Federal Register

Wednesday,
February 7, 2001

Part III

Department of the Interior

Fish and Wildlife Service

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Proposed Determination of Critical Habitat for the Quino Checkerspot Butterfly; Proposed Rule

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018–AH03

Endangered and Threatened Wildlife and Plants; Proposed Determination of Critical Habitat for the Quino Checkerspot Butterfly

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: We, the U. S. Fish and Wildlife Service (Service), propose designation of critical habitat for the Quino checkerspot butterfly (*Euphydras editha quino*) pursuant to the Endangered Species Act of 1973, as amended (Act). A total of approximately 121,814 hectares (301,010 acres) in Riverside and San Diego Counties, California, are proposed for designation as critical habitat for the Quino checkerspot butterfly.

If this proposal is made final, section 7 of the Act requires Federal agencies to ensure that actions they fund, authorize, or carry out do not destroy or adversely modify critical habitat to the extent that the action appreciably diminishes the value of the critical habitat for the survival and recovery of the species.

Section 4 of the Act requires us to consider economic and other impacts of specifying any particular area as critical habitat. We solicit data and comments from the public on all aspects of this proposal, including data on economic and other impacts of the designation. We may revise or further refine critical habitat boundaries prior to final designation based on habitat and butterfly surveys, public comments on the Draft Quino Checkerspot Butterfly Recovery Plan and this proposed critical habitat rule, input from the recovery team, and new scientific and commercial information.

DATES: We will accept comments until the close of business on April 9, 2001. Requests for public hearings must be received by March 26, 2001.

ADDRESSES: *Comment submission:* If you wish to comment, you may submit your comments and materials by any one of several methods:

You may submit written comments and information to the Field Supervisor, Carlsbad Fish and Wildlife Office, U. S. Fish and Wildlife Service, 2730 Loker Avenue West, Carlsbad, California 92008.

You may hand-deliver written comments to our Carlsbad Fish and Wildlife Office at the address given above.

You may send comments by electronic mail (e-mail) to fw1cfwolqcb@fws.gov. See the Public Comments Solicited section below for file format and other information on electronic filing.

You may view comments and materials received, as well as supporting documentation used in the preparation of this proposed rule, by appointment, during normal business hours at the Carlsbad Fish and Wildlife Office.

FOR FURTHER INFORMATION CONTACT: Ken Berg, Field Supervisor, Carlsbad Fish and Wildlife Office, at the above address (telephone 760/431–9440; facsimile 760/431–9624).

SUPPLEMENTARY INFORMATION:

Background

The Quino checkerspot butterfly (*Euphydras editha quino*) is a member of the family Nymphalidae (brush-footed butterflies) and the subfamily Melitaeinae (checkerspots and fritillaries). The Quino checkerspot butterfly is a subspecies of *Euphydryas editha;* it differs in physical appearance from other subspecies in size, wing coloration, larval, and pupal characteristics (Mattoni *et al.* 1997).

The Quino checkerspot butterfly has undergone several nomenclatural changes. Originally described as *Melitaea quino* (Behr 1863), Gunder (1929) reduced it to a subspecies of *Euphydras chalcedona*. At the same time, he described *Euphydryas editha wrighti* from a checkerspot specimen collected in San Diego County. After reexamining Behr's descriptions and specimens, Emmel *et al.* (1998) concluded that the Quino checkerspot butterfly should be associated with *E. editha*, not *E. chalcedona*. For the Quino checkerspot butterfly, *E. editha quino* is now the accepted scientific name.

The adult Quino checkerspot butterfly has a wingspan of approximately 4 centimeters (1.5 inches). The top sides of the wings have a red, black, and cream colored checkered pattern and the bottom sides are dominated by a red and cream marbled pattern. The abdomen of Quino checkerspot butterflies has red stripes across the top. Quino checkerspot butterfly larvae (immature, wormlike phase) are black with a row of nine orange fleshy/hairy extensions on their back. Pupae (intermediate phase between larva and adult) are mottled black on a pale blue-gray background and extremely well camouflaged.

The life cycle of the Quino checkerspot butterfly typically includes one generation of adults per year, with a 4- to 6-week flight period beginning between late February and May, depending on weather conditions (Emmel and Emmel 1973). If sufficient rain falls in late summer or early fall, a rare second generation of reduced adult numbers may occur (Mattoni *et al.* 1997). Females are usually mated on the day they emerge from pupae, and lay one or two egg clusters per day for most of their adult life. *Euphydryas editha* egg clusters typically contain 20–150 eggs (M. Singer, C. Parmesan, and G. Pratt 1999). Eggs deposited by adults on hostplants hatch in 10–14 days. Adult emergence from pupae is staggered, resulting in a 1-to 2-month flight season, with each adult butterfly living from 10–14 days. Peak emergence in most butterfly species, and probably for Quino checkerspot butterflies as well, occurs shortly after the beginning of the flight season, usually in the second week (Zonneveld 1991).

Quino checkerspot butterfly larvae may undergo as many as seven molts (shedding skin) prior to pupation. During the first two instars (period between molts), pre-diapause (before dormancy) larvae cannot move more than a few centimeters and are usually restricted to the plant on which the eggs were laid (primary hostplant). Prior to diapause, larvae spin a web and feed gregariously. During the third instar (about 10 days after hatching), larvae are able to move among individual hostplants. Third instar larvae usually wander independently in search of food, and may switch from feeding on the plant on which they hatched to another plant of the same species, or another hostplant species (secondary hostplant). As hostplants age and become dry and inedible, larvae enter diapause if they have accumulated sufficient energy reserves. Although the location of diapausing Quino checkerspot butterfly larvae in the field is not known, the presence of clusters of postdiapause (after dormancy) larvae found near dense grass and shrub cover indicates they may diapause in these areas (Osborne and Redak 2000). Additionally, Quino checkerspot butterfly larvae are capable of sustaining multiple-year diapause (M. Singer, pers. comm., 2000).

Sufficient rainfall, usually during November or December, causes larvae to break diapause. Records of late second flight seasons following unusual summer rains indicate that the Quino checkerspot butterfly does not require winter chilling to break diapause, and may not diapause at all under some circumstances (Mattoni *et al.* 1997). Rain stimulates germination and growth

of the hostplants fed upon by postdiapause larvae, which can crawl up to several meters in search of food. Postdiapause larval dispersal has been well documented in the bay checkerspot butterfly (*Euphydryas editha bayensis*). Larvae of this subspecies have been observed to travel up to 3.5 meters (m) (11.5 feet (ft)) during a 4-day period (Weiss *et al.* 1987). Postdiapause larvae seek microclimates (small habitats with uniform climate) with high solar radiation, which helps speed development (White 1974; Weiss *et al.* 1987; Osborne and Redak 2000). Because of variable weather during winter and early spring, the time between diapause termination and pupation can range from 2 weeks if conditions are warm and sunny, to 2 or 3 months if cold, rainy conditions prevail (G. Pratt, pers. comm., 2001). Postdiapause larvae undergo three to as many as seven instars prior to pupating in silken shelters near ground level. Adults emerge from pupae after approximately 10 days, again depending on weather (Mattoni *et al.* 1997).

Adult Quino checkerspot butterflies spend time searching for mates, basking in the sun to regulate body temperature, feeding on nectar, defending territories, and in the case of females, searching for sites to deposit eggs. The Quino checkerspot butterfly, like other subspecies of *Euphydryas editha*, shows a habitat preference for low-growing vegetation interspersed with barren spots (Osborne and Redak 2000). Quino checkerspot butterflies tend to avoid flying over trees, buildings, or other objects taller than 2–2.5 m (6–8 ft) (G. Pratt, pers. comm., 2001). The thermodynamic requirements of the butterfly, and natural avoidance of shaded areas, deters flight in densely wooded areas and other types of closed-canopy vegetation (C. Parmesan, pers. comm., 2001).

Male Quino checkerspot butterflies, and to a lesser extent, females, are frequently observed on hilltops and ridgelines (Service, unpublished data), and a number of behaviors characteristic of species known to inhabit hilltops has been documented (K. Osborne and G. Pratt, pers comm., 2001). Largely untested explanations for this behavior include: 1) The active dispersal of male and female butterflies to local hilltops or ridgelines during years of low adult density where the probability of finding mates is increased (facultative hilltopping behavior); 2) the presence of areas of exposed soil resulting in warmer microclimates and superior basking sites than surrounding vegetated slopes and valleys; and 3) the attraction of males to the activities of other butterfly species on hilltops.

Data from mark-recapture studies indicate that long-distance dispersal (greater than 1 kilometer (km) (0.6 miles (mi)) in *Euphydryas editha* is rare. Nonetheless, Murphy and White (1984) suggested that long-distance dispersal events associated with population outbreaks may contribute significantly to colonization or recolonization of unoccupied areas, and hence to long-term survival of the Quino checkerspot butterfly.

Most *Euphydryas editha* subspecies exhibit generally sedentary behavior, with adults frequently remaining in the same habitat patch in which they developed as larvae (Ehrlich 1961, 1965; Boughton 1999, 2000). However, female bay checkerspots, a species similar to the Quino checkerspot, were found to be more likely to emigrate than males (Ehrlich *et al.* 1984). Adult dispersal by the bay checkerspot, is typically less than 150 m (490 ft) between recaptures (Ehrlich 1961, 1965; Gilbert and Singer 1973). Harrison (1989) recaptured bay checkerspots greater than 1 km (0.6 mi) from the point of release in only 5 percent of cases. Though a study of the Quino checkerspot at Otay Lakes in San Diego County included an estimate of less than 100 m (330 ft) dispersal distances (White and Levin 1981), this study was not designed to detect long-distance dispersal. Harrison (1989) recaptured bay checkerspots greater than 1 kilometer (0.6 mile) from the point of release in only 5 percent of cases. Long-distance dispersal in bay checkerspot butterflies has been documented as far as 7.6 km (4.7 miles) (D. Murphy pers. comm.), 5.6 km (3.5 miles) (1 male), and 3 km (2 miles) (1 female) (Harrison 1989).

Long-distance habitat patch colonization may be achieved within a single season through long-distance dispersal of individual butterflies, or over several seasons through stepping-stone habitat patch colonization and dispersal events. In a study of the Morgan Hill bay checkerspot island-mainland type metapopulation, no unoccupied habitat patches farther than 4.5 km (2.8 mi) from the source population were colonized over a 10 year period (Harrison *et al.* 1988). A metapopulation is a series of interconnected subpopulations that exchange individuals and/or genetic material. The interchange of individuals within a metapopulation can prevent an otherwise isolated subpopulation from going extinct and enhances genetic fitness. A model, which was conservative with respect to extinction, predicted habitat patches at a distance greater than 7 to 8 kilometers (4 to 5 miles) from the primary source population were not likely to support populations (Harrison *et al.* 1988).

Most Quino checkerspot butterfly oviposition (egg laying) has been documented on *Plantago erecta* (dwarf plantain); however, egg clusters and prediapause larvae have been recently documented on *Plantago patagonica* (woolly plantain), which appears to be the sole primary host for the Silverado metapopulation in southern Riverside County (Pratt 2000). Additionally, *Cordylanthus rigidus* (bird's beak) was observed on two occasions in 1999 with egg clusters in southern San Diego County (G. Pratt, pers. comm., 2001). Dwarf plantain occurs in coastal sage scrub, open chaparral, grassland, and similar plant communities. It is often associated with cryptogamic crusts, and fine-textured clay soils derived from gabbro and basalt.

The selection of specific plants by *Euphydryas editha* on which to oviposit is genetically determined (Singer *et al.* 1991). The ability of *Euphydryas editha* larvae to grow and survive on particular host plant species is variable among individual larvae (Singer *et al.* 1988) and among larval populations (Singer *et al.* 1994; Rausher 1982). Singer *et al.* (1991) found that Quino checkerspot butterflies from the lower Otay Lakes area preferred to deposit eggs on dwarf plantain over *Collinsia tinctoria* (sticky chinese houses). When female *Euphydryas editha* butterflies fail to encounter preferred hostplants, the likelihood of emigration to other suitable habitat patches increases (Thomas and Singer 1987).

The two most important factors affecting the suitability of hostplants for Quino checkerspot buttefly oviposition are exposure to solar radiation and phenology (timing of the plant's development). Quino checkerspot butterflies deposit eggs on plants located in full sun, preferably surrounded by bare ground or sparse, low vegetation (Weiss *et al.* 1987, 1988; Osborne and Redak 2000). Primary hostplants must remain edible for approximately 8 weeks for larval feeding (Singer 1972; Singer and Ehrlich 1979).

Secondary hostplants may be important before and after diapause. Secondary hostplants are important when the primary hosts undergo senescence before larvae can enter diapause. Such is the case in many populations of the bay checkerspot, where dwarf plantain is the primary host, but most larvae survive to diapause by migrating to *Castilleja exserta* (owl's clover). Prediapause

larvae feed on owl's clover until diapause, then return to feeding on dwarf plantain when they break diapause in winter (Singer 1972, Ehrlich *et al.* 1975). Some metapopulations of the Quino checkerspot butterfly may be dependent for persistence on secondary hosts.

Euphydryas editha butterflies use a much wider range of plants for adult nectar feeding than for larval foliage feeding. The butterflies frequently take nectar from *Lomatium* spp. (lomatium), *Muilla* spp. (goldenstar), *Achillea millefolium* (milfoil or yarrow), *Amsinkia* spp. (fiddleneck), *Lasthenia* spp. (goldfields), *Plagyobothrys* and *Cryptantha* spp. (popcorn flowers), *Gilia* spp, (gilia), *Eriogonum fasiculatum* (California buckwheat), *Allium* spp. (onion), and *Eriodictyon* spp. (yerba santa) (D. Murphy and G. Pratt, pers. comm., 2000). Quino checkerspots butterflies have been observed flying several hundred meters from the nearest larval habitat patch to nectar sources.

Local habitats alone are generally not sufficient to ensure the long-term persistence of the Quino checkerspot butterfly. A local population may be expected to persist on the time scale of years. Persistence for longer terms results from the interaction of sets of local habitat patch populations at larger geographic scales (metapopulation). Although member populations may change in size independently, their probabilities of existing at a given time are not independent of one another because they are linked by processes of extinction and mutual recolonization, processes that can occur on the order of every 10 to 100 generations (Harrison *et al.* 1988). The ability and propensity of larvae to undergo multiple-year diapause in the field, and survival rates during repeated diapause (currently unknown), will also affect the persistence time of local populations.

The timescale of extirpation and recolonization depends on the geographic scale of the metapopulation. Smaller metapopulations, composed of sets of local habitat patches described above, should be stable over the course of decades, with habitat patches recolonized within a few years of extirpation. The distance between habitat patches determines the colonization rate, and for small metapopulations, this distance is likely to be under 1 km (0.6 mi). The long-term persistence of species with metapopulation dynamics depends on maintenance of habitat patches and rare long-distance dispersal and recolonization events that link larger metapopulations together.

The Quino checkerspot butterfly is threatened primarily by urban and agriculture development, non-native plant species invasion, off-road vehicle use, grazing, and fire management practices (62 FR 2313). Quino checkerspot butterfly population decline likely has been, and will continue to be, caused in part by enhanced nitrogen deposition (Allen *et al.* 1998), elevated atmospheric carbon dioxide concentrations (Coviella *et al.* 1999), and climate change (Parmesan 1996; Field *et al.* 1999). Nonetheless, urban development poses the greatest threat and exacerbates the other threats. Activities resulting in habitat fragmentation, or host or nectar plant removal, reduces habitat quality and increases the probability of Quino checkerspot butterfly extinction.

Stamp (1984) and White (1986) examined the effects of parasitism and predation on the genus *Euphydryas*, although it is not clear whether these mortality factors pose a significant threat to the species. Predation by Argentine ants (*Iridomyrmex humilis*) has been observed in colonies of the butterfly in the laboratory (G. Pratt, pers. comm., 2001), and predation by imported Brazilian fire ants (*Solenopsis invicta*) is likely if it were to co-occur with Quino checkerspot butterflies (Porter and Savignano 1990). Brazilian fire ants were discovered in 1998 in the vicinity of historic Orange County butterfly habitat, and have subsequently been found in San Diego, Riverside and Los Angeles Counties (California Department of Food and Agriculture 2000).

Other threats to the species identified in the final listing rule (62 FR 2313) includes illegal trash dumping, which is a problem for some populations (G. Pratt pers. comm., 2000), and over-collection by butterfly collectors, although the magnitude of this activity is unknown.

Previous Federal Action

On September 30, 1988, we received a petition dated September 26, 1988, from Dr. Dennis Murphy of the Stanford University Center for Conservation Biology, to list the Quino checkerspot butterfly as endangered under the Act. At the time the petition was submitted, this taxon had not been seen for several years. The status of the Quino checkerspot butterfly had been under review since 1984 (49 FR 21664) and was classified as a Category 1 candidate species on November 21, 1991 (56 FR 58804), meaning that information on file was sufficient to support a proposal to list this subspecies as endangered or threatened.

On August 4, 1994, a proposed rule and petition finding was published in the **Federal Register** (59 FR 39868) to list the Quino checkerspot butterfly as endangered. The notice included the 90-day petition finding that the petition presented substantial information that listing the Quino checkerspot butterfly may be warranted, the 12-month petition finding that listing the Quino checkerspot butterfly was warranted, and the proposed listing rule for the subspecies. On September 26, 1994, we published a notice announcing a public hearing on several proposed species listings, including the Quino checkerspot butterfly, and to extend the comment period (59 FR 49045). We published a final rule listing the Quino checkerspot butterfly as endangered on January 16, 1997 (62 FR 2313). This rule contained a not prudent finding for critical habitat.

On June 30, 1999, the Center for Biological Diversity filed a 60-day notice of intent to sue us in District Court challenging the ''not prudent'' finding for critical habitat as published in the final listing rule for the Quino checkerspot butterfly. The plaintiff contended that we did not properly consider the benefits in designating critical habitat or adequately document known perceived threats that would result from a critical habitat designation. On February 16, 2000, we agreed to a stipulated settlement agreement that required us to re-evaluate the existing ''not prudent'' finding. If we found that critical habitat is prudent, then a proposal to designate critical habitat was to be submitted for publication in the **Federal Register** by February 1, 2001, and a final designation by October 1, 2001. If we found that critical habitat is not prudent, then a final determination was to be submitted for publication in the **Federal Register** by June 1, 2001. Publication of this proposed rule is consistent with the settlement agreement.

Critical Habitat

Critical habitat is defined in section 3 of the Act as—(i) the specific areas within the geographic area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) that may require special management 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. ''Conservation'' means the use of all methods and procedures that are

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

Critical habitat receives protection under section 7 of the Act through prohibition against destruction or adverse modification of critical habitat with regard to actions carried out, funded, or authorized by a Federal agency. Section 7 also requires conferences on Federal actions that are likely to result in the destruction or adverse modification of proposed critical habitat. In our regulations at 50 CFR 402.02, we define destruction or adverse modification as ''* * * the direct or indirect alteration that appreciably diminishes the value of critical habitat for both the survival and recovery of a listed species. Such alterations include, but are not limited to, alterations adversely modifying any of those physical or biological features that were the basis for determining the habitat to be critical.'' Aside from the added protection that may be provided under section 7, the Act does not provide other forms of 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.

To be included in a critical habitat designation, the habitat must first 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 4 requires that we designate critical habitat at the time of listing and based on what we know at the time of the designation. When we designate critical habitat at the time of listing or under short court-ordered deadlines, we will often not have sufficient information to identify all areas of critical habitat. We are required, nevertheless, to make a decision and thus must base our designations on what, at the time of designation, we know to be critical habitat.

Within the geographic area occupied by the species, we will designate only areas currently known to be essential. Essential areas should already have the features and habitat characteristics that are necessary to sustain the species. We will not speculate about what areas might be found to be essential if better information became available, or what areas may become essential over time. If the information available at the time of designation does not show that an area provides essential life cycle needs of the species, then the area should not be included in the critical habitat designation. Within the geographic area occupied by the species, we will not designate areas that do not now have the primary constituent elements, as defined at 50 CFR 424.12(b), that provide essential life cycle needs of the species.

Our regulations 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.'' (50 CFR 424.12(e)). Accordingly, when the best available scientific and commercial data do not demonstrate that the conservation needs of the species require designation of critical habitat outside of occupied areas, we will not designate critical habitat in areas outside the geographic area occupied by the species.

Our Policy on Information Standards Under the Endangered Species Act, published in the **Federal Register** 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 Service biologists, to the extent consistent with the Act, and with the use of the best scientific and commercial data available, to 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, biological assessments, unpublished materials, and expert opinion or personal knowledge.

Habitat is often dynamic, and species 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 will continue to be subject to conservation actions that may be implemented under section 7(a)(1) and 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. We specifically anticipate that federally funded or assisted projects affecting listed species outside their designated critical habitat areas may still result in jeopardy findings in some cases. Similarly, critical habitat designations made on the basis of the best available information at the time of designation will not control the direction and substance of future recovery plans, habitat conservation plans, or other species conservation planning efforts if new information available to these planning efforts calls for a different outcome.

Prudency Redetermination

Section 4(a)(3) of the Act, as amended, and implementing regulations (50 CFR 424.12) require that, to the maximum extent prudent and determinable, we designate critical habitat at the time the species is determined to be endangered or threatened. At the time of the final listing determination (62 FR 2313), we found that designation of critical habitat was not prudent for the Quino checkerspot butterfly. Our regulations (50 CFR 424.12(a)(1)) state that designation of critical habitat is not prudent when one or both of the following situations exist—(1) 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 (2) such designation of critical habitat would not be beneficial to the species.

In our final listing rule, we believed that publication of precise maps and descriptions of critical habitat for the Quino checkerspot butterfly could result in increased collection of specimens by collectors and hobbyists. Additionally, the commercial trade in rare butterflies could increase demand for this taxa following listing as endangered under the Act. Consequently, critical habitat maps could lead unscrupulous collectors to endangered populations. We further believed that the publication of maps showing critical habitat units would result in additional habitat destruction through trampling, discing, grading, and intentional acts of habitat vandalism.

We also described the threat posed by vandalism towards the Quino

checkerspot butterfly and its habitat in the final listing rule. We cited several cases under investigation by our Law Enforcement Division prior to listing, and documented other instances of unauthorized Quino checkerspot butterfly habitat destruction since. We determined that the designation of critical habitat would increase the instances of habitat destruction and exacerbate threats to the Quino checkerspot butterfly.

We acknowledged that critical habitat designation, in some situations, may provide some benefit to the species, for example, by identifying areas important for conservation and calling attention to those areas in need of special protection. But, we concluded that the vandalism threat posed by designating critical habitat would outweigh the benefit provided by such a designation.

