; 251318, 1478939; 251419, 1478655; 251585, 1478663; 251706, 1478676; 251746, 1478741; 251615, 1479003; 251516, 1479035; 251486, 1479196; 251428, 1479358; 251344, 1479561; 251122, 1479654; 250863, 1479589; 250640, 1479700; 250614, 1479911; 250605, 1480129; 250652, 1480853; 250673, 1480921; 250741, 1480941; 250877, 1480941; 251212, 1480936; 251338, 1480936; 251405, 1480904; 251819, 1480706; 251886, 1480568; 252757, 1480381; 253342, 1479736; 253298, 1478854; 253597, 1478723; 253904, 1478475; 254210, 1478183; 254510, 1477855; 254526, 1477750; 254207, 1477835; 253963, 1477494; 253962, 1477494; 253743, 1477502; 253641, 1477652; 253589, 1477649; 253472, 1477667; 253389, 1477739; 253204, 1477694; 252993, 1477709; 252793, 1477566; 252561, 1477440; 252476, 1477486; 252472, 1477520; 252536, 1477618; 252532, 1477670; 252476, 1477716; 252416, 1477705; 252353, 1477501; 252322, 1477517; 252329, 1477634; 252265, 1477716; 252009, 1477683; 251888, 1477724; 251820, 1477781; 251730, 1477811; 251726, 1477875; 251748, 1477931; 251601,

1477871; 251583, 1477373; 251458, 1477343; 251258, 1477204; 251360, 1477030; 251349, 1476842; 251168, 1476619; 251428, 1476423; 251583, 1476231; 251816, 1476080; 251835, 1475891; 251563, 1475479; 251560, 1475465; 251484, 1475137; 251262, 1474361; 250994, 1473369; 251024, 1473358; 251092, 1473456; 251221, 1473456; 251262, 1473576; 251239, 1473655; 251292, 1473688; 251405, 1473531; 251496, 1473591; 251605, 1473546; 251767, 1473633; 252137, 1473874; 252125, 1473916; 252231, 1474142; 252318, 1474183; 252540, 1474161; 252992, 1474119; 253446, 1474105; 253722, 1474068; 253867, 1473973; 254079, 1473688; 254181, 1473477; 254247, 1473316; 254203, 1473017; 254064, 1472805; 253882, 1472586; 253306, 1472273; 253101, 1472258; 252919, 1472185; 252722, 1472141; 252533, 1472181; 252306, 1472229; 252175, 1472171; 251883, 1471842; 251657, 1471580; 251233, 1471383; 251000, 1471200; 250803, 1471003; 250701, 1470864; 250511, 1470624; 250241, 1470470; 250081, 1470478; 249913, 1470602; 249687, 1470704; 249672, 1470799; 249614, 1470981; 249599, 1471171; 249570, 1471390; 249519, 1471485; 249584, 1471645; 249584, 1471864; 249482, 1471966; 249468, 1472163; 249497, 1472258; 249460, 1472338; 249519, 1472543; 249535, 1472652; 249511, 1472820; 249358, 1473032; 249365, 1473229; 249322, 1473280; 249151, 1473567; 248928, 1473703; 248650, 1474031.

(ii) Excluding one area: Bounded by the following 114 points (4,346 ha; 45,338 ac): 250684, 1476986; 250614, 1477069; 250531, 1477232; 250595, 1477315; 250614, 1477358; 250718, 1477387; 250815, 1477358; 250855, 1477510; 250916, 1477596; 250868, 1477671; 250823, 1477681; 250823, 1477622; 250769, 1477609; 250713, 1477695; 250753, 1477791; 250742, 1477869; 250793, 1477893; 250951,

1477890; 250924, 1478061; 250940, 1478131; 251018, 1478286; 251114, 1478310; 251310, 1478543; 251425, 1478535; 251534, 1478484; 251596, 1478433; 251690, 1478460; 251802, 1478366; 251874, 1478058; 251656, 1477976; 251620, 1477975; 251516, 1477920; 251482, 1477886; 251330, 1477839; 251270, 1477914; 251189, 1477957; 251173, 1477906; 251248, 1477802; 251256, 1477663; 251245, 1477534; 251216, 1477505; 251141, 1477526; 250989, 1477400; 251011, 1477327; 250959, 1477224; 250890, 1477189; 250804, 1477184; 250737, 1477208; 250713, 1477192; 250841, 1477148; 250874, 1477111; 250978, 1477178; 251055, 1477177; 251090, 1477109; 251090, 1477036; 251072, 1476975; 250986, 1476921; 250981, 1476892; 251002, 1476879; 251029, 1476900; 251045, 1476871; 251013, 1476849; 251061, 1476784; 250945, 1476680; 251055, 1476498; 251121, 1476501; 251120, 1476456; 251090, 1476418; 250994, 1476413; 250970, 1476370; 250844, 1476314; 250858, 1476242; 250922, 1476162; 250970, 1476119; 250991, 1476089; 250973, 1476068; 250943, 1476100; 250887, 1476111; 250879, 1476065; 250924, 1476025; 250887, 1475948; 250866, 1475867; 250817, 1475886; 250815, 1475966; 250836, 1476020; 250817, 1476057; 250812, 1476113; 250817, 1476140; 250801, 1476162; 250775, 1476180; 250767, 1476279; 250783, 1476373; 250863, 1476421; 250740, 1476472; 250702, 1476542; 250721, 1476616; 250780, 1476619; 250903, 1476536; 250906, 1476552; 250855, 1476627; 250823, 1476638; 250796, 1476710; 250769, 1476731; 250745, 1476683; 250681, 1476665; 250625, 1476702; 250627, 1476721; 250710, 1476718; 250721, 1476780; 250772, 1476798; 250868, 1476756; 250906, 1476801; 250775, 1477023; 250780, 1477039.

(iii) **Note:** Map 3 of Unit B for Mariana fruit bat follows:



* * * * *

(b) *Birds.*

* * * * *

Mariana crow (*Corvus kubaryi*)

(1) Critical habitat units for the Mariana crow are depicted for the Territory of Guam and the island of Rota, Commonwealth of the Northern Mariana Islands.

(2) The primary constituent elements required by the Mariana crow for the biological needs of foraging, sheltering, roosting, nesting, and rearing of young are found in areas that support limestone, secondary, ravine, swamp, agricultural, and coastal forests composed of native and introduced plant species. These forest types provide the primary constituent elements of:

(i) Emergent trees and subcanopy trees with dense cover for breeding such as *Neisosperma oppositifolia* (fagot), *Macaranga thompsonii* (pengua), *Intsia bijuga* (ifit), *Premna obtusifolia* (ahgao), *Eugenia reinwardtiana* (aabang), *Ficus* spp. (fig), *Elaeocarpus joga* (yoga), and *Tristiropsis obtusangula* (faniok);

