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Endangered and Threatened Wildlife and Plants; Revised Designation of Critical Habitat for the Tidewater Goby (Eucyclogobius newberryi); Final Rule

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

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[FWS–R8–ES–2008–0010; 92210–1117–0000–B4]

RIN 1018–AU81

Endangered and Threatened Wildlife and Plants; Revised Designation of Critical Habitat for the Tidewater Goby (Eucyclogobius newberryi)

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), are revising the critical habitat designation for the tidewater goby (*Eucyclogobius newberryi*) under the Endangered Species Act of 1973, as amended (Act). In total, approximately 10,003 acres (ac) (4,050 hectares (ha)) fall within the boundaries of the final revised critical habitat designation. The revised critical habitat is located in Del Norte, Humboldt, Mendocino, Sonoma, Marin, San Mateo, Santa Cruz, Monterey, San Luis Obispo, Santa Barbara, Ventura, and Los Angeles Counties, California.

DATES: This rule becomes effective on March 3, 2008.

ADDRESSES: The final rule, final economic analysis, and map of critical habitat will be available on the Internet at *http://www.regulations.gov* and *http://www.fws.gov/ventura.* Supporting documentation we used in preparing this final rule will be available for public inspection, by appointment, during normal business hours, at the U.S. Fish and Wildlife Service, Ventura Fish and Wildlife Office, 2493 Portola Road, Suite B, Ventura, California 93003; telephone (805) 644–1766; facsimile (805) 644–3958.

FOR FURTHER INFORMATION CONTACT: Michael McCrary, Listing and Recovery Coordinator, U.S. Fish and Wildlife Service, Ventura Fish and Wildlife Office, telephone (805) 644–1766 (see **ADDRESSES** section). If you use a telecommunications device for the deaf (TDD), call the Federal Information Relay Service (FIRS) at 800–877–8339.

SUPPLEMENTARY INFORMATION:

Background

It is our intent to discuss only those topics directly relevant to the revised designation of critical habitat in this final rule. For additional information on the tidewater goby, refer to the final listing rule published in the **Federal Register** on February 4, 1994 (59 FR 5494); the original proposed and final critical habitat rules published in the **Federal Register** on August 3, 1999 (64 FR 42250) and November 20, 2000 (65 FR 69693), respectively; and the proposed revised critical habitat designation published in the **Federal Register** on November 28, 2006 (71 FR 68914).

Species Description and Genetic/Morphological Characteristics

The tidewater goby is a small, elongate, grey-brown fish rarely exceeding 2 inches (in) (5 centimeters (cm)) in length. This species possesses large pectoral fins, and the pelvic or ventral fins are joined to each other below the chest and belly from below the gill cover back to just anterior of the anus. Male tidewater gobies are nearly transparent with a mottled brownish upper surface. Female tidewater gobies develop darker colors, often black, on the body and dorsal and anal fins. The tidewater goby is a short-lived species; the lifespan of most individuals appears to be about 1 year (Irwin and Soltz 1984, pg 26; Swift *et al.* 1989, pg 4).

Various genetic markers demonstrate that pronounced differences in the genetic structure of tidewater gobies exist, and that tidewater gobies in some locations are genetically distinct. A recent study of mitochondrial DNA and cytochrome b (molecular material used in genetic studies) sequences from tidewater gobies that were collected at 31 locations throughout the species' range identified six major phylogeographic (geographic differences in the evolution of a species) or regional groups (Dawson *et al.* 2001, pg 1171). These six regional groups include the following areas: (1) Tillas Slough (Smith River) in Del Norte County to Lagoon Creek in Mendocino County, i.e., the North Coast (NC) Unit; (2) Salmon Creek in Sonoma County to Bennett's Slough in Monterey County, i.e., the Greater Bay (GB) Unit; (3) Arroyo del Oso to Morro Bay in San Luis Obispo County, i.e., the Central Coast (CC) Unit; (4) San Luis Obispo Creek in San Luis Obispo County to Rincon Creek in Santa Barbara County, i.e., the Conception (CO) Unit; (5) Ventura River in Ventura County to Topanga Creek in Los Angeles County, i.e., the Los Angeles-Ventura (LV) Unit; and (6) San Pedro Harbor in Los Angeles County to Los Peñasquitos Lagoon in San Diego County, i.e., the South Coast (SC) Unit.

Metapopulation Dynamics

Local populations of tidewater gobies are best characterized as metapopulations (Lafferty *et al.* 1999a, p. 1448). First, local goby populations are frequently isolated from other local populations by extensive areas of unsuitable habitat. Second, gobies occupy coastal lagoons and estuaries that in most cases are separated from each other by the open ocean. Very few tidewater gobies have ever been captured in the marine environment (Swift *et al.* 1989, p. 7), which suggests this species rarely occurs in the open ocean. Studies of the tidewater goby suggest that some populations persist on a consistent basis (Lafferty *et al.* 1999a, p. 1452), while other tidewater goby populations appear to experience intermittent extirpations. These extirpations may result from one or a series of factors, such as the drying up of some small streams during prolonged droughts (Lafferty *et al.* 1999a, p. 1451). Some of the areas where tidewater gobies have been extirpated apparently have been recolonized when extant populations were present within a relatively short distance of the extirpated population (i.e., less than 6 miles (mi) (10 kilometers (km)). These recolonization events suggest that tidewater goby populations exhibit a metapopulation dynamic where some populations survive or remain viable by continually exchanging individuals, and recolonizations may occur after occasional extirpations (Doak and Mills 1994, pg 619).

Lafferty *et al.* (1999b) monitored the post-flood persistence of several tidewater goby populations in Santa Barbara and Los Angeles Counties during and after the heavy winter floods of 1995. All of the monitored populations persisted after the floods, and no significant changes in population sizes were noted (Lafferty *et al.* 1999b, p. 621). Tidewater gobies apparently colonized Cañada Honda in Santa Barbara County after one flood event (Lafferty *et al.* 1999b, p. 621). This information suggests that flooding may sometimes contribute to recolonization of habitats where a tidewater goby population has become extirpated.

The largest wetland habitats where tidewater gobies have been known to occur are not necessarily the most secure, as evidenced by the fact that the Santa Margarita River in San Diego County and the San Francisco Bay have lost their populations of tidewater goby. Today, the majority of the most stable and largest tidewater goby populations consist of lagoons and estuaries of intermediate sizes, i.e., 5 to 125 ac (2 to 50 ha) that have remained relatively unaffected by human activities (Service 2005, p. 12). Many of the localities where tidewater gobies are consistently present may be ''source'' populations, and such locations may provide the

colonists for localities that intermittently lose their tidewater goby populations.

Historical records and survey results for several localities occupied by the tidewater goby are available (e.g., Swift *et al.* 1989, pp. 18–19; Swift *et al.* 1994, pp. 8–16). These documents suggest the persistence of tidewater goby populations is related to habitat size, configuration, location, and proximity to human development. In general, the most stable and persistent tidewater goby populations occur in the lagoons and estuaries that are more than 2.47 ac (1 ha) in size and that have remained relatively unaffected by human activities (Lafferty *et al.* 1999a, pp. 1450–1453). We note, however, that some systems that are affected or altered by human activities also have relatively large and stable populations (e.g., Humboldt Bay in Humboldt County, Pismo Creek in San Luis Obispo County, Santa Ynez River in Santa Barbara County, and the Santa Clara River in Ventura County). Also, some habitats less than 2.47 ac (1 ha) in size have tidewater goby populations that persist on a regular basis (Swift *et al.* 1997, p. 3; Keegan 2006, p. 8). The best available information suggests that the lagoons and estuaries that have persistent populations are likely the core populations that provide the individuals that colonize adjacent, smaller localities that have ephemeral tidewater goby populations (Lafferty *et al.* 1999a, p. 1452).

Distribution

The known geographic range of the tidewater goby is limited to the coast of California (Eschmeyer *et al.* 1983, p. 262; Swift *et al.* 1989, p. 12). The species historically occurred from localities that extended from 3 mi (5 km) south of the California-Oregon border (i.e., Tillas Slough in Del Norte County) to 44 mi (71 km) north of the United States-Mexico border (i.e., Agua Hedionda Lagoon in San Diego County). The available documentation (e.g., Eschmeyer *et al.* 1983, p. 262; Swift *et al.* 1989, p. 12) suggests the northernmost locality that forms one end of the historical and current geographic range of the tidewater goby has not changed over time. Tidewater gobies do not currently occur in Agua Hedionda Lagoon, and the species' southernmost known locality currently is located in Cockleburr Canyon 9.2 mi (14.8 km) north of Agua Hedionda Lagoon. Although the northernmost and southernmost extent of the tidewater goby's range has not changed much over time, the tidewater goby's overall population has become patchy and fragmented along the coast.

Tidewater gobies appear to be naturally absent from several large (50 to 135 mi (80 to 217 km)) stretches of coastline where lagoons or estuaries are absent, and steep topography or swift currents may prevent tidewater gobies from dispersing between adjacent localities (Swift *et al.* 1989, p. 13). One such gap in lagoons and estuaries occurs between the Eel River in Humboldt County and the Ten Mile River in Mendocino County. A second gap exists between Lagoon Creek in Mendocino County and Salmon Creek in Sonoma County. Another large, natural gap occurs between the Salinas River in Monterey County and Arroyo del Oso in San Luis Obispo County. Habitat loss and other anthropogenic-related factors have resulted in the tidewater goby now being absent from several locations where it historically occurred; their recent disappearance from specific locations has created smaller, artificial gaps in the species' geographic distribution (Capelli 1997, p. 7). Such locations include Buena Vista Lagoon and Agua Hedionda Lagoon in San Diego County, Calleguas Creek/Mugu Lagoon in Ventura County, San Francisco Bay in San Francisco and Alameda Counties, and Redwood Creek and Freshwater Lagoon in Humboldt County.

Swift *et al.* (1989, p. 13) reported that, as of 1984, tidewater gobies occurred, or had been known to occur, at 87 localities; these localities included those at the extreme northern and southern end of the species' historical geographic range. An assessment of the species' distribution in 1993, using records that were limited to the area between the Monterey Peninsula in Monterey County and the United States-Mexico border, found tidewater gobies occurring at four additional localities (Swift *et al.* 1993, p. 129). Other goby localities have been identified since 1993, and currently tidewater gobies have been documented at 135 localities within the historical geographic range of the species (Service 2005, p. 6). Of these 135 localities, 23 (17 percent) are no longer known to be occupied by tidewater gobies. Therefore, 112 localities are currently occupied.

Habitat

The lagoons, estuaries, backwater marshes, and freshwater tributaries that tidewater gobies occupy are dynamic environments that are subject to considerable fluctuations on a seasonal and annual basis. In a typical year, the formation of a sandbar occurs in the late spring as flow into a lagoon declines enough to allow the ocean surf to build up the sandbar at the mouth of the lagoon. Winter rains and subsequently increased stream flows may bring in considerable sediment and dramatically affect the bottom profile and substrate composition of a lagoon or estuary. Fine mud and clay either moves through the lagoon or estuary or settles out in backwater marshes, while heavier sand is left in the lagoon or estuary. High flows associated with winter rains can scour out the lagoon bottom to lower levels, with sand building up again after flows decline. These dynamic processes result in wetland habitats that, over time, move both laterally and up-or-down-gradient relative to stationary features that exist outside the flood zone (e.g., roads or buildings).

The horizontal extent of the lentic (pond-like) wetland habitat associated with a particular tidewater goby locality varies on a site-specific basis, and is affected in part by local precipitation patterns and topography. In coastal areas where the topography is steep and precipitation is relatively low (e.g., areas adjacent to the Santa Ynez Mountains in Santa Barbara County), the habitats occupied by tidewater gobies may be a few acres in size, only extend a few hundred feet inland from the ocean, and backwater marshes may be small or absent. In other coastal settings where precipitation is more abundant: (1) Topography is less steep and surface streams are larger; (2) coastal lagoons or estuaries may be hundreds of acres in size and extend many miles inland; and (3) extensive backwater marshes may be present (e.g., Lake Earl in Del Norte County and Ten Mile River in Mendocino County).

Some localities occupied by tidewater gobies receive surface or ground water from upstream areas on a year-round basis. Such localities (e.g., Bennett's Slough in Monterey County) tend to possess wetland habitats that are larger and can extend inland for several hundred feet or even miles. Other occupied locations do not possess stream channels or tributaries that provide a considerable amount of water throughout the summer or fall months. Such locations (e.g., Little Pico Creek in San Luis Obispo County) tend to possess wetland habitats that only extend a short distance inland from the ocean (i.e., 290 ft (88 m)).

Reproduction

Tidewater gobies have been observed spawning in every month of the year except December (Swenson 1999, p. 107). Reproduction tends to peak in late April or May to July, and can continue into November depending on seasonal

temperature and rainfall. Swenson (1995, p. 31) has documented spawning behavior in adult fish and the presence of egg clutches at water temperatures between 48 and 77 degrees Fahrenheit (F) (9 and 25 degrees Celsius (C)). Spawning tidewater gobies have been observed in water salinities between 2 and 27 parts per thousand (ppt) (Swenson 1999, p. 31).

Threats

The final listing rule for the tidewater goby that was published in 1994 (59 FR 5494) states that this species is threatened, or potentially threatened, by: (1) Coastal development projects that result in the loss or alteration of coastal wetland habitat; (2) water diversions and alterations of water flows upstream of coastal lagoons and estuaries that negatively impact the species' breeding and foraging activities; (3) groundwater overdrafting; (4) channelization of the rivers where the species occurs; (5) discharge of agricultural and sewage effluents; (6) cattle grazing and feral pig activity that results in increased sedimentation of coastal lagoons and riparian habitats, removal of vegetative cover, increased ambient water temperatures, and elimination of plunge pools and undercut banks utilized by tidewater gobies; (7) introduced species that prey on the tidewater goby (e.g., bass (*Micropterus* spp.) and crayfish (*Cambaris* spp.)); (8) the inadequacy of existing regulatory mechanisms; (9) drought conditions that result in the deterioration of coastal and riparian habitats; and (10) competition with introduced species such as the yellowfin goby (*Acanthogobius flavimanus*) and chameleon goby (*Tridentiger trigonocephalus*).

Previous Federal Actions

On August 31, 2001, Cabrillo Power L.L.C. (Cabrillo) filed a lawsuit in the U.S. District Court for the Southern District of California challenging a portion of the November 20, 2000, final rule (65 FR 69693) that designated the 10 critical habitat units for the tidewater goby in Orange and San Diego Counties. Specifically, Cabrillo objected to the critical habitat unit involving Agua Hedionda Lagoon and Creek. In a consent decree dated February 27, 2003, the U.S. District Court: (1) Agreed to vacate the critical habitat designation involving Agua Hedionda Lagoon and Creek; (2) stated the nine other critical habitat units should remain in effect; (3) stated the final rule designating critical habitat was remanded in its entirety for reconsideration; and (4) directed the Service to promulgate a revised critical habitat rule that considers the entire geographic range of the tidewater goby and any currently unoccupied tidewater goby habitat. The consent decree requires that the Service submit proposed and final revised rules to the **Federal Register** no later than November 15, 2006, and November 15, 2007, respectively. On November 28, 2006, we published the proposed revised critical habitat designation for the tidewater goby in the **Federal Register** (71 FR 68914). An extension of the due date for the final critical habitat rule was approved by the court on November 19, 2007, and the Service is now required to submit the final rule to the **Federal Register** by January 18, 2008.

A draft economic analysis (DEA) for the proposed revised designation was completed on August 23, 2007, and a notice of availability for this DEA was published in the **Federal Register** on September 25, 2007 (72 FR 54411). Publication of the notice of availability opened a public comment period for the DEA as well as the proposed revised designation from September 25, 2007, to October 10, 2007. For a discussion of additional Federal actions that occurred prior to the proposed revised designation of critical habitat for this species, please refer to the Previous Federal Actions section of the proposed revised critical habitat rule for the tidewater goby (71 FR 68914).

On September 28, 2007, we completed a 5-year review for the tidewater goby. In the 5-year review we recommended that the tidewater goby be downlisted to threatened because we believe that it is not in imminent danger of extinction. The main reason for this recommendation is that the number of localities known to be occupied has more than doubled since listing (from 48 to 106). We believe this indicates the tidewater goby is more resilient in the face of severe drought events than believed at the time of listing. Furthermore, we believe threats identified at the time of listing have been reduced or are not as serious as thought. One of the main reasons why the tidewater goby was listed was because of habitat destruction and alteration. Current laws and regulations have largely eliminated the major destruction of habitat that occurred in the past along the coast of California. The 5-year review concluded that tidewater goby populations are highly dynamic and will periodically be extirpated or reach such low numbers that they cannot be detected at some localities. This is a natural occurrence within many species exhibiting a metapopulation dynamic including the tidewater goby. Although the rate of extirpation or reduction to low levels is expected to be higher during drought conditions, during wetter periods, we expect that these localities will again be occupied assuming that suitable habitat still exists.

Summary of Comments and Recommendations

We requested written comments from the public on the proposed revised designation of critical habitat for tidewater goby in the proposed rule (71 FR 68914, November 28, 2006) and in the subsequent notice of availability for the DEA (72 FR 54411, September 25, 2007). We also contacted appropriate Federal, State, and local agencies; scientific organizations; and other interested parties and invited them to comment on the proposed revised rule.

During the comment period that opened on November 28, 2006, and closed on January 29, 2007, we received 23 comments directly addressing the proposed revised critical habitat designation: 4 from peer reviewers, 2 from Federal agencies, 1 from the State of California, 2 from local government, and 14 from organizations or individuals. Seventeen commenters generally supported the revised designation of critical habitat for tidewater goby, 4 opposed it, and 2 were neither for nor against it. During the comment period that opened September 25, 2007, and closed on October 10, 2007, we received seven comments addressing the proposed revised critical habitat designation and/or the draft economic analysis: two from local governments and five from organizations or individuals. One commenter supported the revised designation of critical habitat for the tidewater goby, five opposed it and/or the draft economic analysis, and one was neither for nor against it. Comments received were grouped into six general issues and are addressed in the following summary and incorporated into this final rule as appropriate. We did not receive any requests for a public hearing.