However, following publication of the final listing rule, we made available three successive survey guidelines and protocols for determining presence of Quino checkerspot butterflies, providing guidance that minimizes take of the subspecies. Within each protocol, we described requisite Quino checkerspot butterfly habitat and known locations throughout the historic range of the butterfly. In the latter two protocols, we published maps indicating the location of potential suitable Quino checkerspot butterfly habitat, and the general locations of recent butterfly observations. These maps were subsequently published in local newspapers. Additionally, in the spirit of partnership with local jurisdictions, planning for conservation and management of the Quino checkerspot butterfly, and in compliance with several Freedom of Information Act requests, we distributed maps and electronic files of historic and recent Quino checkerspot butterfly locations. Furthermore, in the recently published Draft Quino Checkerspot Butterfly Recovery Plan (Service 2001), we included maps showing locations of both historic and recent butterfly observations. The release of these data resulted in the widespread distribution of Quino checkerspot butterfly occurrence locations to the public.

Since the release of these data, we have not documented an increase in the threats to the subspecies through vandalism, collection, habitat destruction, or other means. In contrast, we have witnessed an increase in public interest in the subspecies and its conservation through survey efforts by species experts, scientific research, regional and local planning, and educational outreach. Based on the lack of an increase in vandalism threats, we have reconsidered our evaluation of our original prudency determination. We have determined that the threats to the Quino checkerspot butterfly and its habitat from the specific instances of habitat destruction we identified in the final listing rule do not outweigh the broader educational, regulatory, and other possible benefits that a designation of critical habitat would provide for this subspecies. The instances of likely vandalism, though real, were relatively isolated. Consequently, we conclude that designating critical habitat will not increase incidences of habitat vandalism above current levels for this subspecies.

In the absence of finding that critical habitat would increase threats to a species, if there are any benefits to critical habitat designation, then a prudent finding is warranted. The potential benefits include: (1) Triggering section 7 consultation in new areas where it would not otherwise occur because, for example, it is or has become unoccupied or the occupancy is in question; (2) focusing conservation activities on the most essential areas; (3) providing educational benefits to State or county governments or private entities; and, (4) preventing people from causing inadvertent harm to the species.

Therefore, we conclude that the benefits of designating critical habitat on lands essential for the conservation of the Quino checkerspot butterfly outweigh the risks of increased vandalism resulting from such designation. We proposed that critical habitat is prudent for the Quino checkerspot butterfly.

Methods

In determining areas that are essential to conserve the Quino checkerspot butterfly, we used the best scientific and commercial data available. We reviewed available information that pertains to the habitat requirements of this subspecies, including data from research and survey observations published in peer-reviewed articles; information from private and institutional collections; regional GIS coverages; data collected from biological reports submitted by holders of section 10(a)(1)(A) recovery permits; and recommendations from the Quino checkerspot butterfly recovery team during the development of the draft recovery plan for the butterfly.

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 base critical habitat determinations on the best scientific and commercial data available, and to consider those physical and biological features (primary constituent elements) that are essential to the conservation of the species, and that may require special management considerations and protection. These include, but are not limited to: space for individual and population growth, and for normal behavior; food, water, air, light, minerals, or other nutritional or physiological requirements; cover or shelter; sites for breeding, reproduction, rearing (or development) of offspring; and habitats that are protected from disturbance or are representative of the historic geographical and ecological distributions of a species. All areas proposed as critical habitat for the Quino checkerspot butterfly contain one or more of these physical or biological features.

The areas designated as critical habitat are designed to provide sufficient habitat to maintain self-sustaining populations of Quino checkerspot butterflies throughout its range, and provide those habitat components essential for the conservation of the subspecies. Habitat components that are essential for the Quino checkerspot butterfly include the biological needs of larval diapause, feeding, and pupation, and adult oviposition, nectaring, roosting and basking, dispersal, genetic exchange, and shelter. The critical habitat units are configured to provide for dispersal and migration corridors, as well as allowing room for population expansion, which is essential for the conservation of the species.

Primary constituent elements occur in undeveloped areas that support various types of open woody canopy plant communities. They include, but are not limited to, plant communities in their natural state, or those that have been recently disturbed (e.g., by fire or grubbing) that provide populations of host plant and nectar sources for the Quino checkerspot butterfly. Habitat patch suitability is determined primarily by larval host plant density, topographic diversity, nectar resource availability, and climatic conditions (Singer 1972; Murphy 1982; Weiss *et al.* 1988; Murphy *et al.* 1990; and Osborne and Redak 2000).

The primary and secondary host plants that have been documented for the butterfly include *Plantago erecta* (dwarf plantain), *Plantago patagonica* (wooly plantain), *Castilleja exserta* (owl's clover), and *Cordylanthus rigidus* (bird's beak), with dwarf plantain being the most common. Dwarf plantain is an annual herb found in coastal sage scrub,

open chaparral, grassland and similar plant communities. It is often associated with cryptogamic crusts, and fine-textured clay soils derived from gabbro and basalt.

Some local populations or metapopulations of the Quino checkerspot butterfly may be dependent on secondary hosts for persistence. Typically, prediapause secondary hosts are important when the primary hosts undergo senescence (growth phase in plant from maturity to death) before larvae can respond by entering diapause (Singer 1972; Ehrlich *et al.* 1975).

Adult Quino checkerspot butterflies use a variety of plants for adult nectar feeding. *Euphydryas editha* prefers flowers with a platform-like surface on which they can remain upright while feeding (D. Murphy, G. Pratt, and M. Singer, pers. comm., 2000). The butterflies frequently take nectar from *Lomatium* spp., *Muilla* spp., *Achillea millefolium* (yarrow), *Amsinckia* spp. (fiddleneck), *Lasthenia* spp. (goldfields), *Plagiobothrys* spp. (popcornflower), *Cryptantha* spp., *Gilia* spp., *Eriogonum fasiculatum* (California buckwheat), *Allium* spp. (onion), and *Eriodictyon* spp. (yerba santa) (D. Murphy and G. Pratt, pers. comm., 2000).

Criteria Used To Identify Critical Habitat Units

The draft recovery plan (Service 2001) for the Quino checkerspot butterfly identified the specific recovery needs of the subspecies, and serves as a starting point for identifying areas essential to its conservation. The draft recovery strategy focuses on lands described as essential for the long-term conservation of the Quino checkerspot butterfly because they: (1) Contain occupied habitat complexes (source populations) that must be stabilized to recover the subspecies; (2) contain habitats that were part of a historical population distribution adjacent to occupied areas and are most likely to contain the suitable habitat needed for (expansion and) stability of small, low-density habitat complexes; and (3) provide the landscape connectivity between habitat complexes that may belong to a single metapopulation, or at least are required to maintain natural long-term stability and genetic exchange among smaller populations or metapopulations. To recover the Quino checkerspot butterfly to the point where it can be downlisted, it is essential to preserve the subspecies' genetic diversity as well as the habitat in which it persists.

Areas supporting core populations or that have the potential to support larger populations are essential because they represent the foundation for continued persistence of the species. Furthermore, some habitat areas that would not be considered essential if geographically isolated are, in fact, essential when situated in locations where they facilitate continued connectivity between surrounding populations or play a significant role in maintaining metapopulation viability (e.g., by providing additional areas of occupancy that provide resilience to periodic extirpations of adjacent habitat patches). Populations on the periphery of the species range, or in atypical environments, are important for maintaining the genetic diversity of the species which could be essential to evolutionary adaptation to changing climatic and environmental conditions.

To identify and map areas essential to the conservation of the subspecies, we used the characteristics of essential habitat described above, data on known Quino checkerspot butterfly locations, criteria in the draft recovery plan for reclassification of the subspecies, aerial photography at a scale of 1:24,000 (comparable to the scale of a 7.5 minute U.S. Geological Survey Quadrangle topographic map), current aerial photography prints, boundaries of approved habitat conservation plans (HCPs), and projects authorized for take through section 7 consultations. For the purpose of this proposed determination, critical habitat units have been described using Universal Transverse Mercator (UTM) North American Datum of 1927 (NAD 27) coordinates derived from a 100-m grid that approximated the boundaries delineated from the digital aerial photography with the exception of Unit 3 (Otay Unit). The Otay unit was described using a combination of UTM coordinates and by referencing boundaries for the Multiple Habitat Preservation Area, the Major Amendment Area, and the City of Chula Vista Preserve Design of the San Diego County Multiple Species Conservation Program, State and Federal lands, and State Route 94.

To identify critical habitat units, we first examined those lands under Federal jurisdiction. Those lands include areas managed by the Bureau of Land Management (BLM), U.S. Forest Service (Forest Service), Department of Defense (DOD) lands, and the Service. We also considered the existing status of non-Federal and private lands in designating areas as critical habitat. Section 10(a)(1)(B) of the Act authorizes us to issue permits for the take of listed species incidental to otherwise lawful activities. An incidental take permit application must be supported by an HCP that identifies conservation measures that the permittee agrees to implement for the species to minimize and mitigate the impacts of the requested incidental take. Non-Federal public lands and private lands that are covered by an existing operative HCP and executed implementation agreement (IA) for Quino checkerspot butterfly under section 10(a)(1)(B) of the Act are not designated as critical habitat because the benefits of exclusion outweigh the benefits of inclusion as discussed in section 4(b)(2) of the Act.

We are also including a portion of the Cahuilla Band of Mission Indian Reservation because it contains areas of high-quality habitat within a unit that is essential to the conservation of the Quino checkerspot butterfly. We initiated coordination with this Tribe on this designation under the guidance of the President's memorandum of April 29, 1994, ''Government-to-Government Relations with Native American Tribal Governments'' (59 FR 22951), Executive Order 13175, and 512 DM 2, which requires us to coordinate with federally recognized Tribes on a Government-to-Government basis.

In defining critical habitat boundaries, we made an effort to exclude all developed areas, such as towns, housing developments, and other lands unlikely to contain primary constituent elements essential for Quino checkerspot butterfly conservation. Our 100-m UTM grid minimum mapping unit was designed to minimize the amount of development along the urban edge included in our designation. However, this minimum mapping unit does not exclude all developed areas, such as buildings, aqueducts, railroads, airports, and other lands unlikely to contain the primary constituent elements. Federal actions limited to these areas would not trigger a section 7 consultation, unless they affect the species and/or the primary constituent elements in adjacent critical habitat.

Critical Habitat Proposal

The approximate area encompassing the proposed designation of critical habitat by county and land ownership is shown in Table 1.

TABLE 1.—APPROXIMATE PROPOSED CRITICAL HABITAT IN HECTARES (HA) (ACRES (AC)) BY COUNTY AND LAND OWNERSHIP (AREA ESTIMATES REFLECT CRITICAL HABITAT UNIT BOUNDARIES, NOT THE PRIMARY CONSTITUENT ELEMENTS WITHIN.[1])

County	Federal[2]	Tribal	Local/State	Private	Total
Riverside	9,292 ha (22,960 ac)	4,407 ha (10,890 ac)	2,877 ha (7,110 ac)	62,111 ha (153,480 ac)	78,687 ha (194,440 ac)
San Diego	15,188 ha (37,530 ac)	0 ha (0 ac)	3,784 ha (9,350 ac)	24,155 ha (59,690 ac)	43,127 ha (106,570 ac)
Total	24,480 ha (60,490 ac)	4,407 ha (10,890 ac)	6,661 ha (16,460 ac)	86,266 ha (213,170 ac)	121,814 ha (301,010 ac)

[1] Approximate hectares have been converted to acres (1 ha = 2.47 ac). Based on the level of imprecision of mapping at this scale, approximate hectares have been rounded to the nearest 5, and acres to the nearest 10, if greater than or equal to 100 (≥ 100); both hectares and acres are rounded to the nearest 5 if less than 100 (< 100).

[2] Federal lands include BLM, Department of Defense, National Forest, and Service lands.

Critical habitat includes Quino checkerspot butterfly habitat throughout the subspecies' current range in the United States (i.e., Riverside and San Diego Counties, California). Lands proposed are under private, local, State, Federal, and Tribal ownership, with Federal lands including lands owned or managed by BLM, Forest Service, DOD, and Service lands. Lands proposed as critical habitat have been divided into four critical habitat units.

We are proposing to designate critical habitat on lands that are considered essential to the conservation of the Quino checkerspot butterfly. Using the draft recovery plan for guidance (Service 2001), we determined an area was essential if it had one or more of the following characteristics: (1) Lands considered to be occupied within recovery unit boundaries and within a 4.8 km (3 mile) dispersal distance of confirmed recent (since 1985) Quino checkerspot butterfly locations that are part of identified habitat complexes; (2) lands not known to be occupied but provide landscape connectivity between adjacent occupied habitat complexes; and (3) lands not known to be occupied that contain confirmed historic Quino checkerspot locations and are part of identified habitat complexes, and are contiguous with occupied lands. The areas designated as critical habitat are designed to provide sufficient habitat to maintain self-sustaining populations of Quino checkerspot butterflies throughout its range, and provide those habitat components essential for the conservation of the subspecies. The critical habitat units are configured to provide for dispersal and migration corridors, as well as allowing room for population expansion, which, as stated in the draft recovery plan (Service 2001), is essential for the conservation of the species.

A brief description of each unit, and reasons for proposing to designate it as critical habitat are presented below.

Unit 1: Lake Mathews Unit

Unit 1 encompasses approximately 12,982 ha (32,080 ac) within the northwestern portion of Riverside County. Approximately 550 ha (1,360 ac) of this unit occurs on BLM land, and the rest 12,432 ha (30,720 ac) occurs on State/local lands or private lands.

Lands considered to be occupied encompass 4,905 ha (12,120 ac) in the Gavilan Hills southeast of Lake Mathews, and 8,077 ha (19,960 ac) adjacent to and south of the lake that are not known to be occupied but determined to be essential in the draft recovery plan. The unit supports one habitat complex identified by the draft Quino Checkerspot Butterfly Recovery Plan. The Gavilan Hills habitat complex occurs within the Northwest Riverside Recovery Unit described in the draft recovery plan. Quino checkerspot butterflies were observed in Harford Springs County Park in 1998, a site that was once part of a more extensive, well documented distribution. Quino checkerspot butterflies were last observed at the southern margin of Lake Mathews in 1986. The Quino checkerspot butterfly was historically abundant in this area, with consistently high densities reported by collectors from the 1950s to the mid 1980s (Orsak 1978; K. Osborne and G. Pratt, pers. comm. 2000). This unit, therefore, includes the vicinity of Harford Springs County Park.

The unit also includes habitat areas south of Lake Mathews not currently known to be occupied that are part of the Gavilan Hills habitat complex, but is considered essential to the species because it is a documented historical population location, and contains large, dense, contiguous stands of dwarf plantain and is needed for the recovery of the species (K. Osborne pers. comm. 2000). This area should have the population restored, if in fact, it does not exist there, in order to support a larger and stable population distribution within the habitat complex.

The Lake Mathews/Gavilan Hills area is characterized by diverse topography and high-quality habitat patches with extensive stands of dense dwarf plantain spp. in open spaces within juniper woodland, coastal sage scrub, and grassland. Landscape connectivity is broken primarily by Cajalco Road. Landscape connectivity still exists between Harford Springs County Park and Lake Mathews, and apparently suitable habitat containing dense stands of dwarf plantain exists south of Lake Mathews in the vicinity of Black Rocks, west of Monument Peak (K. Osborne pers. comm., 2000). Stands of dwarf plantain also occur in the vicinities of Estelle Mountain, Railroad Canyon Reservoir, and the town of Sun City (G. Pratt, pers. comm., 2000).

Unit 2: Southwest Riverside Unit

Unit 2 encompasses approximately 70,237 ha (173,560 ac) within southwestern Riverside County and Northwestern San Diego County. Lands considered to be occupied encompass 65,907 ha (162,860 ac) stretching east from the cities of Temecula and Murrieta to almost the desert's edge, north to near the town of Hemet, and south into Oak Grove Valley in San Diego County. Lands not known to be occupied but determined to be essential in the draft recovery plan encompass 4,330 ha (10,700 ac) south of Brown Canyon and northeast of Oak Grove Valley. The unit supports seven habitat complexes identified as essential in the draft recovery plan. The Warm Springs Creek and Skinner/Johnson habitat complexes occur within the Southwest Riverside Recovery Unit described by the draft recovery plan. Recent Quino checkerspot observations are distributed in the vicinity of Warm Springs Creek

north of Murrieta Hot Springs Road to at least Scott Road, although much of the habitat at the southern end of the Hogbacks, where butterflies were recently observed, was disturbed in 1998. Recent observations are also distributed throughout the Southwest Riverside County Multiple Species Reserve, and are concentrated around Lake Skinner, and south of Benton and Borel Roads (Johnson Ranch). Landscape connectivity between the Warm Springs Creek and Skinner/Johnson habitat complexes has been severed by State Route 79 and associated development. Landscape connectivity between Warm Springs Creek and Skinner/Johnson habitat complexes is constrained by State Route 79 and associated development.

The Oak Mountain/Vail Lake, Sage Road/Billy Goat Mountain, and Brown Canyon habitat complexes occur within the South Riverside Recovery Unit described by the draft recovery plan. Recent Quino checkerspot butterfly observations are concentrated in the vicinities of Oak Mountain, Vail Lake, Pauba Valley, and in the vicinity of Sage Road from Magee Hills and the town of Sage south and east to Wilson Valley and Billy Goat Mountain. One possibly isolated population occurs just southeast of Hemet in Brown Canyon. Landscape connectivity in the habitat complex areas is generally good, and habitat is largely unfragmented. Landscape connectivity most likely exists between the Oak Mountain/Vail Lake and Sage Road/Billy Goat Mountain habitat complexes. Lands not known to be occupied between the Brown Canyon and Sage Road/Billygoat Mountain habitat complexes are considered essential because they provide landscape connectivity between them that allows for a sufficient rate of genetic exchange and recolonization events, and therefore, the long-term stability of both.

The Silverado and Dameron Valley/Oak Grove habitat complexes occur within the South Riverside/North San Diego Recovery unit described by the draft recovery plan. Recent Quino checkerspot butterfly observations are distributed across BLM lands and the Silverado Ranch Mitigation Bank south of the Cahuilla Indian Reservation. Increased survey efforts in 2000 expanded the Silverado habitat complex distribution, though much of the area remains to be surveyed. Two recent butterfly observation sites are found distant from the Silverado mitigation bank, one in northern Dameron Valley south of State Route 79, and one just south of that in Oak Grove Valley. Lands not known to be occupied between the Silverado and Dameron Valley/Oak Grove habitat complexes are considered essential because they provide landscape connectivity between them that allows for a sufficient rate of genetic exchange and recolonization events, and therefore, the long-term stability of both.

Habitat patches appear to be well connected in the Silverado Ranch area, and are largely unfragmented. The known distribution of this metapopulation is relatively well protected since the habitat areas are primarily owned by the BLM and Silverado Ranch Mitigation Bank (Pratt 2000). A management plan is being developed for this mitigation bank, but it is not complete. Oak Grove Valley is highly invaded by non-native grasses at lower elevations, but much habitat appears to remain on the hills. Habitat in areas surrounding Oak Grove Valley remain relatively undeveloped, including Chihuahua Valley to the east.

This unit includes 4,407 ha (10,890 ac) of Tribal lands of the Cahuilla Band of Mission Indians, just north of the Silverado Ranch mitigation bank, and approximately 19,433 ha (48,020 ac) of Forest Service and BLM lands.

Unit 3: Otay Unit

Unit 3 encompasses approximately 29,328 ha (72,470 ac) within the southern portion of San Diego County. Approximately 10,582 ha (26,150 ac) occur on Federal land, including 182 ha (450 ac) on lands owned by the DOD, which consists of the Naval Space Surveillance Station.

Lands considered to be occupied encompass 26,973 ha (66,660 ac) stretching south from the San Diego National Wildlife Refuge (SDNWR) complex and State Route 94 to the international border with Mexico, west along Otay River Valley and the northern rim of Otay Mesa, and east to the town of Tecate. Lands not known to be occupied but determined to be essential in the draft recovery plan encompass 2,351 ha (5,810 ac) south of Sweetwater Reservoir, and adjacent to State Route 94 east of San Miguel Mountain, Proctor Valley, and Otay Lake. It supports six habitat complexes identified as essential by the draft recovery plan. The SDNWR, Otay Lake, Otay Mesa, and Otay Mountain Foothills habitat complexes occur west of Otay Mountain within the Southwest San Diego Recovery Unit described by the draft recovery plan. Recent Quino checkerspot butterfly observations in the area are concentrated north and southeast of Otay Lake, with a smaller cluster concentrated along the southwestern slope of Otay Mountain.

Other recent butterfly observations are located on the SDNWR, northeast of Sweetwater Reservoir, and along the mesa rim above the Otay River and at the Salt Creek confluence. The Otay Lakes area historically supported a large population that extended south to Otay Mesa and across the international border (Murphy and White 1984). The historic population distribution extended across the entire mesa, and there are current Quino checkerspot butterfly habitat restoration activities being undertaken adjacent to a recent butterfly observation on the mesa rim just west of Johnson Canyon (Service 1999). The draft recovery plan calls for this habitat restoration and re-establishment of this population of Quino checkerspot butterfly (Service 2001). Restoration of vernal pool habitat that includes essential elements of Quino checkerspot butterfly habitat is also ongoing at the site of a collection record on the mesa top adjacent to Dennery and Spring canyons (Service 1997). The Otay Mesa habitat complex distribution includes Otay Valley from the Salt Creek confluence to Dennary Canyon, and the adjacent undeveloped mesa tops, canyons and ridges south of Otay Valley (in the vicinity of Brown Field). Lands not known to be occupied between the SDNWR and Otay Lakes are considered essential because they provide landscape connectivity between them that allows for a low rate of genetic exchange and recolonization events, and therefore, the long-term stability of both.

Landscape connectivity along the western margin of Otay Lake is constrained by the Olympic Training Center and other development, although some habitat remains along the Salt Creek drainage. Landscape connectivity on the eastern margin of Otay Lake is constrained by stands of woodland vegetation dominated by non-native species. Historic records indicate that habitat (now in the SDNWR) near Sweetwater River was, and still is, connected to Proctor Valley, San Miguel Mountain, and thus to currently occupied habitat around Otay Lake. Landscape connectivity on the mesas northeast of Brown Field and southwest of lower Otay Lake is reduced, although no significant dispersal barriers exist.

The Marron Valley and Tecate habitat complexes occur east of Otay Mountain within the Southwest San Diego recovery unit described by the draft recovery plan. Recent Quino checkerspot butterfly observations are concentrated on the eastern slope of Otay Mountain and ridgelines along the international border in the vicinity of Marron Valley. Occupancy likely

extends south across the international border, and it is possible that the majority of the habitat complex is in Baja California, Mexico. Another recent record is located east of Marron Valley near the town of Tecate. Lands not known to be occupied between the Otay Lakes and Marron Valley habitat complexes are considered essential because they provide landscape connectivity between them that allows for a low rate of genetic exchange and recolonization events, and therefore, the long-term stability of both. Habitat patches within this complex remain relatively well connected. In addition, some degree of landscape connectivity may exist north and south of Otay Mountain between the Otay Mesa and Marron Valley habitat complexes. Most occupied habitat in this area occurs on publicly owned land.