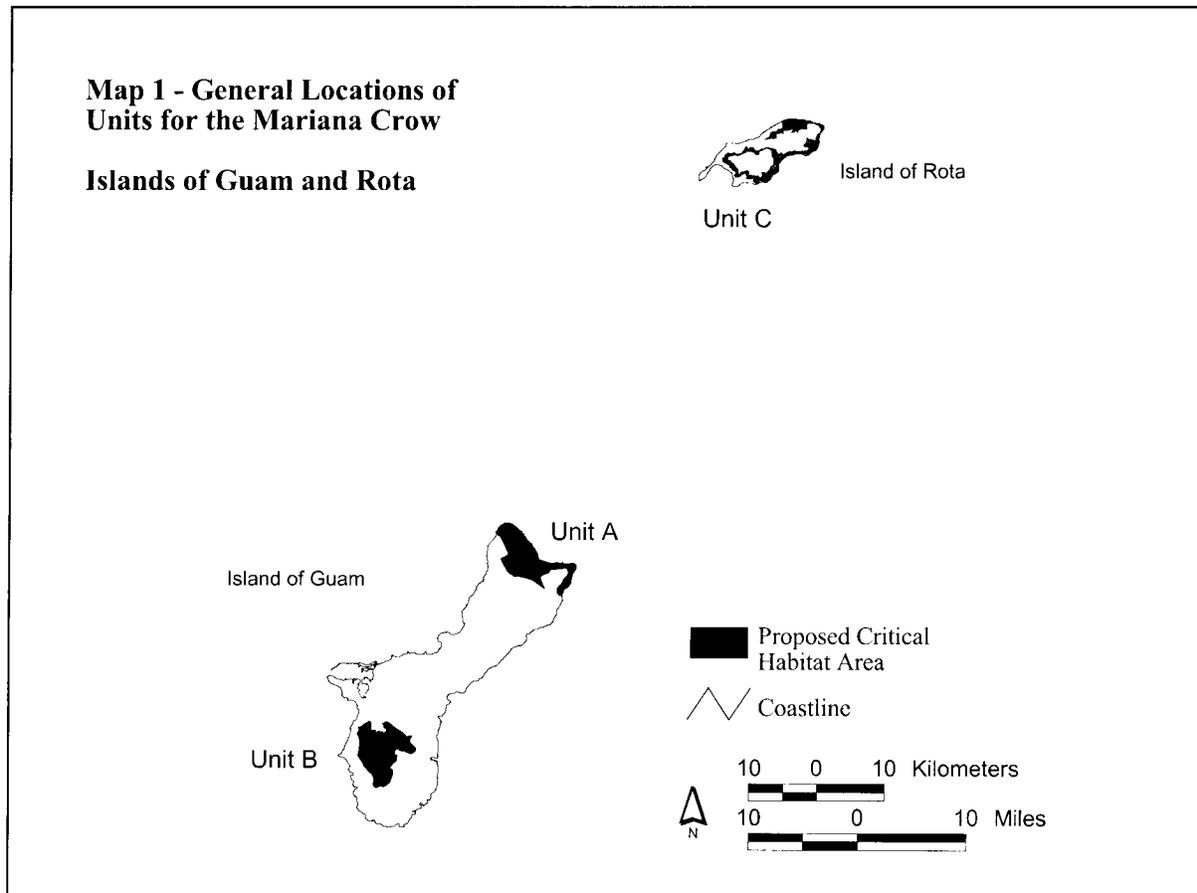
(ii) Sufficient area under predominantly native forest to allow nesting at least 290 m (950 ft) from the nearest road and 62 m (203 ft) from the nearest forest edge and to support Mariana crow breeding territories (approximately 12 to 37 ha (30 to 91 ac)) and foraging areas for nonbreeding juvenile crows; and

(iii) Standing dead trees and plant species such as *Aglaia mariannensis*

(maypunayo), *Artocarpus* spp. (breadfruit), *Cocos nucifera* (coconut palm), fagot, *Hibiscus tiliaceus* (pago), ifit, *Leucaena* spp. (tangentangen), *Ochrosia mariannensis* (langiti), *Pandanus tectorius* (kafu), ahgao, fig, and joga for foraging.

(3) Critical habitat does not include existing features and structures within the boundaries of the mapped units, such as buildings, roads, aqueducts, antennas, water tanks, agricultural fields, paved areas, lawns, and other urban landscaped areas not containing one or more of the primary constituent elements.

(4) **Note:** Map 1—General locations of units for Mariana crow follows:



(5) Northern Guam, Unit A, Mariana crow (5,075 ha; 12,540 ac).

(i) Unit A consists of 58 boundary points with the following coordinates in UTM Zone 55 with the units in meters using World Geodetic System 1984 (WGS84): 276837, 1498680; 276836, 1498679; 276161, 1498972; 276437, 1499560; 276381, 1499660; 276493, 1500036; 276358, 1500432; 276374, 1500948; 277097, 1501696; 277216, 1501626; 277565, 1501788; 277367, 1502247; 277556, 1502519; 277738, 1502614; 278104, 1503226; 277931, 1503680; 277528, 1504079; 276540, 1503998; 275541, 1503775; 275456, 1503878; 274960, 1503661; 275017, 1503428; 274919, 1503337; 274350, 1503193; 273846, 1502898; 273696, 1502636; 273683, 1502394; 274082, 1501289; 272625, 1502266; 271544,

1502611; 270399, 1502902; 270276, 1502896; 269976, 1502855; 269819, 1502894; 269127, 1503348; 268873, 1503326; 268324, 1502996; 267317, 1501835; 267067, 1502058; 267891, 1503624; 267799, 1504039; 267471, 1504118; 267162, 1503935; 266993, 1503750; 266419, 1503365; 266115, 1503073; 265990, 1503021; 265865, 1503010; 265532, 1502708; 265443, 1502458; 265558, 1502239; 265719, 1502249; 265928, 1502401; 266157, 1502406; 265720, 1501528; 265451, 1501304; 264834, 1501755; 264835, 1501755.

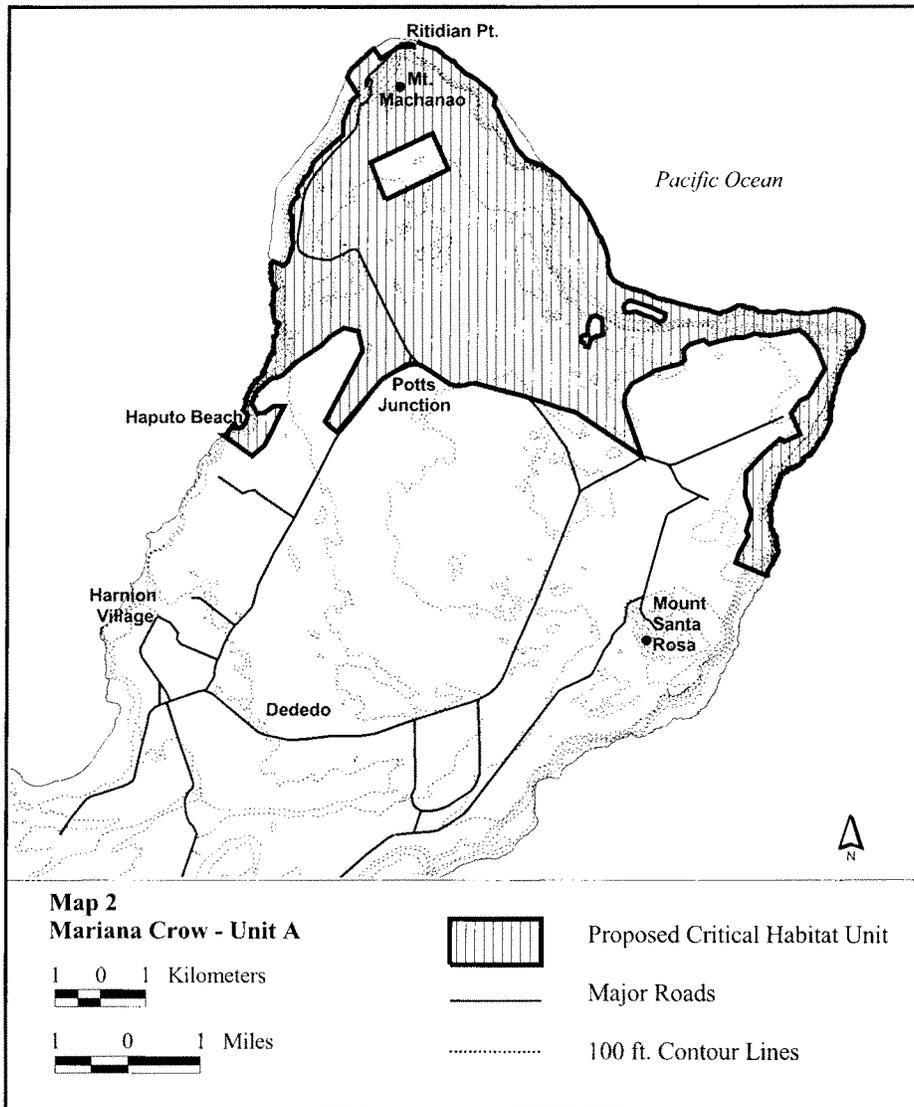
(ii) Excluding three areas:

(A) Bounded by the following four points (133 ha, 328 ac): 268056, 1507791; 269417, 1508433; 269771, 1507647; 268377, 1506972.

(B) Bounded by the following 15 points (17 ha, 43 ac): 272711, 1503822; 272730, 1503928; 272767, 1503961; 272872, 1503975; 272859, 1504070; 272879, 1504214; 272949, 1504372; 273070, 1504396; 273184, 1504331; 273199, 1503977; 273041, 1503917; 272949, 1503912; 272884, 1503703; 272828, 1503710; 272818, 1503785.

(C) Bounded by the following 12 points (20 ha, 48 ac): 273808, 1504727; 274234, 1504592; 274579, 1504430; 274572, 1504328; 274444, 1504247; 274295, 1504355; 274146, 1504389; 273930, 1504484; 273795, 1504464; 273686, 1504470; 273659, 1504585; 273707, 1504687.