Peer Review

In accordance with our policy published on July 1, 1994 (59 FR 34270), we solicited expert opinions from seven knowledgeable individuals with scientific expertise that included familiarity with the species, the geographic region in which the species occurs, and conservation biology principles. We received responses from four of the peer reviewers. The peer reviewers generally concurred with our methods and conclusions, and provided

additional information, clarifications, and suggestions to improve the final revised critical habitat rule. Peer reviewer comments are addressed in the following summary and incorporated into the final rule as appropriate.

Peer Reviewer Comments

1. *Comment:* Four peer reviewers stated that more extant populations need to be designated or new populations established in order to potentially increase connectivity and persistence of present tidewater goby distribution and diversity.

Our Response: We have not designated all areas currently occupied by tidewater gobies as critical habitat, nor have we designated any areas that were historically occupied but are now unoccupied by the species. However, we believe the 44 critical habitat units we are designating for the tidewater goby, all of which are currently occupied, are the areas that are necessary for the conservation of the tidewater goby and, therefore, meet the definition of critical habitat in the Act. The goal of the recovery plan for the tidewater goby is to preserve the diversity of habitats that occur within the range of the species, the metapopulation structure of the species (see Criteria Used To Identify Critical Habitat section for a definition and additional details on the recovery plan for the tidewater goby), and genetic diversity (Service 2005). The recovery plan identifies 26 subunits throughout the range of the tidewater goby. We designated critical habitat in all 26 subunits included in the recovery plan, except for those on Vandenberg Air Force Base (Santa Barbara County) and Marine Corps Base, Camp Pendleton (San Diego County), which have Integrated National Resource Management Plans (INRMP) that provide protection for the tidewater goby. These areas have been exempted from this final designation of critical habitat (see Application of Section 4(a)(3) of the Act—Approved Integrated Natural Resource Management Plans section). We believe these 44 critical habitat units, in addition to those subunits covered by INRMPs, are sufficient for the conservation of the species throughout its range, as they adequately represent the variation of both the habitat and genetic composition of the species, and they will support the species' recovery. As such, we did not designate any areas that are not currently occupied (see Summary of Changes from Previously Designated Critical Habitat and 2006 Proposed Rule section for more information).

We also agree with the commenters that the introduction of new populations could potentially benefit the tidewater goby. However, we did not include any unoccupied habitat in this designation because we concluded that the 44 units we are designating are the areas essential for conservation.

2. *Comment:* Several peer reviewers stated that all available evidence suggests that the southern tidewater goby is a distinct taxon of, or equivalent to, species rank and given the critical habitat proposed, is very likely to go extinct.

Our Response: At this time, the tidewater goby is listed as a single species, following the currently accepted taxonomy for the species. If a change in the taxonomy of the tidewater goby is published in a peer-reviewed journal, we will evaluate the listing status of the species at that time. We have not designated any critical habitat in Orange and San Diego Counties because all the areas in these Counties that meet the first part of the definition of critical habitat in section 3(5)(A) of the Act (''the specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the provisions of section 4 of this Act, on which are found those physical or biological features (I) essential to the conservation of the species * * *'') are located on Camp Pendleton Marine Corps Base (Base). The Base has a completed INRMP that provides a conservation benefit to the tidewater goby. Section 4(a)(3) of the Act prohibits the Secretary from designating critical habitat on any lands owned or controlled by the Department of Defense that are subject to an INRMP if the Secretary has determined that such plan provides a benefit to the species for which critical habitat is being proposed for designation. As such, pursuant to section 4(a)(3) of the Act, we have exempted the Base from this final designation of critical habitat (see Application of Section 4(a)(3)—Marine Corps Base Camp Pendleton section). We also did not designate any areas outside the geographical area occupied by the species as critical habitat for the reasons given in our response to comment 1 above and the Summary of Changes from Previously Designated Critical Habitat and 2006 Proposed Rule section.

3. *Comment:* One peer reviewer stated that our identification of tidewater goby populations serving as source populations for other areas is not supported by available information.

Our Response: We are not aware of any single definition of source population that can be applied to every species. The recovery plan for the tidewater goby defines a source population as a subpopulation of a metapopulation that has an average birth rate that exceeds the average death rate, and therefore produces an excess of juveniles that may disperse to other areas (Service 2005). We do not have information on either tidewater goby population size or productivity for each occupied area. Therefore, for purposes of this rule, we have used the term ''source population'' to describe those areas that are currently occupied and have been consistently occupied for three or more consecutive years based on presence/absence survey data and published reports. We believe these areas are more likely to be capable of maintaining populations over many years and more likely to be capable of providing individuals to recruit into surrounding subpopulations.

4. *Comment:* Two peer reviewers asserted that coastal lagoon restoration plans that establish tidal salt marshes rather than brackish coastal lagoons should be included as an additional new threat.

Our Response: We acknowledge that coastal lagoon restoration projects may be a threat to tidewater goby habitat. Although we have not specifically mentioned this type of project in this rule, we consider this as a coastal development project (see Critical Habitat Designation section and the Special Management Considerations or Protection section below).

5. *Comment:* Two peer reviewers stated that critical habitat units should be related to recovery units because the units designated as they are now do not provide for recovery.

Our Response: We believe that our approach to this designation complies with the definitions in the Act, reflects the intent of the recovery plan for the tidewater goby (Service 2005), and identifies the areas essential to the conservation of the species throughout its range (see our response to comment 1 above). Developing recovery plans and designating critical habitat are not necessarily synonymous under the Act. The Act does not include specific instructions as to the areas that should be included in recovery plans, and often recovery plans include redundant areas. In comparison, critical habitat is defined in section 3(5)(A) of the Act as, ''the specific areas within the geographical area occupied by the species, at the time it is listed * * *'' Critical habitat is further defined in the Act as those specific areas, ''on which are found those physical or biological features (I) essential to the conservation of the

species and (II) which may require special management considerations or protection.'' Under section 3(5)(A)(ii) of the Act, areas outside the geographical area occupied by the species at the time it is listed may only be designated as critical habitat, ''upon a determination by the Secretary that such areas are essential for the conservation of the species.'' Each of these definitions requires us to look at what is essential to the conservation of the species. The word essential means ''absolutely necessary, indispensable.'' We interpret this as Congressional direction to designate only those areas that are indispensable to conservation, not to designate areas that may be desirable or helpful for conservation. Furthermore, section 3(5)(C) of the Act prohibits us from designating the entire geographical area which can be occupied by a species without the approval of the Secretary. Thus, we considered the 26 subunits in the recovery plan and designated critical habitat units accordingly as discussed in more detail in comment 1 above.

6. *Comment:* One peer reviewer questioned why we did not include the Smith River locality in the critical habitat designation and make it a priority for protection because it is the northernmost population and may be divergent genetically.

Our Response: We determined that the survey history shows the species to be consistently rare at this location, and within the past 5 years, surveys in this location have only sporadically located a few individuals. Based on this information, we believe this locality does not serve as a source population and does not provide connectivity between localities (see Criteria Used To Identify Critical Habitat section). We also do not have any information that indicates this locality is occupied by a genetically distinct population. Therefore, we do not consider this locality to have the features that are essential to the conservation of the species.

7. *Comment:* One peer reviewer stated that Scott Creek lagoon in Santa Cruz County should be considered for addition to critical habitat because it is substantially isolated and could be genetically distinct and therefore, may be an important potential stepping stone site.

Our Response: Scott Creek lagoon was not occupied at the time of listing, although it was subsequently colonized (Service 2005). Over the years, survey efforts indicate that occupancy by tidewater gobies at this locality is intermittent and therefore, we do not consider it a source population (Service 2005). We also do not have information that indicates this locality is occupied by a genetically distinct population. Finally, Scott Creek is not likely to provide connectivity between localities because the next locality to the north, Bean Hollow Creek, is 16.1 mi (26 km) from Scott Creek. This distance is well beyond what experts believe to be the dispersal abilities of the tidewater goby (see Background section). Therefore, we do not consider this locality to be essential to the conservation of the species.

8. *Comment:* One peer reviewer stated that Wilder Creek lagoon in Santa Cruz County should be considered for addition to critical habitat because it has a larger late summer population than Baldwin Creek and may be more likely to supply large numbers of dispersing tidewater gobies to other sites in the metapopulation.

Our Response: As described in the recovery plan for the tidewater goby (Service 2005), the subunit that includes Wilder Creek consists of several small, closely spaced localities. Only small numbers of individuals have been found in many of these localities and occupancy is intermittent in most areas; survey efforts indicate that occupancy by tidewater gobies at Wilder Creek is intermittent (Service 2005). Tidewater gobies are only regularly abundant at one locality in this subunit, Baldwin Creek, which we have designated as critical habitat. We consider Baldwin Creek to be the source population for this subunit. For these reasons, we do not consider the Wilder Creek lagoon to contain the features essential to the conservation of the species.

9. *Comment:* One peer reviewer recognized that, while Marine Corps Base, Camp Pendleton (Base) may be providing some protection to those tidewater goby populations on the Base, the protection of these populations is not sufficient to protect the southern population of the species as a whole and that areas outside the Base that were historically occupied should be designated.

Our Response: As discussed in the Marine Corps Base, Camp Pendleton section under Application of Section 4(a)(3), occupied tidewater goby habitat occurs on the Base. We have determined that the conservation efforts for estuarine habitat and species identified in the Base's INRMP provide a benefit to the tidewater goby. Section 4(a)(3) of the Act prohibits the Secretary from designating critical habitat on any lands owned or controlled by the Department of Defense that are subject to an INRMP if the Secretary has determined that such plan provides a benefit to the species for which critical habitat is being proposed for designation. As such, pursuant to section 4(a)(3) of the Act, we have exempted the Base from the designation of critical habitat.

Additionally, none of the historically occupied sites in southern California outside of the Base supported tidewater gobies at the time the species was listed in 1994. In fact, tidewater gobies have not been detected at any of the off-Base southern California sites for several decades. As a result, none of these locations meets the first part of the definition of critical habitat.

As noted above, section 3(5)(A)(ii) requires us to determine whether areas outside the geographical area occupied by the species at the time of listing are essential for the conservation of the species. While our final recovery plan for the tidewater goby identifies these off-Base southern California locations as potential reintroduction sites, it also acknowledges that habitat improvements will be needed before these sites can be recolonized. We acknowledge that some of these sites, if restored, may be helpful contributors to the recovery of the species in southern California. However, we did not designate any areas outside the geographical area occupied by the species as critical habitat for the reasons given in our response to comment 1 above and the Summary of Changes from Previously Designated Critical Habitat and 2006 Proposed Rule section.

Public Comments Regarding Site-Specific Areas

10. *Comment:* One commenter stated that we should have included the area around Lake Earl Lagoon above the 4-foot elevation, and we therefore, underestimated the size of the Lake Earl Lagoon critical habitat unit (see DN–1: Lake Earl/Lake Tolowa section).

Our Response: Lake Earl is artificially breeched, and there are times when water level is well below the 4-foot elevation. We determined that the 4-foot elevation above mean sea level was appropriate for delineating critical habitat for Lake Earl because the portion of Lake Earl below that elevation is wetted during most times of the year, providing consistent habitat for tidewater goby. The area above the 4-foot elevation that is frequently not submerged does not contain the features essential to the conservation of the species.

11. *Comment:* Several commenters wanted additional areas, including unoccupied areas, designated as critical habitat for the tidewater goby.

Our Response: Please see our response to comment 1 above.

12: *Comment:* One commenter believed that Hathaway Creek in Mendocino County should be included in the critical habitat designation because it is good tidewater goby habitat and is occupied by tidewater gobies.

Our Response: We have no record that Hathaway Creek is occupied or has ever been occupied by tidewater gobies, and the commenter did not provide specific information that shows it to be occupied. As per our responses to comment 1 and 2 and as discussed in the Summary of Changes from Previously Designated Critical Habitat and 2006 Proposed Rule section, we have determined that unoccupied habitat is not essential for the conservation of the tidewater goby.

13. *Comment:* Two commenters believed that Arroyo Grande Lagoon in San Luis Obispo County should be considered for addition to critical habitat because: it is likely a source population, it possesses all four primary constituents, and it provides connectivity for the Pismo Creek population with the Santa Maria River population.

Our Response: We agree that Arroyo Grande Lagoon is likely to have some or all of the primary constituent elements (PCEs) for the tidewater goby; however, the mere presence of one or more PCEs does not mean that an area meets the definition of critical habitat. As described in the recovery plan for the tidewater goby (Service 2005), the subunit that includes Arroyo Grande Lagoon consists of five localities, of which four are currently occupied. Tidewater gobies occur only intermittently at San Luis Obispo Creek and Arroyo Grande Lagoon and only in small numbers. Tidewater gobies are only regularly abundant at two localities in this subunit, Pismo Creek and Santa Maria River, which we have designated as critical habitat. We consider Pismo Creek and Santa Maria River to be the source populations for this subunit. Survey efforts indicate that occupancy by tidewater gobies at Arroyo Grande Lagoon is intermittent (Service 2005) and therefore is not likely to be a source population. For these reasons, we do not consider this locality to contain the features essential to the conservation of the species.

14. *Comment:* One commenter expressed concern over the effects of a proposed multi-lane toll road on tidewater gobies in San Mateo Creek and San Onofre Creek on Marine Corps Base Camp Pendleton (Base). The commenter stated that the Base's INRMP does not address potential impacts to the tidewater goby associated with the proposed toll road, and therefore we should designate habitat along San Mateo Creek and San Onofre on the Base as critical habitat.

Our Response: The proposed toll road is not a Marine Corps project and therefore is not directly subject to the Base's INRMP. The toll road is a separate Federal action with the U.S. Department of Transportation, Federal Highway Administration as the lead agency; as such, any adverse effects to federally listed species, including tidewater gobies, will be addressed under section 7 of the Act.

However, as described in the Base's INRMP, the Marine Corps agreed that (among other provisos) an on-Base alignment of the toll road could be evaluated provided ''that any adverse environmental impacts created as a result of siting this route on the Base * * * must be fully and properly mitigated.'' Further, the lower portion of San Mateo Creek and San Onofre Creek is leased to California Department of Parks and Recreation, who is required by the Marine Corps to ''conduct its natural resources management consistent with the philosophies and supportive of the objectives'' of the Camp Pendleton INRMP. Moreover, the Marine Corps is implementing the INRMP, including actions benefiting the tidewater goby, within the San Mateo Creek and San Onofre watersheds. As stated above, pursuant to section 4(a)(3) of the Act we are required to exempt the Base from critical habitat for the tidewater goby, which includes the lower portion of San Mateo Creek and San Onofre Creek.

15. *Comment:* One commenter stated that unlike Stone or Big Lagoons, Lake Earl is artificially managed and consequently, there is no official monitoring or rescue effort for tidewater gobies, no established population baseline, and a consistent failure to reach the appropriate lagoon level during the summer during tidewater goby breeding season (April to August), making this critical habitat unavailable to tidewater gobies.

Our Response: The current 10-year Army Corps permit for the breaching of Lake Earl includes the requirement of a monitoring plan. Currently, there are specific post-breach monitoring requirements that include surveying for tidewater gobies in areas suspected to cause stranding. The current permit to breach Lake Earl includes a restriction on breaching after February 15 which is designed to protect tidewater goby habitat during the breeding season, allowing the lagoon sufficient time to close and fill naturally during the spring and summer months, when breeding is thought to peak.

The commenter is correct that there is not enough information available to precisely estimate population baseline. The Service is addressing this issue by looking into innovative methods of obtaining that information in a practical manner.

We believe that the lake levels during most breeding seasons are adequate for tidewater goby breeding to take place if the permit conditions for the artificial breaching are attained.

16. *Comment:* One commenter stated that the proposed revised rule did not provide an analysis of why each individual area with suitable habitat for tidewater gobies, regardless of occupancy, was or was not designated.

Our Response: To determine which areas to designate as critical habitat for the tidewater goby, we developed a set of rules or criteria (see Criteria Used To Identify Critical Habitat section) specific to tidewater gobies. We believe our criteria identify those areas which meet the definition of critical habitat in the Act and reflect the intent of the recovery plan for the tidewater goby (Service 2005). Based on these criteria, we determined that not all habitat occupied at the time of listing contain the PCEs in the spatial arrangement and quantity essential to the conservation of the species. We also considered localities that we know from surveys, or the lack thereof, were not occupied at the time of listing. We included unoccupied-at-time-of-listing localities in the designation when they met our criteria and were essential to the conservation of the species. See response to Comment 1 for more details.

17. *Comment:* One commenter believed that the proposed critical habitat adjacent to the Mad River Slough Channel should not be designated because they do not include habitat for the tidewater goby.

Our Response: We believe tidewater goby habitat occurs in these areas adjacent to the Mad River Slough, which are included in Unit Hum-3: Humboldt Bay, because these areas are occupied by tidewater gobies (Goldsmith 2007). We have included these areas in this final revised designation because they form part of the hydrologically interconnected system of estuaries and seasonally flooded backwaters that make up the habitat of the tidewater goby along Humboldt Bay, and these areas have the features that are essential to the conservation of gobies.

Comments Related to Threats to the Species

18. *Comment:* Two commenters stated that illegal breaching of sand bars across

lagoons should be included as an additional new threat.

Our Response: Untimely breaching of sandbars may be a threat to tidewater gobies in areas where sandbars play a role in the hydrology of estuaries and lagoons. We have provided a discussion of the effects of artificial breaching of sandbars on tidewater gobies, which would include illegal breaching, in the Primary Constituent Elements and Effects of Critical Habitat Designation sections of this rule. We have also more clearly identified artificial breaching of sandbars as a threat to tidewater goby habitat in the Special Management Considerations or Protection section.

19. *Comment:* One commenter stated that disease, particularly since a new species of microsporidian parasite was found in the tidewater goby population at Big Lagoon, should be included as an additional new threat.

Our Response: The discovery of the parasitic microsporidian referred to by the commenter is a new development. Currently, the parasite has only been identified from Big Lagoon, Humboldt County, with a possible detection from Rodeo Lagoon, Marin County. Surveys evaluating the extent of the parasite, and its role in the decline of the tidewater goby are needed to assess the level of threat to the goby. We have not included this as a threat to the tidewater goby at this time, but will continue to monitor and address new information as it becomes available.