Unit 4: Jacumba Unit

Unit 4 encompasses approximately 9,267 ha (22,900 ac) in southeastern San Diego County. Approximately 2,966 ha (7,330 ac) occurs on BLM land.

Lands considered to be occupied encompass 5,610 ha (13,860 ac) north and south of Interstate 8 in the vicinity of the town of Jacumba. Lands not known to be occupied but determined to be essential in the draft recovery plan encompass 3,658 ha (9,040 ac) north and south of Interstate 8 in the vicinity of Table Mountain.

The unit supports one habitat complex identified as essential by the draft recovery plan. The Jacumba habitat complex occurs within the Southeast San Diego Recovery Unit described by the draft recovery plan. Recent Quino checkerspot butterfly observations are concentrated northwest of the community of Jacumba on State Park and private lands. Occupancy likely extends south across the international border, and it is possible that the majority of the habitat complex is in Baja California, Mexico. Occupancy has been documented approximately 6 km (4 mi) to the south in El Condor (Baja California, Mexico), and the U.S. habitat complex may belong to the same population distribution. A historic butterfly record occurs north of Interstate 8 in the Table Mountain area. The Table Mountain site and apparently suitable surrounding habitat areas (G. Pratt, pers. comm., 2000) are within the BLM Jacumba National Cooperative Land and Wildlife Management Area. Current habitat and landscape connectivity in the Jacumba area are relatively intact. No habitat fragmentation or severing of landscape connectivity has occurred or is likely to occur in the Table Mountain area. Landscape connectivity between Table Mountain and Jacumba Peak is constrained by Interstate 8.

Effects of Critical Habitat Designation

Section 7 Consultation

Section 7(a)(2) of the Act requires Federal agencies, including the Service, to ensure that actions they fund, authorize, or carry out do not destroy or adversely modify critical habitat to the extent that the action appreciably diminishes the value of the critical habitat for the survival and recovery of the species. Individuals, organizations, states, local 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, including the Service, 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 proposed or designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402. Section 7(a)(4) of the Act 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 advisory. If a species is listed or critical habitat is designated, section 7(a)(2) 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 to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency (action agency) must enter into consultation with us. Through this consultation we would ensure that the permitted actions do not destroy or adversely modify critical habitat.

When 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 or conference with us on actions for which formal consultation has been completed, if those actions may affect designated critical habitat, or adversely modify or destroy proposed critical habitat. Conference reports assist the agency in eliminating conflicts that may be caused by the proposed action, and may include recommendations on actions to eliminate conflicts with or adverse modifications to proposed critical habitat. The conservation recommendations in a conference report are advisory.

Activities on Federal lands that may affect the Quino checkerspot butterfly or its critical habitat will require section 7 consultation. Activities on private or State lands requiring a permit from a Federal agency, such as a permit from the U.S. Army Corps of Engineers (Corps) under section 404 of the Clean Water Act, or some other Federal action, including funding (e.g., from the Federal Highway Administration, Federal Aviation Administration, or Federal Emergency Management Agency) will also continue to be subject to the section 7 consultation process. Federal actions not affecting listed species or critical habitat and actions on non-Federal lands that are not federally funded or permitted do not require section 7 consultation.

We may issue a formal conference report if requested by a Federal agency. Formal conference reports on proposed critical habitat contain an opinion that is prepared according to 50 CFR 402.14, as if critical habitat were designated. We may adopt the formal conference report as the biological opinion when the

critical habitat is designated, if no substantial new information or changes in the action alter the content of the opinion (see 50 CFR 402.10(d)).

Activities on Federal lands that may affect the Quino checkerspot butterfly or its critical habitat will require section 7 consultation. Activities on private or State lands requiring a permit from a Federal agency, such as a permit from the Corps under section 404 of the Clean Water Act, a section 10(a)(1)(B) permit from the Service, or some other Federal action, including funding (e.g., Federal Highway Administration or Federal Emergency Management Agency funding), will also continue to be subject to the section 7 consultation process. Federal actions not affecting listed species or critical habitat and actions on non-Federal and private lands that are not federally funded, authorized, or permitted do not require section 7 consultation.

Section 4(b)(8) of the Act requires us to briefly evaluate and describe in any proposed or final regulation that designates critical habitat those activities involving a Federal action that may destroy or adversely modify such habitat or that may be affected by such designation. Activities that may destroy or adversely modify critical habitat include those that appreciably reduce the value of critical habitat for both the survival and recovery of the Quino checkerspot butterfly. Within critical habitat, this pertains only to those areas containing primary constituent elements. We note that such activities may also jeopardize the continued existence of the subspecies.

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

Common to both definitions is an appreciable detrimental effect on both survival and recovery of a listed species. Given the similarity of these definitions, actions likely to destroy or adversely modify critical habitat would almost always result in jeopardy to the species concerned, particularly when the area of the proposed action is occupied by the species concerned. Designation of critical habitat in areas occupied by the Quino checkerspot butterfly is not likely to result in a regulatory burden above that already in place due to the presence of the listed species. Designation of critical habitat in areas not occupied by the subspecies may have some effect if we do not consult in these areas now, and we will investigate this possibility through our economic analysis.

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

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

(2) Regulation of grazing, mining, and recreation by the BLM, Forest Service or Service;

(3) Road construction and maintenance, right-of-way designation, and regulation of agricultural activities;

(4) Regulation of airport improvement activities by the Federal Aviation Administration jurisdiction;

(5) Construction of roads and fences along the International Border with Mexico, and associated immigration enforcement activities by the Immigration and Naturalization Service;

(6) Hazard mitigation and post-disaster repairs funded by the Federal Emergency Management Agency;

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

(8) Activities funded by the U. S. Environmental Protection Agency, Department of Energy, or any other Federal agency.

Federal agencies already consult with us on activities in areas currently occupied by the species, or if the species may be affected by the action, to ensure that their actions do not jeopardize the continued existence of the species. Within much of the lands not known to be occupied by the Quino checkerspot butterfly, we already consult on other listed species and designated critical habitat, including the California coastal gnatcatcher (*Polioptila californica californica*) and its critical habitat, Stephen's kangaroo rat (*Dipodomys stephensi*) and Munz' onion (*Allium munzii*) (Riverside County only), least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*), and southwestern arroyo toad (*Bufo californicus*). Thus, we do not anticipate additional regulatory burden will result from critical habitat designation, but we will examine this in our economic analysis.

Exclusions Under Section 4(b)(2)

Subsection 4(b)(2) of the Act allows us to exclude areas from critical habitat designation where the benefits of exclusion outweigh the benefits of designation, provided the exclusion will not result in the extinction of the species. For the following reasons, we believe that in most instances the benefits of excluding legally operative HCPs for which the Quino checkerspot is a covered species and take has been authorized, from critical habitat designations will outweigh the benefits of including them.

(1) Benefits of Inclusion

The benefits of including HCP lands in critical habitat are normally small. The principal benefit of any designated critical habitat is that activities in such habitat that may affect it require consultation under section 7 of the Act. Such consultation would ensure that adequate protection is provided to avoid adverse modification of critical habitat. Where HCPs are in place, our experience indicates that this benefit is small or non-existent. Currently approved and permitted HCPs are already designed to ensure the long-term survival of covered species within the plan area. Where we have an approved HCP, lands that we ordinarily would define as critical habitat for the covered species will normally be protected in reserves and other conservation lands by the terms of the HCPs and their implementation agreements. These HCPs and IAs include management measures and protections for conservation lands that are crafted to protect, restore, and enhance their value as habitat for covered species.

In addition, an HCP application must itself be consulted upon. While this consultation will not look specifically at the issue of adverse modification of critical habitat, it will look at the very similar concept of jeopardy to the listed species in the plan area. Because HCPs, particularly large regional HCPs, address land use within the plan boundaries, habitat issues within the plan boundaries will have been thoroughly addressed in the HCP and through the consultation on the HCP. Our experience is also that, under most circumstances, consultations under the jeopardy standard will reach the same result as consultations under the adverse modification standard.

Implementing regulations (50 CFR Part 402) define ''jeopardize the continued existence of'' and ''destruction or adverse modification of'' in virtually identical terms. ''Jeopardize the continued existence of'' means to engage in an action ''that reasonably would be expected to reduce appreciably the likelihood of both the survival and recovery of a listed species.'' Destruction or adverse modification means an alteration that appreciably diminishes the value of critical habitat for both the survival and recovery of a listed species.'' Common to both definitions is an appreciable detrimental effect on both survival and recovery of a listed species, in the case of critical habitat by reducing the value of the habitat so designated. Thus, actions satisfying the standard for adverse modification are nearly always found to also jeopardize the species concerned, and the existence of a critical habitat designation does not materially affect the outcome of consultation. Additional measures to protect the habitat from adverse modification are not likely to be required.

Further, HCPs typically provide for greater conservation benefits to a covered species than section 7 consultations because HCPs assure the long term protection and management of a covered species and its habitat, and funding for such management through the standards found in the 5-Point Policy for HCPs (64 FR 35242) and the HCP No Surprises regulation (63 FR 8859). Such assurances are typically not provided by section 7 consultations which, in contrast to HCPs, often do not commit the project proponent to long term special management or protections. Thus, a consultation typically does not accord the lands it covers the extensive benefits an HCP provides.

The development and implementation of HCPs provide other important conservation benefits, including the development of biological information to guide conservation efforts and assist in species recovery, and the creation of innovative solutions to conserve species while allowing for development. The educational benefits of critical habitat, including informing the public of areas that are important for the long-term survival and conservation of the species, are essentially the same as those that would occur from the public notice and comment procedures required to establish an HCP, as well as the public participation that occurs in the development of many regional HCPs. For these reasons, then, we believe that designation of critical habitat has little benefit in areas covered by HCPs.

(2) Benefits of Exclusion

The benefits of excluding HCPs from being designated as critical habitat may be more significant. It includes relieving landowners, communities and counties of any additional minor regulatory review that might be imposed by critical habitat. Many HCPs, particularly large regional HCPs, take many years to develop and, upon completion, become regional conservation plans that are consistent with the recovery of covered species. Most regional plans benefit many species, both listed and unlisted. Imposing an additional regulatory review after HCP completion may jeopardize conservation efforts and partnerships in many areas and could be viewed as a disincentive to those developing HCPs. Excluding HCPs provides us with an opportunity to streamline regulatory compliance and confirms regulatory assurances for HCP participants.

A related benefit of excluding HCPs is that it would encourage the continued development of partnerships with HCP participants, including States, local governments, conservation organizations, and private landowners, that together can implement conservation actions we would be unable to accomplish alone. By excluding areas covered by HCPs from critical habitat designation, we preserve these partnerships and, we believe, set the stage for more effective conservation actions in the future.

In general, then, we believe the benefits of critical habitat designation to be small in areas covered by approved HCPs. We also believe that the benefits of excluding HCPs from designation are significant. Weighing the small benefits of inclusion against the benefits of exclusion, including the benefits of relieving property owners of an additional layer of approvals and regulation, together with the encouragement of conservation partnerships, would generally result in HCPs being excluded from critical habitat designation under section 4(b)(2) of the Act.

Not all HCPs are alike with regard to species coverage and design. Within this general analytical framework, we need to evaluate completed and legally operative HCPs in which the Quino checkerspot butterfly is a covered species on a case-by-case basis to determine whether the benefits of excluding these particular areas outweigh the benefits of including them.

Relationship To Habitat Conservation Plans

Section 4(b)(2) of the Act allows us broad discretion to exclude from critical habitat designation areas where the benefits of exclusion outweigh the benefits of designation, provided the exclusion will not result in the extinction of the species. We expect that critical habitat may be used as a tool to identify those areas essential for the conservation of the species, and we will encourage development of HCPs for such areas on non-Federal lands. Habitat conservation plans currently under development are intended to provide for protection and management of habitat areas essential for the conservation of the Quino checkerspot butterfly, while directing development and habitat modification to nonessential areas of lower habitat value.

Only HCPs within the boundaries of the proposed critical habitat units are discussed herein. Those approved and legally operative HCPs that provide coverage and incidental take approval for the Quino checkerspot butterfly have been excluded from this proposed designation. These include several habitat conservation planning efforts that have been completed within the proposed critical habitat. These include the Assessment District 161 Subregional HCP and the Rancho Bella Vista HCP in Riverside County that provide coverage and incidental take authorization for the Quino checkerspot butterfly.

The Riverside County Assessment District 161 Subregional HCP, which authorizes the take of the Quino checkerspot butterfly, has been completed and approved. This HCP includes habitat protection, habitat restoration research, educational outreach, and captive propagation. The Rancho Bella Vista HCP also occurs within the Riverside County Assessment District 161, but an independent HCP was approved for this project. Although it is not currently known to occur within the project boundaries, the Quino checkerspot butterfly is known from adjacent occupied habitat patches and is covered by the Rancho Bella Vista HCP. This HCP provides conservation of the Quino checkerspot butterfly through monitoring of this subspecies, habitat and dispersal corridor preservation and management, and habitat restoration and enhancement.

The benefits of excluding lands covered by these HCPs would be significant in preserving positive relationships with our conservation partners, lessening potential additional regulatory review and potential

economic burdens, reinforcing the regulatory assurances provided for in the implementation agreements for the approved HCPs, and providing for more established and cooperative partnerships for future conservation efforts.

In summary, the benefits of including these approved HCPs in critical habitat for the Quino checkerspot butterfly include increased educational benefits and minor additional management protections and measures. The benefits of excluding HCPs from being proposed as critical habitat for the Quino checkerspot butterfly include the additional conservation measures for this and other listed species, preservation of partnerships that may lead to future conservation, and the avoidance of the minor regulatory and economic burdens associated with the designation of critical habitat. The benefits of excluding these areas from critical habitat designation outweigh the benefits of including these areas. Furthermore, we have determined that these exclusions will not result in the extinction of the subspecies. We have already completed section 7 consultation on the impacts of these HCPs on the subspecies.

We determined that the approved HCPs will not jeopardize the continued existence of the Quino checkerspot butterfly, which means that they will not appreciably reduce likelihood of the survival and recovery of the subspecies. Additionally, excluding these lands from the critical habitat designation will not result in the extinction of the species. Consequently, these lands have not been designated as critical habitat for the subspecies.

The Lake Mathews Multiple Species Habitat Conservation Plan/Natural Community Conservation Plan (MSHCP) has been completed and approved by the California Department of Fish and Game (CDFG) and the Service. Although it is not currently known to occur within the reserve boundaries, the Quino checkerspot butterfly is conditionally covered by the Lake Mathews Multiple Species Habitat Conservation Plan/Natural Community Conservation Plan. Since the Quino checkerspot butterfly is only conditionally covered, we are including this HCP in the proposed critical habitat designation.

The San Diego Multiple Species Conservation Program (MSCP) encompasses approximately 236,000 ha (582,000 ac) of southwestern San Diego County, and involves multiple jurisdictions. Approximately 69,600 ha (172,000 ac) are targeted to be conserved within a preserve. We approved the overall MSCP and the City of San Diego's Subarea Plan in July 1997. The City of Poway's plan was approved in 1996; the County of San Diego's in 1998; San Diego Gas and Electric in 1995; and the City of La Mesa in 2000. Other jurisdictions, including the City of Chula Vista, are expected to complete their subarea planning processes in the future. The Quino checkerspot butterfly is not a covered subspecies for any of the subarea plans within the MSCP. However, both the County of San Diego and San Diego Gas and Electric are developing amendments to their permits to gain permit coverage for the Quino checkerspot butterfly. The Quino checkerspot butterfly is also a target subspecies for the North San Diego County Subarea of the MSCP which encompasses unincorporated lands east of the existing Multiple Habitat Conservation Program, and north of the MSCP planning areas. Since the Quino checkerspot butterfly is not yet a covered species, we are including this MSCP in the proposed critical habitat designation.

The Western Riverside Multiple Species Habitat Conservation Plan was initiated by the County of Riverside on October 8, 1998. The planning area encompasses 530,000 ha (1.3 million ac) and is proposed to include conservation measures for over 100 species, including the Quino checkerspot butterfly. Currently, 12 cities within the western portion of Riverside County have endorsed, and will participate, in the planning efforts. A draft Multiple Species Habitat Conservation Plan is proposed to be released for public review in late 2001. Since this HCP is not yet completed, we are including it in the proposed critical habitat designation.

Habitat conservation plans currently under development or being amended are intended to provide for protection and management of habitat areas essential for the conservation of the Quino checkerspot butterfly, while directing development and habitat modification to nonessential areas of lower habitat value. The HCP development process provides an opportunity for more intensive data collection and analysis regarding the use of particular habitat areas by the Quino checkerspot butterfly. The process also enables us to conduct detailed evaluations of the importance of such lands to the long-term survival of the species in the context of constructing a biologically configured system of interlinked habitat blocks. We fully expect that HCPs undertaken by local jurisdictions (e.g., counties, cities) and other parties will identify, protect, and provide appropriate management for those specific lands within the boundaries of the plans that are essential for the long-term conservation of the species. We believe and fully expect that our analyses of proposed HCPs and proposed projects under section 7 will show that covered activities carried out in accordance with the provisions of the HCPs and biological opinions will not result in destruction or adverse modification of critical habitat.

We will provide technical assistance and work closely with applicants throughout the development of future HCPs to identify lands essential for the long-term conservation of the Quino checkerspot butterfly, and appropriate conservation and management actions. Several HCP efforts are currently under way that address listed and nonlisted species in areas within the range of the Quino checkerspot butterfly, and in areas we propose as critical habitat. The take minimization and mitigation measures provided under these HCPs would be expected to protect the essential habitat lands proposed as critical habitat in this rule and provide for the conservation of the covered species. If an HCP that addresses the Quino checkerspot butterfly is ultimately approved, we will reassess the critical habitat boundaries in light of the HCP. We will seek to undertake this review when the HCP is approved, but funding constraints may influence the timing of such a review.

Should additional information become available that changes our analysis of the benefits of excluding any of these (or other) areas compared to the benefits of including them in the critical habitat designation, we may revise the proposed designation accordingly. Similarly, if new information indicates any of these areas should not be included in the proposed critical habitat designation because they no longer meet the definition of critical habitat, we may revise the proposal. If, consistent with available funding and program priorities, we elect to revise this designation, we will do so through a subsequent rulemaking.

If you have questions regarding whether specific activities will constitute adverse modification of critical habitat, contact the Field Supervisor, Carlsbad Fish and Wildlife Offices (see **ADDRESSES** section). Requests for copies of the regulations on listed wildlife, and inquiries about prohibitions and permits may be addressed to the U.S. Fish and Wildlife Service, Branch of Endangered Species, 911 N.E. 11th Avenue, Portland, Oregon

97232 (telephone 503/231–2063; facsimile 503/231–6243).

Economic Analysis

Section 4(b)(2) of the Act requires us to designate critical habitat on the basis of the best scientific and commercial data available, and to consider the economic and other relevant impacts of designating a particular area as critical habitat. We may exclude areas from critical habitat upon a determination that the benefits of such exclusions outweigh the benefits of specifying such areas as critical habitat. We cannot exclude such areas from critical habitat when such exclusion will result in the extinction of the species. We will conduct an economic analysis for this proposal prior to a final determination. When completed, we will announce the availability of the draft economic analysis with a notice in the **Federal Register**, and we will open a 30-day comment period on the draft economic analysis and proposed rule at that time.

Public Comments Solicited

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

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

(2) Specific information on the amount and distribution of the Quino checkerspot butterfly habitat, and what habitat is essential to the conservation of the subspecies and why;

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

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

(5) Economic and other values associated with designating critical habitat for the Quino checkerspot butterfly, such as those derived from non-consumptive uses (e.g., hiking, camping, bird-watching, equestrian trails, enhanced watershed protection, improved air quality, increased soil retention, ''existence values,'' and reductions in administrative costs).

(6) 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 you wish to comment, you may submit your comments and materials concerning this proposal by any one of several methods (see **ADDRESSES**). 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: 1018–AH03'' and your name and return e-mail address in your e-mail message. Please note that the e-mail address will be closed out at the termination of the public comment period. If you do not receive confirmation from the system that we have received your message, contact us directly by calling our Carlsbad Fish and Wildlife Office at phone number 760/431–9440.

Our practice is to make comments, including names and home addresses of respondents, available for public review during regular business hours. Individual respondents may request that we withhold their home address, which we will honor to the extent allowable by law. In some circumstances, we would withhold from the rulemaking record a respondent's identity, as allowable by law. If you wish us to withhold your name and/or address, you must state this 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 above address.

Peer Review

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

We will consider all comments and data received during the 60-day comment period on this proposed rule during preparation of a final rulemaking. Accordingly, the final decision may differ from this proposal.

Public Hearings

The Act provides for one or more public hearings on this proposal, if requested. Requests for public hearings must be made at least 15 days prior to the close of the public comment period. We will schedule public hearings on this proposal, if any are requested, and announce the dates, times, and places of those hearings in the **Federal Register** and local newspapers at least 15 days prior to the first hearing.

Clarity of the Rule

Executive Order 12866 requires each agency to write regulations/notices that are easy to understand. We invite your comments on how to make this notice easier to understand including answers to questions such as the following: (1) Are the requirements in the notice clearly stated? (2) Does the notice contain technical language or jargon that interferes with the clarity? (3) Does the format of the notice (grouping and order of sections, use of headings, paragraphing, etc.) aid or reduce its clarity? (4) Is the description of the notice in the **SUPPLEMENTARY INFORMATION** section of the preamble helpful in understanding the notice? What else could we do to make the notice easier to understand?

Send a copy of any comments that concern how we could make this notice easier to understand to the Field Supervisor, Carlsbad Fish and Wildlife Office (see **ADDRESSES**).

Required Determinations

Regulatory Planning and Review

In accordance with Executive Order 12866, this document is a significant rule and was reviewed by the Office of Management and Budget (OMB). We are preparing a draft analysis of this proposed action, which will be available for public comment, to determine the economic consequences of designating the specific areas as critical habitat. The availability of the draft economic analysis will be announced in the **Federal Register** and in local newspapers so that it is available for public review and comments.

(a) This rule is not expected to have an annual economic effect of $100 million or more or adversely affect an

economic sector, productivity, jobs, the environment, or other units of government. The Quino checkerspot butterfly was listed as an endangered subspecies in 1997. In fiscal years 1997 through 2000, we have conducted, or in the process of conducting, an estimated 11 formal section 7 consultations with other Federal agencies to ensure that their actions would not jeopardize the continued existence of the Quino checkerspot butterfly. We have also issued section 10(a)(1)(B) incidental take permits for approximately 12 projects in areas where the subspecies occurs in which the project proponents have prepared either individual HCPs or were signatories to the AD161 HCP in western Riverside County.