(iii) **Note:** Map 2 of Unit A for Mariana crow follows:



(6) Southern Guam, Unit B, Mariana crow (4,234 ha; 10,464 ac).

(i) Unit B consists of 184 boundary points with the following coordinates in UTM Zone 55 with the units in meters using World Geodetic System 1984 (WGS84): 248002, 1474589; 247650, 1474901; 247495, 1475129; 247271, 1475466; 247014, 1476083; 246950, 1476271; 247074, 1476899; 247118, 1477285; 247235, 1477541; 247293, 1477723; 247508, 1477876; 247522, 1479447; 247658, 1479766; 247629, 1480138; 247571, 1480291; 247586, 1480324; 247611, 1480465; 247782, 1480608; 248018, 1480694; 248088, 1480673; 248307, 1480797; 248380, 1480844; 248434, 1480948; 248420, 1481047; 248423, 1481115; 248490, 1481114; 248732, 1481047; 248758, 1481043; 248787, 1481048; 248930, 1481119; 249268, 1481028; 249316, 1481047; 249377, 1481077; 249428,

1481064; 249874, 1480811; 250243, 1479980; 250246, 1479973; 250253, 1479957; 250272, 1479915; 250316, 1479645; 250511, 1479330; 250724, 1479237; 250997, 1479153; 251074, 1479008; 251187, 1478955; 251318, 1478939; 251419, 1478655; 251585, 1478663; 251706, 1478676; 251746, 1478741; 251615, 1479003; 251516, 1479035; 251486, 1479196; 251428, 1479358; 251344, 1479561; 251122, 1479654; 250863, 1479589; 250640, 1479700; 250614, 1479911; 250605, 1480129; 250652, 1480853; 250673, 1480921; 250741, 1480941; 250877, 1480941; 251212, 1480936; 251338, 1480936; 251405, 1480904; 251819, 1480706; 251886, 1480568; 252757, 1480381; 253342, 1479736; 253298, 1478854; 253597, 1478723; 253904, 1478475; 254210, 1478183; 254510, 1477855; 254526, 1477750; 254207, 1477835; 253963, 1477494; 253962,

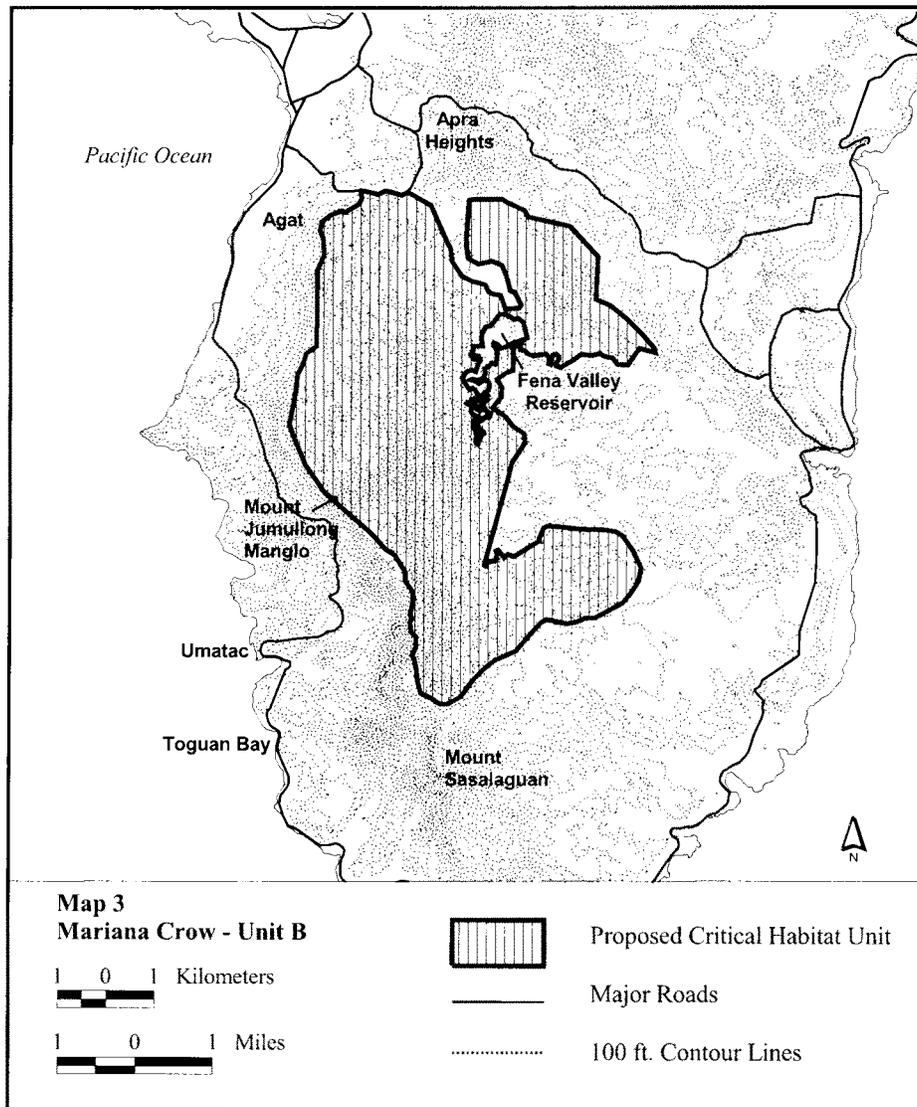
1477494; 253743, 1477502; 253641, 1477652; 253589, 1477649; 253472, 1477667; 253389, 1477739; 253204, 1477694; 252993, 1477709; 252793, 1477566; 252561, 1477440; 252476, 1477486; 252472, 1477520; 252536, 1477618; 252532, 1477670; 252476, 1477716; 252416, 1477705; 252353, 1477501; 252322, 1477517; 252329, 1477634; 252265, 1477716; 252009, 1477683; 251888, 1477724; 251820, 1477781; 251730, 1477811; 251726, 1477875; 251748, 1477931; 251601, 1477871; 251583, 1477373; 251458, 1477343; 251258, 1477204; 251360, 1477030; 251349, 1476842; 251168, 1476619; 251428, 1476423; 251583, 1476231; 251816, 1476080; 251835, 1475891; 251563, 1475479; 251560, 1475465; 251484, 1475137; 251262, 1474361; 250994, 1473369; 251024, 1473358; 251092, 1473456; 251221, 1473456; 251262, 1473576; 251239,

1473655; 251292, 1473686; 251405, 1473531; 251496, 1473591; 251605, 1473546; 251767, 1473633; 252137, 1473874; 252125, 1473916; 252231, 1474142; 252318, 1474183; 252540, 1474161; 252992, 1474119; 253446, 1474105; 253722, 1474068; 253867, 1473973; 254079, 1473688; 254181, 1473477; 254247, 1473316; 254203, 1473017; 254064, 1472805; 253882, 1472586; 253306, 1472273; 253101, 1472258; 252919, 1472185; 252722, 1472141; 252533, 1472181; 252306, 1472229; 252175, 1472171; 251883, 1471842; 251657, 1471580; 251233, 1471383; 251000, 1471200; 250803, 1471003; 250701, 1470864; 250511, 1470624; 250241, 1470470; 250081, 1470478; 249913, 1470602; 249687, 1470704; 249672, 1470799; 249614, 1470981; 249599, 1471171; 249570, 1471390; 249519, 1471485; 249584, 1471645; 249584, 1471864; 249482, 1471966; 249468, 1472163; 249497, 1472258; 249460, 1472338; 249519, 1472543; 249535, 1472652; 249511, 1472820; 249358, 1473032; 249365, 1473229; 249322, 1473280; 249151, 1473567; 248928, 1473703; 248650, 1474031.