20. *Comment:* One commenter stated we should take in account the potential effects of global warming on tidewater goby habitat and therefore the Service should expand its designation of critical habitat to include unoccupied habitat, particularly upstream of barriers.

Our Response: The average surface temperature of the Earth is widely recognized by scientists throughout the world to be increasing (IPCC 2007, p. 4). Projected changes in climate include changes in precipitation, sea level rise, and increased frequency and intensity in extreme climatic events leading to increased climate variability (IPCC 2002, p. 4). These changes will have a serious impact on the environment on a global scale. However, it is much more difficult to predict how the climate of a local area will change and how that change will affect the local environment. We are required by section 4(b)(1)(A) of the Act to use the best scientific data available in determining the areas to designate as critical habitat for the tidewater goby. We simply do not have good science at this point that provides local predictions. Therefore, we cannot account for such potential but unknown changes in local climate in our critical habitat designation. However, we do believe this designation does address the potential for climate change by inclusion of critical habitat units over a wide range of latitudes.

Comments Related to Criteria and Methodology

21. *Comment:* One commenter stated that our approach to designating critical habitat could be improved or modified through more public outreach, such as providing information about tidewater goby life history or habitat requirements at some of the critical habitat localities.

Our Response: We published the Recovery Plan for the Tidewater Goby in 2005. The recovery plan provides detailed information on the biology of the species, reasons for its decline, habitat requirements, the actions needed for recovery of the species, and additional information for each of the localities designated as critical habitat for the species. The recovery plan is available on the Web at *http://ecos.fws.gov/speciesProfile/SpeciesReport.do?spcode=E071.* For future reference, all recovery plans and other documents relating to a species can be found on our Web site at *http://ecos.fws.gov.*

22. *Comment:* One commenter stated that critical habitat for tidewater gobies should not be limited to only those areas downstream of barriers.

Our Response: We consider a barrier, such as sills, dams, and raised culverts, to be impassable by tidewater gobies. Therefore, we consider the areas above the barriers to not contain the features essential to the conservation of the species.

Comments on Other Critical Habitat Related Issues

23. *Comment:* One commenter's opinion was that designation of critical habitat is of little additional value for the tidewater goby.

Our Response: The process of designating critical habitat as described in the Act requires that the Service identify those lands on which are found the physical or biological features essential to the conservation of the species that may require special management considerations or protection, and the areas outside the current range of the species that are essential for its conservation. In identifying those lands, the Service must consider the recovery needs of the species, such that the habitat that is identified, if managed, could provide for the survival and recovery of the species. Furthermore, once critical habitat has been designated, Federal agencies must consult with the Service under section 7(a)(2) of the Act to ensure that their actions will not adversely modify designated critical habitat or jeopardize the continued existence of the species. As noted in the Ninth Circuit's *Gifford Pinchot* decision, the jeopardy and adverse modification standards are distinct, and adverse modification evaluations require consideration of impacts to the recovery of species. Thus, through the section 7(a)(2) consultation process, critical habitat designations provide recovery benefits to species by ensuring that Federal actions will not destroy or adversely modify designated critical habitat.

Another benefit of including lands in critical habitat is that designation of critical habitat serves to educate landowners, State and local governments, and the public regarding the potential conservation value of an area. Although the designation of critical habitat may not, in and of itself, restrict human activities within an area or mandate any specific management or conservation actions, it does help focus Federal, Tribal, State, and private conservation and management efforts in such areas by clearly delineating areas of high conservation value for the tidewater goby. In general, critical habitat designation always has educational benefits; however, in some cases, they may be redundant with other educational effects.

24. *Comment:* One commenter requested clarification regarding the October 9, 2007, press release noticing the completion of the tidewater goby 5-year review and its recommendation to downlist the species throughout its range. More specifically, the commenter wanted to know how a reclassification to threatened would affect the status of designated critical habitat.

Our Response: Critical habitat applies equally to both endangered and threatened species. Therefore, reclassifying the tidewater goby from endangered to threatened would have no affect on the designated critical habitat.

25. *Comment:* One commenter expressed concern that designation of critical habitat for the tidewater goby may conflict with management of Aleutian Canada goose (*Branta Canadensis leucopareia*) habitat (Humboldt Bay and Eel River Delta areas) (grazing benefits the goose by improving its habitat), by restricting grazing in upland areas.

Our Response: The designation of critical habitat does not, in and of itself, restrict human activities within an area or mandate any specific management or conservation actions. However, one of

the benefits of critical habitat is to help focus Federal, Tribal, State, and private conservation and management efforts in such areas. With the knowledge that there is an area that is important to both the Aleutian Canada goose and the tidewater goby, management actions compatible with both species may be undertaken.

Comments Related to Policy Compliance

26. *Comment:* One commenter stated that Federal statutes and regulations require Federal agencies to coordinate their initial planning efforts with local government. Presidential Executive Order 12372 requires Federal agencies to coordinate actions and projects with local governments. To date, the Service has failed to initiate coordination with Del Norte County as required by Federal statute.

Our Response: Executive Order 12372 (47 FR 30959; July 14, 1982), Intergovernmental Review of Federal Programs pertains to Federal Assistance and is not directly pertinent to this designation of critical habitat. However, we do address the issue of Federal-State Coordination below. Please see the Federalism section for additional information.

Comments Related to the Draft Economic Analysis

27. *Comment:* Several commenters requested that we extend the comment period on the draft economic analysis.

Our Response: Due to time constraints associated with the consent decree dated February 27, 2003, we were not able to extend or open an additional public comment period.

28. *Comment:* One commenter stated that the economic analysis does not provide grounds for exclusion of any critical habitat because it does not include benefits.

Our Response: The economic analysis for the tidewater goby did consider economic benefits. Our draft economic analysis predicted an overall net cost savings of $10.2 million to $65.2 million (undiscounted) over the next 20 years.

29. *Comment:* One commenter stated that the economic analysis fails to estimate the benefits of critical habitat designation. This comment includes concerns that the Service: Did not identify the vast majority of benefits from designating critical habitat, including benefits to ecosystem services, wetland protection, and other use and non-use values of habitat; violated the Act by failing to quantify benefits; improperly relied on flawed OMB guidance regarding the estimation of benefits; does not properly qualitatively describe the benefits of designation; improperly establishes the baseline because benefits are not estimated; does not prove the infeasibility of estimating and monetizing benefits in the analysis; could easily quantify the benefits of designating critical habitat; and ignores available information from multiple sources that could have been used to estimate benefits.

Our Response: The economic analysis for the tidewater goby did include benefits. Our draft economic analysis predicted an overall net cost savings of $10.2 million to $65.2 million (undiscounted) over the next 20 years. The only quantifiable benefit of goby conservation identified through the economic analysis is the saving associated with not constructing a sewage bypass system. While the economic analysis acknowledges the potential for other types of economic benefits, data were not available, for example, to identify where and to what extent property values may be affected by tidewater goby conservation efforts. For example, while property valuation studies may provide estimates of the value to property of being near environmentally pristine area, these studies do not address what changes in property values will result from critical habitat designation.

Section 4(b)(2) of the Act requires the Secretary to designate critical habitat based on the best scientific data available after taking into consideration the economic impact, impact on national security, and any other relevant impact, of specifying any particular area as critical habitat. Where data are available, the economic analyses do attempt to measure the net economic impact.

Most of the other benefit categories submitted by the commenter reflect broader social values, which are not the same as economic impacts. While the Secretary must consider economic and other relevant impacts as part of the final decision-making process under section 4(b)(2) of the Act, the Act explicitly states that it is the government's policy to conserve all threatened and endangered species and the ecosystems upon which they depend. Thus, we believe that explicit consideration of broader social values for the subspecies and its habitat, beyond the more traditionally defined economic impacts, is not necessary as Congress has already clarified the social importance.

30. *Comment:* One commenter stated that the baseline is improperly set because it relies on the Tenth Circuit Court of Appeals instead of the Ninth Circuit, and that the baseline should be compared with the incremental impacts of the designation. Similarly, another commenter expressed concern that the economic analysis improperly measures the impacts of designation by including costs that would have been incurred regardless of critical habitat designation. This commenter stated that impacts such as land acquisition and grazing costs are not properly integrated into the baseline and should not be considered as a consequence of designation, and that the economic analysis does not describe the costs attributable solely to designation.

Our Response: Appendix B of the Final Economic Analysis (FEA) estimates the potential incremental impacts of critical habitat designation for the goby. It does so by attempting to isolate those direct and indirect impacts that are expected to be triggered specifically by the critical habitat designation. The incremental conservation efforts and associated impacts included in Appendix B would not be expected to occur absent the designation of critical habitat for the tidewater goby. Total present value potential incremental impacts are estimated to be $206,000 discounted at three percent. All other impacts quantified in the FEA are considered baseline impacts and are not expected to be affected by the critical habitat designation.

31. *Comment:* One commenter requested clarification regarding the 50-meter (m) buffer used in the analysis of the study areas for the economic analysis. The commenter was concerned that the term ''buffer'' indicated that these areas will be barred from use.

Our Response: The study area analyzed in the draft economic analysis included the critical habitat units, which are primarily lagoons, estuaries, and coastal streams, and a 50-meter (m) wide stream buffer that extended 100 m upstream of the critical habitat units. These buffer areas are not included in the critical habitat units. However, for the purposes of the analysis it was assumed that activities conducted in these areas could indirectly affect the critical habitat units. Therefore, the draft economic analysis took into consideration the potential economic costs that could result from conservation efforts for the tidewater goby within the buffer areas. Also, the term ''buffer'' as used in Chapter 3 of the FEA has been clarified to indicate that it is for analytical purposes only.

32. *Comment:* Two commenters stated that the land identified as private land within the grazing study area, which the economic analysis determined as

lacking a Federal nexus compelling consultation, should have been addressed in the economic analysis. The commenter is concerned that some combination of Federal, State, and local laws may affect grazing on those private lands.

Our Response: Review of existing land management documents, section 7 consultations, and State and private grazing practices do not indicate that this private land is likely to be affected. Private grazers have not been affected by goby conservation in the past, there are no known voluntary private grazing restrictions, and, under the Act, the critical habitat designation will not affect grazing on private land absent a Federal nexus. Further, no information is available to suggest that critical habitat designation may trigger additional regulation under other State and local laws concerning grazing. This analysis therefore forecasts that private grazing activity is not likely to be affected by goby conservation.

33. *Comment:* One commenter stated that the draft economic analysis does not address municipal land ownership of grazing land, but counts it as privately-owned land instead. The commenter expressed concern that the economic analysis should predict future conservation efforts on municipal land.

Our Response: Review of existing land management documents, consultations, and State and private grazing practices do not indicate that municipal land is likely to be affected differently than private land. Grazing on municipal land has not been affected by goby conservation in the past, and information gathered in the development of the analysis did not suggest that it was likely to be affected in the future. Under the Act, the critical habitat designation will not affect grazing on municipal land absent a Federal nexus, and there is no information to suggest that State or local regulation may be tightened because of the designation of critical habitat. This analysis therefore forecasts that grazing on municipal lands is unlikely to be affected by goby conservation.

34. *Comment:* One commenter expressed concern about impacts of potential changes in grazing restrictions and management practices on the state lands due to critical habitat.

Our Response: Information received during the comment period concerning the California Department of Fish and Game's (CDFG) grazing management practices on State lands in the study area has prompted changes in Chapter 3 of the economic analysis. The FEA estimates foregone forage values and construction costs as part of the baseline impacts of CDFG management. These ongoing, co-extensive impacts are expected to continue into the future. There are no anticipated changes for grazing practices in the study area that will result from the critical habitat designation. Further, no additional impacts to grazing activities are expected to result from this rulemaking as described in Chapter 3 of the FEA.

35. *Comment:* One commenter stated that there are alternative ways to manage grazing other than exclusion.

Our Response: The commenter is correct; there are alternative ways to manage grazing other than exclusion. However, CDFG currently manages grazing in tidewater goby habitat through exclusion. As noted in Chapter 3 of the FEA, the practice of excluding livestock from tidewater goby habitat is unlikely to change after critical habitat designation as CDFG does not anticipate that there will be any future changes to grazing management practices. Chapter 3 provides post-designation cost estimates for current CDFG management practices that CDFG has validated and indicates are unlikely to change. Total impacts to grazing are estimated to be $1.53 million, undiscounted (20 percent lost grazing value and 80 percent fencing maintenance and construction costs).

36. *Comment:* Two commenters stated that the undiscounted impacts to grazing of $1,430,000 are understated. The commenters pointed out that the number of Animal Unit Months (AUMs) should be multiplied by the number of months grazed.

Our Response: New information received during the comment period from the CDFG has been incorporated into the FEA regarding grazing impacts. As described in Chapter 3, the estimates of foregone grazing values incorporate the number of months in the grazing season. The information received during the comment period provided better data on both grazing and fencing construction and maintenance impacts. The FEA estimates foregone forage values and construction costs as part of the baseline impacts of CDFG management. These ongoing, co-extensive impacts are expected to continue into the future. The draft economic analysis estimated $1.43 million in undiscounted total impacts (4 percent lost grazing value and 95 percent fence construction and maintenance costs). Based upon the information received during the comment period, total impacts to grazing are estimated to be $1.53 million, undiscounted (20 percent lost grazing value and 80 percent fencing maintenance and construction costs).

37. *Comment:* Three commenters stated that potential grazing land should be valued not at its rental rate, but at the opportunity cost in terms of the amount of livestock that could not be produced. These commenters stated that reducing grazing acreage has additional effects beyond the market value of the land.

Our Response: As discussed in Section 3.1.3 of the FEA, the analysis applies a well-accepted method of assigning value to grazing land using the forage value available on that land, expressed in AUMs, as a proxy. The grazing rental rate is the opportunity cost of the forage that is given up. This price is the amount that would have to be paid to purchase an equivalent amount of grazing forage somewhere else.

38. *Comment:* Two commenters stated that some of the land that will be removed from grazing may be organic, which has a higher rental value.

Our Response: While the FEA quantifies ongoing, co-extensive impacts of foregone grazing associated with goby conservation, it does not forecast further limitations on grazing activity as a result of critical habitat designation. While organic grazing rental rates are likely to be higher, consultation with CDFG has indicated that the rental estimates provided in Chapter 3 closely approximate the total impacts of the existing grazing management program.

39. *Comment:* One commenter stated that the economic analysis does not explain the presence of the pre-designation impacts.

Our Response: As discussed in the introduction to Chapter 1 and in Section 1.4.6 of the FEA, pre-designation impacts are provided as context for the ongoing goby conservation efforts in the post-designation period. The continuation of existing policies and practices post-designation is evident when comparing the pre- and post-designation impact exhibits in Chapters 2 through 6.

40. *Comment:* One commenter said that the cost of constructing exclosure fencing would be a huge burden on the ranching community.

Our Response: The question of who is affected by exclosure costs has been clarified in Section 3.1.2 of the FEA. Following conversations with CDFG, the costs of building fencing quantified in the analysis are forecast to be paid by CDFG and not by the ranching community.

41. *Comment:* One commenter stated that the economic analysis did not address potential critical habitat designation impacts on recreation and recreation dependent businesses.

Our Response: Review of management documents and consultations, and interviews with the National Park Service, counties, municipalities, and local park officials did not indicate that goby conservation efforts would be undertaken that may affect recreational activities. A sentence clarifying this point has been added to Section 1.1 of the FEA.

42. *Comment:* One commenter stated that the economic analysis does not consider secondary effects on resource conservation districts that currently sub-contract to provide grazing management services.

Our Response: As described in Chapter 3, the economic analysis does not predict any changes in grazing policy as a result of critical habitat designation.

43. *Comment:* One commenter stated that the economic analysis failed to address what could happen if sandbar breaching at Lake Earl is no longer permitted. The commenter cited excerpts from breaching consultations and says that the consultation appears to favor not breaching, which would cause substantial economic impacts to property.

Our Response: As indicated in Section 2.2 of the FEA, a review of the consultation history and discussions with the Service, CDFG, and the U.S. Army Corps of Engineers, indicate that the cessation of sandbar breaching permitting in Lake Earl is improbable.

Comments From the State

44. *Comment:* The California Department of Fish and Game stated that our critical habitat designations are premature and we should wait until our current data gathering and genetic analyses for Del Norte, Humboldt, and Mendocino Counties are completed and disclosed.

Our Response: As required by section 4(b)(1)(A) of the Act, we used the best scientific data available in determining the areas to designate as critical habitat for the tidewater goby. Further, under a consent decree, we are restricted to a specific deadline for finalizing the critical habitat designation. As such, we must use the best scientific data available to us at this time and cannot delay our designation to allow for possible additional data. Within the area mentioned, the commenter suggests that the presence of tidewater gobies within Humboldt Bay does not indicate that the population sites are persistent. On the contrary, there are several sites where surveys indicate alternating presence and absence of gobies. We believe that the significance of detecting tidewater gobies within Humboldt Bay as a unit should be emphasized, and due to their potential ability to move within the bay, we believe that we designated the area with features essential to the species within Humboldt Bay.

45. *Comment:* The California Department of Fish and Game asserted that we have a lack of understanding regarding the processes that drive and maintain metapopulation dynamics (e.g., hydrology, hydrological connections, source population identification, persistence of sink populations) used in determining the PCEs and identifying whether critical habitat exists at certain locations in the absence of tidewater goby presence.

Our Response: The process we use to identify the features that are essential to the conservation of the tidewater goby reflects a complete assessment of the current, best scientific data available. We also solicited information from knowledgeable biologists that have worked with the tidewater goby. We did not find any locations that are currently unoccupied to be essential to the conservation of the species.

Summary of Changes From Previously Designated Critical Habitat and 2006 Proposed Rule

On November 20, 2000, we designated critical habitat for the tidewater goby at 10 coastal stream segments in Orange and San Diego Counties, California, totaling approximately 1,581 acres (ac) (642 hectares (ha)) (65 FR 69693). We proposed to revise this designation to a total of approximately 10,003 ac (4,050 ha) on November 28, 2006 (71 FR 68914). This is an increase of approximately 8,422 ac (3,408 ha) from the previously designated critical habitat. In this section we present the differences between what was designated in 2000 and what is included in this revised final designation.