Under the Act, critical habitat may not be adversely modified by a Federal agency action; the Act does not impose any restrictions through critical habitat designation on non-Federal persons unless they are conducting activities funded or otherwise sponsored, authorized, or permitted by a Federal agency. Section 7 requires Federal agencies to ensure that they do not jeopardize the continued existence of the species. Based upon our experience with the subspecies and its needs, we conclude that any Federal action or authorized action that could potentially cause adverse modification of the proposed critical habitat would currently be considered as ''jeopardy'' under the Act (see Table 2).

Accordingly, the designation of occupied critical habitat areas for the Quino checkerspot butterfly are not anticipated to have any incremental impacts on what actions may or may not be conducted by Federal agencies or non-Federal persons that receive Federal authorization or funding. Non-Federal persons that do not have a Federal ''sponsorship'' of their actions are not restricted by the designation of critical habitat (however, they continue to be bound by the provisions of the Act concerning ''take'' of the species). Designation of critical habitat in areas of unknown occupancy may have some effect if we do not consult in these areas now, and we will investigate this possibility through our economic analysis.

(b) This rule is not expected to create inconsistencies with other agencies' actions. As discussed above, Federal agencies have been required to ensure that their actions do not jeopardize the continued existence of the Quino checkerspot butterfly since the listing in 1997. The prohibition against adverse modification of critical habitat is expected to impose few, if any, additional restrictions to those that currently exist. Because of the potential for impacts on other Federal agency activities for lands not known to be occupied, we will review this action for any inconsistencies with other Federal agency actions.

(c) This rule is not expected to materially affect entitlements, grants, user fees, loan programs, or the rights and obligations of their recipients. Federal agencies are currently required to ensure that their activities do not jeopardize the continued existence of the subspecies, and as discussed above we do not anticipate that the adverse modification prohibition (resulting from critical habitat designation) will have any significant incremental effects.

(d) This rule is not expected to raise novel legal or policy issues. This proposed determination follows the requirements for determining critical habitat contained in the Act.

TABLE 2.—IMPACTS OF QUINO CHECKERSPOT BUTTERFLY LISTING AND CRITICAL HABITAT DESIGNATION

Categories of activities	Activities potentially affected by species listing only [1]	Additional activities potentially affected by critical habitat designation [2]
Federal Activities Potentially Affected [3].	Activities the Federal Government carries out such as removing, thinning, or destroying Quino checkerspot butterfly habitat (as defined in the primary constituent elements discussion), whether by burning or mechanical, chemical, or other means (e.g., woodcutting, grubbing, grading, overgrazing, construction, road building, mining, herbicide application, etc.) and appreciably decreasing habitat value or quality through indirect effects (e.g., edge effects, invasion of exotic plants or animals, or fragmentation.	None.
Private Activities Potentially Affected [4].	Activities such as removing, thinning, or destroying Quino checkerspot butterfly habitat (as defined in the primary constituent elements discussion), whether by burning or mechanical, chemical, or other means (e.g., woodcutting, grubbing, grading, overgrazing, construction, road building, mining, herbicide application, etc.) and appreciably decreasing habitat value or quality through indirect effects (e.g., edge effects, invasion of exotic plants or animals, or fragmentation that require a Federal action (permit, authorization, or funding).	None.

[1] This column represents the activities potentially affected by listing the Quino checkerspot butterfly as an endangered subspecies (January 16, 1997, 62 FR 2313) under the Endangered Species Act.
[2] This column represents the activities potentially affected by the critical habitat designation in addition to those activities potentially affected by listing the subspecies.
[3] Activities initiated by a Federal agency.
[4] Activities initiated by a private entity that may need Federal authorization or funding.

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

In the economic analysis, we will determine if designation of critical habitat will have a significant effect on a substantial number of small entities. As discussed under Regulatory Planning and Review above, and in this proposed determination, this rule is expected to result in few, if any, restrictions in addition to those currently in existence. As indicated on Table 1 (see Critical Habitat Designation section), we proposed property owned by Federal, State, Tribal, and local governments, and private property.

Within these areas, the types of Federal actions or authorized activities that we have identified as potential concerns are:

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

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

(3) Regulation of grazing, mining, and recreation by the BLM, Forest Service, or Service;

(4) Road construction and maintenance, right of way designation, and regulation of agricultural activities;

(5) Regulation of airport improvement activities by the Federal Aviation Administration jurisdiction;

(6) Construction of roads and fences along the international border with Mexico, and associated immigration enforcement activities by the Immigration and Naturalization Service;

(7) Hazard mitigation and post-disaster repairs funded by the Federal Emergency Management Agency;

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

(9) Activities funded by the U.S. Environmental Protection Agency, Department of Energy, or any other Federal agency.

Many of the activities sponsored by Federal agencies within critical habitat areas are carried out by small entities (as defined by the Regulatory Flexibility Act) through contract, grant, permit, or other Federal authorization. As discussed above, these actions are currently required to comply with the listing protections of the Act, and the designation of critical habitat is not anticipated to have any additional effects on these activities.

For actions on non-Federal property that do not have a Federal connection (such as funding or authorization), the current restrictions concerning take of the subspecies remain in effect, and this proposed determination will add no further restrictions.

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

In the economic analysis, we will determine whether designation of critical habitat would cause (a) any effect on the economy of $100 million or more, (b) any increases in costs or prices for consumers, individual industries, Federal, State, or local government agencies, or geographic regions in the economic analysis, or (c) any significant adverse effects on competition, employment, investment, productivity, innovation, or the ability of U.S.-based enterprises to compete with foreign-based enterprises.

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

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

(a) This rule, as proposed, will not ''significantly or uniquely'' affect small governments. A Small Government Agency Plan is not required. Small governments will be affected only to the extent that any programs having Federal funds, permits or other authorized activities must ensure that their actions will not adversely affect the critical habitat. However, as discussed above, these actions are currently subject to equivalent restrictions through the listing protections of the subspecies, and no further restrictions are anticipated.

(b) This rule, as proposed, will not produce a Federal mandate of $100 million or greater in any year, that is, it is not a ''significant regulatory action'' under the Unfunded Mandates Reform Act. The designation of critical habitat imposes no obligations on State or local governments.

Takings

In accordance with Executive Order 12630, the rule does not have significant takings implications. A takings implication assessment is not required. As discussed above, the designation of critical habitat affects only Federal agency actions. The rule will not increase or decrease the current restrictions on private property concerning take of the Quino checkerspot butterfly. Due to current public knowledge of the subspecies' protection, the prohibition against take of the subspecies both within and outside of the proposed areas, and the fact that critical habitat provides no incremental restrictions, we do not anticipate that property values will be affected by the critical habitat designation. While real estate market values may temporarily decline following designation, due to the perception that critical habitat designation may impose additional regulatory burdens on land use, we expect any such impacts to be short term. Additionally, critical habitat designation does not preclude development of HCPs and issuance of incidental take permits. Owners of areas that are included in the designated critical habitat will continue to have the opportunity to utilize their property in ways consistent with the survival and recovery of the Quino checkerspot butterfly.

Federalism

In accordance with Executive Order 13132, the rule does not have significant Federalism effects. A Federalism assessment is not required. In keeping with Department of the Interior and Department of Commerce policy, we requested information from, and coordinated development of this critical habitat designation, with appropriate State resource agencies in California. The designation of critical habitat within the geographic range occupied by the Quino checkerspot butterfly imposes no additional restrictions to those currently in place, and therefore, has little incremental impact on State and local governments and their activities. The designation may have some benefit to these governments in that the areas essential to the conservation of the subspecies are more clearly defined, and the primary constituent elements of the habitat necessary to the survival of the subspecies are specifically identified. While this definition and identification does not alter where and what federally sponsored activities may occur, it may assist these local governments in long range planning (rather than waiting for case by case section 7 consultations to occur).

Civil Justice Reform

In accordance with Executive Order 12988, the Office of the Solicitor has determined that the rule does not unduly burden the judicial system and meets the requirements of sections 3(a) and 3(b)(2) of the Order. We are proposing to designate critical habitat in accordance with the provisions of the Endangered Species Act. The rule uses standard property descriptions and identifies the primary constituent elements within the designated areas to assist the public in understanding the habitat needs of the Quino checkerspot butterfly.

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

This rule references permits for HCPs which contain information collection activity. The Service has OMB approval for the collection under OMB Control Number 1018–0094 which expires on February 28, 2001. The Service may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number.

National Environmental Policy Act

We determined we do not need to prepare an Environmental Assessment and/or an Environmental Impact Statement as defined by the National Environmental Policy Act of 1969 in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act, as amended. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244). This proposed determination does not constitute a major Federal action significantly affecting the quality of the human environment.

Government-to-Government Relationship With Tribes

In accordance with the President's memorandum of April 29, 1994, ''Government-to-Government Relations with Native American Tribal Governments'' (59 FR 22951), Executive Order 13175, and 512 DM 2, we are coordinating with federally recognized Tribes on a Government-to-Government basis. We determined that 4,405 ha (10,890 ac) within the Cahuilla Band of Mission Indians Reservation in western Riverside County are essential for the conservation of the Quino checkerspot butterfly because they are directly adjacent to Quino checkerspot butterfly populations within the Silverado habitat complex, and provide essential dispersal and metapopulation habitat between core populations. Therefore, we are considering designating critical habitat for the Quino checkerspot butterfly on Tribal lands. We may exclude areas from critical habitat upon a determination that the benefits of such exclusions outweigh the benefits of specifying such areas as critical habitat according to section(4)(b)(2) of the Act. However, we cannot exclude such areas from critical habitat when such exclusions will result in the extinction of the subspecies.

Relationship to Mexico

We are not aware of any existing regulatory mechanism in Mexico that would protect the Quino checkerspot butterfly or its habitat. Although Mexico has laws that could provide protection for rare species, they are not easily enforced. At this time, Mexico enforces no specific protections for this subspecies, or its habitat. If specific protections were available and enforceable in Mexico, the portion of the range in Mexico alone, in isolation, would not be adequate to ensure the long-term conservation of this subspecies. Furthermore, according to CFR 402.12(h) ''Critical habitat shall not be designated with foreign countries or in other areas outside of the United States jurisdiction.''

References Cited

A complete list of all references cited in this proposed rule is available upon request from the Carlsbad Fish and Wildlife Office (see **ADDRESSES** section).

Authors

The primary authors of this proposed rule are the staff of the Carlsbad Fish and Wildlife Office (see **ADDRESSES** section).

List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and record keeping requirements, Transportation.

Proposed Regulation Promulgation

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

PART 17—[AMENDED]

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

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

2. In § 17.11(h) revise the entry for ''Butterfly, Quino checkerspot''' under ''INSECTS'' to read as follows:

§ 17.11 Endangered and threatened wildlife.

* * * * *

(h) * * *

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rates
Common name	Scientific name						
*	* * *	*	*	*		*	
INSECTS							
*	* * *	*	*	*		*	
Butterfly, Quino checkerspot	*Euphydryas editha quino*	U.S.A. (CA), Mexico..	.....do.....	E	604	17.95(i)	NA
*	* * *	*	*	*		*	

3. Amend § 17.95(i) by adding critical habitat for the Quino checkerspot butterfly (*Euphydras editha quino*) in the same alphabetical order as this subspecies occurs in § 17.11(h).

§ 17.95 Critical habitat—fish and wildlife.

* * * * *

(i) *Insects.* * * *

Quino Checkerspot Butterfly (*Euphydras editha quino*)

1. Critical habitat units are depicted for Riverside and San Diego Counties, California, on the maps below.

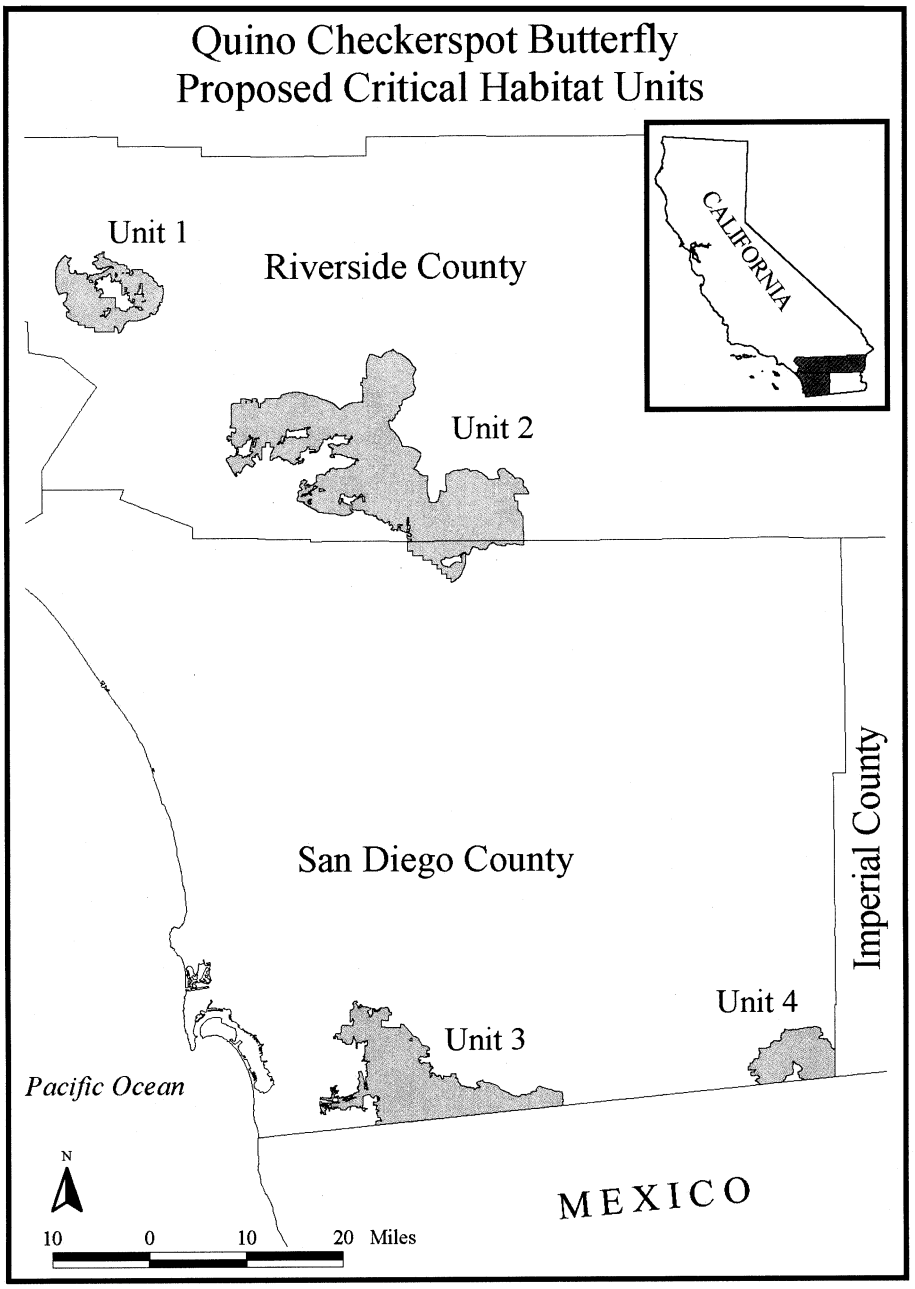
2. The primary constituent elements for the Quino checkerspot butterfly are those habitat components that are essential for the primary biological needs of larval diapause, feeding, and pupation, and adult oviposition (egg-laying), nectaring, roosting and basking, dispersal, genetic exchange, and shelter. Primary constituent elements occur in undeveloped areas that support various types of open woody canopy plant communities. They include, but are not limited to, plant communities in their natural state, or those that have been recently disturbed (e.g., by fire or grubbing) that provide populations of host plant and nectar sources for the Quino checkerspot butterfly. Habitat patch suitability is determined primarily by larval host plant density, topographic diversity, nectar resource availability, and climatic conditions (Osborne and Redak 2000; Singer 1972; Murphy 1982; Weiss et al. 1988; Murphy *et al.* 1990). The primary and secondary host plants that have been documented for the butterfly include *Plantago erecta* (dwarf plantain), *Plantago patagonica* (wooly plantain), *Castilleja exserta* (owl's clover), and *Cordylanthus rigidus* (bird's beak), with dwarf plantain being the most common. Dwarf plantain is an annual herb found in coastal sage scrub, open chaparral, grassland and similar plant communities. It is often associated with cryptogamic crusts, and fine-textured clay soils derived from gabbro and basalt. Some local populations or metapopulations of the Quino checkerspot butterfly may be dependent on secondary hosts for persistence. Typically, prediapause secondary hosts are important when the primary hosts undergo senescence before larvae can respond by entering diapause (Singer 1972, Ehrlich *et al.* 1975). Adult Quino checkerspot butterflies use a variety of plants for adult nectar feeding. *Euphydryas editha* prefers flowers with a platform-like surface on which they can remain upright while feeding (D. Murphy, G. Pratt, and M. Singer, pers. comm., 2000). The butterflies frequently

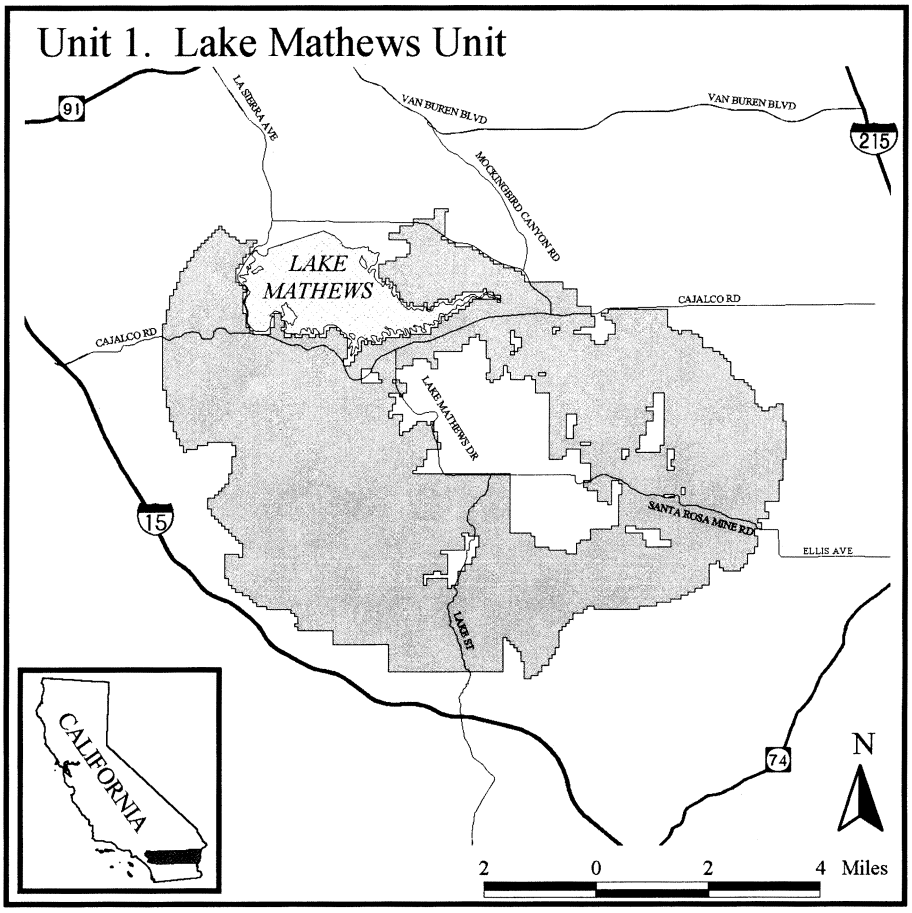
take nectar from *Lomatium* spp., *Muilla* spp., *Achillea millefolium* (yarrow), *Amsinckia* spp. (fiddleneck), *Lasthenia* spp. (goldfields), *Plagiobothrys* spp. (popcornflower), *Cryptantha* spp., *Gilia* spp., *Eriogonum fasiculatum* (California buckwheat), *Allium* spp. (onion), and *Eriodictyon* spp. (yerba santa) (D. Murphy and G. Pratt, pers. comm., 2000).

3. Critical habitat does not include non-Federal lands covered by a legally operative incidental take permit for which the Quino checkerspot butterfly is a covered species and has take authorization, issued under section 10(a)(1)(B) of the Act on or before [date of **Federal Register** publication of final rule].

4. Existing features and structures within the boundaries of mapped critical habitat units, such as buildings, paved or improved roads, aqueducts, railroads, airports, other paved areas, lawns, large areas of closed canopy chaparral, agricultural fields, and other urban landscaped areas are not constituent elements. Federal actions limited to those areas, therefore, would not trigger a section 7 consultation, unless they affect the subspecies and/or primary constituent elements in adjacent critical habitat.