(ii) Excluding one area: Bounded by the following 114 points (99 ha, 245 ac): 250684, 1476986; 250614, 1477069; 250531, 1477232; 250595, 1477315; 250614, 1477358; 250718, 1477387; 250815, 1477358; 250855, 1477510; 250916, 1477596; 250868, 1477671; 250823, 1477681; 250823, 1477622; 250769, 1477609; 250713, 1477695; 250753, 1477791; 250742, 1477869; 250793, 1477893; 250951, 1477890; 250924, 1478061; 250940, 1478131; 251018, 1478286; 251114, 1478310; 251310, 1478543; 251425, 1478535; 251534, 1478484; 251596, 1478433; 251690, 1478460; 251802, 1478366; 251874, 1478058; 251656, 1477976; 251620, 1477975; 251516, 1477920; 251482, 1477886; 251330, 1477839; 251270, 1477914; 251189, 1477957; 251173, 1477906; 251248, 1477802; 251256, 1477663; 251245, 1477534; 251216, 1477505; 251141, 1477526; 250989, 1477400; 251011, 1477327; 250959, 1477224; 250890, 1477189; 250804, 1477184; 250737, 1477208; 250713, 1477192; 250841, 1477148; 250874, 1477111; 250978, 1477178; 251055, 1477177; 251090, 1477109; 251090, 1477036; 251072, 1476975; 250986, 1476921; 250981, 1476892;

251002, 1476879; 251029, 1476900; 251045, 1476871; 251013, 1476849; 251061, 1476784; 250945, 1476680; 251055, 1476498; 251121, 1476501; 251120, 1476456; 251090, 1476418; 250994, 1476413; 250970, 1476370; 250844, 1476314; 250858, 1476242; 250922, 1476162; 250970, 1476119; 250991, 1476089; 250973, 1476068; 250943, 1476100; 250887, 1476111; 250879, 1476065; 250924, 1476025; 250887, 1475948; 250866, 1475867; 250817, 1475886; 250815, 1475966; 250836, 1476020; 250817, 1476057; 250812, 1476113; 250817, 1476140; 250801, 1476162; 250775, 1476180; 250767, 1476279; 250783, 1476373; 250863, 1476421; 250740, 1476472; 250702, 1476542; 250721, 1476616; 250780, 1476619; 250903, 1476536; 250906, 1476552; 250855, 1476627; 250823, 1476638; 250796, 1476710; 250769, 1476731; 250745, 1476683; 250681, 1476665; 250625, 1476702; 250627, 1476721; 250710, 1476718; 250721, 1476780; 250772, 1476798; 250868, 1476756; 250906, 1476801; 250775, 1477023; 250780, 1477039.

(iii) **Note:** Map 3 of Unit B for Mariana crow follows:



BILLING CODE 4310-55-C

(7) Rota, Unit C, Mariana crow (2,462 ha; 6,084 ac).

(i) Unit C consists of 719 points with the following coordinates in UTM Zone 55 with the units in meters using World Geodetic System 1984 (WGS84):

300709, 1564865; 300724, 1564935;
300733, 1564985; 300802, 1564997;
300809, 1565065; 300824, 1565186;
300889, 1565296; 300927, 1565332;
301139, 1565378; 301166, 1565499;
301310, 1565554; 301340, 1565496;
301493, 1565470; 301602, 1565455;
301726, 1565444; 301852, 1565428;
301951, 1565444; 302023, 1565520;
302279, 1565526; 302273, 1565424;
302522, 1565388; 302630, 1565372;
302914, 1565332; 303045, 1565414;
303213, 1565437; 303283, 1565463;
303299, 1565568; 303353, 1565617;
303429, 1565705; 303551, 1565855;
303589, 1565862; 303662, 1565909;
303709, 1565943; 303699, 1565972;

303790, 1566116; 303814, 1566104;
303914, 1566165; 303961, 1566093;
304048, 1566137; 304008, 1566221;
303912, 1566211; 303876, 1566200;
303784, 1566149; 303710, 1566324;
303725, 1566359; 303889, 1566367;
303933, 1566390; 303906, 1566437;
303985, 1566502; 304046, 1566507;
304164, 1566279; 304241, 1566149;
304173, 1566049; 304116, 1566004;
304118, 1565967; 304208, 1565992;
304274, 1566044; 304578, 1566092;
304532, 1566129; 304531, 1566215;
304506, 1566303; 304729, 1566316;
304773, 1566274; 304902, 1566268;
304962, 1566265; 305087, 1566248;
305070, 1566133; 305108, 1566102;
305082, 1566065; 305145, 1565958;
305177, 1565915; 305235, 1565955;
305421, 1565782; 305452, 1565756;
305596, 1565779; 305683, 1565792;
305791, 1565838; 305893, 1565886;
306023, 1565952; 306135, 1566064;

306203, 1566119; 306251, 1566060;
306555, 1566080; 306664, 1566164;
306780, 1566264; 306834, 1566273;
307071, 1566336; 307106, 1566329;
307223, 1566324; 307307, 1566290;
307304, 1566221; 307397, 1566214;
307647, 1566199; 307865, 1566154;
307896, 1566125; 307979, 1566062;
308031, 1566047; 308267, 1565952;
308267, 1565855; 308315, 1565841;
308359, 1565901; 308432, 1565806;
308535, 1565518; 308562, 1565402;
308545, 1565397; 308590, 1565223;
308676, 1565242; 308700, 1565190;
308860, 1565315; 309031, 1565486;
309093, 1565494; 309270, 1565486;
309332, 1565415; 309354, 1565337;
309367, 1565161; 309389, 1565153;
309440, 1565161; 309492, 1565131;
309497, 1565052; 309524, 1565041;
309568, 1565055; 309587, 1565096;
309570, 1565131; 309579, 1565174;
309560, 1565223; 309573, 1565261;