The 2000 final critical habitat designation (65 FR 69693, November 20, 2000) consisted of 10 units totaling 1,581 ac (642 ha). In the 2000 rule, critical habitat was only designated in Orange and San Diego Counties due to uncertainty over the future listing status of tidewater goby populations to the north. The Service had published a proposed rule on June 24, 1999, to: (1) Delist populations of the tidewater goby in areas north of Orange and San Diego Counties, and (2) retain the tidewater goby populations in Orange and San Diego Counties as an endangered distinct population segment based on our re-evaluation of the species' status throughout its range (64 FR 33816). Subsequently, the Service determined that the tidewater goby should remain listed as endangered throughout its range and withdrew the June 24, 1999, proposal (67 FR 67803, November 7, 2002). In this revised final critical habitat designation we have designated critical habitat for the tidewater goby throughout its range. We considered but did not include the 10 units that were previously designated in Orange and San Diego Counties. We exempted 8 of the 10 units, all of which are located on U.S. Marine Corps Base, Camp Pendleton (Base), under section 4(a)(3) of the Act because these areas are subject to the Base's INRMP and we determined that the INRMP provides a benefit to the tidewater goby and its habitat (see Application of Section 4(a)(3) of the Act—Approved Integrated Natural Resource Management Plans section). We also considered but did not include the remaining 2 units out of the 10 from the 2000 rule (65 FR 69693), Aliso Creek in Orange County and Agua Hedionda Lagoon in northern San Diego County. For several reasons, we have now determined that these two localities are not essential for the conservation of the species. The 2000 designation found that the eight occupied localities on the Base were not sufficient for the conservation of the species. However, at that time, the Base did not have an approved INRMP and therefore, the future of the tidewater goby on the Base was not assured. Subsequent to the 2000 designation, the Base completed its INRMP, which includes protections for the tidewater goby. Specific measures in the INRMP that benefit the tidewater goby include: (1) General avoidance of estuarine wetlands by all military activities, (2) maintenance of currently and historically occupied tidewater goby habitat, (3) compensation for unavoidable impacts, (4) regular monitoring of tidewater goby populations, and (5) controlling and removing exotic plants and fish.

Second, more information is now available on the status of both the tidewater goby throughout its range and on the Base. We now know that there are many more occupied localities than when the species was listed in 1994. In our recently completed 5-year review for the tidewater goby, we found that the number of occupied localities has more than doubled since the species was listed (106 versus 48) and concluded that the species was more resilient to perturbations such as drought than was believed when it was listed. As a result we recommended in the 5-year review that the tidewater goby be downlisted to threatened. We also now have a longer record of the continued occupancy of those localities

on the Base, which supports our view that they make up 1–2 viable metapopulations. Therefore, we have now determined that the occupied habitat in Orange and San Diego Counties is sufficient to support the natural pattern of local extinctions and recolonizations (Swift et al. 1989, Moyle et al. 1995, Lafferty et al. 1999b, Swenson 1999) that characterize the tidewater goby's population biology. Thus, the unoccupied areas designated in 2000 (i.e., Aliso Creek and Agua Hedionda Lagoon) are no longer considered essential for the conservation of the tidewater goby.

We also made changes to our proposed designation in preparing this final critical habitat designation for the tidewater goby. We reviewed and considered comments from the public and peer reviewers on the proposed revised designation of critical habitat published on November 28, 2006 (71 FR 68914). We also received comments from the public on the draft economic analysis published on September 25, 2007 (72 FR 54411). As a result of comments received, we made changes to our proposed designation, as follows:

(1) Based on peer review comments, we further refined our definition of source populations (see response to comment 3). However, this did not result in any change in the designation.

(2) We made minor adjustments to the number of areas historically and currently occupied by tidewater gobies because in some cases we have combined two adjacent areas into one, and a few areas have recently become occupied. However, these changes did not affect the number or acreage of the units proposed for designation.

Critical Habitat

Critical habitat is defined in section 3 of the Act as:

(1) The specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features

(a) Essential to the conservation of the species and

(b) Which may require special management considerations or protection; and

(2) Specific areas outside the geographical area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

Conservation, as defined under section 3 of the Act, means to use and the use of all methods and procedures that are necessary to bring any endangered species or threatened species to the point at which the measures provided under the Act are no longer necessary.

Critical habitat receives protection under section 7 of the Act through the prohibition against Federal agencies carrying out, funding, or authorizing the destruction or adverse modification of critical habitat. Section 7(a)(2) of the Act requires consultation on Federal actions that may affect critical habitat. The designation of critical habitat does not affect land ownership or establish a refuge, wilderness, reserve, preserve, or other conservation area. Such designation does not allow the government or public access to private lands. Such designation does not require implementation of restoration, recovery, or enhancement measures by non-federal landowners. Where a non-federal landowner seeks or requests federal agency funding or authorization for an action that may affect a listed species or critical habitat, the consultation requirements of Section 7(a)(2) would apply, but even in the event of a destruction or adverse modification finding, the Federal action agency's and the applicant's obligation is not to restore or recover the species, but to implement reasonable and prudent alternatives to avoid destruction or adverse modification of critical habitat.

To be included in a critical habitat designation, habitat within the geographical area occupied by the species at the time it was listed must contain features that are essential to the conservation of the species. The Service must identify, to the extent known using the best scientific data available, habitat areas that provide essential life cycle needs of the species (areas on which are found the PCEs, as defined at 50 CFR 424.12(b)). The features at issue must also be ones that may require special management considerations or protection.

Under the Act, we can designate areas outside the geographical area occupied by the species at the time it is listed as critical habitat only when we determine that those areas are essential for the conservation of the species.

Section 4 of the Act requires that we designate critical habitat on the basis of the best scientific and commercial data available. Further, our Policy on Information Standards Under the Endangered Species Act, published in the **Federal Register** on July 1, 1994 (59 FR 34271), the Information Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Pub. L. 106–554; H.R. 5658)), and our associated Information Quality Guidelines provide criteria, establish procedures, and provide guidance to ensure that decisions are based on the best scientific data available. They require Service biologists, to the extent consistent with the Act and with the use of the best scientific data available, to use primary and original sources of information as the basis for recommendations to designate critical habitat.

When we are determining which areas may be designated as critical habitat, a primary source of information is generally the information developed during the listing process for the species. Additional information sources include the recovery plan for the species, articles in peer-reviewed journals, conservation plans developed by States and counties, scientific status surveys and studies, biological assessments, other 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 critical habitat designated at a particular point in time may not include all of the habitat areas that we may later determine are necessary for the recovery of the species. For these reasons, critical habitat designation does not signal that habitat outside the designation is unimportant or may not be required for recovery of the species.

Areas that are important to the conservation of the tidewater goby, but are outside the critical habitat designation, will continue to be subject to conservation actions implemented by Federal agencies under section 7(a)(1) of the Act. Areas that support populations are also subject to the regulatory protections afforded by the section 7(a)(2) jeopardy standard, as determined on the basis of the best available scientific information at the time of the agency action. Federally funded or permitted 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 (HCPs), or other species conservation planning efforts, if information available at the time of these planning efforts calls for a different outcome.

Primary Constituent Elements

In accordance with section 3(5)(A)(i) of the Act and the regulations at 50 CFR 424.12, in determining which areas within the geographical area occupied at

the time of listing to designate as critical habitat, we consider those physical and biological features that are essential to the conservation of the species to be the primary constituent elements (PCEs) laid out in the appropriate quantity and spatial arrangement for conservation of the species. These include, but are not limited to:

(1) Space for individual and population growth and for normal behavior;

(2) Food, water, air, light, minerals, or other nutritional or physiological requirements;

(3) Cover or shelter;

(4) Sites for breeding, reproduction, and rearing (or development) of offspring; and

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

The specific PCEs required for the tidewater goby are derived from the biological needs of the tidewater goby as described in the final listing rule, the proposed revised critical habitat rule (71 FR 68914), and information contained in this final rule.

Space for Individual and Population Growth and Normal Behavior

Saline Aquatic Habitat

Tidewater gobies occur in lagoons, estuaries, and backwater marshes that are adjacent to the Pacific Ocean (Wang 1982, p. 14; Irwin and Soltz 1984, p. 27; Swift *et al.* 1989, p. 1; Swenson 1993, p. 3; Moyle 2002, p. 431). Tidewater gobies are most commonly found in waters with relatively low salinities, i.e., less than 10 to 12 parts per thousand (ppt) (Swift *et al.* 1989, p. 7). This species can, however, tolerate a wide range of salinities and is frequently found in coastal habitats with higher salinity levels (Swift *et al.* 1989, p. 7; Worcester 1992, p. 106; Swift *et al.* 1997, pp. 15–22). The species has been collected in salinities as high as 42 ppt (Swift *et al.* 1989, p. 7). The species' tolerance of high salinities likely enables it to withstand some exposure to the marine environment, allowing it to recolonize nearby lagoons and estuaries following flood events. However, tidewater gobies have only rarely been captured in the marine environment (Swift *et al.* 1989, p. 7), and they appear to enter the ocean only when flushed out of lagoons, estuaries, and river mouths by storm events or human-caused breaches of sand bars.

The goal of the recovery plan for the tidewater goby is to preserve the diversity of habitats that occur within the range of the species, the metapopulation structure of the species, and genetic diversity (Service 2005). The recovery plan identifies 26 subunits throughout the range of the tidewater goby. We designated critical habitat in all 26 subunits included in the recovery plan, except for those on Vandenberg Air Force Base (Santa Barbara County) and Marine Corps Base, Camp Pendleton (San Diego County), which have Integrated National Resource Management Plans (INRMP) that provide protection for the tidewater goby. These areas have been exempted from this final designation of critical habitat (see Application of Section 4(a)(3) of the Act—Approved Integrated Natural Resource Management Plans section). We believe these 44 critical habitat units, in addition to those subunits covered by INRMP's, are the areas essential to the conservation of the species throughout its range, as they adequately represent the variation of both the habitat and genetic composition of the species, and they will support the species' recovery. As such, we did not designate any other areas, including areas outside the geographical area occupied by the species, as critical habitat. For a further discussion of how we determined how much space was essential to the conservation of the species, please see the Criteria Used To Identify Critical Habitat section below.

Water Depth, Velocity, and Temperature

Tidewater gobies are most commonly collected in water less than 6 feet (ft) (2 meters (m)) deep (Wang 1982, pp. 4–5; Worchester 1992, p. 53). However, recently tidewater gobies were collected in Big Lagoon in Humboldt County during the breeding season at a water depth of 15 ft (4.6 m) (Goldsmith 2006a, p. 1). Whether use of these deeper waters is confined to this locality or is more widespread will require additional sampling at various depths at various locations.

Tidewater gobies tend to avoid currents and concentrate in slack-water areas; this suggests they are less likely to occur in areas with a steep gradient or microhabitats that have a substantial current. At Pescadero Creek in San Mateo County, tidewater gobies were absent from portions of the flowing creek that had a surface velocity of 0.15 m per second (0.49 ft per second), and the species was instead more densely concentrated in nearby eddies with lower water velocities (Swenson 1993, p. 3).

Backwater marshes, including lateral sloughs, are likely to be important to tidewater gobies for multiple reasons. Flood waters with increased water velocities can have a negative effect on tidewater gobies (Irwin and Soltz 1984, p. 27), and backwater marshes may provide important refuges that reduce the likelihood that tidewater gobies will be flushed out of the lagoons or estuaries and into the marine environment during heavy winter floods (Lafferty *et al.* 1999a, p. 619). Evidence that increased flows can eliminate tidewater gobies from a locality is suggested by the elimination of tidewater gobies from Waddell Creek in Santa Cruz County following a flood event in the winter of 1972–73 (Nelson as cited in Swift 1990, p. 2); this creek had been channelized and no longer afforded protection from high flows during flood events. Likewise, the channelization and elimination of habitat lateral to the main stream channel upstream of San Onofre Lagoon in San Diego County probably led to the flushing and extirpation of tidewater gobies from this locality during a storm in 1993 (Swift *et al.* 1994, p. 22–23). The importance of backwater marshes is also highlighted by the fact that tidewater gobies in these habitats can achieve a greater size than in adjacent lagoons and creeks (Swenson 1993, pp. 6–7).

Freshwater Habitat

Tidewater gobies also occur in freshwater streams up gradient and tributary to brackish habitats; the salinity of these freshwater streams is typically less than 0.5 ppt. The available documentation demonstrates that in some areas, tidewater gobies can occur 1.6 to 7.3 miles (mi) (2.6 to 11.7 kilometers (km)) upstream from the ocean environment (Irwin and Soltz 1984, p. 27; Swift *et al.* 1997, p. 20; Chamberlain and Goldsmith 2006, p. 1).

Within a 2-hour period, hundreds of tidewater gobies have been observed to move upstream of a fixed location into areas in the Santa Ynez River 3.2 mi (5.1 km) from the ocean in Santa Barbara County (Swift *et al.* 1997, p. 20). The fact that this many individuals were observed to move through an area suggests that freshwater tributaries in some riverine systems provide important habitat for individual and population growth.

We have reviewed a variety of documents to determine how far tidewater gobies have been detected upstream from the ocean. Chamberlain and Goldsmith (2006, p. 1) found tidewater gobies 1.6 to 2.0 mi (2.6 to 3.3 km) upstream from the ocean in the Ten Mile River in Mendocino County; Swift *et al.* (1997, p. 18) found tidewater gobies 4.6 mi (7.3 km) upstream from the ocean in the San Antonio River in Santa Barbara County; Swift *et al.* (1997,

p. 20) found tidewater gobies at various distances from 3.9 to 7.3 mi (6.2 to 11.7 km) upstream from the ocean in the Santa Ynez River in Santa Barbara County; and Holland (1992, p. 9) found tidewater gobies 3 mi (5 km) upstream from the ocean in the Santa Margarita River in San Diego County. Collectively, these data suggest the average distance tidewater gobies have been detected upstream from the ocean in medium to large rivers is approximately 3.8 mi (6.1 km). Other than high stream gradient, the reasons for the variation in upstream movement between one locality and another have not been determined; salinity could be an important factor. Upstream salinity levels may vary with time of year, tidal cycles, storm events, and topography. However, Swift *et al.* (1997, p. 26) indicate that gradient and lack of barriers (e.g., beaver dams, sills) are more important factors than salinity to upstream dispersal.

Sandbars

Many of the locations occupied by the tidewater goby closely correspond to stream drainages. Under natural conditions, these stream drainages and the marine environment collectively act to produce sandbars that form a barrier between the ocean and the lagoon, estuary, backwater marsh, and freshwater stream system (Habel and Armstrong 1977, p. 39). These sandbars tend to be present during the late spring, summer, and fall seasons. The presence of a sandbar can create a lower salinity level (i.e., 5 to 10 ppt) in the area up gradient from the sandbar (Carpelan 1967, p. 324) than would otherwise exist if there were no sandbar.

Tidewater gobies are more commonly associated with these lower salinity levels than with the salinity levels that occur in the ocean or an estuary without a sandbar, i.e., about 35 ppt. The formation of a sandbar also creates a larger area for aquatic organisms because water becomes ponded behind the sandbar. Artificial breaching of a sandbar tends to result in a rapid decrease in water levels and increases the likelihood that adult tidewater gobies, their nests, and their fry could become stranded and die, or become concentrated and subject to greater levels of predation pressure by birds or other predators.

In Humboldt Bay and the Eel River estuary in Humboldt County, a large amount of salt and brackish marsh habitat was eliminated through the construction of levees and drainage channels. As a result, several of the localities occupied by the tidewater goby do not contain natural sandbars between the ocean and habitat where the species is present. Instead, manmade water control structures, such as tidegates and culverts, exist between tidal waters and the locations where tidewater gobies occur. These tidegates have been in place for decades, and in some cases, they provide habitat conditions similar to those created by the presence of a seasonal sandbar. In fact, most of the occupied tidewater goby habitats in the Humboldt Bay-Eel River estuaries are above tidegates.

Food

Tidewater gobies feed mainly on macro-invertebrates such as mysid shrimp, gamarid amphipods, ostracods, and aquatic insects such as chironomid midge larvae (Irwin and Soltz 1984, p. 21–23; Swift *et al.* 1989, p. 6; Swenson 1995, p. 87). The diets of adult and juvenile tidewater gobies tend to include the same relative abundance of different invertebrate species (Swenson and McCray 1996, p. 962).

Cover or Shelter

A variety of native and nonnative fish species and fish-eating bird species such as egrets (*Egretta* spp.) and herons (e.g., great blue herons (*Ardea herodias*)) prey on tidewater gobies, and escape cover or shelter is necessary to reduce the likelihood that tidewater gobies will be preyed upon.

A species' ability to persist when it is subject to predation pressure frequently depends on the presence of features that provide cover from predators, or the presence of a heterogeneous habitat that provides a greater level of structure which makes it more likely a prey species will avoid predation (Crowder and Cooper 1982, p. 1802; Gilinsky 1984, p. 455).

At locations where tidewater gobies occur, submerged and emergent aquatic vegetation has the potential to provide cover from predators, and provide a greater degree of habitat heterogeneity or structure that would not otherwise exist if the aquatic vegetation was absent. Stable lagoons often possess dense aquatic vegetation that frequently consists of sago pondweed (*Potamogeton pectinatus*) or widgeon grass (e.g., *Ruppia maritima* and *R. cirrhosa*). At some locations, juvenile tidewater gobies are more prevalent in areas with at least some submergent vegetation as compared to other areas with no or little vegetation (Wang 1984, p. 16; Swenson 1994, p. 6; Trihey & Associates, Inc. 1996, p. 11). We believe it is reasonable to assume that the presence of submerged or emergent vegetation reduces the likelihood that tidewater gobies will be preyed upon by native and nonnative species because this vegetation provides cover and increases the level of habitat heterogeneity in a way that makes it more likely that tidewater gobies will persist where they co-occur with predators.

Aquatic vegetation may provide some degree of shelter or refuge during flash flood events (Lafferty *et al.* 1999b, p. 621). These refuges presumably would result because the presence of vegetation would create lower water velocities than might otherwise occur in unvegetated areas. Such refuges would be especially important to fish species that are not strong swimmers, such as the tidewater goby.