BILLING CODE 4310–55–P


Quino Checkerspot Butterfly
Proposed Critical Habitat Units
CALIFORNIA
Unit 1
Riverside County
Unit 2
San Diego County
Imperial County
Unit 4
Unit 3
Pacific Ocean
N
MEXICO
10 0 10 20 Miles



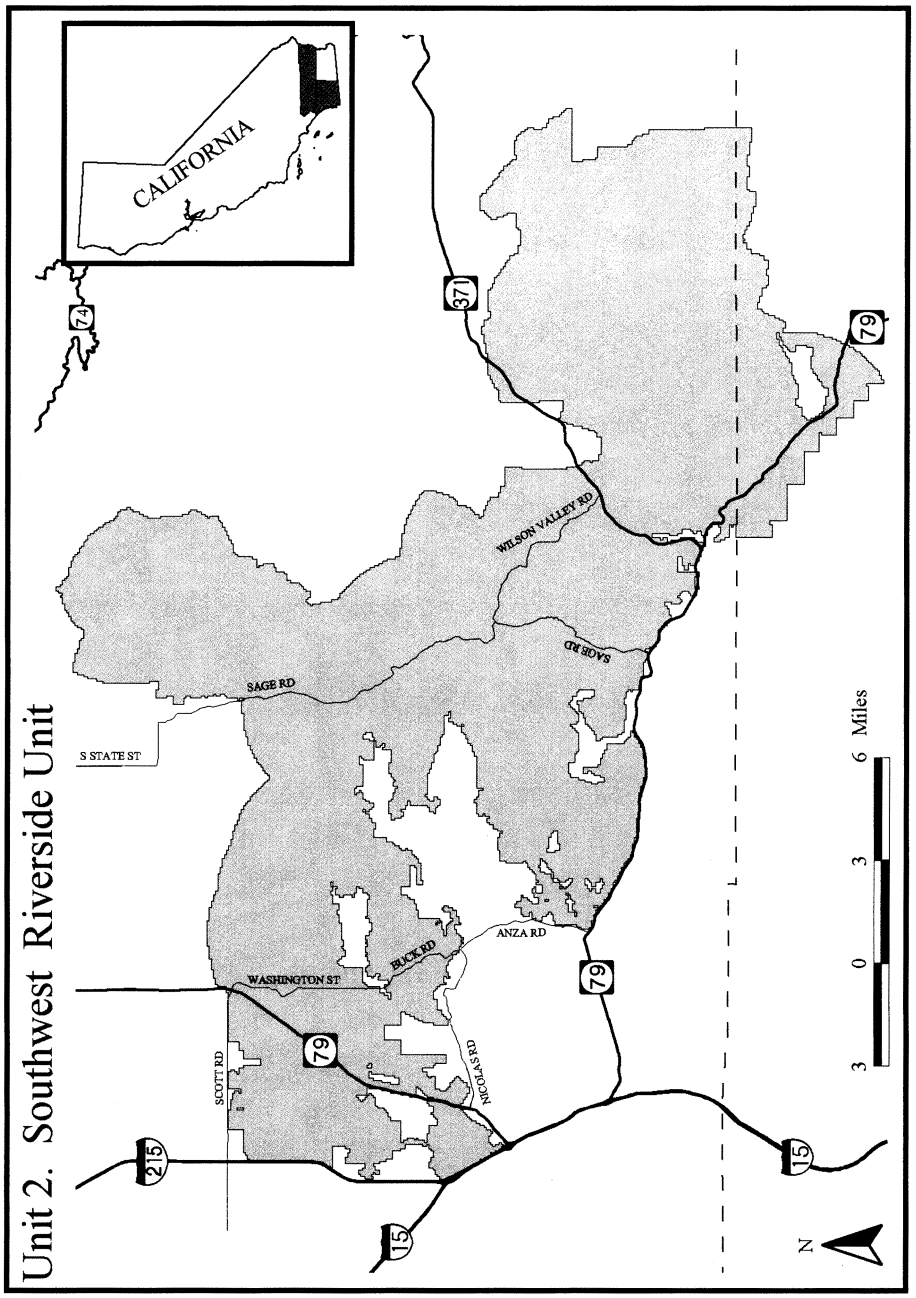
BILLING CODE 4310–55–C

Map Unit 1: Lake Mathews, Riverside County, California. From USGS 1:24,000 quadrangle maps Alberhill, Lake Elsinore, Lake Mathews, and Steele Peak, lands bounded by the following Universal Transverse Mercator (UTM) zone 11, North American Datum of 1927 (NAD27) coordinates (E, N): 462800, 3746700; 463200, 3746700; 463200, 3746600; 463100, 3746600; 463100, 3745900; 463000, 3745900; 463000, 3745800; 463200, 3745800; 463200, 3745700; 463400, 3745700; 463400, 3745600; 463900, 3745600; 463900, 3745500; 464100, 3745500; 464100, 3745400; 464200, 3745400; 464200, 3745300; 464400, 3745300; 464400, 3745200; 464500, 3745200; 464500, 3745100; 464800, 3745100; 464800, 3745000; 465100, 3745000; 465100, 3744900; 465300, 3744900; 465300, 3744800; 465400, 3744800; 465400, 3744600; 466500, 3744600; 466500, 3744400; 466900, 3744400; 466900, 3743900; 467300, 3743900; 467300, 3743600; 467400, 3743600; 467400, 3743300; 467000, 3743300; 467000, 3743200; 466800, 3743200; 466800, 3743100; 467300, 3743100; 467300, 3742900; 467400, 3742900; 467400, 3742800; 467700, 3742800; 467700, 3742900; 467800, 3742900; 467800, 3743100; 468000, 3743100; 468000, 3743400; 467900, 3743400; 467900, 3743500; 467700, 3743500; 467700, 3743600; 467600, 3743600; 467600, 3743700; 467800, 3743700; 467800, 3743800; 469500, 3743800; 469500, 3743300; 469600, 3743300; 469600, 3743200; 469800, 3743200; 469800, 3743100; 469900, 3743100; 469900, 3743200; 470200, 3743200; 470200, 3743100; 470400, 3743100; 470400, 3743000; 470500, 3743000; 470500, 3742700; 470800, 3742700; 470800, 3742600; 471000, 3742600; 471000, 3742500; 471100, 3742500; 471100, 3742400; 471200, 3742400; 471200, 3742300; 471300, 3742300; 471300, 3741900; 471400, 3741900; 471400, 3741800; 471700, 3741800; 471700, 3741700; 471800, 3741700; 471800, 3741600; 471900, 3741600; 471900, 3741500; 472000, 3741500; 472000, 3741100; 472100, 3741100; 472100, 3741000; 472200, 3741000; 472200, 3740900; 472400, 3740900; 472400, 3741000; 472600, 3741000; 472600, 3741100; 472800, 3741100; 472800, 3740600; 472900, 3740600; 472900, 3739500; 472800, 3739500; 472800, 3738900; 472700, 3738900; 472700, 3738300; 472300, 3738300; 472300, 3738000; 472400, 3738000; 472400, 3737800; 472100, 3737800; 472100, 3737700; 472200, 3737700; 472200, 3737500; 472000, 3737500; 472000, 3737300; 472100, 3737300; 472100, 3737000; 472000, 3737000; 472000, 3736800; 471800, 3736800; 471800, 3736500; 471700, 3736500; 471700, 3736400; 471600, 3736400; 471600, 3736300; 471100, 3736300; 471100, 3736400; 471000, 3736400; 471000, 3736600; 470900, 3736600; 470900, 3736500; 470700, 3736500; 470700, 3735900; 470500, 3735900; 470500, 3735800; 470300, 3735800; 470300, 3735700; 470100, 3735700; 470100, 3735600; 469900, 3735600; 469900, 3735500; 469600, 3735500; 469600, 3735400; 469200, 3735400; 469200, 3735300; 468700, 3735300; 468700, 3735200; 467400, 3735200; 467400, 3735300; 467200, 3735300; 467200, 3735200; 467100, 3735200; 467100, 3735100; 466800, 3735100; 466800, 3734900; 466700, 3734900; 466700, 3734800; 466600, 3734800; 466600, 3734700; 466500, 3734700; 466500, 3734600; 466400, 3734600; 466400, 3734100; 466300, 3734100; 466300, 3733900; 466200, 3733900; 466200, 3733800; 466100, 3733800; 466100, 3733600; 465900, 3733600; 465900, 3733400; 465800, 3733400; 465800, 3733300; 465600, 3733300; 465600, 3733200; 465400, 3733200; 465400, 3733700; 465300, 3733700; 465300, 3734000; 465200, 3734000; 465200, 3734100; 465100, 3734100; 465100, 3734200; 465000, 3734200; 465000, 3734300; 464900, 3734300; 464900, 3734400; 464800, 3734400; 464800, 3733400; 461500, 3733400; 461500, 3734200; 459900, 3734200; 459900, 3734600; 458900, 3734600; 458900, 3734700; 458800, 3734700; 458800, 3734800; 458900, 3734800; 458900, 3735000; 458800, 3735000; 458800, 3735100; 458700, 3735100; 458700, 3735200; 458000, 3735200; 458000, 3735300; 457700, 3735300; 457700, 3735400; 457600, 3735400; 457600, 3735500; 457500, 3735500; 457500, 3735600; 457300, 3735600; 457300, 3735700; 457100, 3735700; 457100, 3735800; 457000, 3735800; 457000, 3735900; 456900, 3735900; 456900, 3736100; 456800, 3736100; 456800, 3736800; 457200, 3736800; 457200, 3736700; 457300, 3736700; 457300, 3737100; 457200, 3737100; 457200, 3737200; 457100, 3737200; 457100, 3737300; 457000, 3737300; 457000, 3737400; 456900, 3737400; 456900, 3737500; 456800, 3737500; 456800, 3737600; 456700, 3737600; 456700, 3737700; 456600, 3737700; 456600, 3737800; 456500, 3737800; 456500, 3737900; 456400, 3737900; 456400, 3738100; 456300, 3738100; 456300, 3738400; 456500, 3738400; 456500, 3738500; 456600, 3738500; 456600, 3738600; 456700, 3738600; 456700, 3738700; 456800, 3738700; 456800, 3738800; 456900, 3738800; 456900, 3739100; 457000, 3739100; 457000, 3739600; 457100, 3739600; 457100, 3739900; 457000, 3739900; 457000, 3740000; 456300, 3740000; 456300, 3739900; 456000, 3739900; 456000, 3739800; 455700, 3739800; 455700, 3739700; 455600, 3739700; 455600, 3739900; 455500, 3739900; 455500, 3740100; 455400, 3740100; 455400, 3740300; 455300, 3740300; 455300, 3740600; 455200, 3740600; 455200, 3741000; 455100, 3741000; 455100, 3741500; 455000, 3741500; 455000, 3743400; 455100, 3743400; 455100, 3743800; 455200, 3743800; 455200, 3744200; 455300, 3744200; 455300, 3744400; 455400, 3744400; 455400, 3744600; 455500, 3744600; 455500, 3744900; 455600, 3744900; 455600, 3745000; 455700, 3745000; 455700, 3745200; 455800, 3745200; 455800, 3745300; 455900, 3745300; 455900, 3745500; 456000, 3745500; 456000, 3745600; 456100, 3745600; 456100, 3745700; 456200, 3745700; 456200, 3745800; 456300, 3745800; 456300, 3745900; 456400, 3745900; 456400, 3746000; 456500, 3746000; 456500, 3746100; 456600, 3746100; 456600, 3746200; 456700, 3746200; 456700, 3746100; 456800, 3746100; 456800, 3746000; 456900, 3746000; 456900, 3745900; 457100, 3745900; 457100, 3745800; 457200, 3745800; 457200, 3745700; 457400, 3745700; 457400, 3745800; 457700, 3745800; 457700, 3745700; 457600, 3745700; 457600, 3745600; 457500, 3745600; 457500, 3745400; 457400, 3745400; 457400, 3745300; 457300, 3745300; 457300, 3745100; 457200, 3745100; 457200, 3745000; 457100, 3745000; 457100, 3744600; 457200, 3744600; 457200, 3744500; 457300, 3744500; 457300, 3744400; 457400, 3744400; 457400, 3744300; 457300, 3744300; 457300, 3743700; 457400, 3743700; 457400, 3743300; 457500, 3743300; 457500, 3743200; 457600, 3743200; 457600, 3743100; 458100, 3743100; 458100, 3743300; 458200, 3743300; 458200, 3743700; 458400, 3743700; 458400, 3743500; 458500, 3743500; 458500, 3743300; 458400, 3743300; 458400, 3743200; 458500, 3743200; 458500, 3743000; 458700, 3743000; 458700, 3743100; 458800, 3743100; 458800, 3743000; 459000, 3743000; 459000, 3743100; 459200, 3743100; 459200, 3743000; 459400, 3743000; 459400, 3743100; 459500, 3743100; 459500, 3743000; 459700, 3743000; 459700, 3743200; 459800, 3743200; 459800, 3743300; 460000, 3743300; 460000, 3743200; 460100, 3743200; 460100, 3743100; 460200, 3743100; 460200, 3743000; 460300, 3743000; 460300,

3742400; 460200, 3742400; 460200, 3742200; 460400, 3742200; 460400, 3742300; 460500, 3742300; 460500, 3742500; 460600, 3742500; 460600, 3742600; 460700, 3742600; 460700, 3742900; 460800, 3742900; 460800, 3742800; 460900, 3742800; 460900, 3742900; 461000, 3742900; 461000, 3742800; 461300, 3742800; 461300, 3742900; 461400, 3742900; 461400, 3743000; 461800, 3743000; 461800, 3743100; 461900, 3743100; 461900, 3743000; 462100, 3743000; 462100, 3743100; 462700, 3743100; 462700, 3743300; 462900, 3743300; 462900, 3743400; 463000, 3743400; 463000, 3743600; 463100, 3743600; 463100, 3743500; 463200, 3743500; 463200, 3743600; 463300, 3743600; 463300, 3743700; 463500, 3743700; 463500, 3743800; 463700, 3743800; 463700, 3743900; 463800, 3743900; 463800, 3744000; 463900, 3744000; 463900, 3744100; 464600, 3744100; 464600, 3744000; 464700, 3744000; 464700, 3744200; 464500, 3744200; 464500, 3744300; 464300, 3744300; 464300, 3744400; 464200, 3744400; 464200, 3744300; 463600, 3744300; 463600, 3744200; 463400, 3744200; 463400, 3744100; 463300, 3744100; 463300, 3744000; 463200, 3744000; 463200, 3744100; 462900, 3744100; 462900, 3744000; 462800, 3744000; 462800, 3743900; 462700, 3743900; 462700, 3743800; 462600, 3743800; 462600, 3744000; 462500, 3744000; 462500, 3743900; 462200, 3743900; 462200, 3744000; 462100, 3744000; 462100, 3743900; 462000, 3743900; 462000, 3744000; 461900, 3744000; 461900, 3744100; 461800, 3744100; 461800, 3744300; 461700, 3744300; 461700, 3744500; 461600, 3744500; 461600, 3744600; 461500, 3744600; 461500, 3744700; 461400, 3744700; 461400, 3744600; 461300, 3744600; 461300, 3744700; 461200, 3744700; 461200, 3745100; 461400, 3745100; 461400, 3745200; 461700, 3745200; 461700, 3745300; 462000, 3745300; 462000, 3745400; 462100, 3745400; 462100, 3745700; 462000, 3745700; 462000, 3745800; 461500, 3745800; 461500, 3746000; 461800, 3746000; 461800, 3746200; 462200, 3746200; 462200, 3746400; 462800, 3746400; 462800, 3746700; excluding land bounded by 465100, 3742600; 465000, 3742600; 465000, 3742500; 465100, 3742500; 465100, 3742600; land bounded by 461700, 3741800; 461800, 3741800; 461800, 3741700; 462000, 3741700; 462000, 3741400; 461900, 3741400; 461900, 3741300; 461800, 3741300; 461800, 3741400; 461500, 3741400; 461500, 3741300; 461700, 3741300; 461700, 3741100; 461600, 3741100; 461600, 3740900; 461500, 3740900; 461500, 3740700; 461600, 3740700; 461600, 3740800; 461900, 3740800; 461900, 3740600; 461800, 3740600; 461800, 3740200; 461900, 3740200; 461900, 3740300; 462100, 3740300; 462100, 3740400; 462200, 3740400; 462200, 3740500; 462300, 3740500; 462300, 3740600; 462600, 3740600; 462600, 3740500; 462700, 3740500; 462700, 3740600; 462800, 3740600; 462800, 3740300; 462900, 3740300; 462900, 3740000; 463000, 3740000; 463000, 3739800; 462600, 3739800; 462600, 3739500; 462500, 3739500; 462500, 3739300; 462300, 3739300; 462300, 3739200; 462200, 3739200; 462200, 3739100; 465000, 3739100; 465000, 3737400; 465600, 3737400; 465600, 3737300; 465700, 3737300; 465700, 3737000; 466100, 3737000; 466100, 3736900; 466600, 3736900; 466600, 3736800; 466900, 3736800; 466900, 3737100; 467000, 3737100; 467000, 3737200; 467300, 3737200; 467300, 3737500; 467900, 3737500; 467900, 3737600; 468100, 3737600; 468100, 3738500; 468200, 3738500; 468200, 3738800; 468100, 3738800; 468100, 3738900; 467900, 3738900; 467900, 3738200; 467800, 3738200; 467800, 3738300; 467500, 3738300; 467500, 3738600; 467200, 3738600; 467200, 3738700; 467100, 3738700; 467100, 3738900; 467300, 3738900; 467300, 3739400; 467000, 3739400; 467000, 3739800; 466600, 3739800; 466600, 3739600; 466500, 3739600; 466500, 3739500; 466100, 3739500; 466100, 3741400; 465700, 3741400; 465700, 3741800; 465600, 3741800; 465600, 3741900; 465400, 3741900; 465400, 3741800; 465000, 3741800; 465000, 3742000; 464900, 3742000; 464900, 3742200; 464800, 3742200; 464800, 3741900; 464700, 3741900; 464700, 3741800; 464500, 3741800; 464500, 3741700; 464400, 3741700; 464400, 3741800; 464300, 3741800; 464300, 3742000; 464400, 3742000; 464400, 3742400; 464300, 3742400; 464300, 3742900; 464100, 3742900; 464100, 3743100; 464000, 3743100; 464000, 3743000; 463800, 3743000; 463800, 3742800; 463600, 3742800; 463600, 3742600; 462800, 3742600; 462800, 3742400; 462900, 3742400; 462900, 3742100; 462700, 3742100; 462700, 3742300; 462600, 3742300; 462600, 3742400; 462200, 3742400; 462200, 3742200; 461900, 3742200; 461900, 3742100; 461700, 3742100; 461700, 3741800; land bounded by 461700, 3741800; 461600, 3741800; 461600, 3741700; 461700, 3741700; 461700, 3741800; land bounded by 465100, 3742600; 465200, 3742600; 465200, 3742700; 465300, 3742700; 465300, 3743000; 465100, 3743000; 465100, 3743200; 465000, 3743200; 465000, 3742800; 465100, 3742800; 465100, 3742600; land bounded by 466200, 3743300; 466200, 3743100; 466300, 3743100; 466300, 3743200; 466400, 3743200; 466400, 3743300; 466200, 3743300; land bounded by 460700, 3742100; 460700, 3741700; 461300, 3741700; 461300, 3741800; 461200, 3741800; 461200, 3742000; 461000, 3742000; 461000, 3742100; 460700, 3742100; land bounded by 465800, 3742000; 465800, 3741900; 466000, 3741900; 466000, 3742000; 465800, 3742000; land bounded by 469100, 3741400; 469100, 3741000; 468900, 3741000; 468900, 3740900; 469100, 3740900; 469100, 3740600; 468900, 3740600; 468900, 3740200; 468700, 3740200; 468700, 3739800; 468600, 3739800; 468600, 3739700; 469300, 3739700; 469300, 3739900; 469400, 3739900; 469400, 3741400; 469100, 3741400; land bounded by 466600, 3740800; 466600, 3740100; 466800, 3740100; 466800, 3740500; 466900, 3740500; 466900, 3740800; 466600, 3740800; land bounded by 467000, 3740000; 467000, 3739900; 467300, 3739900; 467300, 3740000; 467000, 3740000; land bounded by 468200, 3739800; 468200, 3739500; 468300, 3739500; 468300, 3739600; 468400, 3739600; 468400, 3739800; 468200, 3739800; land bounded by 469500, 3739800; 469500, 3739200; 469700, 3739200; 469700, 3739300; 469600, 3739300; 469600, 3739500; 469700, 3739500; 469700, 3739800; 469500, 3739800; land bounded by 469900, 3738700; 469900, 3738500; 470000, 3738500; 470000, 3738700; 469900, 3738700; land bounded by 469400, 3738500; 469400, 3738400; 469700, 3738400; 469700, 3738500; 469400, 3738500; land bounded by 468300, 3737600; 468300, 3737400; 468800, 3737400; 468800, 3737200; 468900, 3737200; 468900, 3737000; 469600, 3737000; 469600, 3737200; 469300, 3737200; 469300, 3737500; 468600, 3737500; 468600, 3737600; 468300, 3737600; and land bounded by 463600, 3737400; 463600, 3737300; 463700, 3737300; 463700, 3736900; 463000, 3736900; 463000, 3736800; 463200, 3736800; 463200, 3736200; 463000, 3736200; 463000, 3736300; 462800, 3736300; 462800, 3736200; 462500, 3736200; 462500, 3735900; 462600, 3735900; 462600, 3736100; 463200, 3736100; 463200, 3735800; 463300, 3735800; 463300, 3735900; 463500, 3735900; 463500, 3736300; 463700, 3736300; 463700, 3736500; 463900, 3736500; 463900, 3736700; 464000, 3736700; 464000, 3737000;

464100, 3737000; 464100, 3737300;
463800, 3737300; 463800, 3737400;
463600, 3737400.