309608, 1565299; 309578, 1565369;
309820, 1565486; 310001, 1565592;
310154, 1565639; 310358, 1565685;
310369, 1565665; 310596, 1565693;
310642, 1565657; 310700, 1565655;
310795, 1565726; 310937, 1565754;
310976, 1565767; 311272, 1565802;
311282, 1565660; 311408, 1565703;
311494, 1565731; 311616, 1565734;
311782, 1565734; 311858, 1565745;
312021, 1565735; 312100, 1565743;
312203, 1565779; 312306, 1565776;
312392,
1565841; 312409, 1565811; 312398,
1565757; 312439, 1565681; 312479,
1565670; 312550, 1565678; 312596,
1565678; 312601, 1565730; 312574,
1565776; 312533, 1565838; 312950,
1565848; 312983, 1565823; 313055,
1565882; 313070, 1565943; 313113,
1566024; 313256, 1566157; 313460,
1566223; 313496, 1566305; 313555,
1566443; 313631, 1566481; 313723,
1566467; 313799, 1566489; 313878,
1566481; 313921, 1566505; 313929,
1566540; 313902, 1566559; 313864,
1566557; 313826, 1566521; 313788,
1566543; 313790, 1566603; 313783,
1566660; 313813, 1566703; 313862,
1566757; 313832, 1566768; 313788,
1566749; 313704, 1566717; 313615,
1566668; 313569, 1566627; 313498,
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1566382; 313136, 1566223; 313101,
1566254; 313101, 1566366; 313059,
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1566471; 312501, 1566632; 312565,
1566815; 312693, 1566785; 312693,
1566897; 312807, 1566917; 312813,
1566980; 312802, 1567132; 312937,
1567124; 312932, 1566925; 312996,
1566927; 313121, 1567027; 313135,
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1566936; 313292, 1566858; 313309,
1566787; 313283, 1566731; 313320,
1566717; 313355, 1566728; 313360,
1566782; 313360, 1566833; 313368,
1566863; 313401, 1566887; 313431,
1566898; 313466, 1566955; 313562,
1566958; 313585, 1567052; 313455,
1567137; 313195, 1567213; 313129,
1567244; 313040, 1567253; 312907,
1567257; 312912, 1567448; 312909,
1567729; 313019, 1567652; 313276,
1567581; 313810, 1567411; 313916,
1567327; 313989, 1567327; 314106,
1567237; 314184, 1567248; 314220,
1567360; 314192, 1567421; 314225,
1567533; 314192, 1567611; 314198,
1567679; 314314, 1567766; 314371,
1567831; 314390, 1567888; 314428,
1568004; 314439, 1568107; 314482,
1568185; 314507, 1568231; 314596,
1568270; 314697, 1568359; 314764,
1568357; 314813, 1568378; 314844,
1568493; 314973, 1568590; 314995,
1568674; 314984, 1568766; 315011,
1568915; 315022, 1569162; 314960,
1569181; 314905, 1569200; 314843,
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1569398; 314759, 1569406; 314743,
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1569655; 314081, 1569785; 313920,
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1568976; 312795, 1569012; 312588,
1568997; 312425, 1569062; 312181,
1569041; 312012, 1569001; 311943,
1568999; 311943, 1568953; 311818,
1568948; 311731, 1568905; 311711,
1568926; 311675, 1568917; 311649,
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(ii) Excluding three areas:
 (A) Bounded by the following 225 points (1,828 ha, 4,517 ac): 304379, 1562567; 304411, 1562555; 304424, 1562519; 304395, 1562481; 304302, 1562446; 304273, 1562406; 304249, 1562358; 304254, 1562282; 304261, 1562234; 304267, 1562190; 304322, 1562154; 304363, 1562125; 304393, 1562154; 304450, 1562187; 304496, 1562219; 304553, 1562195; 304591, 1562252; 304677, 1562222; 304751, 1562222; 304756, 1562184; 304707, 1562097; 304732, 1562065; 304778, 1562078; 304848, 1562116; 304883, 1562133; 304897, 1562100; 304919, 1562054; 304965, 1562055; 305014, 1562130; 305027, 1562070; 305087, 1562070; 305138, 1562106; 305178, 1562184; 305273, 1562139; 305332, 1562082; 305502, 1562089; 305578, 1562186; 305634, 1562202; 305663, 1562153; 305654, 1562055; 305625, 1562051; 305559, 1561906; 305499, 1561766; 305502, 1561677; 305536, 1561661; 305583, 1561645; 305628, 1561651; 305657, 1561733; 305750, 1562039; 305797, 1562046; 305851, 1562027; 305884, 1561946; 305962, 1561919; 306000, 1561908; 306049, 1561932; 306083, 1561909; 306124, 1561894; 306125, 1561840; 306152, 1561740; 306149, 1561664; 306171, 1561612; 306196, 1561564; 306331, 1561523; 306475, 1561523; 306637, 1561536; 306678, 1561599; 306697, 1561618; 306795, 1561601; 306862, 1561696; 306865, 1561764; 306854, 1561781; 306837, 1561785; 306821, 1561831; 306726, 1561820; 306597, 1561737; 306383, 1561737; 306312, 1561775; 306280, 1561824; 306280, 1561867; 306328, 1561986; 306326, 1562043; 306369, 1562146; 306348, 1562193; 306359, 1562248; 306396, 1562413; 306211, 1562495; 306212, 1562642; 306491, 1562590; 306893, 1562575; 307497, 1563122; 307570, 1563395; 307632, 1563500; 307765, 1563576; 307881, 1563606; 307963, 1563657; 308014, 1563772; 308065, 1564029; 308062, 1564310; 308088, 1564565; 308044, 1564754; 307833, 1564944; 307768, 1565047; 307819, 1565112; 307805, 1565168; 307749, 1565378; 307765, 1565443; 307822, 1565486; 307811, 1565570; 307779, 1565654; 307817, 1565697; 307825, 1565828; 307842, 1565852; 307741, 1565909; 307639, 1565920; 307442, 1565987; 307386, 1566039; 307223, 1566107; 307152, 1566137; 307112, 1566137; 307082, 1566183; 307047, 1566199; 306955, 1566199; 306887, 1566191; 306824, 1566142; 306643, 1566020; 306824, 1565947; 306401, 1565931; 306247, 1565886; 306225, 1565841; 306113, 1565820; 306065, 1565846; 305956, 1565740; 305864, 1565621; 305851, 1565381; 305732, 1565386; 305724, 1565275; 305583, 1565276; 305305, 1565376; 305244, 1565424; 305104, 1565593; 304938, 1565657; 304768, 1565694; 304538, 1565717; 304173, 1565710; 304059, 1565694; 303985, 1565704; 303930, 1565725; 303903, 1565726; 303881, 1565697; 303879, 1565686; 303866, 1565617; 303819, 1565548; 303760, 1565524; 303670, 1565498; 303545, 1565484; 303504, 1565453; 303445, 1565416; 303355, 1565352; 303191, 1565289; 303022, 1565141; 302927, 1565120; 302874, 1565088; 302601, 1565117; 302527, 1565140; 302218, 1565153; 302086, 1565142; 301948, 1565092; 301810, 1565044; 301728, 1565024; 301675, 1565037; 301588, 1565018; 301416, 1565032; 301326, 1565030; 301284, 1565055; 301215, 1564939; 301207, 1564880; 301178, 1564669; 301199, 1564611; 301215, 1564529; 301236, 1564468; 301284, 1564460; 301363, 1564476; 301459, 1564476; 301604, 1564444; 301705, 1564365; 301734, 1564277; 301781, 1564145; 301827, 1564059; 301898, 1564026; 301972, 1563986; 302078, 1563923; 302144, 1563891; 302215, 1563817; 302318, 1563661; 302371, 1563526; 302605, 1563264; 302705, 1563179; 302736, 1563065; 302743, 1562848; 302859, 1562481; 302916, 1562366; 302961, 1562293; 302983, 1562274; 303027, 1562300; 303093, 1562406; 303115, 1562459; 303159, 1562565; 303190, 1562612; 303214, 1562638; 303250, 1562687; 303232, 1562713; 303478, 1562733; 303626, 1562749; 303778, 1562811; 303847, 1562837; 303900, 1562902; 303986,

1562937; 304081, 1562943; 304196, 1562928; 304284, 1562884; 304280, 1562804; 304302, 1562749; 304315, 1562704; 304363, 1562636; 304368, 1562613.

(B) Bounded by the following 80 points (34 ha, 84 ac): 307495, 1562490; 307624, 1562456; 307687, 1562504; 307700, 1562504; 307723, 1562493; 307768, 1562521; 307804, 1562511; 307827, 1562494; 307871, 1562552; 307897, 1562565; 307928, 1562565; 307943, 1562545; 307959, 1562519; 307976, 1562515; 308031, 1562572; 307996, 1562594; 307980, 1562618; 307978, 1562640; 307930, 1562655; 307908, 1562675; 307891, 1562697; 307891, 1562743; 307856, 1562771; 307851, 1562810; 307902, 1562852; 308068, 1562957; 308134, 1562964; 308164, 1562997; 308173, 1563049; 308204, 1563115; 308197, 1563150; 308171, 1563159; 308149, 1563172; 308158, 1563220; 308153, 1563290; 308153, 1563334; 308184, 1563347; 308234, 1563340; 308316, 1563418;

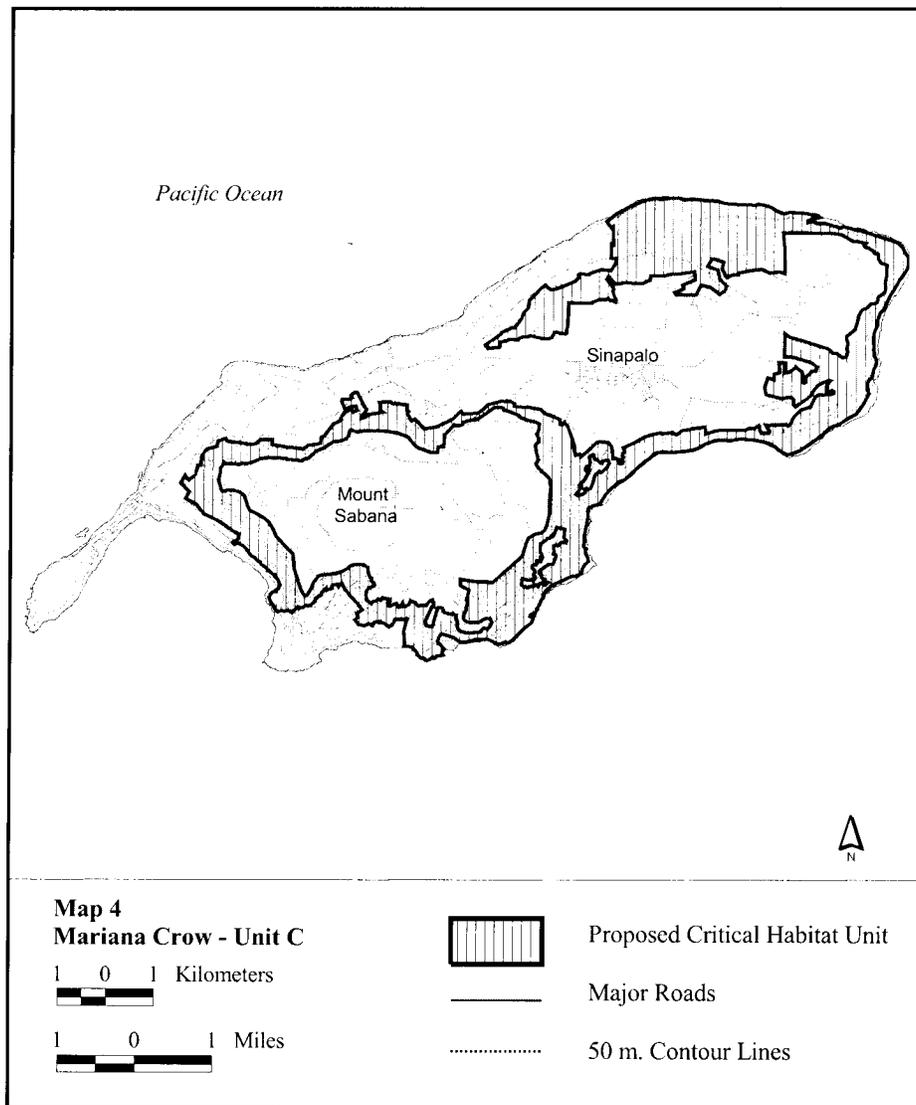
308398, 1563405; 308418, 1563437; 308367, 1563499; 308373, 1563676; 308215, 1563726; 308158, 1563576; 308126, 1563534; 308091, 1563547; 308052, 1563487; 308025, 1563486; 307965, 1563436; 307886, 1563373; 307872, 1563313; 307872, 1563199; 307896, 1563181; 307911, 1563141; 307871, 1563095; 307869, 1563073; 307904, 1563069; 307880, 1563003; 307862, 1563010; 307849, 1563025; 307803, 1563019; 307807, 1562964; 307792, 1562951; 307753, 1562946; 307713, 1562935; 307700, 1562911; 307704, 1562881; 307753, 1562828; 307768, 1562797; 307733, 1562745; 307731, 1562727; 307781, 1562683; 307729, 1562598; 307713, 1562633; 307689, 1562635; 307646, 1562613; 307495, 1562647; 307488, 1562556; 307488, 1562533.