Sites for Breeding, Reproduction, and Rearing (or Development) of Offspring

The eggs of the tidewater goby are laid in burrows that are excavated by male fish. The available literature suggests that burrows most commonly occur in areas with relatively unconsolidated, clean, coarse sand (Swift *et al.* 1989, p. 8), while other documents demonstrate that burrows also occur in silt or mud (Wang 1982, p. 6). Swenson (1995, p. 148) demonstrated that tidewater gobies prefer a sandy substrate in the laboratory. Male tidewater gobies remain in the burrow to guard the eggs attached to the burrow ceiling and walls. Male tidewater gobies care for the embryos for approximately 9 to 11 days until they hatch, rarely if ever emerging from the burrow to feed (Swift *et al.* 1989, p. 4). Tidewater goby larvae occupy the water column after the eggs hatch (Wang 1982, p. 15). As they mature, they occupy the bottom substrate. Worcester (1992, pp. 77–79) found that larval tidewater gobies in Pico Creek Lagoon in San Luis Obispo County tended to use the deeper portion of the lagoon, i.e., 29 inches (in) (73 centimeters (cm)) deep water versus 17 in (42 cm) deep water.

Primary Constituents for the Tidewater Goby

Under the Act and its implementing regulations, we are required to identify the known primary constituent elements (PCEs) within the geographical area occupied by the species that in the appropriate spatial arrangement and quantity comprise the physical or biological features essential to the conservation of the species which may require special management considerations or protection.

Based on our current knowledge of the life history, biology, and ecology of the species and the requirements of the habitat to sustain the essential life history functions of the species, we have

determined that the tidewater goby's PCEs are:

(1) Persistent, shallow (in the range of about 0.1 to 2 m), still-to-slow-moving, aquatic habitat most commonly ranging in salinity from 0.5 ppt to about 10 to 12 ppt, which provides adequate space for normal behavior and individual and population growth;

(2) Substrates (e.g., sand, silt, mud) suitable for the construction of burrows for reproduction;

(3) Submerged and emergent aquatic vegetation, such as *Potamogeton pectinatus*, *Ruppia maritima*, *Typha latifolia*, and *Scirpus* spp. that provides protection from predators; and

(4) Presence of a sandbar(s) across the mouth of a lagoon or estuary during the late spring, summer, and fall that closes or partially closes the lagoon or estuary, thereby providing relatively stable water levels and salinity.

This designation of critical habitat for the tidewater goby is designed for the conservation of PCEs necessary to support the life history functions of the species comprising the physical or biological features essential to the conservation of the species, and the areas supporting these features. We propose units for designation based on sufficient PCEs being present to support at least one of the species' life history functions. Some units contain all of these PCEs and support multiple life processes, while some units contain only a portion of these PCEs, those necessary to support the species' particular use of that habitat.

Special Management Considerations or Protection

When designating critical habitat, we assess whether the areas within the geographical area occupied by the species at the time of listing contain the features essential to the conservation of the species that may require special management considerations or protection. Special management considerations or protection may be necessary to eliminate or reduce the magnitude of threats that affect the tidewater goby. Threats that were identified in the final rule listing the tidewater goby include: (1) Coastal development projects that result in the loss or alteration of coastal wetland habitat; (2) water diversions and alterations of water flows upstream of coastal lagoons and estuaries that negatively impact the species' breeding and foraging activities; (3) groundwater overdrafting that results in reduction of flows and negatively impacts the species' breeding and forging activities; (4) channelization of habitats where the species occurs that removes or reduces quality of habitat; (5) discharge of agricultural and sewage effluents; (6) cattle grazing and feral pig activity that results in increased sedimentation of coastal lagoons and riparian habitats, removes vegetative cover, increases ambient water temperatures, and eliminates plunge pools and collapsed undercut banks utilized by tidewater gobies; (7) introduced species that prey on the tidewater goby (e.g., bass, crayfish (*Cambaris* spp.)); (8) the inadequacy of existing regulatory mechanisms; (9) drought conditions that result in the deterioration of coastal and riparian habitats; and (10) competition with introduced species such as the yellowfin goby and chameleon goby.

For the purposes of this rule, we have combined the ''water diversions and alterations of water flows upstream of coastal lagoons and estuaries that negatively impact the species' breeding and foraging activities'' threats category with ''drought conditions'' and ''groundwater overdrafting,'' along with the addition of artificial breaching of sandbars, into one threat category called ''water diversions, alterations of water flows, artificial sandbar breaching, and groundwater overdrafting that negatively impact the species' breeding and foraging activities.'' Similarly, we have combined the two threat categories of ''introduced species that prey on the tidewater goby (e.g., bass, crayfish, (*Cambaris* spp.))'' and ''competition with introduced species such as the yellowfin goby and chameleon goby'' into one category called ''Introduced species that prey on, or compete with, the tidewater goby (e.g., yellowfin gobies, bass, and crayfish).'' Where special management may be necessary, regulatory mechanisms may need to be added or amended by local, State or Federal governmental entities if sufficient management is not achievable through voluntary mechanisms.

We find that the PCEs present within all the areas we are designating may require special management considerations or protection due to threats to the tidewater goby or its habitat. Using current information provided in the tidewater goby recovery plan (Service 2005, Appendix E) and other information in our files, we have identified the PCEs, which may require special management considerations or protection from known threats within each of the critical habitat units (see Critical Habitat Designation and Table 2 below for a unit-by-unit description).

Criteria Used To Identify Critical Habitat

As required by section 4(b)(1)(A) of the Act, we use the best scientific and commercial data available in determining the specific areas within the geographical area occupied by the species at the time of listing that contain features essential to the conservation of species which may require special management considerations or protection. We also use the best scientific and commercial data available when determining if any specific areas outside the geographical area occupied by the species at the time of listing are essential for the conservation of the species. We only designate areas outside the geographical area presently occupied by a species when a designation limited to its present range would be inadequate to ensure the conservation of the species (50 CFR 424.12e). Such data used included research published in peer-reviewed articles and presented in academic theses and agency reports; information submitted during section 7 consultations and by biologists holding section 10(a)(1)(A) recovery permits; information that is contained within the recently completed recovery plan for the tidewater goby (Service 2005); the final rule listing the tidewater goby (59 FR 5494); and regional Geographic Information System (GIS) coverage. We also solicited information from knowledgeable biologists that have worked with the tidewater goby.

The process we use to identify the features that are essential to the conservation of the tidewater goby reflects a complete assessment of the current, best scientific data available. Much of the available information on the tidewater goby is summarized in the Recovery Plan for the Tidewater Goby (Service 2005). The emphasis of the recovery plan is to preserve the diversity of habitats that occur within the range of the tidewater goby, the metapopulation structure of the species, and genetic diversity. The recovery plan identifies 26 subunits (i.e., groups) of tidewater goby localities and describes them as being metapopulations. A metapopulation is generally considered a group of genetically related subpopulations (i.e., localities as used elsewhere in this rule) that are linked by the dispersal of individuals between subpopulations. Some subunits consist of a single occupied locality. Others consist of multiple populations that make up a source-sink type metapopulation where some subpopulations produce such an abundance of young that they are available to disperse to other localities (i.e., source), while others (sinks) may sometimes be extirpated until they are recolonized. These subunits identified

in the recovery plan were based on the most up-to-date scientific information on tidewater goby morphology and genetics available. Based on the goals of the recovery plan and the scientific literature that was used in the preparation of the plan, we developed criteria for identifying critical habitat units (see below). In this rule, we have also attempted to describe, in a more explicit manner, the criteria we use to determine the lateral and upstream extent of the critical habitat unit boundaries.

The criteria for identifying which areas meet the definition of critical habitat include:

(a) Areas occupied at the time of listing and that possess one or more PCEs such that the area supports one or more of the tidewater goby's life processes. We determined which areas were occupied at the time of listing from information in the recovery plan (Service 2005) and in two papers on tidewater goby occurrence (Swift *et al.* 1989, p. 13; Swift *et al.* 1993, p. 129), both of which were used in the preparation of the final listing rule for the tidewater goby;

(b) Areas that are currently occupied but were not occupied at the time of listing, which are determined to be essential to the conservation of the species;

(c) Areas that are representative of the distribution of the tidewater goby throughout the entire geographic range occupied at the time of listing, including those with unique ecological characteristics (e.g., large, open bays in Humboldt County versus small, routinely closed lagoons in Santa Barbara County), with the goal of maintaining the full range of the habitat variability and genetic and morphological adaptation in the species; and

(d) Areas that allow for the conservation of viable metapopulations (as defined in the Background section above) under varying environmental conditions (e.g., drought). These areas include those that presumably serve as source populations or those that provide important connectivity between source populations.

For the purposes of this designation, we define source populations as those that are currently occupied and have been consistently occupied for three or more consecutive years based on survey data and published reports. Based on the source-sink metapopulation type structure of many tidewater goby localities, we believe these areas are more likely to be capable of maintaining populations over many years and therefore capable of providing individuals to recruit into surrounding subpopulations.

Locations that provide connectivity between source populations are those locations that exist between source populations that are likely to act as ''stepping stones'' between more isolated populations, and contribute to metapopulation persistence. Locations that possess unique ecological characteristics are those that represent the full range of environmental variability where the tidewater goby has evolved, and therefore are likely to promote the adaptation of the species to different environmental conditions. For example, some of these habitats would include locations that reflect different environmental conditions in southern and northern California (e.g. smaller habitats that occur in a more arid environment versus large habitats that occur in areas with abundant rainfall). Morphological and genetic variability was used to support the inclusion of locations where we assume that this variability may play a role in positively affecting the species' conservation over time.

The conservation of a broad range of environmental, morphological, and genetic diversity that is present at the various locations is an important consideration in determining localities that have the features essential for the conservation of the species. For example, a population's ability to successfully adapt to changing environmental conditions is a function of the heterozygosity, population size, and genetic variation of the individuals at a given location (Reed and Frankham 2003, p. 233). Local adaptations to different environmental conditions and morphological differences are likely linked to genetic variations among populations. These features may in turn be best protected by: (a) Identifying areas that represent the species and genetic diversity, and (b) maximizing within these areas the protection of contiguous environmental gradients across which selection and migration can interact to maintain population viability and (adaptive) genetic diversity (Moritz 2002, p. 238).

By applying these criteria to the 26 subunits described in the recovery plan, we identified 44 critical habitat units that we have determined to be essential to the conservation of the tidewater goby. In general, we are designating these 44 units as critical habitat because: (1) They are representative of the distribution of the tidewater goby; (2) some units are occupied by source populations such that they support other habitats with tidewater gobies; (3) some units, although not considered sources, provide connectivity between populations; and, (4) other units reflect the diversity of the species and its currently occupied habitats. Although all 44 units are currently occupied by tidewater gobies, 3 of the units were not occupied at the time of listing (HUM–4, SB–8, and LA–2). We have included these three units because they meet our criterion ''b,'' ''c,'' and ''d'' above and we determined that they are essential for the conservation of the species (please see the Critical Habitat Designation section below for more information). Critical habitat units in this final designation are located in all 26 subunits in the recovery plan, except for those on Vandenberg Air Force Base (Santa Barbara County) and Marine Corps Base, Camp Pendleton (San Diego County), which have completed INRMPs that provide protection for the tidewater goby (see Application of Section 4(a)(3) of the Act—Approved Integrated Natural Resource Management Plans section). In some cases, several critical habitat units are included within a recovery plan subunit. In these instances we believe either that there is likely more than one source population and/or the inclusion of additional localities increases the chance for dispersal of individuals between localities.

Finally, we considered but did not include any currently unoccupied habitat in this designation because we concluded that the 44 units we are designating are sufficient for the conservation of the species. Many changes have occurred to the coastal wetlands of California, including the complete destruction of some. Many of these changes can not be reversed to the point where tidewater gobies are likely to be able to survive in these unoccupied areas. Additionally, our recently completed 5-year review evaluating the status of the species has recommended downlisting the species. This is in part due to an increase in the number of occupied locations since listing, which indicates the threats, or levels thereof, are not as seriously impacting tidewater goby populations as previously believed. Therefore, we believe the designation of the 44 currently occupied units which meet the criteria listed above provides for the conservation of the species, and we are not designating any habitat outside the geographical area presently occupied by the species.

After determining the areas that meet the definition of critical habitat by applying criteria ''a'' through ''d'' above, the boundary of each critical habitat unit was mapped. Unit boundaries were based on several factors including

species occurrence data that demonstrated where tidewater gobies have been observed, the presence of barriers and stream gradients that limit tidewater goby movements, and the presence and extent of the aquatic habitat required by tidewater gobies.

The lateral extent of each critical habitat unit was delineated, in part, using existing digital data. To determine the lateral boundaries of each critical habitat unit, we most frequently relied on National Wetland Inventory (NWI) maps that were prepared by the Service in 2006. The NWI maps are based on the Cowardin classification system (Cowardin *et al.* 1979); the Service has adopted this classification system as its official standard to describe wetland and deepwater habitats. Specifically, the following wetland types based on Cowardin (1979) were used to delineate unit boundaries: Lake, Estuarine and Marine Deepwater, Estuarine and Marine Wetland, Freshwater Pond, Freshwater Emergent Wetland, Freshwater Forested/Shrub Wetland, and Riverine. These wetland types have or are likely to have the PCEs at various times throughout the year depending on the season and environmental factors such as storm or drought events. In some cases, we used existing anthropogenic structures, such as concrete or riprap channel linings, that occur within wetland habitat types to delineate the lateral boundaries of units. To a lesser extent, we also used aerial imagery from the National Agricultural Imagery Program (NAIP) to delineate the lateral boundaries of a critical habitat unit where insufficient NWI data was available.

The precise location where tidewater goby habitat occurs at a particular locality may vary on a daily, seasonal, and annual basis, i.e., the habitats occupied by tidewater gobies exist in a dynamic environment that varies over time. For example, the size and lateral extent of a coastal lagoon or estuary varies with daily tide cycles. Flood events may also change the precise location where surface water exists within a given lagoon, estuary, backwater marsh, or freshwater tributary. Therefore, it is appropriate to delineate each critical habitat unit to encompass the entire area occupied by tidewater gobies on a daily, seasonal, and annual basis. To accomplish this, we used the boundaries delineated on the NWI maps to determine the lateral extent of each unit.

The delineation of the upstream-most extent of a particular critical habitat unit was determined using one of four features that include: (a) The average distance that tidewater gobies are known to move upstream from the ocean (3.8 mi (6.1 km)), (b) the presence of barriers (e.g., culverts) that may prevent tidewater gobies from moving upstream, (c) the presence of a gradient that precludes tidewater gobies from swimming upstream (vertical drops of more than 4 to 8 in (10 to 20 cm) high can act as barriers that make it less likely tidewater gobies will be able to swim upstream (Swift *et al.* 1997, p. 20)), or (d) limited surface water in the tributary up gradient from the lagoon or estuary. Each of the above features describes a barrier to upstream movement; therefore the upstream extent of a particular unit was determined by whichever barrier was identified first through the mapping process regardless of whether or not PCEs were still present above it.

When determining critical habitat boundaries, we made every effort to avoid developed areas such as lands covered by buildings, pavement, and other structures because such lands lack PCEs for the tidewater goby. The scale of the critical habitat maps prepared under the parameters for publication within the *Code of Federal Regulations* may not reflect the exclusion of such developed lands. Any such lands inadvertently left inside critical habitat boundaries shown on the maps of this final rule were excluded in the text of the proposed rule and are excluded in this final rule. Therefore, a Federal action involving these lands would not trigger section 7 consultation with respect to critical habitat and the requirement of no adverse modification, unless the specific action may affect adjacent critical habitat.

A brief discussion of each area designated as critical habitat is provided in the unit descriptions below. Additional detailed documentation concerning the essential nature of these areas is contained in our supporting record for this rulemaking.

Critical Habitat Designation

We are designating 44 units as critical habitat for the tidewater goby. All areas are currently occupied by the tidewater goby and constitute our best assessment of areas that meet the definition of critical habitat for the species. The 44 areas designated as critical habitat occur in: Del Norte, Humboldt, Mendocino, Sonoma, Marin, San Mateo, Santa Cruz, Monterey, San Luis Obispo, Santa Barbara, Ventura, and Los Angeles Counties, California.

Table 1 identifies the geographic areas that meet the definition of critical habitat for tidewater goby but are being exempted from critical habitat pursuant to section 4(a)(3) of the Act. Table 2 shows the approximate area, by unit and landownership, designated as critical habitat for the tidewater goby.