BILLING CODE 4310–55–P



Map Unit 2: Southwest Riverside, Riverside County, California. From USGS 1:24,000 quadrangle maps Romoland, Winchester, Hemet, Blackburn Canyon, Murrieta, Bachelor Mountain, Sage, Cahuilla Mountain, Anza, Pechanga, Vail Lake, Aguanga, Beauty Mountain, and Palomar Observatory, land bounded by the following UTM NAD27 coordinates (E, N): 495500, 3712300; 495500, 3712200; 495100, 3712200; 495100, 3712100; 494800, 3712100; 494800, 3712000; 495300, 3712000; 495300, 3711900; 495400, 3711900; 495400, 3711800; 495500, 3711800; 495500, 3711700; 495600, 3711700; 495600, 3711800; 495900, 3711800; 495900, 3712100; 496000, 3712100; 496000, 3712200; 496100, 3712200; 496100, 3712100; 496200, 3712100; 496200, 3711900; 496100, 3711900; 496100, 3711700; 496000, 3711700; 496000, 3711500; 495700, 3711500; 495700, 3711400; 495400, 3711400; 495400, 3711300; 495300, 3711300; 495300, 3711600; 495100, 3711600; 495100, 3711500; 494900, 3711500; 494900, 3711400; 494800, 3711400; 494800, 3711300; 494700, 3711300; 494700, 3711200; 494600, 3711200; 494600, 3711300; 494500, 3711300; 494500, 3711200; 494400, 3711200; 494400, 3711300; 494300, 3711300; 494300, 3711400; 494000, 3711400; 494000, 3711500; 493900, 3711500; 493900, 3711700; 493700, 3711700; 493700, 3711800; 493600, 3711800; 493600, 3711900; 493400, 3711900; 493400, 3712000; 493100, 3712000; 493100, 3711900; 492900, 3711900; 492900, 3711800; 492800, 3711800; 492800, 3712000; 492900, 3712000; 492900, 3712100; 492600, 3712100; 492600, 3712000; 492500, 3712000; 492500, 3712300; 492400, 3712300; 492400, 3712400; 492300, 3712400; 492300, 3712500; 492200, 3712500; 492200, 3712600; 491800, 3712600; 491800, 3712400; 491300, 3712400; 491300, 3712200; 491100, 3712200; 491100, 3712100; 491000, 3712100; 491000, 3712000; 490900, 3712000; 490900, 3711900; 490600, 3711900; 490600, 3712600; 490700, 3712600; 490700, 3713100; 490800, 3713100; 490800, 3713300; 490900, 3713300; 490900, 3713500; 491000, 3713500; 491000, 3713700; 491100, 3713700; 491100, 3713900; 491200, 3713900; 491200, 3714100; 490600, 3714100; 490600, 3714900; 489900, 3714900; 489900, 3714100; 489200, 3714100; 489200, 3712000; 488800, 3712000; 488800, 3712500; 488700, 3712500; 488700, 3712600; 488600, 3712600; 488600, 3713100; 488400, 3713100; 488400, 3712900; 488200, 3712900; 488200, 3712800; 488100, 3712800; 488100, 3712700; 488200, 3712700; 488200, 3712500; 487600, 3712500; 487600, 3712300; 487500, 3712300; 487500, 3712000; 487600, 3712000; 487600, 3711900; 487700, 3711900; 487700, 3711800; 487900, 3711800; 487900, 3711700; 488000, 3711700; 488000, 3711600; 488100, 3711600; 488100, 3711500; 488200, 3711500; 488200, 3711400; 488100, 3711400; 488100, 3711300; 488000, 3711300; 488000, 3711200; 487900, 3711200; 487900, 3711000; 487700, 3711000; 487700, 3710900; 487400, 3710900; 487400, 3711000; 487200, 3711000; 487200, 3711100; 487100, 3711100; 487100, 3711200; 486900, 3711200; 486900, 3711300; 486600, 3711300; 486600, 3711200; 486500, 3711200; 486500, 3711100; 486400, 3711100; 486400, 3711000; 486300, 3711000; 486300, 3710900; 486200, 3710900; 486200, 3710800; 486100, 3710800; 486100, 3710600; 486000, 3710600; 486000, 3710400; 485900, 3710400; 485900, 3710200; 485800, 3710200; 485800, 3710100; 485700, 3710100; 485700, 3709900; 485600, 3709900; 485600, 3709800; 485500, 3709800; 485500, 3709900; 485400, 3709900; 485400, 3710000; 485100, 3710000; 485100, 3709900; 485000, 3709900; 485000, 3709800; 484900, 3709800; 484900, 3709700; 485000, 3709700; 485000, 3709500; 485100, 3709500; 485100, 3709400; 485000, 3709400; 485000, 3709300; 484900, 3709300; 484900, 3709400; 484800, 3709400; 484800, 3709500; 484700, 3709500; 484700, 3709700; 484600, 3709700; 484600, 3709900; 484500, 3709900; 484500, 3710000; 484400, 3710000; 484400, 3710200; 484300, 3710200; 484300, 3710400; 484200, 3710400; 484200, 3710500; 484100, 3710500; 484100, 3710700; 484000, 3710700; 484000, 3710900; 483900, 3710900; 483900, 3711000; 483800, 3711000; 483800, 3711200; 483700, 3711200; 483700, 3711400; 483600, 3711400; 483600, 3711600; 483500, 3711600; 483500, 3711700; 483400, 3711700; 483400, 3711900; 483300, 3711900; 483300, 3712200; 483400, 3712200; 483400, 3712300; 483500, 3712300; 483500, 3712400; 483600, 3712400; 483600, 3712500; 483800, 3712500; 483800, 3712600; 483900, 3712600; 483900, 3712800; 484200, 3712800; 484200, 3712700; 484400, 3712700; 484400, 3712600; 484700, 3712600; 484700, 3712700; 484800, 3712700; 484800, 3712800; 485000, 3712800; 485000, 3712900; 484900, 3712900; 484900, 3713100; 485000, 3713100; 485000, 3713900; 484800, 3713900; 484800, 3714100; 484700, 3714100; 484700, 3714500; 484300, 3714500; 484300, 3714800; 484200, 3714800; 484200, 3715100; 484100, 3715100; 484100, 3715400; 484000, 3715400; 484000, 3715300; 483800, 3715300; 483800, 3715100; 483600, 3715100; 483600, 3715300; 483700, 3715300; 483700, 3715400; 483600, 3715400; 483600, 3715500; 483500, 3715500; 483500, 3715400; 483400, 3715400; 483400, 3715800; 483500, 3715800; 483500, 3716000; 483600, 3716000; 483600, 3716100; 483800, 3716100; 483800, 3715900; 483900, 3715900; 483900, 3715800; 484100, 3715800; 484100, 3716700; 484400, 3716700; 484400, 3716600; 484600, 3716600; 484600, 3716500; 484800, 3716500; 484800, 3716700; 484900, 3716700; 484900, 3717300; 483900, 3717300; 483900, 3717400; 484000, 3717400; 484000, 3717500; 483900, 3717500; 483900, 3717600; 484000, 3717600; 484000, 3717800; 484100, 3717800; 484100, 3718300; 484200, 3718300; 484200, 3721200; 484300, 3721200; 484300, 3721300; 484500, 3721300; 484500, 3721400; 484600, 3721400; 484600, 3721500; 485700, 3721500; 485700, 3722200; 486600, 3722200; 486600, 3722100; 487100, 3722100; 487100, 3722000; 487400, 3722000; 487400, 3721900; 487500, 3721900; 487500, 3721700; 487400, 3721700; 487400, 3721600; 487600, 3721600; 487600, 3722200; 488400, 3722200; 488400, 3722100; 488500, 3722100; 488500, 3721900; 488400, 3721900; 488400, 3721800; 488300, 3721800; 488300, 3721700; 488600, 3721700; 488600, 3721500; 488700, 3721500; 488700, 3720700; 489000, 3720700; 489000, 3721500; 489400, 3721500; 489400, 3721700; 489800, 3721700; 489800, 3722200; 492100, 3722200; 492100, 3722300; 492400, 3722300; 492400, 3722700; 492500, 3722700; 492500, 3722800; 492800, 3722800; 492800, 3722900; 493200, 3722900; 493200, 3723000; 493700, 3723000; 493700, 3723100; 494300, 3723100; 494300, 3723200; 495500, 3723200; 495500, 3723100; 496100, 3723100; 496100, 3723000; 496400, 3723000; 496400, 3722900; 496700, 3722900; 496700, 3722800; 496900, 3722800; 496900, 3722700; 497700, 3722700; 497700, 3722600; 498000, 3722600; 498000, 3722500; 498400, 3722500; 498400, 3722400; 498600, 3722400; 498600, 3722300; 498800, 3722300; 498800, 3722200; 499000, 3722200; 499000, 3722100; 499300, 3722100; 499300, 3722000; 499700, 3722000; 499700, 3721900; 500000, 3721900; 500000, 3721800; 500200, 3721800; 500200, 3721700; 500500, 3721700; 500500, 3721600; 500700, 3721600; 500700, 3721500;

500900, 3721500; 500900, 3721400; 501000, 3721400; 501000, 3721300; 501100, 3721300; 501100, 3721200; 501300, 3721200; 501300, 3721100; 501400, 3721100; 501400, 3721000; 501500, 3721000; 501500, 3720900; 501600, 3720900; 501600, 3720800; 501700, 3720800; 501700, 3720700; 501800, 3720700; 501800, 3720600; 501900, 3720600; 501900, 3720500; 502000, 3720500; 502000, 3720400; 502100, 3720400; 502100, 3720300; 502300, 3720300; 502300, 3720400; 502400, 3720400; 502400, 3720500; 502500, 3720500; 502500, 3720600; 502700, 3720600; 502700, 3720700; 502800, 3720700; 502800, 3720800; 502900, 3720800; 502900, 3720900; 503100, 3720900; 503100, 3721000; 503300, 3721000; 503300, 3721100; 503500, 3721100; 503500, 3721200; 503700, 3721200; 503700, 3721300; 504100, 3721300; 504100, 3721400; 504400, 3721400; 504400, 3721500; 505200, 3721500; 505200, 3721600; 505800, 3721600; 505800, 3721500; 505900, 3721500; 505900, 3721700; 505800, 3721700; 505800, 3721800; 505900, 3721800; 505900, 3722300; 506000, 3722300; 506000, 3722400; 506100, 3722400; 506100, 3722600; 506000, 3722600; 506000, 3722800; 506100, 3722800; 506100, 3722900; 506000, 3722900; 506000, 3723200; 505900, 3723200; 505900, 3723300; 506000, 3723300; 506000, 3723500; 505900, 3723500; 505900, 3724000; 506000, 3724000; 506000, 3724200; 505900, 3724200; 505900, 3724300; 505600, 3724300; 505600, 3724800; 506000, 3724800; 506000, 3725100; 505900, 3725100; 505900, 3725600; 506300, 3725600; 506300, 3725500; 506700, 3725500; 506700, 3725900; 506600, 3725900; 506600, 3728100; 506700, 3728100; 506700, 3728400; 506800, 3728400; 506800, 3728800; 506900, 3728800; 506900, 3729000; 507000, 3729000; 507000, 3729300; 507100, 3729300; 507100, 3729500; 507600, 3729500; 507600, 3729400; 508000, 3729400; 508000, 3729300; 508200, 3729300; 508200, 3729200; 508600, 3729200; 508600, 3729100; 508700, 3729100; 508700, 3729000; 509100, 3729000; 509100, 3729100; 509200, 3729100; 509200, 3729300; 509300, 3729300; 509300, 3729400; 509400, 3729400; 509400, 3729500; 509500, 3729500; 509500, 3729600; 509700, 3729600; 509700, 3729700; 509900, 3729700; 509900, 3729800; 510000, 3729800; 510000, 3729900; 510300, 3729900; 510300, 3730000; 510600, 3730000; 510600, 3730100; 510700, 3730100; 510700, 3730000; 510800, 3730000; 510800, 3730200; 510900, 3730200; 510900, 3730300; 511100, 3730300; 511100, 3730100; 511200, 3730100; 511200, 3730000; 511400, 3730000; 511400, 3729900; 511500, 3729900; 511500, 3729800; 511600, 3729800; 511600, 3729700; 512000, 3729700; 512000, 3729600; 512300, 3729600; 512300, 3729500; 512500, 3729500; 512500, 3729400; 512600, 3729400; 512600, 3729300; 512700, 3729300; 512700, 3729200; 512900, 3729200; 512900, 3729100; 513000, 3729100; 513000, 3729000; 513200, 3729000; 513200, 3728900; 513300, 3728900; 513300, 3728800; 513500, 3728800; 513500, 3728700; 513600, 3728700; 513600, 3728500; 513700, 3728500; 513700, 3728400; 513800, 3728400; 513800, 3728300; 513900, 3728300; 513900, 3728100; 514000, 3728100; 514000, 3728000; 514100, 3728000; 514100, 3727800; 514200, 3727800; 514200, 3727600; 514300, 3727600; 514300, 3727500; 514400, 3727500; 514400, 3727400; 514600, 3727400; 514600, 3727300; 514700, 3727300; 514700, 3727000; 514800, 3727000; 514800, 3726800; 514700, 3726800; 514700, 3726700; 514600, 3726700; 514600, 3726400; 514500, 3726400; 514500, 3726200; 514400, 3726200; 514400, 3726000; 514300, 3726000; 514300, 3725400; 514400, 3725400; 514400, 3724400; 514500, 3724400; 514500, 3724100; 514600, 3724100; 514600, 3724000; 514700, 3724000; 514700, 3723700; 514600, 3723700; 514600, 3723500; 514500, 3723500; 514500, 3723300; 514400, 3723300; 514400, 3723200; 514300, 3723200; 514300, 3723100; 514400, 3723100; 514400, 3722700; 514200, 3722700; 514200, 3722600; 514100, 3722600; 514100, 3722500; 513900, 3722500; 513900, 3722400; 513700, 3722400; 513700, 3722300; 513500, 3722300; 513500, 3722200; 513300, 3722200; 513300, 3722100; 513100, 3722100; 513100, 3722000; 512700, 3722000; 512700, 3721900; 512600, 3721900; 512600, 3721800; 512500, 3721800; 512500, 3721100; 512400, 3721100; 512400, 3720900; 512000, 3720900; 512000, 3720800; 512100, 3720800; 512100, 3720600; 512200, 3720600; 512200, 3720100; 512000, 3720100; 512000, 3720000; 511800, 3720000; 511800, 3719600; 511700, 3719600; 511700, 3719500; 511400, 3719500; 511400, 3719300; 511300, 3719300; 511300, 3718900; 511200, 3718900; 511200, 3718800; 511100, 3718800; 511100, 3718700; 511000, 3718700; 511000, 3718600; 510900, 3718600; 510900, 3718400; 510600, 3718400; 510600, 3718500; 510500, 3718500; 510500, 3718600; 510400, 3718600; 510400, 3718500; 510300, 3718500; 510300, 3718400; 510200, 3718400; 510200, 3718300; 510300, 3718300; 510300, 3717900; 510400, 3717900; 510400, 3717400; 510500, 3717400; 510500, 3717100; 510600, 3717100; 510600, 3717000; 510800, 3717000; 510800, 3716900; 510900, 3716900; 510900, 3716800; 511000, 3716800; 511000, 3716700; 511100, 3716700; 511100, 3716600; 511200, 3716600; 511200, 3716500; 511300, 3716500; 511300, 3716400; 511400, 3716400; 511400, 3716300; 511500, 3716300; 511500, 3716200; 511600, 3716200; 511600, 3716100; 511700, 3716100; 511700, 3715900; 511800, 3715900; 511800, 3715800; 511900, 3715800; 511900, 3715600; 512000, 3715600; 512000, 3715400; 512100, 3715400; 512100, 3715200; 512200, 3715200; 512200, 3715000; 512300, 3715000; 512300, 3714800; 512400, 3714800; 512400, 3714400; 512500, 3714400; 512500, 3714200; 512900, 3714200; 512900, 3714100; 513600, 3714100; 513600, 3714000; 514000, 3714000; 514000, 3713900; 514300, 3713900; 514300, 3713800; 514500, 3713800; 514500, 3713700; 514700, 3713700; 514700, 3713600; 514900, 3713600; 514900, 3713500; 515100, 3713500; 515100, 3713400; 515200, 3713400; 515200, 3713300; 515400, 3713300; 515400, 3713200; 515500, 3713200; 515500, 3713100; 515600, 3713100; 515600, 3712500; 515500, 3712500; 515500, 3712200; 515400, 3712200; 515400, 3711900; 515300, 3711900; 515300, 3711700; 515200, 3711700; 515200, 3711600; 515100, 3711600; 515100, 3711500; 514900, 3711500; 514900, 3711100; 514800, 3711100; 514800, 3710900; 514700, 3710900; 514700, 3710800; 514600, 3710800; 514600, 3710700; 514500, 3710700; 514500, 3710500; 514300, 3710500; 514300, 3710400; 514400, 3710400; 514400, 3710300; 514700, 3710300; 514700, 3710200; 514900, 3710200; 514900, 3710100; 515100, 3710100; 515100, 3710000; 515300, 3710000; 515300, 3709600; 515500, 3709600; 515500, 3709500; 515800, 3709500; 515800, 3709300; 516700, 3709300; 516700, 3708500; 516600, 3708500; 516600, 3706400; 516700, 3706400; 516700, 3705900; 516800, 3705900; 516800, 3705700; 516900, 3705700; 516900, 3705600; 517000, 3705600; 517000, 3705300; 516900, 3705300; 516900, 3705200; 517000, 3705200; 517000, 3704900; 517300, 3704900; 517300, 3704800; 518100, 3704800; 518100, 3705000; 518300, 3705000; 518300, 3705100; 518400, 3705100; 518400, 3705400; 518500, 3705400; 518500, 3705700; 518600, 3705700; 518600, 3706100; 518700, 3706100; 518700, 3706400;

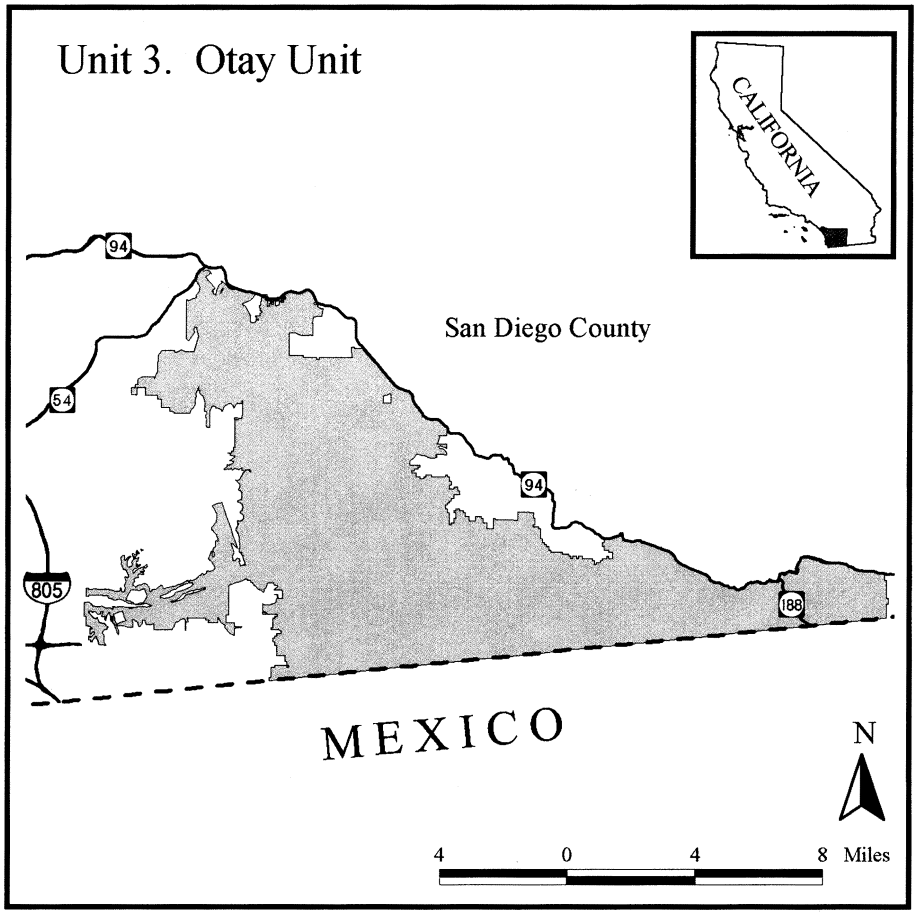
518800, 3706400; 518800, 3706800; 519000, 3706800; 519000, 3706700; 519300, 3706700; 519300, 3706600; 519800, 3706600; 519800, 3707700; 519700, 3707700; 519700, 3709500; 519800, 3709500; 519800, 3709600; 520300, 3709600; 520300, 3709700; 520400, 3709700; 520400, 3709800; 520600, 3709800; 520600, 3709900; 520800, 3709900; 520800, 3710000; 521000, 3710000; 521000, 3710100; 521600, 3710100; 521600, 3710200; 521800, 3710200; 521800, 3710100; 522000, 3710100; 522000, 3710200; 522500, 3710200; 522500, 3710300; 522900, 3710300; 522900, 3710400; 523300, 3710400; 523300, 3710300; 523600, 3710300; 523600, 3710100; 523700, 3710100; 523700, 3710000; 524000, 3710000; 524000, 3710100; 525000, 3710100; 525000, 3710000; 525100, 3710000; 525100, 3709900; 525300, 3709900; 525300, 3709800; 525600, 3709800; 525600, 3709700; 525700, 3709700; 525700, 3709600; 525800, 3709600; 525800, 3709500; 526000, 3709500; 526000, 3709400; 526100, 3709400; 526100, 3709300; 526300, 3709300; 526300, 3709200; 526400, 3709200; 526400, 3709100; 526600, 3709100; 526600, 3708900; 526700, 3708900; 526700, 3708700; 527100, 3708700; 527100, 3708600; 527800, 3708600; 527800, 3708700; 527900, 3708700; 527900, 3708800; 528600, 3708800; 528600, 3709200; 528500, 3709200; 528500, 3709400; 528400, 3709400; 528400, 3709700; 528300, 3709700; 528300, 3710000; 528400, 3710000; 528400, 3710100; 528500, 3710100; 528500, 3710200; 528600, 3710200; 528600, 3710300; 528700, 3710300; 528700, 3710500; 529400, 3710500; 529400, 3710400; 529500, 3710400; 529500, 3710200; 529700, 3710200; 529700, 3710100; 529800, 3710100; 529800, 3710000; 529900, 3710000; 529900, 3709900; 530100, 3709900; 530100, 3709800; 530200, 3709800; 530200, 3709700; 530300, 3709700; 530300, 3709600; 530500, 3709600; 530500, 3709500; 530600, 3709500; 530600, 3709400; 530800, 3709400; 530800, 3709200; 530900, 3709200; 530900, 3709100; 531000, 3709100; 531000, 3709000; 531100, 3709000; 531100, 3708800; 531300, 3708800; 531300, 3708900; 532000, 3708900; 532000, 3708800; 532200, 3708800; 532200, 3708700; 532300, 3708700; 532300, 3708600; 532400, 3708600; 532400, 3708400; 532500, 3708400; 532500, 3708300; 532600, 3708300; 532600, 3708000; 532500, 3708000; 532500, 3707600; 532600, 3707600; 532600, 3707400; 532800, 3707400; 532800, 3707300; 533000, 3707300; 533000, 3707100; 533100, 3707100; 533100, 3706800; 533200, 3706800; 533200, 3706700; 533300, 3706700; 533300, 3706600; 533400, 3706600; 533400, 3706500; 533500, 3706500; 533500, 3706200; 531000, 3706200; 531000, 3705700; 531100, 3705700; 531100, 3705100; 531200, 3705100; 531200, 3705000; 531700, 3705000; 531700, 3703600; 531800, 3703600; 531800, 3703400; 532000, 3703400; 532000, 3703300; 532100, 3703300; 532100, 3703200; 532200, 3703200; 532200, 3702900; 532300, 3702900; 532300, 3702600; 532500, 3702600; 532500, 3700000; 532600, 3700000; 532600, 3697800; 531900, 3697800; 531900, 3697900; 531300, 3697900; 531300, 3698000; 530800, 3698000; 530800, 3697900; 530300, 3697900; 530300, 3698000; 529700, 3698000; 529700, 3697900; 529600, 3697900; 529600, 3697600; 528900, 3697600; 528900, 3697700; 528600, 3697700; 528600, 3697800; 528200, 3697800; 528200, 3697900; 528000, 3697900; 528000, 3698000; 527800, 3698000; 527800, 3698100; 527600, 3698100; 527600, 3698200; 527400, 3698200; 527400, 3698100; 527300, 3698100; 527300, 3698200; 527200, 3698200; 527200, 3698000; 526900, 3698000; 526900, 3697800; 526700, 3697800; 526700, 3697400; 526600, 3697400; 526600, 3697200; 526400, 3697200; 526400, 3697000; 526000, 3697000; 526000, 3697100; 525700, 3697100; 525700, 3697000; 525200, 3697000; 525200, 3697100; 525100, 3697100; 525100, 3697300; 524700, 3697300; 524700, 3697400; 524400, 3697400; 524400, 3697500; 524100, 3697500; 524100, 3697300; 524000, 3697300; 524000, 3697200; 523900, 3697200; 523900, 3697000; 523800, 3697000; 523800, 3696700; 523700, 3696700; 523700, 3696500; 523600, 3696500; 523600, 3696300; 523500, 3696300; 523500, 3696200; 523200, 3696200; 523200, 3696300; 523000, 3696300; 523000, 3694700; 522900, 3694700; 522900, 3694400; 522800, 3694400; 522800, 3694000; 522700, 3694000; 522700, 3693800; 522600, 3693800; 522600, 3693600; 522500, 3693600; 522500, 3693300; 522400, 3693300; 522400, 3693200; 522300, 3693200; 522300, 3693000; 522200, 3693000; 522200, 3692900; 522100, 3692900; 522100, 3692700; 522000, 3692700; 522000, 3692600; 521900, 3692600; 521900, 3692500; 521800, 3692500; 521800, 3692400; 521700, 3692400; 521700, 3692300; 521600, 3692300; 521600, 3692200; 521500, 3692200; 521500, 3692100; 521400, 3692100; 521400, 3692000; 521300, 3692000; 521300, 3691900; 521200, 3691900; 521200, 3691800; 521000, 3691800; 521000, 3691700; 520800, 3691700; 520800, 3691600; 520600, 3691600; 520600, 3692400; 520500, 3692400; 520500, 3692300; 519800, 3692300; 519800, 3693000; 519000, 3693000; 519000, 3693800; 518200, 3693800; 518200, 3694500; 518300, 3694500; 518300, 3694600; 517400, 3694600; 517400, 3695300; 515900, 3695300; 515900, 3696100; 514200, 3696100; 514200, 3696900; 514000, 3696900; 514000, 3696800; 513400, 3696800; 513400, 3698500; 514000, 3698500; 514000, 3698600; 513900, 3698600; 513900, 3698700; 514000, 3698700; 514000, 3698800; 513400, 3698800; 513400, 3699000; 513300, 3699000; 513300, 3699200; 513200, 3699200; 513200, 3699500; 513400, 3699500; 513400, 3699400; 513500, 3699400; 513500, 3699300; 513600, 3699300; 513600, 3699200; 513900, 3699200; 513900, 3699300; 514000, 3699300; 514000, 3699600; 513900, 3699600; 513900, 3699700; 513800, 3699700; 513800, 3699800; 513500, 3699800; 513500, 3699900; 513400, 3699900; 513400, 3700000; 513500, 3700000; 513500, 3700100; 513700, 3700100; 513700, 3700300; 513600, 3700300; 513600, 3700500; 513700, 3700500; 513700, 3700600; 513800, 3700600; 513800, 3701000; 513600, 3701000; 513600, 3701200; 513500, 3701200; 513500, 3701600; 513600, 3701600; 513600, 3702400; 513400, 3702400; 513400, 3702000; 513300, 3702000; 513300, 3701900; 513400, 3701900; 513400, 3701700; 513200, 3701700; 513200, 3701500; 513300, 3701500; 513300, 3701100; 513400, 3701100; 513400, 3700400; 513300, 3700400; 513300, 3700300; 513200, 3700300; 513200, 3699900; 513000, 3699900; 513000, 3700000; 512800, 3700000; 512800, 3700100; 512500, 3700100; 512500, 3700200; 512300, 3700200; 512300, 3700300; 512100, 3700300; 512100, 3700600; 512200, 3700600; 512200, 3700700; 511900, 3700700; 511900, 3700900; 512100, 3700900; 512100, 3701000; 512500, 3701000; 512500, 3701200; 511800, 3701200; 511800, 3700200; 511600, 3700200; 511600, 3700400; 511100, 3700400; 511100, 3700200; 511000, 3700200; 511000, 3700300; 510700, 3700300; 510700, 3700400; 510600, 3700400; 510600, 3700500; 510700, 3700500; 510700, 3700600; 510800, 3700600; 510800, 3700700; 510900, 3700700; 510900, 3701000; 510800, 3701000; 510800, 3701100; 510700, 3701100; 510700, 3701200; 510600, 3701200; 510600, 3701100; 510500, 3701100; 510500, 3701000; 510400, 3701000; 510400, 3701100; 510300, 3701100; 510300, 3701500;