(C) Bounded by the following 53 points (19 ha, 46 ac): 308671, 1564401; 308686, 1564398; 308762, 1564422; 308791, 1564444; 308793, 1564466; 308784, 1564497; 308797, 1564525;

308821, 1564528; 308848, 1564503; 308874, 1564514; 308905, 1564532; 308955, 1564666; 308979, 1564736; 308994, 1564814; 309056, 1564845; 309090, 1564889; 309126, 1564869; 309248, 1564976; 309277, 1565027; 309288, 1565060; 309280, 1565083; 309271, 1565117; 309213, 1565113; 309170, 1565106; 309132, 1565058; 309100, 1565068; 309047, 1565112; 308992, 1565145; 308979, 1565217; 308948, 1565228; 308887, 1565176; 308883, 1565150; 308900, 1565075; 308876, 1564990; 308839, 1564994; 308821, 1564996; 308791, 1564924; 308813, 1564898; 308839, 1564906; 308870, 1564928; 308878, 1564915; 308808, 1564760; 308756, 1564683; 308703, 1564628; 308672, 1564595; 308668, 1564571; 308677, 1564563; 308716, 1564574; 308718, 1564560; 308673, 1564489; 308647, 1564459; 308607, 1564406; 308654, 1564386.

(iii) **Note:** Map 4 of Unit C for Mariana crow follows:

BILLING CODE 4310-55-P



* * * * *

Guam Micronesian kingfisher (*Halcyon cinnamomina cinnamomina*)

(1) Critical habitat units for the Guam Micronesian kingfisher are depicted for the Territory of Guam.

(2) The primary constituent elements required by the Guam Micronesian kingfisher for the biological needs of foraging, sheltering, roosting, nesting, and rearing of young are found in areas that support limestone, secondary, ravine, swamp, agricultural, and coastal forests composed of native and introduced plant species. These forest

types include the primary constituent elements of:

(i) Closed canopy and well-developed understory vegetation, large (approximately 43 cm (17 in) dbh), standing dead trees (especially *Tristiropsis obtusangula* (faniok), *Pisonia grandis* (umumu), *Artocarpus* spp. (breadfruit), *Ficus* spp. (fig), and *Cocos nucifera* (coconut palm)), mud nests of *Nasutitermes* spp. termites, and root masses of epiphytic ferns for breeding;

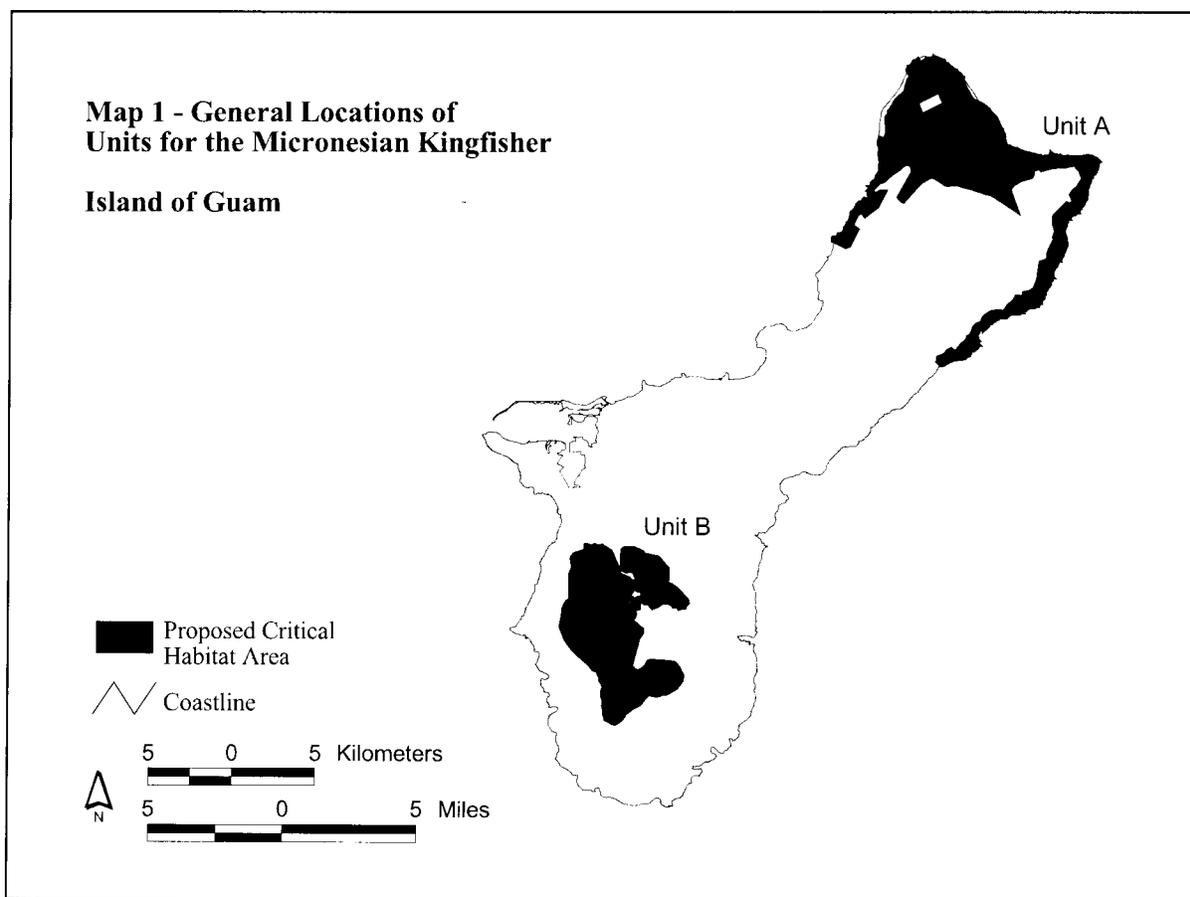
(ii) Sufficiently diverse structure to provide exposed perches and ground surfaces, leaf litter, and other substrates that support a wide range of vertebrate

and invertebrate prey species for foraging kingfishers; and

(iii) Sufficient overall breeding and foraging area to support large kingfisher territories (approximately 10 ha (25 ac)).

(3) Critical habitat does not include existing features and structures within the boundaries of the mapped units, such as buildings, roads, aqueducts, antennas, water tanks, agricultural fields, paved areas, lawns, and other urban landscaped areas not containing one or more of the primary constituent elements.

(4) **Note:** Map 1—General locations of units for Guam Micronesian kingfisher—follows:



(5) Northern Guam, Unit A, Guam Micronesian kingfisher (5,803 ha; 14,338 ac).