TABLE 1.—APPROXIMATE SIZE OF OCCUPIED AREAS CONTAINING FEATURES ESSENTIAL TO THE CONSERVATION OF THE TIDEWATER GOBY (DEFINITIONAL AREA) AND THE AREAS DETERMINED TO BE EXEMPT FROM THE CRITICAL HABITAT DESIGNATION UNDER SECTION 4(A)(3) OF THE ACT

Geographic area	Definitional area (acres/ hectares)	Exempted area (acres/ hectares)	Total
Camp Pendleton Marine Corps Base	838/340	838/340	838/340
Vandenberg Air Force Base	775/314	775/314	775/314

TABLE 2.—CRITICAL HABITAT UNITS DESIGNATED FOR THE TIDEWATER GOBY. AREA ESTIMATES (ACRES/HECTARES) REFLECT ALL LAND WITHIN THE CRITICAL HABITAT UNIT BOUNDARIES. AREA ESTIMATES ARE ROUNDED TO THE NEAREST WHOLE INTEGER THAT IS EQUAL TO OR GREATER THAN 1. UNITS ARE ARRANGED NORTH TO SOUTH

Unit name	Federal	State	Local	Private	Total	Threats requiring special management of PCEs [1]
DN–1: Lake Earl/Lake Tolowa	0/0	2,682/1,085	0/0	0/0	2,682/1,085	1,4
HUM–1: Stone Lagoon	0/0	586/237	0/0	0/0	586/237	4
HUM–2: Big Lagoon	0/0	1,505/609	0/0	0/0	1,505/609	4
HUM–3: Humboldt Bay	879/356	296/120	90/36	213/86	1,478/598	1,3,4,5
HUM–4: Eel River	0/0	32/13	0/0	236/96	268/109	4,5
MEN–1: Ten Mile River	0/0	218/88	0/0	0/0	218/88	4
MEN–2: Virgin Creek	0/0	11/4	0/0	0/0	11/4	1,4
MEN–3: Pudding Creek	0/0	23/9	0/0	0/0	23/9	1,4
MEN–4: Davis Lake and Manchester State Park Ponds	0/0	24/10	0/0	0/0	24/10	4
SON–1: Salmon Creek	0/0	41/17	0/0	59/24	100/41	1,2,4,5
MAR–1: Estero Americano	1/1	6/2	0/0	288/117	295/120	1,4,5
MAR–2: Estero De San Antonio	0/0	60/24	0/0	118/48	178/72	1,2,4,5
MAR–3: Lagunitas (Papermill) Creek	176/71	666/270	0/0	7/3	849/344	1,3,4,5
MAR–4: Rodeo Lagoon	40/16	0/0	0/0	0/0	40/16	1
SM–1: San Gregorio Creek	0/0	39/16	0/0	0/0	39/16	1,3
SM–2: Pescadero-Butano Creek	0/0	218/88	0/0	0/0	218/88	1,3,4
SM–3: Bean Hollow Creek (Arroyo de Los Frijoles)	0/0	3/1	0/0	7/3	10/4	1,2
SC–1: Laguna Creek	0/0	26/11	0/0	0/0	26/11	2,4
SC–2: Baldwin Creek	0/0	17/7	0/0	0/0	17/7	2,4
SC–3: Corcoran Lagoon	0/0	5/2	6/2	21/8	32/12	1,4
SC–4: Aptos Creek	0/0	3/1	0/0	0/0	3/1	1,3,4
SC–5: Pajaro River	0/0	158/64	10/4	8/3	176/71	1,3,4
MN–1: Bennett Slough	0/0	82/33	5/2	68/28	155/63	1,2,3,4
SLO–1: Arroyo del Corral	0/0	5/2	0/0	0/0	5/2	1,5
SLO–2: Oak Knoll Creek (Arroyo Laguna)	0/0	3/1	0/0	0/0	3/1	1,3
SLO–3: Little Pico Creek	0/0	2/1	0/0	0/0	2/1	5
SLO–4: San Simeon Creek	0/0	16/7	0/0	0/0	16/7	2,4,5
SLO–5: Villa Creek	0/0	5/2	0/0	0/0	5/2	1,2,4,5
SLO–6: San Geronimo Creek	0/0	1/1	0/0	0/0	1/1	5
SLO–7: Pismo Creek	0/0	12/5	1/1	5/2	18/8	1,3,4
SB–1: Santa Maria River	0/0	149/60	33/13	286/116	468/189	1,2,4,5
SB–2: Cañada de las Agujas	0/0	0/0	0/0	1/1	1/1	1,4
SB–3: Cañada de Santa Anita	0/0	0/0	0/0	3/1	3/1	4
SB–4: Cañada de Alegria	0/0	0/0	0/0	1/1	1/1	1,2,4,5
SB–5: Cañada de Agua Caliente	0/0	0/0	0/0	1/1	1/1	1,4
SB–6: Gaviota Creek	0/0	8/3	0/0	1/1	9/4	1,3,4,5
SB–7: Winchester/Bell Canyon	0/0	0/0	1/1	5/2	6/3	4
SB–8: Arroyo Burro	0/0	0/0	2/1	0/0	2/1	1,3,4
SB–9: Mission Creek-Laguna Channel	0/0	9/4	5/2	0/0	14/6	1,3,4
VEN–1: Ventura River	0/0	26/10	16/6	9/4	51/20	1,2,3,4
VEN–2: Santa Clara River	0/0	218/88	22/9	110/45	350/142	1,2,3,4
VEN–3: J Street Drain-Ormond Lagoon	0/0	5/2	40/16	0/0	45/18	1,3,4
LA–1: Malibu Lagoon	0/0	58/24	0/0	6/3	64/27	1,2,3,4
LA–2: Topanga Creek	0/0	5/2	0/0	0/0	5/2	1,2,3,4
Total	1,096/444	7,223/2,923	231/93	1,453/593	10,003/4,053	

[1] Codes of known threats to tidewater goby habitat that may require special management considerations or protection of the PCEs are as follows:

1. Coastal development projects that result in the loss or alteration of coastal wetland habitat affecting PCEs 1, 2, 3, and 4.
2. Water diversions, alterations of water flows, artificial breaching of sandbars, and groundwater overdrafting that negatively impact the species' breeding and foraging activities and PCEs 1, 2, 3, and 4.
3. Channelization of habitats where the species occurs, affecting PCEs 1, 2, 3, and 4.
4. Non-point and point source pollution or discharge of agricultural and sewage effluents that are likely to impact the species health or breeding and foraging activities and PCE 1.
5. Cattle grazing that results in increased sedimentation of coastal lagoons and riparian habitats, removes vegetative cover, increases ambient water temperatures, and eliminates plunge pools and undercut banks utilized by tidewater gobies affecting PCE 1.

Below, we present brief descriptions of all units, and reasons why they meet the definition of critical habitat for the tidewater goby. The first two or three letters in the code for each critical habitat unit description reflects the county where the unit occurs: DN = Del Norte, HUM = Humboldt, LA = Los Angeles, MAR = Marin, MEN = Mendocino, MN = Monterey, SLO = San Luis Obispo, SM = San Mateo, SB = Santa Barbara, SC = Santa Cruz, SON = Sonoma, and VEN = Ventura. In Table 2 above, these units are listed in sequential order from north to south,

with the most northerly unit being described first and the most southerly unit being described last.

DN–1: Lake Earl/Lake Tolowa

Unit DN–1 consists of 2,682 ac (1,085 ha) located approximately 3 mi (4.8 km) north of the town of Crescent City and approximately 10 mi (16 km) south of the California-Oregon border. On an intermittent basis, DN–1 possesses a sandbar across the mouth of the lagoon or estuary during the majority of the late spring, summer, and fall that closes or partially closes the lagoon or estuary and thereby provides relatively stable conditions (PCE 4). This unit includes two contiguous lagoons (Lake Tolowa and Lake Earl), referred to collectively as Lake Earl. DN–1 includes State-owned land within the California Department of Fish and Game's (CDFG) Lake Earl Wildlife Area, and a portion of Tolowa Dunes State Park. DN–1 was occupied at the time of listing and is currently occupied. This critical habitat unit is the largest occupied locality in Del Norte County. Tidewater gobies have regularly been found throughout the lagoon in large numbers during surveys and intensive studies (Tetra Tech 2000, pp. 8–9 and Tables G–1 through G–12). The unit is separated from the nearest extant population to the north, in Tilla Slough/Smith River (not designated as critical habitat), by 7.3 mi (11.8 km). Because DN–has been consistently occupied over time, it is likely a source population for this region. It likely provides demographic and connectivity for other intermittent localities such as Tillas Slough, and provides a source population for reestablishment of the species at historically occupied, but currently extirpated, localities at Redwood Creek estuary and Freshwater Lagoon.

Furthermore, Lake Earl/Lake Tolowa are representative of extensive coastal lagoons and bays north of Cape Mendocino formed over uplifting Holocene sediments on broad flat coastal benches. These coastal benches include an intricate network of estuaries and other channels that are features essential to the conservation of the tidewater goby because they provide refugia during seasonal floods and breeding habitat through the full range of climatic cycles. The water level and salinity within the lagoon varies seasonally and annually in response to (a) periods of high precipitation or drought within its watershed; (b) the timing, duration, and frequency of breaching events; (c) the water level in the lagoon at the time of breaching; and (d) ocean tidal cycles during and immediately following a breach. As a result of natural and human-induced environmental changes, maximum water depth within Lake Earl varies during an annual cycle from less than 5 ft (1.5 meters) deep to more than 10 ft (3 meters) deep. The distribution of tidewater gobies and PCEs within Lake Earl changes in response to these dynamic, short-term habitat conditions; over a multi-year cycle, tidewater gobies may persist and breed anywhere within the lagoon. PCEs 1, 2, and 3 are found throughout DN–1, on a short term but variable time scale in response to the dynamic variability of the habitat itself. This unit and the essential features contained therein are also important to the conservation of the species because the goby population that it supports is considered a source population and will support the recovery of the tidewater goby population along this important coastal range, help conserve genetic diversity within the species, and facilitate colonization of currently unoccupied locations. Known threats to tidewater goby habitat that may require special management considerations or protection of the PCEs in this unit are described in Table 2.

HUM–1: Stone Lagoon

Unit HUM–1 consists of 586 ac (237 ha) located approximately 11 mi (18 km) north of the city of Trinidad. HUM–1 (Stone Lagoon) is a moderately large, natural, coastal lagoon with a narrows and spit separating it from the ocean. The lagoon includes fresh water input from two streams on the east and southern sides of the unit. Similar to DN–1, HUM–1 is typical of large north coast lagoons, characterized by a seasonal sandbar that results in relatively stable habitat within a naturally variable range of seasonal and annual climate conditions. HUM–1 possesses a sandbar across the mouth of the lagoon or estuary during the majority of the late spring, summer, and fall that closes or partially closes the lagoon or estuary and thereby provides relatively stable conditions (PCE 4). Tidewater goby distribution within this overall large lagoon varies in response to annual and seasonal climatic conditions. The other three PCEs occur throughout the unit, and the species likely alters its distribution within the lagoon in response to seasonal and annual habitat variability. HUM–1 is entirely State-owned and is part of Humboldt Lagoons State Park. Management of the lagoon does not include goals or tasks specific to the tidewater goby. HUM–1 was occupied at the time of listing, is currently occupied and is likely a source population for this region. HUM–1 is the northernmost of the four Humboldt County units and is located 40.8 mi (65.6 km) south of Lake Earl/Lake Tolowa (DN–1). The unit is separated from the nearest extant population to the north, in Freshwater Lagoon (not designated as critical habitat), by 30.7 mi (49.4 km). HUM–1 is the closest source population to reestablish the tidewater goby within formerly suitable but known extirpated localities at Redwood Creek and Freshwater Lagoon. HUM–1 will also support the recovery of tidewater goby populations along this portion of the coast and help facilitate colonization of currently unoccupied locations. Known threats to tidewater goby habitat that may require special management considerations or protection of the PCEs in this unit are described in Table 2.

HUM–2: Big Lagoon

Unit HUM–2 consists of 1,505 ac (609 ha) located approximately 7 mi (11 km) north of the city of Trinidad. Big Lagoon is a large coastal lagoon with a narrow sand spit separating it from the ocean, and receives the majority of its fresh water input from one stream in the southeast portion of the unit. Similar to DN–1, HUM–2 is typical of large north coast lagoons and estuaries, characterized by a seasonal sandbar that results in relatively stable habitat within a naturally variable range of seasonal and annual climate conditions. HUM–2 possesses a sandbar across the mouth of the lagoon or estuary during the majority of the late spring, summer, and fall that closes or partially closes the lagoon or estuary and thereby provides relatively stable conditions (PCE 4). Tidewater goby distribution within this overall large lagoon varies in response to annual and seasonal climatic conditions. The other three PCEs occur throughout the unit, and the species likely alters its distribution within the lagoon in response to seasonal and annual habitat variability. HUM–2 consists entirely of State lands that are part of Humboldt Lagoons State Park; however, the CDFG currently holds a lease from State lands for all lands to the mean high tide line of the lagoon. Furthermore, the landward areas are managed as Humboldt Lagoons State Park administered by the California Department of Parks and Recreation. HUM–2 was occupied at the time of listing, is currently occupied, and is likely a source population for this region. HUM–2 is located 4.6 mi (7.3 km) south of Stone Lagoon (HUM–1), which is also the nearest extant population. Conservation of this unit will support the recovery of tidewater goby populations along this portion of the coast, help conserve diversity within

the species, and facilitate colonization of currently unoccupied locations. Known threats to tidewater goby habitat that may require special management considerations or protection of the PCEs in this unit are described in Table 2.

HUM–3: Humboldt Bay

Unit HUM–3 consists of 1,478 ac (598 ha) located within an 8 mi (13 km) radius to the north, south, and east of the city of Eureka. This area was occupied at the time of listing and is currently occupied. Humboldt Bay and its adjacent marshes and estuaries are a complex mixture of natural and human-made aquatic features that have experienced many decades of human-induced changes. These changes include the construction of levees, tidegates, culverts, and other water control structures, and extensive dredging of sandbars. Surrounding the bay itself is a generally broad bench historically dominated by mudflats, tidal marshes, estuarine channels, and brackish marshes. Substantial portions of those habitats were converted to agricultural, urban, and industrial uses in recent history, resulting in the loss of as much as 10,000 ac (4,047 ha) of potentially suitable habitat. This critical habitat unit consists of a complex of interconnected estuary channels and human-made structures along the eastern edge of Humboldt Bay which collectively mimic, on a much reduced scale, habitats largely lost through past management practices. Many of these channels and marshes are themselves the result of changes to historical habitats, and depend on specific yet generally undocumented management activities for their continued function. To address the dynamic variability of these habitats resulting from seasonal and inter-annual precipitation differences, we have included both the actual known locations where tidewater gobies have been documented, as well as portions of those channels contiguous to but upchannel or downchannel from the known localities. We have not included Humboldt Bay proper in critical habitat, nor have we included major channels substantially subject to daily tidal fluctuations, as we have no evidence suggesting tidewater gobies may breed there. Similarly, we have not included channels that are not contiguous with occupied habitat, nor have we included intervening marsh or agricultural lands that may occasionally be flooded during severe winter storm events.

Based on several recent surveys, we have found that the precise locations of tidewater goby use within the channel complex during any particular year may change in response to annual variation in precipitation and channel hydrology. PCEs 1, 2, and 3 occur throughout the unit, although their precise location during any particular time period may change in response to seasonal fluctuations in precipitation and tidal inundation. Only PCE 4 (a sandbar(s) across the mouth of a lagoon or estuary) is not likely to occur within this unit because a navigable, dredged channel with a permanent open connection to the ocean is maintained on a regular basis. We anticipate that the persistence of the tidewater goby source population within this unit may require protection of localities that are not occupied every year, but collectively form a source population through an interconnected complex of channels and shallow water habitats. That is, any of the several known occupied localities within a channel complex may be used by tidewater gobies during various years in response to dynamic habitat conditions during seasonal, annual, and longer term climatic cycles (e.g., drought).

Recently, significant restoration efforts directed primarily at salmonid recovery have occurred or are anticipated to occur within areas designated as critical habitat. The outcome of these salmonid restoration efforts to tidewater gobies is unknown, and will likely vary with their design features and their location. This unit consists of Federal, State, local government, and private lands. HUM–3 is located 21.0 mi (33.9 km) south of Big Lagoon (HUM–2). The unit is separated from the nearest extant population to the south, in the Eel River (HUM–4), by 18.4 mi (29.7 km). This source population may provide essential demographic and genetic support to HUM–4, especially during periods of extreme floods (e.g., the 1964 ''Christmas Flood''), when the population of tidewater gobies at the Eel River estuary may have been extirpated. Conservation of this unit will support the recovery of tidewater goby populations along this portion of the coast and help facilitate colonization of currently unoccupied locations. Known threats to tidewater goby habitat that may require special management considerations or protection of the PCEs in this unit are described in Table 2.

HUM–4: Eel River

Unit HUM–4 consists of 268 ac (109 ha) located approximately 4 mi (6.5 km) north of the town of Ferndale. The Eel River delta includes a large, complex estuary with a network of diked and natural slough channels which contain suitable tidewater goby habitat. The Eel River delta contains many small, un-surveyed slough channels and other backwater areas that provide suitable habitat for tidewater gobies, but it also contains larger channels open to direct tidal influence that do not provide suitable habitat and are not included in this unit. This unit consists of backwater channels and immediately adjacent marsh contiguous to the known occupied habitat. Although no tidewater goby surveys are known to have occurred in the Eel River estuary prior to the listing, we considered this area to be unoccupied by the species until the Service discovered a new population of tidewater gobies in the Eel River estuary during surveys in 2004 (Goldsmith 2006b, p. 1). Although not occupied at the time of listing, we consider this locality to be essential to the conservation of the species because this unit possesses ecological characteristics which are important in maintaining the species' ability to adapt to changing environments, including the ability to disperse into higher channels and marsh habitat during severe flood events. This unit will also support the recovery of the tidewater goby population along this portion of the coast and help facilitate colonization of currently unoccupied locations. This unit consists of State lands, local government lands, and private lands. Similar to HUM–3, this unit includes portions of the contiguous channel upstream from the known locality, expected to function as habitat in response to seasonal and inter-annual fluctuations of water level and salinity. On an intermittent basis, HUM–4 possesses a sandbar across the mouth of the lagoon or estuary during the late spring, summer, and fall that closes or partially closes the lagoon or estuary and thereby provides relatively stable conditions (PCE 4). The other three PCEs occur throughout the unit in a dynamic and seasonally variable distribution.

As described earlier in HUM–3, we anticipate that tidewater gobies use various locations throughout this unit as a moving source population in response to the naturally changing habitat conditions. This unit is subject to infrequent yet severe flooding from the nearby Eel River proper. The major flood event of 1964 (''Christmas Flood''), and other major floods during the past century, may have severely altered habitat in most channels, including those currently occupied. Tidewater gobies may have survived the flood and the resulting loss of habitat in the refugia provided in upper channels and swales. Alternatively, the species may have been extirpated at the Eel River delta during those severe events,

and reestablished itself through demographic and genetic support from HUM–3, located approximately 18.4 mi (29.7 km) to the north. Of particular importance, the Eel River location is at the north end of one of the largest natural geographic gaps in the tidewater goby's geographic range. The gap extends to the Ten Mile River (Mendocino County) to the south, representing a coastline distance in excess of 135 mi (217 km). This gap, with its rocky coastline, strong currents, and long distance, remains a formidable barrier to the dispersal of tidewater gobies. Thus, an additional reason why this unit is essential to the conservation of the species is because it is at the boundary of a large, natural gap in the geographic range of the species.