510400, 3701500; 510400, 3701800; 510200, 3701800; 510200, 3701700; 510100, 3701700; 510100, 3701600; 509800, 3701600; 509800, 3701500; 509500, 3701500; 509500, 3701600; 509400, 3701600; 509400, 3701700; 509300, 3701700; 509300, 3701800; 509200, 3701800; 509200, 3701900; 509100, 3701900; 509100, 3702100; 509000, 3702100; 509000, 3702000; 508600, 3702000; 508600, 3702100; 508500, 3702100; 508500, 3702200; 508300, 3702200; 508300, 3702500; 508200, 3702500; 508200, 3702700; 508100, 3702700; 508100, 3702600; 507700, 3702600; 507700, 3702700; 507600, 3702700; 507600, 3702800; 506900, 3702800; 506900, 3702900; 506500, 3702900; 506500, 3703000; 506300, 3703000; 506300, 3703300; 506200, 3703300; 506200, 3703400; 506300, 3703400; 506300, 3703500; 506200, 3703500; 506200, 3703600; 505900, 3703600; 505900, 3703700; 505600, 3703700; 505600, 3703600; 504900, 3703600; 504900, 3703700; 504300, 3703700; 504300, 3703800; 504200, 3703800; 504200, 3704000; 504100, 3704000; 504100, 3704700; 504000, 3704700; 504000, 3704800; 503900, 3704800; 503900, 3705000; 504200, 3705000; 504200, 3705100; 504400, 3705100; 504400, 3705200; 504500, 3705200; 504500, 3705300; 504600, 3705300; 504600, 3705400; 504700, 3705400; 504700, 3705500; 505000, 3705500; 505000, 3705600; 505200, 3705600; 505200, 3705700; 505300, 3705700; 505300, 3705800; 505600, 3705800; 505600, 3705900; 505800, 3705900; 505800, 3705600; 505900, 3705600; 505900, 3705200; 506000, 3705200; 506000, 3705100; 506300, 3705100; 506300, 3705800; 506200, 3705800; 506200, 3705900; 506000, 3705900; 506000, 3706100; 505800, 3706100; 505800, 3706200; 505700, 3706200; 505700, 3706300; 505600, 3706300; 505600, 3706200; 505500, 3706200; 505500, 3706100; 505400, 3706100; 505400, 3706000; 505300, 3706000; 505300, 3705900; 505200, 3705900; 505200, 3705800; 504800, 3705800; 504800, 3705900; 504700, 3705900; 504700, 3706200; 504600, 3706200; 504600, 3706100; 504500, 3706100; 504500, 3706000; 504400, 3706000; 504400, 3705900; 504300, 3705900; 504300, 3705800; 503400, 3705800; 503400, 3705900; 503300, 3705900; 503300, 3706000; 502900, 3706000; 502900, 3706300; 502400, 3706300; 502400, 3706200; 502200, 3706200; 502200, 3705800; 502100, 3705800; 502100, 3705500; 502000, 3705500; 502000, 3705200; 501900, 3705200; 501900, 3704900; 502000, 3704900; 502000, 3704600; 502200, 3704600; 502200, 3704800; 502300, 3704800; 502300, 3705100; 502400, 3705100; 502400, 3705200; 502500, 3705200; 502500, 3705400; 502400, 3705400; 502400, 3705600; 502700, 3705600; 502700, 3704900; 502800, 3704900; 502800, 3704800; 503100, 3704800; 503100, 3704700; 503300, 3704700; 503300, 3704600; 503500, 3704600; 503500, 3704500; 503800, 3704500; 503800, 3703700; 503900, 3703700; 503900, 3703600; 504000, 3703600; 504000, 3703500; 504100, 3703500; 504100, 3703400; 504400, 3703400; 504400, 3703300; 504300, 3703300; 504300, 3703200; 504100, 3703200; 504100, 3703100; 504000, 3703100; 504000, 3703000; 503800, 3703000; 503800, 3702900; 503600, 3702900; 503600, 3702800; 503100, 3702800; 503100, 3702700; 502200, 3702700; 502200, 3702800; 501800, 3702800; 501800, 3702900; 501500, 3702900; 501500, 3703000; 500300, 3703000; 500300, 3703100; 499400, 3703100; 499400, 3703200; 499100, 3703200; 499100, 3703300; 498600, 3703300; 498600, 3703400; 498400, 3703400; 498400, 3703500; 498300, 3703500; 498300, 3703600; 498200, 3703600; 498200, 3703700; 498000, 3703700; 498000, 3703800; 497800, 3703800; 497800, 3703900; 497600, 3703900; 497600, 3704000; 497400, 3704000; 497400, 3704100; 497300, 3704100; 497300, 3704200; 497000, 3704200; 497000, 3704300; 496800, 3704300; 496800, 3704400; 496600, 3704400; 496600, 3704500; 496500, 3704500; 496500, 3704600; 496300, 3704600; 496300, 3704700; 496200, 3704700; 496200, 3704800; 496100, 3704800; 496100, 3704900; 496000, 3704900; 496000, 3705000; 495800, 3705000; 495800, 3705100; 495500, 3705100; 495500, 3705200; 495200, 3705200; 495200, 3705300; 495100, 3705300; 495100, 3705700; 495200, 3705700; 495200, 3705900; 495300, 3705900; 495300, 3706500; 495200, 3706500; 495200, 3706600; 495300, 3706600; 495300, 3706900; 495500, 3706900; 495500, 3707000; 495800, 3707000; 495800, 3707100; 495900, 3707100; 495900, 3707200; 495800, 3707200; 495800, 3707300; 495700, 3707300; 495700, 3707500; 495500, 3707500; 495500, 3707800; 495600, 3707800; 495600, 3708000; 495900, 3708000; 495900, 3708100; 495700, 3708100; 495700, 3708400; 495800, 3708400; 495800, 3708500; 496100, 3708500; 496100, 3708800; 496300, 3708800; 496300, 3708700; 496400, 3708700; 496400, 3708500; 496700, 3708500; 496700, 3708400; 496600, 3708400; 496600, 3708200; 496500, 3708200; 496500, 3708100; 496400, 3708100; 496400, 3708000; 496300, 3708000; 496300, 3707700; 496600, 3707700; 496600, 3707900; 496800, 3707900; 496800, 3708000; 497000, 3708000; 497000, 3707900; 497100, 3707900; 497100, 3707800; 496800, 3707800; 496800, 3707500; 497200, 3707500; 497200, 3707800; 497300, 3707800; 497300, 3707700; 497400, 3707700; 497400, 3707800; 497700, 3707800; 497700, 3707900; 497800, 3707900; 497800, 3708000; 497900, 3708000; 497900, 3708100; 498000, 3708100; 498000, 3708200; 498200, 3708200; 498200, 3708300; 498300, 3708300; 498300, 3708400; 498200, 3708400; 498200, 3709200; 498300, 3709200; 498300, 3709500; 498800, 3709500; 498800, 3709600; 499400, 3709600; 499400, 3709500; 499600, 3709500; 499600, 3709400; 499700, 3709400; 499700, 3709600; 499800, 3709600; 499800, 3709800; 500000, 3709800; 500000, 3710000; 500100, 3710000; 500100, 3710100; 500300, 3710100; 500300, 3710000; 500400, 3710000; 500400, 3710200; 500500, 3710200; 500500, 3710300; 500400, 3710300; 500400, 3710500; 500500, 3710500; 500500, 3710600; 501000, 3710600; 501000, 3710700; 501200, 3710700; 501200, 3710600; 501300, 3710600; 501300, 3710500; 501600, 3710500; 501600, 3710300; 501700, 3710300; 501700, 3710600; 503200, 3710600; 503200, 3710700; 503400, 3710700; 503400, 3710800; 503700, 3710800; 503700, 3710900; 503800, 3710900; 503800, 3711000; 504000, 3711000; 504000, 3711100; 504200, 3711100; 504200, 3711200; 504300, 3711200; 504300, 3711300; 504600, 3711300; 504600, 3711500; 504700, 3711500; 504700, 3711700; 504800, 3711700; 504800, 3711900; 505000, 3711900; 505000, 3711800; 505300, 3711800; 505300, 3711900; 505100, 3711900; 505100, 3712100; 504200, 3712100; 504200, 3712200; 504100, 3712200; 504100, 3712300; 503700, 3712300; 503700, 3712400; 503400, 3712400; 503400, 3712500; 503300, 3712500; 503300, 3712600; 502900, 3712600; 502900, 3712700; 502600, 3712700; 502600, 3712800; 502400, 3712800; 502400, 3712900; 501400, 3712900; 501400, 3713000; 501300, 3713000; 501300, 3712900; 501200, 3712900; 501200, 3712800; 501100, 3712800; 501100, 3712600; 501300, 3712600; 501300, 3712400; 501200, 3712400; 501200, 3712300; 500900, 3712300; 500900, 3712400; 500800, 3712400; 500800, 3712500; 500500, 3712500; 500500, 3712600; 500600, 3712600; 500600, 3712800; 500800, 3712800; 500800, 3712900; 500900, 3712900; 500900, 3713700;

501100, 3713700; 501100, 3713800; 500900, 3713800; 500900, 3713900; 500700, 3713900; 500700, 3714100; 500600, 3714100; 500600, 3714000; 500400, 3714000; 500400, 3714100; 500300, 3714100; 500300, 3714400; 500200, 3714400; 500200, 3714600; 500500, 3714600; 500500, 3714700; 501100, 3714700; 501100, 3714600; 501200, 3714600; 501200, 3714500; 501500, 3714500; 501500, 3714400; 501700, 3714400; 501700, 3714300; 501800, 3714300; 501800, 3714500; 502000, 3714500; 502000, 3714400; 502100, 3714400; 502100, 3714500; 502200, 3714500; 502200, 3714600; 502400, 3714600; 502400, 3714700; 502900, 3714700; 502900, 3714600; 503500, 3714600; 503500, 3715000; 503600, 3715000; 503600, 3714900; 503800, 3714900; 503800, 3715000; 503700, 3715000; 503700, 3715100; 503600, 3715100; 503600, 3715300; 503900, 3715300; 503900, 3715400; 503000, 3715400; 503000, 3715900; 503100, 3715900; 503100, 3716000; 503200, 3716000; 503200, 3716100; 502800, 3716100; 502800, 3715900; 501800, 3715900; 501800, 3716200; 501700, 3716200; 501700, 3716300; 501400, 3716300; 501400, 3716200; 501500, 3716200; 501500, 3716100; 501600, 3716100; 501600, 3716000; 501500, 3716000; 501500, 3715900; 501200, 3715900; 501200, 3715800; 501100, 3715800; 501100, 3715600; 501000, 3715600; 501000, 3715400; 500800, 3715400; 500800, 3715500; 500700, 3715500; 500700, 3715600; 500600, 3715600; 500600, 3715800; 500500, 3715800; 500500, 3715600; 500300, 3715600; 500300, 3715500; 500100, 3715500; 500100, 3715300; 499800, 3715300; 499800, 3715400; 499400, 3715400; 499400, 3714800; 499200, 3714800; 499200, 3714500; 499100, 3714500; 499100, 3714400; 499000, 3714400; 499000, 3714200; 498900, 3714200; 498900, 3714100; 498800, 3714100; 498800, 3713900; 498900, 3713900; 498900, 3713800; 498800, 3713800; 498800, 3713600; 498600, 3713600; 498600, 3713500; 498500, 3713500; 498500, 3713400; 498400, 3713400; 498400, 3713300; 498200, 3713300; 498200, 3713200; 497400, 3713200; 497400, 3713100; 497200, 3713100; 497200, 3713400; 498000, 3713400; 498000, 3713500; 498100, 3713500; 498100, 3713700; 497100, 3713700; 497100, 3714100; 496700, 3714100; 496700, 3713800; 496600, 3713800; 496600, 3713700; 496500, 3713700; 496500, 3713500; 496300, 3713500; 496300, 3713400; 496000, 3713400; 496000, 3713300; 495600, 3713300; 495600, 3712300; 495500, 3712300; excluding land bounded by 497100, 3717300; 496900, 3717300; 496900, 3717400; 496700, 3717400; 496700, 3717300; 496300, 3717300; 496300, 3717000; 496000, 3717000; 496000, 3717100; 495800, 3717100; 495800, 3717000; 495400, 3717000; 495400, 3716900; 494600, 3716900; 494600, 3716800; 494300, 3716800; 494300, 3716900; 494200, 3716900; 494200, 3716800; 494100, 3716800; 494100, 3716700; 493800, 3716700; 493800, 3716900; 493700, 3716900; 493700, 3717000; 493600, 3717000; 493600, 3717100; 493500, 3717100; 493500, 3717000; 493400, 3717000; 493400, 3716800; 493300, 3716800; 493300, 3715900; 492600, 3715900; 492600, 3715800; 492500, 3715800; 492500, 3715700; 492400, 3715700; 492400, 3715100; 492100, 3715100; 492100, 3714900; 492000, 3714900; 492000, 3714700; 491800, 3714700; 491800, 3714600; 492100, 3714600; 492100, 3714800; 492300, 3714800; 492300, 3714900; 492500, 3714900; 492500, 3714700; 492700, 3714700; 492700, 3715200; 492900, 3715200; 492900, 3715100; 493000, 3715100; 493000, 3715300; 492900, 3715300; 492900, 3715400; 492800, 3715400; 492800, 3715500; 492900, 3715500; 492900, 3715700; 493100, 3715700; 493100, 3715800; 493300, 3715800; 493300, 3715700; 493400, 3715700; 493400, 3715600; 493600, 3715600; 493600, 3715700; 493800, 3715700; 493800, 3715800; 493900, 3715800; 493900, 3715700; 494000, 3715700; 494000, 3715800; 494300, 3715800; 494300, 3715700; 494400, 3715700; 494400, 3715800; 494500, 3715800; 494500, 3715700; 494600, 3715700; 494600, 3715800; 494800, 3715800; 494800, 3715600; 495000, 3715600; 495000, 3715500; 495400, 3715500; 495400, 3715600; 495600, 3715600; 495600, 3715800; 495700, 3715800; 495700, 3715700; 496500, 3715700; 496500, 3715600; 496700, 3715600; 496700, 3715700; 496800, 3715700; 496800, 3715900; 497000, 3715900; 497000, 3716100; 497100, 3716100; 497100, 3716200; 496800, 3716200; 496800, 3716300; 496600, 3716300; 496600, 3716400; 496700, 3716400; 496700, 3716800; 496600, 3716800; 496600, 3717000; 496700, 3717000; 496700, 3717200; 497000, 3717200; 497000, 3717100; 497100, 3717100; 497100, 3717300; land bounded by 500600, 3715800; 500700, 3715800; 500700, 3715900; 500600, 3715900; 500600, 3715800; land bounded by 487300, 3715700; 487300, 3715600; 487400, 3715600; 487400, 3715500; 487300, 3715500; 487300, 3715400; 487200, 3715400; 487200, 3715300; 486800, 3715300; 486800, 3715200; 486700, 3715200; 486700, 3714900; 486600, 3714900; 486600, 3714800; 486500, 3714800; 486500, 3714700; 486300, 3714700; 486300, 3714600; 486100, 3714600; 486100, 3714100; 485100, 3714100; 485100, 3714000; 485200, 3714000; 485200, 3713800; 485300, 3713800; 485300, 3713500; 485200, 3713500; 485200, 3713400; 485300, 3713400; 485300, 3713300; 485200, 3713300; 485200, 3713000; 485100, 3713000; 485100, 3712900; 485500, 3712900; 485500, 3712800; 485900, 3712800; 485900, 3712400; 486200, 3712400; 486200, 3712500; 486300, 3712500; 486300, 3712600; 486400, 3712600; 486400, 3712700; 486500, 3712700; 486500, 3712600; 486800, 3712600; 486800, 3712800; 486900, 3712800; 486900, 3712900; 487100, 3712900; 487100, 3712600; 487200, 3712600; 487200, 3712900; 487300, 3712900; 487300, 3713000; 487400, 3713000; 487400, 3713100; 487500, 3713100; 487500, 3713200; 487600, 3713200; 487600, 3713300; 487700, 3713300; 487700, 3713400; 487200, 3713400; 487200, 3713700; 487300, 3713700; 487300, 3714100; 487400, 3714100; 487400, 3714600; 487500, 3714600; 487500, 3715000; 487600, 3715000; 487600, 3715600; 487700, 3715600; 487700, 3715700; 487300, 3715700; land bounded by 487300, 3715700; 487300, 3716200; 487200, 3716200; 487200, 3716100; 487100, 3716100; 487100, 3716000; 487000, 3716000; 487000, 3715900; 487100, 3715900; 487100, 3715800; 487200, 3715800; 487200, 3715700; 487300, 3715700; land bounded by 503900, 3715400; 504100, 3715400; 504100, 3715500; 504300, 3715500; 504300, 3715800; 504200, 3715800; 504200, 3715900; 504000, 3715900; 504000, 3715600; 503900, 3715600; 503900, 3715400; land bounded by 495400, 3712400; 495400, 3712500; 495300, 3712500; 495300, 3712400; 495400, 3712400; land bounded by 504600, 3711300; 504600, 3711200; 504700, 3711200; 504700, 3711300; 504600, 3711300; land bounded by 497500, 3707000; 497800, 3707000; 497800, 3707100; 497900, 3707100; 497900, 3707200; 498000, 3707200; 498000, 3707300; 498200, 3707300; 498200, 3707400; 498300, 3707400; 498300, 3707500; 498400, 3707500; 498400, 3707600; 498100, 3707600; 498100, 3707700; 498000, 3707700; 498000, 3707600; 497800, 3707600; 497800, 3707400; 497700, 3707400; 497700, 3707100; 497500, 3707100; 497500, 3707000; land bounded by 497100, 3706600; 497100, 3706700; 497000, 3706700; 497000, 3706600; 497100, 3706600; land

bounded by 496700, 3706300; 496800, 3706300; 496800, 3706400; 496700, 3706400; 496700, 3706300; land bounded by 495900, 3706000; 495700, 3706000; 495700, 3705900; 495900, 3705900; 495900, 3706000; land bounded by 496100, 3704900; 496200, 3704900; 496200, 3705100; 496100, 3705100; 496100, 3704900; land bounded by 495500, 3712300; 495500, 3712400; 495400, 3712400; 495400, 3712300; 495500, 3712300; land bounded by 497300, 3706700; 497400, 3706700; 497400, 3706800; 497500, 3706800; 497500, 3707000; 497300, 3707000; 497300, 3706700; land bounded by 495900, 3706000; 496000, 3706000; 496000, 3706100; 496300, 3706100; 496300, 3706000; 496400, 3706000; 496400, 3706100; 496500, 3706100; 496500, 3706200; 496700, 3706200; 496700, 3706300; 496500, 3706300; 496500, 3706400; 496300, 3706400; 496300, 3706300; 495900, 3706300; 495900, 3706000; land bounded by 497100, 3717300; 497300, 3717300; 497300, 3717400; 497100, 3717400; 497100, 3717300; land bounded by 497300, 3706700; 497200, 3706700; 497200, 3706600; 497100, 3706600; 497100, 3706500; 497000, 3706500; 497000, 3706400; 497100, 3706400; 497100, 3706300; 497200, 3706300; 497200, 3706200; 497300, 3706200; 497300, 3706100; 497500, 3706100; 497500, 3706300; 497400, 3706300; 497400, 3706400; 497300, 3706400; 497300, 3706700; land bounded by 486600, 3721800; 486600, 3721500; 486700, 3721500; 486700, 3721800; 486600, 3721800; land bounded by 488600, 3715700; 488600, 3715500; 488800, 3715500; 488800, 3715600; 488700, 3715600; 488700, 3715700; 488600, 3715700; land bounded by 488100, 3715600; 488100, 3715400; 488000, 3715400; 488000, 3715000; 487900, 3715000; 487900, 3714600; 487800, 3714600; 487800, 3714200; 488100, 3714200; 488100, 3714400; 488200, 3714400; 488200, 3714900; 488300, 3714900; 488300, 3715500; 488400, 3715500; 488400, 3715600; 488100, 3715600; land bounded by 496400, 3707400; 496400, 3707200; 496500, 3707200; 496500, 3707400; 496400, 3707400; land bounded by 498700, 3707300; 498700, 3706900; 498800, 3706900; 498800, 3706700; 499100, 3706700; 499100, 3706800; 499700, 3706800; 499700, 3707000; 499600, 3707000; 499600, 3707100; 499400, 3707100; 499400, 3707200; 498900, 3707200; 498900, 3707300; 498700, 3707300; land bounded by 497200, 3705500; 497200, 3705400; 497000, 3705400; 497000, 3705300; 496900, 3705300; 496900, 3705200; 497000, 3705200; 497000, 3705000; 496800, 3705000; 496800, 3704800; 497000, 3704800; 497000, 3704700; 497200, 3704700; 497200, 3704600; 497300, 3704600; 497300, 3704700; 497500, 3704700; 497500, 3704800; 497300, 3704800; 497300, 3705000; 497100, 3705000; 497100, 3705200; 497300, 3705200; 497300, 3705300; 497400, 3705300; 497400, 3705400; 497500, 3705400; 497500, 3705500; 497200, 3705500; and land bounded by 522700, 3696600; 522700, 3696500; 522400, 3696500; 522400, 3696400; 522300, 3696400; 522300, 3696300; 522100, 3696300; 522100, 3696200; 521900, 3696200; 521900, 3696100; 521800, 3696100; 521800, 3696000; 521600, 3696000; 521600, 3695900; 521000, 3695900; 521000, 3695800; 520800, 3695800; 520800, 3695700; 520600, 3695700; 520600, 3695600; 519900, 3695600; 519900, 3695700; 519600, 3695700; 519600, 3695600; 519500, 3695600; 519500, 3695400; 519100, 3695400; 519100, 3695300; 519000, 3695300; 519000, 3695200; 518900, 3695200; 518900, 3695000; 519000, 3695000; 519000, 3694800; 519100, 3694800; 519100, 3694600; 519200, 3694600; 519200, 3694500; 519300, 3694500; 519300, 3694400; 519600, 3694400; 519600, 3694300; 520000, 3694300; 520000, 3694200; 520400, 3694200; 520400, 3694400; 520500, 3694400; 520500, 3694500; 520700, 3694500; 520700, 3694600; 520800, 3694600; 520800, 3694700; 521000, 3694700; 521000, 3694800; 521100, 3694800; 521100, 3694900; 521300, 3694900; 521300, 3695000; 521900, 3695000; 521900, 3694900; 522300, 3694900; 522300, 3695200; 522400, 3695200; 522400, 3695700; 522100, 3695700; 522100, 3696000; 522200, 3696000; 522200, 3696100; 522300, 3696100; 522300, 3696200; 522400, 3696200; 522400, 3696300; 522600, 3696300; 522600, 3696400; 522800, 3696400; 522800, 3696500; 523000, 3696500; 523000, 3696600; 522700, 3696600.