(i) Unit A consists of 106 boundary points with the following coordinates in UTM Zone 55 with the units in meters using World Geodetic System 1984 (WGS84): 269645, 1491989; 269464, 1492175; 269501, 1492206; 269493, 1492433; 269892, 1492587; 270039, 1492791; 270215, 1492895; 270407, 1492769; 270592, 1492782; 270860, 1493156; 271182, 1493403; 271268, 1493585; 271268, 1493643; 271436, 1493753; 271559, 1494014; 271607, 1494236; 271813, 1494415; 272043, 1494477; 272129, 1494724; 272413, 1495015; 272655, 1495146; 272822, 1495101; 272918, 1495177; 273101, 1495192; 273263, 1495136; 273431, 1495202; 274161, 1496022; 274173, 1496089; 274601, 1496017; 274599, 1496283; 274931, 1496366; 275216, 1496545; 275446, 1497148; 275593, 1498173; 275675, 1498164; 276008, 1498280; 276052, 1498688; 276156, 1498965; 276437, 1499560; 276381, 1499660; 276493, 1500036; 276358, 1500432; 276358, 1500432; 276358,

1500435; 276374, 1500948; 277097, 1501696; 277216, 1501626; 277395, 1501709; 277565, 1501788; 277367, 1502247; 277556, 1502519; 277738, 1502614; 278104, 1503226; 277931, 1503680; 277528, 1504079; 276540, 1503998; 275541, 1503775; 275456, 1503878; 274960, 1503661; 275017, 1503428; 275017, 1503428; 274919, 1503336; 274350, 1503193; 273846, 1502898; 273696, 1502636; 273683, 1502394; 274082, 1501289; 272625, 1502266; 271544, 1502611; 270399, 1502902; 270276, 1502896; 269976, 1502855; 269819, 1502894; 269127, 1503348; 268873, 1503326; 268324, 1502996; 267317, 1501835; 267067, 1502058; 267891, 1503624; 267799, 1504039; 267471, 1504118; 267162, 1503935; 266993, 1503750; 266419, 1503365; 266115, 1503073; 265990, 1503021; 265865, 1503010; 265532, 1502708; 265443, 1502458; 265558, 1502239; 265719, 1502249; 265928, 1502401; 266157, 1502406; 265972, 1502034; 265720, 1501528; 265451, 1501304; 265451, 1501304; 265035, 1500959; 264833, 1501228; 264547, 1501077; 264338, 1500650; 264260,

1500311; 264547, 1500113; 264060, 1499171; 263865, 1499073; 263276, 1499383.

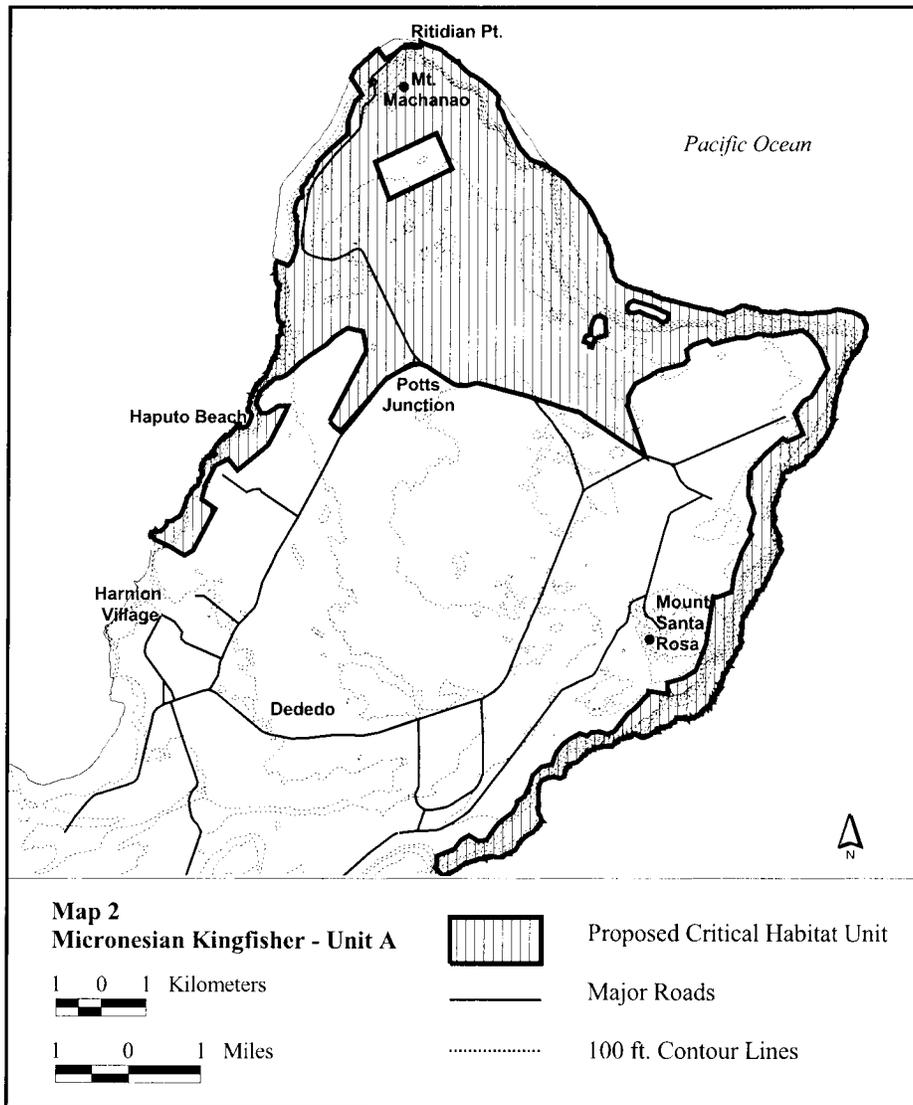
(ii) Excluding three areas:

(A) Bounded by the following four points (133 ha, 328 ac): 268056, 1507791; 269417, 1508433; 269771, 1507647; 268377, 1506972.

(B) Bounded by the following 15 points (17 ha, 43 ac): 272711, 1503822; 272730, 1503928; 272767, 1503961; 272872, 1503975; 272859, 1504070; 272879, 1504214; 272949, 1504372; 273070, 1504396; 273184, 1504331; 273199, 1503977; 273041, 1503917; 272949, 1503912; 272884, 1503703; 272828, 1503710; 272818, 1503785.

(C) Bounded by the following 12 points (20 ha, 48 ac): 273808, 1504727; 274234, 1504592; 274579, 1504430; 274572, 1504328; 274444, 1504247; 274295, 1504355; 274146, 1504389; 273930, 1504484; 273795, 1504464; 273686, 1504470; 273659, 1504585; 273707, 1504687.

(iii) **Note:** Map 2 of Unit A for Guam Micronesian kingfisher follows:



(6) Southern Guam, Unit B, Guam Micronesian kingfisher (4,234 ha; 10,464 ac).

(i) Unit B consists of 184 boundary points with the following coordinates in UTM Zone 55 with the units in meters using World Geodetic System 1984 (WGS84): 248002, 1474589; 247650, 1474901; 247495, 1475129; 247271, 1475466; 247014, 1476083; 246950, 1476271; 247074, 1476899; 247118, 1477285; 247235, 1477541; 247293, 1477723; 247508, 1477876; 247522, 1479447; 247658, 1479766; 247629, 1480138; 247571, 1480291; 247586, 1480324; 247611, 1480465; 247782, 1480608; 248018, 1480694; 248088, 1480673; 248307, 1480797; 248380, 1480844; 248434, 1480948; 248420, 1481047; 248423, 1481115; 248490, 1481114; 248732, 1481047; 248758, 1481043; 248787, 1481048; 248930, 1481119; 249268, 1481028; 249316, 1481047; 249377, 1481077; 249428,

1481064; 249874, 1480811; 250243, 1479980; 250246, 1479973; 250253, 1479957; 250272, 1479915; 250316, 1479645; 250511, 1479330; 250724, 1479237; 250997, 1479153; 251074, 1479008; 251187, 1478955; 251318, 1478939; 251419, 1478655; 251585, 1478663; 251706, 1478676; 251746, 1478741; 251615, 1479003; 251516, 1479035; 251486, 1479196; 251428, 1479358; 251344, 1479561; 251122, 1479654; 250863, 1479589; 250640, 1479700; 250614, 1479911; 250605, 1480129; 250652, 1480853; 250673, 1480921; 250741, 1480941; 250877, 1480941; 251212, 1480936; 251338, 1480936; 251405, 1480904; 251819, 1480706; 251886, 1480568; 252757, 1480381; 253342, 1479736; 253298, 1478854; 253597, 1478723; 253904, 1478475; 254210, 1478183; 254510, 1477855; 254526, 1477750; 254207, 1477835; 253963, 1477494; 253962, 1477494; 253743, 1477502; 253641,