MEN–1: Ten Mile River

Unit MEN–1 consists of 218 ac (88 ha) located 9 mi (14.5 km) north of the town of Fort Bragg. Ten Mile River includes a moderately large estuary with a long, low-gradient profile that contains many beneficial characteristics for supporting tidewater gobies, including part-time tidal exchange, brackish water, complex cover, suitable substrate types, and areas of off-channel refugia. Suitable habitat in this estuary extends to at least 3 mi (5 km) from the ocean, where a gradual increase in gradient and freshwater conditions dominates. On an intermittent basis, MEN–1 possesses a sandbar across the mouth of the lagoon or estuary during the late spring, summer, and fall that closes or partially closes the lagoon or estuary and thereby provides relatively stable conditions (PCE 4). Persistent, shallow water extends in the estuary for more than 3 mi (5 km) upstream from the ocean. Through this long estuary, salinity and water depth vary by season, amount of precipitation, and tidal cycle. Thus, PCEs 1, 2, and 3 occur throughout the unit, although their precise location during any particular time period may change in response to seasonal and longer term fluctuations in precipitation and tidal inundation.

This unit consists entirely of State lands. Ten Mile River was occupied by tidewater gobies at the time of listing and is currently occupied. MEN–1 is located 135.0 mi (217.0 km) south of Eel River (HUM–4). The unit is separated from the nearest extant population to the south, in Virgin Creek (MEN–2), by 5.6 mi (8.9 km). This unit is considered a source population, and will support the recovery of the tidewater goby population along this portion of the coast and help facilitate colonization of currently unoccupied locations. Furthermore, this unit is the largest block of habitat along the coast of Mendocino County, and is the last location on the southern end of one of the longest stretches of unsuitable habitat in the species range (previously described under HUM–4). Thus, this unit is important to connect populations within Mendocino County. South of Ten Mile River, only three other small, isolated localities occupied by tidewater gobies are known to exist across the more than 100 miles of rugged coastline between MEN–1 and SON–1 in south-coastal Sonoma County. Known threats to tidewater goby habitat that may require special management considerations or protection of the PCEs in this unit are described in Table 2.

MEN–2: Virgin Creek

Unit MEN–2 consists of 11 ac (4 ha) located 3.5 mi (5.6 km) north of the town of Fort Bragg and includes the small estuary of Virgin Creek. On an intermittent basis, MEN–2 possesses a sandbar across the mouth of the estuary during the late spring, summer, and fall that closes or partially closes the estuary and thereby provides relatively stable conditions (PCE 4). PCEs 1, 2, and 3 occur throughout the unit, although their precise location during any particular time period may change in response to seasonal fluctuations in precipitation and tidal inundation. This unit consists entirely of State lands that are part of McKerricher State Park, but is influenced by factors, such as upstream water quality, not under the jurisdiction of the Park. The tidewater goby occupied this locality at the time of listing and the unit is currently occupied. MEN–2 is located 5.6 mi (8.9 km) south of Ten Mile River (MEN–1). The unit is separated from the nearest extant population to the south, in Pudding Creek (MEN–3), by 1.2 mi (2.0 km). This unit is considered a source population, and it will support the recovery of the tidewater goby population along this portion of the coast and help facilitate colonization of currently unoccupied locations. As described above, this unit is one of only three small estuaries occupied by tidewater gobies between MEN–1 and SON–1. It forms an important intermediate locality for movement within Mendocino County. Known threats to tidewater goby habitat that may require special management considerations or protection of the PCEs in this unit are described in Table 2.

MEN–3: Pudding Creek

Unit MEN–3 consists of 23 ac (9 ha) located 2.5 mi (4.0 km) north of the town of Fort Bragg. Pudding Creek, is a moderately small estuary controlled at the upstream end by a low-head, municipal water storage dam. On an intermittent basis, MEN–3 possesses a sandbar across the mouth of the lagoon or estuary during the late spring, summer, and fall that closes or partially closes the estuary, and thereby provides relatively stable conditions (PCE 4). PCEs 1, 2, and 3 occur throughout the unit, although their precise location during any particular time period may change in response to seasonal fluctuations in precipitation and tidal inundation. This unit consists entirely of State lands that are part of McKerricher State Park, but is influenced by factors, such as upstream water quality, not under the jurisdiction of the Park. Tidewater gobies have been known from this location for at least the last 30 years, including the time of listing, and it is currently occupied. MEN–3 is located 1.2 mi (2.0 km) south of Virgin Creek (MEN–2), which is also the nearest extant population. This unit allows for connectivity between tidewater goby source populations, and thereby supports gene flow and metapopulation dynamics in this region. As described above, this unit is one of only three small estuaries likely to be occupied by tidewater gobies between MEN–1 and SON–1. It forms an important intermediate locality for long-term connectivity within Mendocino County. Known threats to tidewater goby habitat in this unit that may require special management considerations or protection of the PCEs are described in Table 2.

MEN–4: Davis Lake and Manchester State Park Ponds

Unit MEN–4 consists of 24 ac (10 ha) located 3.3 mi (5.2 km) northeast of Point Arena, and includes an area with ponds fed by a small, unnamed, low-elevation, coastal stream in Manchester State Park. On an intermittent basis, MEN–4 possesses a sandbar across the mouth of the lagoon or estuary during the late spring, summer, and fall that closes or partially closes the lagoon or estuary and thereby provides relatively stable conditions (PCE 4). PCEs 1, 2, and 3 occur throughout the unit, although their precise location during any particular time period may change in response to seasonal fluctuations in precipitation and tidal inundation. This unit consists entirely of State lands that are part of Manchester State Park. Tidewater gobies have been known from this location for at least the last 30 years, including the time of listing, and it is currently occupied. MEN–4 is located 32.4 mi (52.2 km) south of Pudding Creek (MEN–3), which is also the nearest extant population. This unit

is considered a source population, and it will support the recovery of the tidewater goby population along this portion of the coast and help facilitate colonization of currently unoccupied locations. As described above, this unit is one of only three small estuaries likely to be occupied by tidewater gobies between MEN–1 and SON–1. It forms an important intermediate locality for long-term connectivity within Mendocino County. There are other potential areas of suitable habitat in neighboring wetlands. However, tidewater gobies have not been documented from these locations, and they are not included in this unit. Known threats to tidewater goby habitat that may require special management considerations or protection of the PCEs in this unit are described in Table 2.

SON–1: Salmon Creek

Unit SON–1 consists of 100 ac (41 ha) located about 7 mi (11.3 km) south of the community of Jenner at the mouth of the Russian River. On an intermittent basis, SON–1 possesses a sandbar across the mouth of the lagoon or estuary during the late spring, summer, and fall that closes or partially closes the lagoon or estuary and thereby provides relatively stable conditions (PCE 4). PCEs 1, 2, and 3 occur throughout the unit, although their precise location during any particular time period may change in response to seasonal fluctuations in precipitation and tidal inundation. Within the unit, the beach, estuary downstream of the State Route (SR) 1 bridge, and the floodplain north of Salmon Creek and upstream (east) of SR 1 are State lands under the jurisdiction of the CDPR. The area and wetlands south of the creek and east of SR 1 in the unit are privately owned. This unit was occupied by tidewater gobies at the time of listing, is currently occupied, and is likely a source population for this region. The closest known existing population of tidewater gobies to Salmon Creek is located at Estero Americano 5.3 mi (8.5 km) to the south. The geological feature known as Bodega Head separates Salmon Creek and Estero Americano, and is likely to reduce the exchange of tidewater gobies between these two locations. This unit will support the recovery of the tidewater goby population along this portion of the coast and help facilitate colonization of currently unoccupied locations. Known threats to tidewater goby habitat that may require special management considerations or protection of the PCEs in this unit are described in Table 2.

MAR–1: Estero Americano

Unit MAR–1 consists of 295 ac (120 ha) located south of the Bodega Head, about 3.5 mi (5.7 km) south of Bodega Bay. Estero Americano is approximately 750 to 1,000 ac (300 to 400 ha) in size and is a large lagoon relative to other known extant and historical tidewater goby locations. On an intermittent basis, MAR–1 possesses a sandbar across the mouth of the lagoon or estuary during the late spring, summer, and fall that closes or partially closes the lagoon or estuary and thereby provides relatively stable conditions (PCE 4). PCEs 1, 2, and 3 occur throughout the unit, although their precise location during any particular time period may change in response to seasonal fluctuations in precipitation and tidal inundation. The majority of this unit consists of privately-owned lands. A small portion of the unit also consists of Federal and State lands. Although the abundance of tidewater goby in Estero Americano seems to vary, it was occupied by tidewater gobies at the time of listing and is currently occupied. MAR–1 is likely a source population for this region. The unit is one of two known locations of tidewater goby in this area, the other being Estero de San Antonio (MAR–2) approximately 2.2 mi (3.5 km) to the south. The closest known existing locations of tidewater goby to the north is the Salmon Creek estuary (SON–1), but this location is upcoast from the Bodega Head, which likely limits interactions with tidewater gobies from this unit. This unit will support the recovery of the tidewater goby population along this portion of the coast and help facilitate colonization of currently unoccupied locations. Known threats to tidewater goby habitat that may require special management considerations or protection of the PCEs in this unit are described in Table 2.

MAR–2: Estero de San Antonio

Unit MAR–2 consists of 178 ac (72 ha) located about 5.6 mi (9 km) south of Bodega Bay. Estero de San Antonio provides approximately 500 to 750 ac (200 to 300 ha) of fish habitat and is a large lagoon relative to other known extant and historical tidewater goby locations. On an intermittent basis, MAR–2 possesses a sandbar across the mouth of the lagoon or estuary during the late spring, summer, and fall that closes or partially closes the lagoon or estuary and thereby provides relatively stable conditions (PCE 4). PCEs 1, 2, and 3 occur throughout the unit, although their precise location during any particular time period may change in response to seasonal fluctuations in precipitation and tidal inundation. The majority of this unit consists of private lands, and the rest are State lands. Tidewater gobies are abundant within Estero de San Antonio, and it was occupied by tidewater gobies at the time of listing and is currently occupied. MAR–2 is one of two known locations of tidewater gobies to remain within the local area. This critical habitat unit includes a source population of tidewater gobies that likely provides individuals that are recruited into surrounding subpopulations. The closest known existing locations of tidewater goby are Estero Americano (i.e., MAR–1) approximately 2.2 mi (3.5 km) to the north and Lagunitas (Papermill) Creek (i.e., MAR–3) approximately 15.5 mi (25 km) to the south. Given the proximity between the MAR–1 and MAR–2 units, it is possible they have exchanged individuals in the past and that they continue to exchange individuals. Exchange between these populations bolsters the continued sustainable existence of the two populations which will, together with SON–1 and MAR–3 units, provide for natural and introduced colonization of available but unoccupied estuaries within the region south of the Russian River and north of Point Reyes. This unit will support the recovery of the tidewater goby population along this portion of the coast and help facilitate colonization of currently unoccupied locations. Known threats to tidewater goby habitat that may require special management considerations or protection of the PCEs in this unit are described in Table 2.

MAR–3: Lagunitas (Papermill) Creek

Unit MAR–3 consists of 849 ac (344 ha) located in Tomales Bay 20.5 mi (33 km) south of Bodega Bay. We do not have information that confirms that PCE 4 (a sandbar(s) across the mouth of the lagoon or estuary) is present within this unit on at least an intermittent basis. PCEs 1, 2, and 3 occur throughout the unit, although their precise location during any particular time period may change in response to seasonal fluctuations in precipitation and tidal inundation. The bayward portion of the unit consists of State lands. A portion of the unit consists of Federal lands under the jurisdiction of the National Park Service. The remaining portion of the unit is privately owned. This unit was occupied prior to listing and is currently occupied; therefore we consider it to have been occupied at the time of listing. It is the only known location of the tidewater goby to remain within the greater Tomales Bay area. Thus, if allowed to establish a robust population

the unit could act as an important source population for future colonization or introductions to other habitats within Tomales Bay. The closest known location with an extant tidewater goby population is Estero de San Antonio approximately 15.5 mi (25 km) to the north. Known threats to tidewater goby habitat that may require special management considerations or protection of the PCEs in this unit are described in Table 2.

MAR–4: Rodeo Lagoon

Unit MAR–4 consists of 40 ac (16 ha) located at the tip of the Marin Peninsula, approximately 3.8 mi (6 km) north of San Francisco. MAR–4 possesses a sandbar across the mouth of the lagoon or estuary during the late spring, summer, and fall that closes or partially closes the lagoon or estuary and thereby provides relatively stable conditions (PCE 4). PCEs 1, 2, and 3 occur throughout the unit, although their precise location during any particular time period may change in response to seasonal fluctuations in precipitation and tidal inundation. This unit consists of Federal lands under the jurisdiction of the National Park Service's Golden Gate National Recreation Area. Tidewater gobies are abundant within Rodeo Lagoon, and the lagoon was occupied by tidewater gobies at the time of listing and is currently occupied. MAR–5 is the only known location where the tidewater goby remains within the greater Bay Area. It also provides habitat for a population of tidewater gobies that could disperse to other adjoining habitats. The closest known existing locations of tidewater goby are Lagunitas Creek in Tomales Bay 23.6 mi (38 km) to the north, and San Gregorio Creek 36 mi (58 km) to the south. This unit will support the recovery of the tidewater goby population along this portion of the coast and help facilitate colonization of currently unoccupied locations. Known threats to tidewater goby habitat that may require special management considerations or protection of the PCEs in this unit are described in Table 2.

SM–1: San Gregorio Creek

Unit SM–1 consists of 39 ac (16 ha) located about 28 mi (45 km) south of the San Francisco-San Mateo County line. On an intermittent basis, SM–1 possesses a sandbar across the mouth of the lagoon or estuary during the late spring, summer, and fall that closes or partially closes the lagoon or estuary and thereby provides relatively stable conditions (PCE 4). PCEs 1, 2, and 3 occur throughout the unit, although their precise location during any particular time period may change in response to seasonal fluctuations in precipitation and tidal inundation. This unit consists entirely of State lands that are part of San Gregorio State Beach. This unit was occupied at the time of listing, and it is currently occupied. SM–1 is the northernmost of the only three extant populations in San Mateo County. This unit is noted for high densities of tidewater gobies (Swenson 1993, p. 3). The closest extant population of tidewater gobies north of San Gregorio Creek is 36 mi (58 km) at Rodeo Lagoon and the closest historical location to the north is Lake Merced approximately 28 mi (45 km) to the north. The lack of nearby populations to the north reduces the likelihood that the existing SM–1 population would be naturally reestablished if it were lost. SM–1's position as the northernmost of the only extant tidewater locations remaining in San Mateo County and its proximity to potential reintroduction sites, the lack of other nearby locations to the north, and the presence of a stable population makes this unit an important source population for this region of the California coast. Known threats to tidewater goby habitat that may require special management considerations or protection of the PCEs in this unit are described in Table 2.

SM–2: Pescadero-Butano Creek

Unit SM–2 consists of 218 ac (88 ha) located approximately 32 mi (51 km) south of the San Francisco-San Mateo County line. The unit consists of a lagoon, marshes, and creek channels. Unit SM–2 is located between two extant tidewater goby populations; namely the populations in San Gregorio Creek (SM–1) about 3.7 mi (6 km) to the north and in Bean Hollow Creek (SM–3) about 2.9 mi (4.7 km) to the south. On an intermittent basis, SM–2 possesses a sandbar across the mouth of the lagoon or estuary during the late spring, summer, and fall that closes or partially closes the lagoon or estuary and thereby provides relatively stable conditions (PCE 4). However, since the early 1990s the timing of the sandbar formation seems to have changed from spring/summer to late summer or fall. PCEs 1, 2, and 3 occur throughout the unit, although their precise location during any particular time period may change in response to seasonal fluctuations in precipitation and tidal inundation. This unit consists entirely of State lands that are part of Pescadero State Beach and Pescadero Marsh Natural Preserve. This unit was occupied by tidewater gobies at the time of listing and is currently occupied. This unit is unusual in that some tidewater gobies from this location possess a parasite that appears to occasionally affect their health; these parasites, or the environmental factors that increase the prevalence of the parasites, may represent a threat to this population not identified in Table 2. This unit allows for connectivity between tidewater goby source populations, and thereby supports gene flow and metapopulation dynamics in this region. Known threats to tidewater goby habitat that may require special management considerations or protection of the PCEs in this unit are described in Table 2.

SM–3: Bean Hollow Creek (Arroyo de Los Frijoles)

Unit SM–3 consists of 10 ac (4 ha) located approximately 34.8 mi (56 km) south of the San Francisco-San Mateo County line. On an intermittent basis, SM–3 possesses a sandbar across the mouth of the lagoon or estuary during the late spring, summer, and fall that closes or partially closes the lagoon or estuary and thereby provides relatively stable conditions (PCE 4). PCEs 1, 2, and 3 occur throughout the unit, although their precise location during any particular time period may change in response to seasonal fluctuations in precipitation and tidal inundation. The area east of State Highway 1 is privately owned and the portion of the lagoon west of the highway consists of State lands, which are part of Bean Hollow State Beach. This unit was occupied by tidewater gobies at the time of listing and it is currently occupied. SM–3 is the southernmost of the three San Mateo County units and is located 2.9 mi (4.7 km) south of Pescadero Creek. The unit is separated from the nearest extant population to the south, in Scott Creek (not designated as critical habitat), by 16.1 mi (26 km). This unit, together with the two units to the north, will support the recovery of the tidewater goby population along this important coastal range, allowing for connectivity between tidewater goby source populations, and thereby supports gene flow and metapopulation dynamics in this region. Known threats to tidewater goby habitat that may require special management considerations or protection of the PCEs in this unit are described in Table 2.

SC–1: Laguna Creek

Unit SC–1 consists of 26 ac (11 ha) located approximately 7.5 mi (12.0 km) west of the city of Santa Cruz. On an intermittent basis, SC–1 possesses a sandbar across the mouth of the lagoon or estuary during the late spring, summer, and fall that closes or partially

closes the lagoon or estuary and thereby provides relatively stable conditions (PCE 4). PCEs 1, 2, and 3 occur throughout the unit, although their precise location during any particular time period may change in response to seasonal fluctuations in precipitation and tidal inundation. This unit consists entirely of State lands. SC–1 was occupied by tidewater gobies at the time of listing and is currently occupied. SC–1 is the northernmost of the five Santa Cruz County units and is located 21.4 mi (34.5 km) south of Bean Hollow Creek (SM–3). The unit is separated from the nearest extant population to the south, in Baldwin Creek (SC–2), by 2.0 mi (3.2 km). SC–1 is likely a source population for this region. This unit, together with Baldwin Creek (SC–2) to the south, is considered a source population, and will support the recovery of the tidewater goby population along this portion of the coast and help facilitate colonization of currently unoccupied locations. Known threats to tidewater goby habitat that may require special management considerations or protection of the PCEs in this unit are described in Table 2.