BILLING CODE 4310–55–P

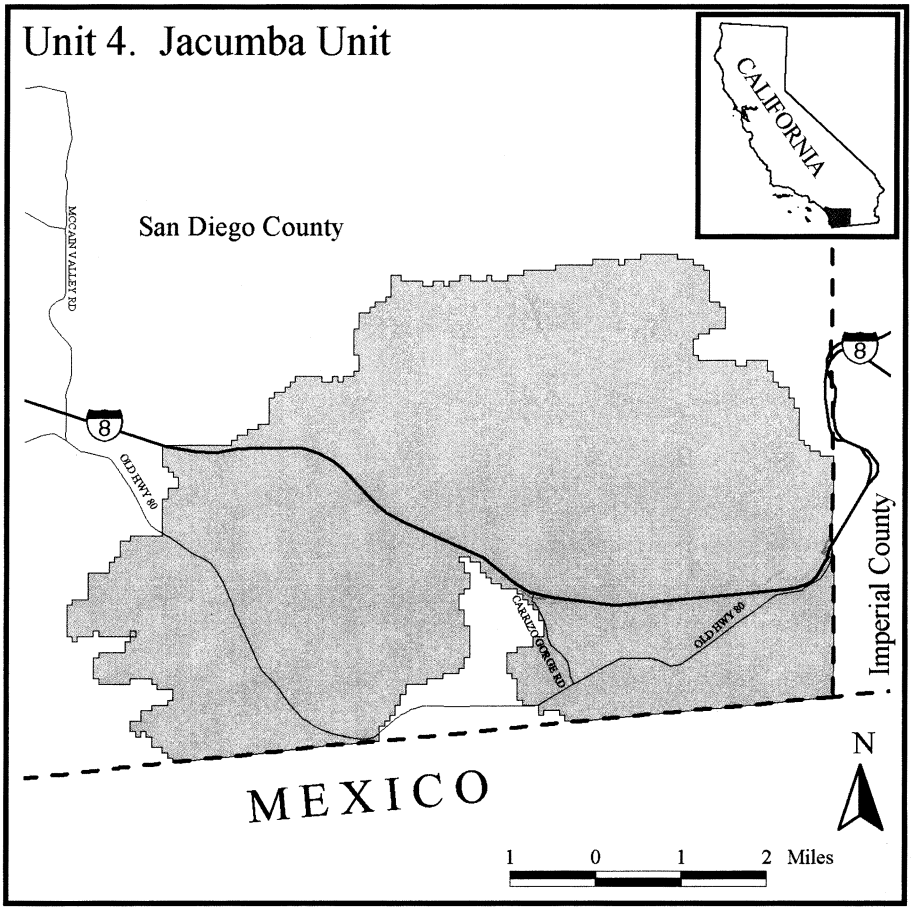


BILLING CODE 4310–55–C

Map Unit 3: Otay, San Diego County, California. From USGS 1:24,000 quadrangle maps Dulzura, Jamul Mountains, Potrero, Tecate, Otay Mountain, Imperial Beach, and Otay Mesa. Beginning at the U.S./Mexico border at UTM NAD27 x-coordinate 507800 thence north along the following UTM NAD27 coordinates (E, N): 507800, 3601600 ; 507900, 3601600; 507900, 3602100; 508100, 3602100; 508100, 3602200; 508700, 3602200; 508700, 3602400; 508600, 3602400; 508600, 3602700; 508200, 3602700; 508200, 3603200; 508100, 3603200; 508100, 3603400; 508000, 3603400; 508000, 3603600; 508100, 3603600; 508100, 3603700; 508200, 3603700; 508200, 3603800; 508400, 3603800; thence north to the County of San Diego Major Amendment (CSDMA) boundary at UTM x-coordinate 508400; thence northwest following the CSDMA boundary to UTM x-coordinate 508300; thence south and returning north following UTM coordinates 508300, 3604000; 507900, 3604000; 507900, 3604100; 508000, 3604100; 508000, 3604600; 508100, 3604600; 508100, 3604700; thence east to the CSDMA boundary at UTM y-coordinate 3604700; thence north along the CSDMA boundary to the Multiple Habitat Planning Area (MHPA) boundary; thence northwestward along the MHPA boundary to CSDMA boundary; thence around the CSDMA boundary to the MHPA boundary; thence northward along the MHPA boundary to UTM y-coordinate 3606500; thence west to UTM coordinates (E, N): 506700, 3606500; thence north to the City of Chula Vista Preserve Design (CCVPD) boundary at UTM x-coordinate 506700; thence southwestward along the CCVPD boundary to the CSDMA boundary; thence around the CSDMA boundary to the CCVPD boundary; thence along the CCVPD boundary to UTM y-coordinate 3604500; thence east following UTM coordinates 504600, 3604500; 504600, 3604600; 503700, 3604600; thence north to the CCVPD boundary at UTM x-coordinate 503700; thence west along the CCVPD boundary and continuing along Federal lands boundaries; thence west and north along the Federal lands boundaries to the CCVPD boundary; thence westward along the CCVPD boundary to Otay Mesa Road; thence west along Otay Mesa Road to the CCVPD boundary; thence northward along the CCVPD boundary to UTM x-coordinate 498900; thence south and following UTM coordinates 498900, 3603400; 498800, 3603400; 498800, 3603500; 498700, 3603500; 498700, 3603700; 498800, 3603700; thence south to the CCVPD boundary at UTM x-coordinate 498800; thence northward along the CCVPD boundary to UTM y-coordinate 3604200; thence east and following UTM coordinates 498600, 3604200; 498600, 3604700; 498500, 3604700; 498500, 3605400; 498700, 3605400; thence to the CCVPD boundary at UTM x-coordinate 498700; thence east and back west along the CCVPD boundary to UTM x-coordinate 489700; thence south and following UTM coordinates 498700, 3605700; 498600, 3605700; 498600, 3606100; 498700, 3606100; thence south to the CCVPD boundary at UTM x-coordinate 498700; thence eastward along the CCVPD boundary to the MHPA boundary; thence northward along the MHPA boundary at UTM x-coordinate 506400; thence west and following UTM coordinates 506400, 3607900; 506300, 3607900; 506300, 3608100; thence east to the MHPA boundary at UTM y-coordinate 3608100; thence northward along the MHPA to UTM x-coordinate 505900; thence northward following

UTM coordinates 505900, 3613000; 506000, 3613000; 506000, 3613200; thence east to the CSDMA boundary at UTM y-coordinate 3613200; thence north along the CSDMA boundary to the CCVPD boundary; thence around the CCVPD boundary to the San Diego National Wildlife Refuge (SDNWR) boundary; thence north along the SDNWR boundary to UTM y-coordinate 3615500; thence west and following UTM coordinates 506400, 3615500, 506400, 3615400; 506200, 3615400; thence north to the CCVPD boundary at UTM x-coordinate 506200; thence southwestward along the CCVPD boundary to the MHPA boundary; thence around the MHPA boundary to UTM x-coordinate 503800; thence south and following UTM coordinates 503800, 3614900; 503000, 3614900; thence north to the SDNWR boundary at UTM x-coordinate 503000; thence around the SDNWR boundary to the MHPA boundary; thence southeastward along the MHPA boundary to the SDNWR boundary; thence northeastward and returning southwestward along the SDNWR boundary to the MHPA boundary; thence south along the MHPA boundary to the CSDMA boundary; thence south along the CSDMA boundary to the MHPA boundary; thence north along the MHPA boundary to UTM y-coordinate 3620200; thence west and following UTM coordinates 507300, 3620200; 507300, 3620300; thence east to the MHPA boundary at UTM y-coordinate 3620300; thence north along the MHPA boundary to Highway 94; thence east along Highway 94 to the MHPA boundary; thence southeastward along the MHPA boundary to the SDNWR boundary; thence north along the SDNWR boundary to Highway 94; thence east along Highway 94 to the SDNWR boundary; thence south the SDNWR boundary to UTM y-coordinate 3619400; thence east and following UTM coordinates 510000, 3619400; 510000, 3618800; 509900, 3618800; thence north to the MHPA boundary at UTM x-coordinate 509900; thence west along the MHPA boundary to UTM x-coordinate 509800; thence south and following UTM coordinates 509800, 3618800; 509400, 3618800; thence north to the MHPA boundary at UTM x-coordinate 509400; thence west along the MHPA boundary to UTM x-coordinate 508800; thence south and following UTM coordinates 508800, 3617800; 509500, 3617800; 509500, 3617700; 510200, 3617700; 510200, 3617600; 510300, 3617600; 510300, 3617700; thence east to California Department of Fish and Game (CDFG) lands at UTM y-coordinate 3617700; thence north and east along the CDFG lands to Highway 94; thence southeastward along Highway 94 to the MHPA boundary; thence west along the MHPA boundary to CDFG lands; thence south and west along the CDFG lands to the MHPA boundary; thence around the MHPA boundary to CDFG lands; thence along the CDFG lands to UTM x-coordinate 514900; thence south and following UTM coordinates 514900, 3612300; 515400, 3612300; 515400, 3612200; 515300, 3612200; 515300, 3612100; 515100, 3612100; 515100, 3612000; 515000, 3612000; 515000, 3611900; 515200, 3611900; 515200, 3611700; 515400, 3611700; 515400, 3611600; 515600, 3611600; 515600, 3611700; 515700, 3611700; 515700, 3611800; 516000, 3611800; 516000, 3611700; 516700, 3611700; 516700, 3611800; 516800, 3611800; 516800, 3611700; 516900, 3611700; 516900, 3611500; 517000, 3611500; 517000, 3611300; 516900, 3611300; 516900, 3611100; 517100, 3611100; 517100, 3611200; 517300, 3611200; 517300, 3611000; 517400, 3611000; 517400, 3610800; 517100, 3610800; 517100, 3610600; 517000, 3610600; 517000, 3610500; 516900, 3610500; 516900, 3610400; 516800, 3610400; 516800, 3610300; 516700, 3610300; 516700, 3610100; 516800, 3610100; 516800, 3609900; 516900, 3609900; 516900, 3609300; 517000, 3609300; 517000, 3609400; 517100, 3609400; 517100, 3609600; 517200, 3609600; 517200, 3609900; 517100, 3609900; 517100, 3610000; 517200, 3610000; 517200, 3610100; 517400, 3610100; 517400, 3610000; 517600, 3610000; 517600, 3609900; 517700, 3609900; 517700, 3609700; 517900, 3609700; 517900, 3609500; 518200, 3609500; 518200, 3609700; 518500, 3609700; 518500, 3609600; 518600, 3609600; 518600, 3609400; 518800, 3609400; 518800, 3609100; 519100, 3609100; 519100, 3609600; 519200, 3609600; thence south to the MHPA boundary at UTM x-coordinate 519200; thence east along the MHPA to UTM y-coordinate 3609600; thence south and following UTM coordinates 521200, 3609600; 521200, 3609300; 521100, 3609300; 521100, 3609200; 521400, 3609200; 521400, 3609100; 521500, 3609100; 521500, 3608600; 521600, 3608600; 521600, 3608400; 521700, 3608400; 521700, 3608300; 521800, 3608300; 521800, 3608200; 521900, 3608200; 521900, 3608000; 522000, 3608000; 522000, 3607900; 522600, 3607900; 522600, 3607800; 522900, 3607800; 522900, 3607700; 523000, 3607700; 523000, 3607600; 523100, 3607600; 523100, 3607700; 523300, 3607700; 523300, 3607600; 523400, 3607600; 523400, 3607700; 523600, 3607700; 523600, 3607600; 524100, 3607600; 524100, 3607500; 524200, 3607500; 524200, 3607300; 524300, 3607300; 524300, 3607400; 524500, 3607400; 524500, 3607500; 524600, 3607500; 524600, 3607600; 524800, 3607600; 524800, 3607700; 524900, 3607700; 524900, 3607600; 525100, 3607600; 525100, 3607900; 524900, 3607900; 524900, 3608000; 524700, 3608000; 524700, 3608200; 524600, 3608200; 524600, 3608400; 524700, 3608400; 524700, 3608600; thence east to Highway 94 at UTM y-coordinate 3608600; thence southeastward along Highway 94 to UTM x-coordinate 538800; thence south and following UTM coordinates 538800, 3606900; 538800, 3606500; 538900, 3606500; 538900, 3605600; 539000, 3605600; 539000, 3605300; 538900, 3605300; thence south to the U.S./Mexico border at UTM x-coordinate 538900; returning to the point of beginning on the U.S./Mexico border at UTM x-coordinate 507800; excluding the Otay landfill; the planned recreational areas in the Otay River Valley and the university site as illustrated in the City of Chula Vista's subarea plan; and land bounded by 508700, 3602200; 508700, 3602100; 508800, 3602100; 508800, 3602200; 508700, 3602200.

BILLING CODE 4310–55–P



BILLING CODE 4310–55–C

Map Unit 4: Jacumba, San Diego County, California. From USGS 1:24,000 quadrangle maps In-Ko-Pah-Gorge, In-Ko-Pah-Gorge OE S, Jacumba, Jacumba OE S, Live Oak Springs, and Tierra Del Sol. Beginning at the U.S./Mexico border at UTM NAD27 x-coordinate 571500, lands bounded by the following UTM NAD27 coordinates (E, N):
571500, 3608000; 571400, 3608000; 571400, 3608100; 571300, 3608100; 571300, 3608200; 571100, 3608200; 571100, 3608400; 571000, 3608400; 571000, 3608500; 570900, 3608500; 570900, 3608400; 570800, 3608400; 570800, 3608500; 570700, 3608500; 570700, 3608700; 570900, 3608700; 570900, 3608900; 571100, 3608900; 571100, 3609000; 571400, 3609000; 571400, 3609100; 571500, 3609100; 571500, 3609300; 571200, 3609300; 571200, 3609400; 571100, 3609400; 571100, 3609500; 570700, 3609500; 570700, 3609400; 570100, 3609400; 570100, 3609500; 570000, 3609500; 570000, 3609900; 570100, 3609900; 570100, 3610000; 570600, 3610000; 570600, 3610200; 570700, 3610200; 570700, 3610300; 570100, 3610300; 570100, 3610400; 570000, 3610400; 570000, 3610300; 569700, 3610300; 569700, 3610200; 569600, 3610200; 569600, 3610300; 569500, 3610300; 569500, 3610900; 569600, 3610900; 569600, 3611000; 569900, 3611000; 569900, 3611500; 570300, 3611500; 570300, 3611700; 570400, 3611700; 570400, 3611800; 570500, 3611800; 570500, 3612100; 570700, 3612100; 570700, 3612200; 571300, 3612200; 571300, 3612900; 571400, 3612900; 571400, 3613100; 571600, 3613100; 571600, 3613300; 571500, 3613300; 571500, 3613400; 571400, 3613400; 571400, 3613500; 571300, 3613500; 571300, 3613900; 572600, 3613900; 572600, 3614000; 572700, 3614000; 572700, 3614100; 572900, 3614100; 572900, 3614200; 573100, 3614200; 573100, 3614300; 573300, 3614300; 573300, 3614800; 573400, 3614800; 573400, 3614900; 573600, 3614900; 573600, 3615000; 573700, 3615000; 573700, 3615100; 573800, 3615100; 573800, 3615200; 574300, 3615200; 574300, 3615100; 574500, 3615100; 574500, 3615200; 574600, 3615200; 574600, 3615100; 574700, 3615100; 574700, 3615200; 574900, 3615200; 574900, 3615300; 575000, 3615300; 575000, 3615600; 574900, 3615600; 574900, 3616100; 575000, 3616100; 575000, 3616400; 575200, 3616400; 575200, 3616500; 575300, 3616500; 575300, 3616600; 575500, 3616600; 575500, 3616700; 575600, 3616700; 575600, 3617100; 575800, 3617100; 575800, 3617000; 576200, 3617000; 576200, 3616900; 576400, 3616900; 576400, 3617000; 576600, 3617000; 576600, 3616900; 576700, 3616900; 576700, 3617000; 576900, 3617000; 576900, 3617100; 577100, 3617100; 577100, 3617000; 577400, 3617000; 577400, 3617100; 577500, 3617100; 577500, 3617000; 577800, 3617000; 577800, 3617100; 578100, 3617100; 578100, 3617200; 578700, 3617200; 578700, 3617300; 579400, 3617300; 579400, 3617400; 579900, 3617400; 579900, 3617300; 580000, 3617300; 580000, 3617400; 580300, 3617400; 580300, 3617500; 581000, 3617500; 581000, 3617400; 581300, 3617400; 581300, 3617300; 581500, 3617300; 581500, 3617200; 581600, 3617200; 581600, 3616600; 581800, 3616600; 581800, 3616500; 581900, 3616500; 581900, 3616100; 581600, 3616100; 581600, 3616000; 581400, 3616000; 581400, 3615900; 581300, 3615900; 581300, 3615600; 581400, 3615600; 581400, 3615500; 582100, 3615500; 582100, 3615400; 582300, 3615400; 582300, 3615500; 582700, 3615500;

582700, 3615300; 582800, 3615300; 582800, 3615100; 582900, 3615100; 582900, 3615000; 583100, 3615000; 583100, 3614800; 583200, 3614800; 583200, 3614600; 583300, 3614600; 583300, 3614000; 583400, 3614000; 583400, 3613900; 583500, 3613900; 583500, 3613800; 583700, 3613800; 583700, 3613700; thence east to the San Diego/Imperial County boundary; thence south to the U.S./Mexico border at UTM x-coordinate 584200; thence westward along the U.S./Mexico border to UTM x-coordinate 579000; thence northward and returning southward following UTM coordinates 579000, 3608700; 578900, 3608700; 578900, 3608800; 578800, 3608800; 578800, 3608900; 578500, 3608900; 578500, 3608800; 578400, 3608800; 578400, 3609000; 578100, 3609000; 578100, 3609100; 578000, 3609100; 578000, 3609500; 577900, 3609500; 577900, 3609600; 577800, 3609600; 577800, 3610000; 578000, 3610000; 578000, 3610100; 578300, 3610100; 578300, 3610300; 578500, 3610300; 578500, 3610600; 578400, 3610600; 578400, 3610800; 578300, 3610800; 578300, 3610900; 578200, 3610900; 578200, 3611000; 578100, 3611000; 578100, 3611100; 578000, 3611100; 578000, 3611200; 577700, 3611200; 577700, 3611300; 577500, 3611300; 577500, 3611400; 577400, 3611400; 577400, 3611500; 577300, 3611500; 577300, 3611700; 577100, 3611700; 577100, 3611800; 576900, 3611800; 576900, 3611700; 577000, 3611700; 577000, 3611500; 577100, 3611500; 577100, 3611200; 577000, 3611200; 577000, 3611100; 576900, 3611100; 576900, 3610800; 577000, 3610800; 577000, 3610500; 577100, 3610500; 577100, 3609900; 577000, 3609900; 577000, 3609700; 576900, 3609700; 576900, 3609600; 576600, 3609600; 576600, 3609500; 576300, 3609500; 576300, 3609400; 575900, 3609400; 575900, 3609200; 575800, 3609200; 575800, 3609000; 575700, 3609000; 575700, 3608800; 575600, 3608800; 575600, 3608700; 575500, 3608700; 575500, 3608600; 575400, 3608600 to the U.S./Mexico border at UTM x-coordinate 575400; returning to the point of beginning on the U.S./Mexico border at UTM x-coordinate 571500; excluding land bounded by 570700, 3610300; 570800, 3610300; 570800, 3610400; 570700, 3610400; 570700, 3610300.

* * * * *

Dated: February 1, 2001.

Joseph E. Doddridge,

Acting Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 01–3127 Filed 2–6–01; 8:45 am]

BILLING CODE 4310–55–P