1477652; 253589, 1477649; 253472, 1477667; 253389, 1477739; 253204, 1477694; 252993, 1477709; 252793, 1477566; 252561, 1477440; 252476, 1477486; 252472, 1477520; 252536, 1477618; 252532, 1477670; 252476, 1477716; 252416, 1477705; 252353, 1477501; 252322, 1477517; 252329, 1477634; 252265, 1477716; 252009, 1477683; 251888, 1477724; 251820, 1477781; 251730, 1477811; 251726, 1477875; 251748, 1477931; 251601, 1477871; 251583, 1477373; 251458, 1477343; 251258, 1477204; 251360, 1477030; 251349, 1476842; 251168, 1476619; 251428, 1476423; 251583, 1476231; 251816, 1476080; 251835, 1475891; 251563, 1475479; 251560, 1475465; 251484, 1475137; 251262, 1474361; 250994, 1473369; 251024, 1473358; 251092, 1473456; 251221, 1473456; 251262, 1473576; 251239, 1473655; 251292, 1473686; 251405, 1473531; 251496, 1473591; 251605,

1473546; 251767, 1473633; 252137,
1473874; 252125, 1473916; 252231,
1474142; 252318, 1474183; 252540,
1474161; 252992, 1474119; 253446,
1474105; 253722, 1474068; 253867,
1473973; 254079, 1473688; 254181,
1473477; 254247, 1473316; 254203,
1473017; 254064, 1472805; 253882,
1472586; 253306, 1472273; 253101,
1472258; 252919, 1472185; 252722,
1472141; 252533, 1472181; 252306,
1472229; 252175, 1472171; 251883,
1471842; 251657, 1471580; 251233,
1471383; 251000, 1471200; 250803,
1471003; 250701, 1470864; 250511,
1470624; 250241, 1470470; 250081,
1470478; 249913, 1470602; 249687,
1470704; 249672, 1470799; 249614,
1470981; 249599, 1471171; 249570,
1471390; 249519, 1471485; 249584,
1471645; 249584, 1471864; 249482,
1471966; 249468, 1472163; 249497,
1472258; 249460, 1472338; 249519,
1472543; 249535, 1472652; 249511,
1472820; 249358, 1473032; 249365,
1473229; 249322, 1473280; 249151,
1473567; 248928, 1473703; 248650,
1474031.

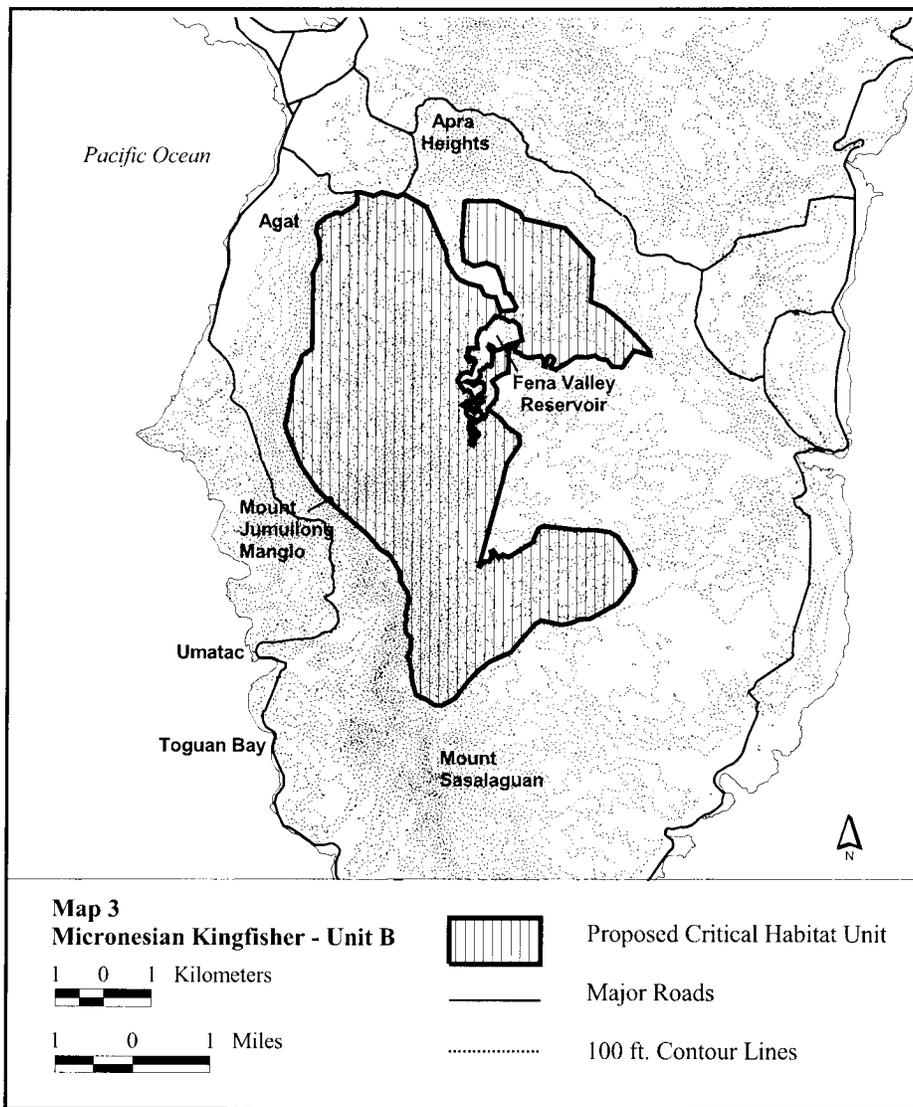
(ii) Excluding one area: Bounded by
the following 114 points (99 ha, 245 ac):

250684, 1476986; 250614, 1477069;
250531, 1477232; 250595, 1477315;
250614, 1477358; 250718, 1477387;
250815, 1477358; 250855, 1477510;
250916, 1477596; 250868, 1477671;
250823, 1477681; 250823, 1477622;
250769, 1477609; 250713, 1477695;
250753, 1477791; 250742, 1477869;
250793, 1477893; 250951, 1477890;
250924, 1478061; 250940, 1478131;
251018, 1478286; 251114, 1478310;
251310, 1478543; 251425, 1478535;
251534, 1478484; 251596, 1478433;
251690, 1478460; 251802, 1478366;
251874, 1478058; 251656, 1477976;
251620, 1477975; 251516, 1477920;
251482, 1477886; 251330, 1477839;
251270, 1477914; 251189, 1477957;
251173, 1477906; 251248, 1477802;
251256, 1477663; 251245, 1477534;
251216, 1477505; 251141, 1477526;
250989, 1477400; 251011, 1477327;
250959, 1477224; 250890, 1477189;
250804, 1477184; 250737, 1477208;
250713, 1477192; 250841, 1477148;
250874, 1477111; 250978, 1477178;
251055, 1477177; 251090, 1477109;
251090, 1477036; 251072, 1476975;
250986, 1476921; 250981, 1476892;
251002, 1476879; 251029, 1476900;

251045, 1476871; 251013, 1476849;
251061, 1476784; 250945, 1476680;
251055, 1476498; 251121, 1476501;
251120, 1476456; 251090, 1476418;
250994, 1476413; 250970, 1476370;
250844, 1476314; 250858, 1476242;
250922, 1476162; 250970, 1476119;
250991, 1476089; 250973, 1476068;
250943, 1476100; 250887, 1476111;
250879, 1476065; 250924, 1476025;
250887, 1475948; 250866, 1475867;
250817, 1475886; 250815, 1475966;
250836, 1476020; 250817, 1476057;
250812, 1476113; 250817, 1476140;
250801, 1476162; 250775, 1476180;
250767, 1476279; 250783, 1476373;
250863, 1476421; 250740, 1476472;
250702, 1476542; 250721, 1476616;
250780, 1476619; 250903, 1476536;
250906, 1476552; 250855, 1476627;
250823, 1476638; 250796, 1476710;
250769, 1476731; 250745, 1476683;
250681, 1476665; 250625, 1476702;
250627, 1476721; 250710, 1476718;
250721, 1476780; 250772, 1476798;
250868, 1476756; 250906, 1476801;
250775, 1477023; 250780, 1477039.

(iii) **Note:** Map 3 of Unit B for Guam
Micronesian kingfisher follows:

BILLING CODE 4310-55-P



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Dated: October 1, 2002.

Paul Hoffman,

*Acting Assistant Secretary for Fish and
Wildlife and Parks.*

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