SC–2: Baldwin Creek

Unit SC–2 consists of 17 ac (7 ha) located approximately 6 mi (9.7 km) west of the city of Santa Cruz. On an intermittent basis, SC–2 possesses a sandbar across the mouth of the lagoon or estuary during the late spring, summer, and fall that closes or partially closes the lagoon or estuary and thereby provides relatively stable conditions (PCE 4). PCEs 1, 2, and 3 occur throughout the unit, although their precise location during any particular time period may change in response to seasonal fluctuations in precipitation and tidal inundation. This unit consists entirely of State lands that are part of Wilder Ranch State Park. SC–2 was occupied by tidewater gobies at the time of listing and is currently occupied. SC–2 is located 2.0 mi (3.2 km) south of Laguna Creek (SC–1). The unit is separated from the nearest extant population to the south, Lombardi Creek (not designated as critical habitat), by 0.7 mi (1.2 km). SC–2, together with Laguna Creek to the north, is considered a source population for this region, and will support the recovery of the tidewater goby population along this portion of the coast and help facilitate colonization of currently unoccupied locations. Known threats to tidewater goby habitat that may require special management considerations or protection of the PCEs in this unit are described in Table 2.

SC–3: Corcoran Lagoon

Unit SC–3 consists of 32 ac (12 ha) located approximately 3 mi (4.8 km) east of the city of Santa Cruz. On an intermittent basis, SC–3 possesses a sandbar across the mouth of the lagoon or estuary during the late spring, summer, and fall that closes or partially closes the lagoon or estuary and thereby provides relatively stable conditions (PCE 4). PCEs 1, 2, and 3 occur throughout the unit, although their precise location during any particular time period may change in response to seasonal fluctuations in precipitation and tidal inundation. A portion of the unit consists of State lands that are part of Twin Lakes State Beach. The remaining portion is under the jurisdiction of local government, or is privately owned. SC–3 was occupied by tidewater gobies at the time of listing and is currently occupied. SC–3 is located 8.0 mi (12.9 km) south of Baldwin Creek (SC–2) and is in Monterey Bay. The unit is separated from the nearest extant population to the south, in Moran Lake (not designated as critical habitat), by 0.7 mi (1.1 km). SC–3 is likely a source population for this region. This will support the recovery of the tidewater goby population along this portion of the coast and help facilitate colonization of currently unoccupied locations. Known threats to tidewater goby habitat that may require special management considerations or protection of the PCEs in this unit are described in Table 2.

SC–4: Aptos Creek

Unit SC–4 consists of 3 ac (1 ha) that occur within the limits of the town of Aptos. We do not have information that confirms that PCE 4 (a sandbar(s) across the mouth of the lagoon or estuary) is present within this unit on at least an intermittent basis. The other three PCEs are present throughout the unit, although their precise location during any particular time period may change in response to seasonal fluctuations in precipitation and tidal inundation. The unit consists entirely of State lands. SC–4 was occupied by tidewater gobies at the time of listing, is currently occupied and is likely a source population for this region. SC–4 is located 4.1 mi (6.6 km) east of Corcoran Lagoon (SC–3) and is in Monterey Bay. The unit is separated from the nearest extant population to the north, Moran Lake (not designated as critical habitat), by 4.2 mi (6.75 km). This unit will support the recovery of the tidewater goby population along this portion of the coast and help facilitate colonization of currently unoccupied locations. Known threats to tidewater goby habitat that may require special management considerations or protection of the PCEs in this unit are described in Table 2.

SC–5: Pajaro River

Unit SC–5 consists of 176 ac (71 ha) located approximately 5 mi (8 km) southwest of the town of Watsonville. On an intermittent basis, SC–5 possesses a sandbar across the mouth of the lagoon or estuary during the late spring, summer, and fall that closes or partially closes the lagoon or estuary and thereby provides relatively stable conditions (PCE 4). PCEs 1, 2, and 3 occur throughout the unit, although their precise location during any particular time period may change in response to seasonal fluctuations in precipitation and tidal inundation. This unit consists of State, local government, and private lands. SC–5 was occupied prior to listing and is currently occupied; therefore we consider it to be occupied at the time of listing. SC–5 is the southernmost of the five Santa Cruz County units and is located 9.7 mi (15.6 km) south of Aptos Creek (SM–4) within Monterey Bay. The unit is separated from the nearest extant population to the south, in Bennett Slough (MN–1), by 3.0 mi (4.7 km). This unit allows for connectivity between tidewater goby source populations, and thereby supports gene flow and metapopulation dynamics in this region. Known threats to tidewater goby habitat that may require special management considerations or protection of the PCEs in this unit are described in Table 2.

MN–1: Bennett Slough

Unit MN–1 consists of 155 ac (63 ha) located approximately 3.7 mi (6 km) northwest of the town of Castroville. PCE 4 (a sandbar(s) across the mouth of lagoon or estuary) is not likely to occur within this unit because it has a navigable, dredged channel with a permanent open connection to the ocean maintained on a regular basis; however, the other three PCEs are present throughout the unit, although their precise location during any particular time period may change in response to seasonal fluctuations in precipitation and tidal inundation. A portion of this unit is on State-owned land under the jurisdiction of either CDFG (Moss Landing Wildlife Area) or CDPR (Moss Landing State Beach). The rest of the unit is on privately owned land, or land owned by local government. MN–1 was occupied by tidewater gobies at the time of listing and is currently one of two occupied localities in Monterey County. MN–1 is likely a source population for this

region. MN–1 is located 4.1 mi (6.6 km) south of the Pajaro River (SC–5). The unit is separated from the nearest extant population to the south, Moro Coho Slough (not designated as critical habitat), by 1.3 mi (2.1 km). This unit will support the recovery of the tidewater goby population along this portion of the coast and help facilitate colonization of currently unoccupied locations. Known threats to tidewater goby habitat that may require special management considerations or protection of the PCEs in this unit are described in Table 2.

SLO–1: Arroyo del Corral

Unit SLO–1 consists of 5 ac (2 ha) located approximately 6 mi (9.7 km) northwest of San Simeon. On an intermittent basis, SLO–1 possesses a sandbar across the mouth of the lagoon or estuary during the late spring, summer, and fall that closes or partially closes the lagoon or estuary and thereby provides relatively stable conditions (PCE 4). PCEs 1, 2, and 3 occur throughout the unit, although their precise location during any particular time period may change in response to seasonal fluctuations in precipitation and tidal inundation. This unit consists entirely of State lands. SLO–1 was occupied at the time of listing and is currently occupied. SLO–1 is likely a source population for this region. SLO–1 is the northernmost of the seven San Luis Obispo County units and is located 83.2 mi (133.9 km) south of Bennett Slough (MN–1). The unit is separated from the nearest extant population to the south, Oak Knoll Creek (SLO–2), by 4.3 mi (6.9 km). This unit will support the recovery of the tidewater goby population along this portion of the coast and help facilitate colonization of currently unoccupied locations. Known threats to tidewater goby habitat that may require special management considerations or protection of the PCEs in this unit are described in Table 2.

SLO–2: Oak Knoll Creek (Arroyo Laguna)

Unit SLO–2 consists of 3 ac (1 ha) located approximately 2 mi (3.2 km) northwest of San Simeon. On an intermittent basis, SLO–2 possesses a sandbar across the mouth of the lagoon or estuary during the late spring, summer, and fall that closes or partially closes the lagoon or estuary and thereby provides relatively stable conditions (PCE 4). PCEs 1, 2, and 3 occur throughout the unit, although their precise location during any particular time period may change in response to seasonal fluctuations in precipitation and tidal inundation. This unit consists entirely of State lands. SLO–2 was occupied at the time of listing and is currently occupied. SLO–2 is located 4.3 mi (6.9 km) south of Arroyo del Corral (SLO–1). The unit is separated from the nearest extant population to the south, in Arroyo de Tortuga (not designated as critical habitat), by 4.9 mi (7.9 km). This unit allows for connectivity between tidewater goby source populations, and thereby supports gene flow and metapopulation dynamics in this region. Known threats to tidewater goby habitat that may require special management considerations or protection of the PCEs in this unit are described in Table 2.

SLO–3: Little Pico Creek

Unit SLO–3 consists of 2 ac (1 ha) located approximately 6.7 mi (10.8 km) northwest of the town of Cambria. On an intermittent basis, SLO–3 possesses a sandbar across the mouth of the lagoon or estuary during the late spring, summer, and fall that closes or partially closes the lagoon or estuary and thereby provides relatively stable conditions (PCE 4). PCEs 1, 2, and 3 occur throughout the unit, although their precise location during any particular time period may change in response to seasonal fluctuations in precipitation and tidal inundation. This unit consists entirely of State lands. SLO–3 is located 3.7 mi (5.9 km) south of Oak Knoll Creek (SLO–2). The unit is separated from the nearest extant population to the north, in Broken Bridge Creek (not designated as critical habitat), by 1.4 mi (2.2 km). SLO–3 was occupied at the time of listing, is currently occupied, and is likely a source population for this region. This unit will support the recovery of the tidewater goby population along this portion of the coast and help facilitate colonization of currently unoccupied locations. Known threats to tidewater goby habitat that may require special management considerations or protection of the PCEs in this unit are described in Table 2.

SLO–4: San Simeon Creek

Unit SLO–4 consists of 16 ac (7 ha) located approximately 3.3 mi (5.3 km) northwest of the town of Cambria. On an intermittent basis, SLO–4 possesses a sandbar across the mouth of the lagoon or estuary during the late spring, summer, and fall that closes or partially closes the lagoon or estuary and thereby provides relatively stable conditions (PCE 4). PCEs 1, 2, and 3 occur throughout the unit, although their precise location during any particular time period may change in response to seasonal fluctuations in precipitation and tidal inundation. This unit consists entirely of State lands that are part of San Simeon State Park. SLO–4 is located 3.8 mi (6.1 km) south of Little Pico Creek (SLO–3). The unit is separated from the nearest extant population to the south, in Santa Rosa Creek (not designated as critical habitat), by 2.6 mi (4.2 km). SLO–4 was occupied at the time of listing, is currently occupied, and is likely a source population for this region. This unit will support the recovery of the tidewater goby population along this portion of the coast and help facilitate colonization of currently unoccupied locations. Known threats to tidewater goby habitat that may require special management considerations or protection of the PCEs in this unit are described in Table 2.

SLO–5: Villa Creek

Unit SLO–5 consists of 5 ac (2 ha) located approximately 9.6 mi (15.4 km) southeast of Cambria. On an intermittent basis, SLO–5 possesses a sandbar across the mouth of the lagoon or estuary during the late spring, summer, and fall that closes or partially closes the lagoon or estuary and thereby provides relatively stable conditions (PCE 4). PCEs 1, 2, and 3 occur throughout the unit, although their precise location during any particular time period may change in response to seasonal fluctuations in precipitation and tidal inundation. This unit consists entirely of State lands. SLO–5 was occupied at the time of listing, is currently occupied, and is likely a source population for this region. SLO–5 is located 12.3 mi (19.8 km) south of San Simeon Creek (SLO–4). The unit is separated from the nearest extant population to the south, in San Geronimo Creek (SLO–6), by 2.3 mi (3.7 km). This unit will support the recovery of the tidewater goby population along this portion of the coast and help facilitate colonization of currently unoccupied locations. Known threats to tidewater goby habitat that may require special management considerations or protection of the PCEs in this unit are described in Table 2.

SLO–6: San Geronimo Creek

Unit SLO–6 consists of 1 ac (1 ha) located approximately 7.6 mi (12.2 km) northwest of the town of Morro Bay. On an intermittent basis, SLO–6 possesses a sandbar across the mouth of the lagoon or estuary during the late spring, summer, and fall that closes or partially closes the lagoon or estuary and thereby provides relatively stable conditions (PCE 4). PCEs 1, 2, and 3 occur throughout the unit, although their precise location during any particular

time period may change in response to seasonal fluctuations in precipitation and tidal inundation. This unit consists entirely of State lands. SLO–6 was occupied at the time of listing, is currently occupied, and is likely a source population for this region. SLO–6 is located 2.3 mi (3.7 km) south of Villa Creek (SLO–5). The unit is separated from the nearest extant population to the south, in Cayucos Creek (not designated as critical habitat), by 1.5 mi (2.4 km). This unit will support the recovery of the tidewater goby population along this portion of the coast and help facilitate colonization of currently unoccupied locations. Known threats to tidewater goby habitat that may require special management considerations or protection of the PCEs in this unit are described in Table 2.

SLO–7: Pismo Creek

Unit SLO–7 consists of 18 ac (8 ha) located within, or is directly adjacent to, the town of Pismo Beach. On an intermittent basis, SLO–7 possesses a sandbar across the mouth of the lagoon or estuary during the late spring, summer, and fall that closes or partially closes the lagoon or estuary and thereby provides relatively stable conditions (PCE 4). PCEs 1, 2, and 3 occur throughout the unit, although their precise location during any particular time period may change in response to seasonal fluctuations in precipitation and tidal inundation. Approximately 60 percent of this locality is located on State-owned land that is part of Pismo State Beach; the remainder is privately owned or owned by the town of Pismo Beach. SLO–7 was occupied at the time of listing, and is currently occupied. SLO–7 is the southernmost of the seven San Luis Obispo County units and is located 27.3 mi (44.0 km) south of San Geronimo Creek (SLO–6). The unit is separated from the nearest extant population to the south, in Arroyo Grande Creek (not designated as critical habitat), by 2.6 mi (4.2 km). SLO–7 has been consistently occupied over time and is likely a source population for this region. This unit will support the recovery of the tidewater goby population along this portion of the coast and help facilitate colonization of currently unoccupied locations. Known threats to tidewater goby habitat that may require special management considerations or protection of the PCEs in this unit are described in Table 2.

SB–1: Santa Maria River

Unit SB–1 consists of 468 ac (189 ha) located approximately 13 mi (21 km) west of the city of Santa Maria. On an intermittent basis, SB–1 possesses a sandbar across the mouth of the lagoon or estuary during the late spring, summer, and fall that closes or partially closes the lagoon or estuary and thereby provides relatively stable conditions (PCE 4). PCEs 1, 2, and 3 occur throughout the unit, although their precise location during any particular time period may change in response to seasonal fluctuations in precipitation and tidal inundation. This unit consists of land that is owned by local government and privately owned land. SB–1 was occupied at the time of listing, is currently occupied, and is likely a source population for this region. SB–1 is the northernmost of the nine Santa Barbara County units and is located 11.8 mi (18.9 km) south of Pismo Creek (SLO–9). The unit is separated from the nearest extant population to the south, in Shuman Canyon (not designated as critical habitat), by 8.6 mi (13.9 km). This unit will support the recovery of the tidewater goby population along this portion of the coast and help facilitate colonization of currently unoccupied locations. Known threats to tidewater goby habitat that may require special management considerations or protection of the PCEs in this unit are described in Table 2.

SB–2: Cañada de las Agujas

Unit SB–2 consists of 1 ac (1 ha) located approximately 7.2 mi (11.6 km) west of Gaviota. On an intermittent basis, SB–2 possesses a sandbar across the mouth of the lagoon or estuary during the late spring, summer, and fall that closes or partially closes the lagoon or estuary and thereby provides relatively stable conditions (PCE 4). PCEs 1, 2, and 3 occur throughout the unit, although their precise location during any particular time period may change in response to seasonal fluctuations in precipitation and tidal inundation. This unit consists of privately owned lands. SB–2 was occupied at the time of listing and is currently occupied. SB–2 is located 38.8 mi (62.5 km) south of the Santa Maria River (SB–1). The unit is separated from the nearest extant population to the south, in Arroyo El Bulito (not designated as critical habitat), by 0.4 mi (0.7 km). This unit allows for connectivity between tidewater goby source populations, and thereby supports gene flow and metapopulation dynamics in this region. Furthermore, we believe this unit, and units SB–3, SB–4, SB–5, and SB–6, likely act as a metapopulation as defined and discussed in the Background and Criteria Used To Identify Critical Habitat sections. These units are no more than 2.0 mi (3.3 km) from each other, which facilitates higher dispersal rates between sites. Because these units are of relatively small size in area (1 to 9 ac (1 to 4 ha)), they are more susceptible to drying up or shrinking due to drought conditions and thereby increasing the likelihood of local extirpation. Lastly, because these units are small, they are likely to be dependent upon some degree of periodic exchange of tidewater gobies between units for any one unit to persist over time. Therefore, these five units will function together to support the recovery of the tidewater goby along the Gaviota Coast in Santa Barbara County. Known threats to tidewater goby habitat that may require special management considerations or protection of the PCEs in this unit are described in Table 2.

SB–3: Cañada de Santa Anita

Unit SB–3 consists of 3 ac (1 ha) located approximately 5.2 mi (8.4 km) west of Gaviota. On an intermittent basis, SB–3 possesses a sandbar across the mouth of the lagoon or estuary during the late spring, summer, and fall that closes or partially closes the lagoon or estuary and thereby provides relatively stable conditions (PCE 4). PCEs 1, 2, and 3 occur throughout the unit, although their precise location during any particular time period may change in response to seasonal fluctuations in precipitation and tidal inundation. This unit consists of privately owned lands. SB–3 was occupied at the time of listing and is currently occupied. SB–3 is located 2.0 mi (3.2 km) south of Cañada de las Agujas (SB–2). The unit is separated from the nearest extant population to the north, in Cañada del Agua (not designated as critical habitat), by 0.4 mi (0.7 km). This unit is important to the conservation of the species because it allows for connectivity between tidewater goby source populations, and thereby supports gene flow and metapopulation dynamics in this region. Furthermore, as described above in SB–2, we believe this unit, and units SB–2, SB–4, SB–5, and SB–6, likely act as a metapopulation as defined and discussed in the Background and Criteria Used To Identify Critical Habitat sections. Known threats to tidewater goby habitat that may require special management considerations or protection of the PCEs in this unit are described in Table 2.

SB–4: Cañada de Alegria

Unit SB–4 consists of 1 ac (1 ha) located approximately 3.2 mi (5.1 km) west of Gaviota. On an intermittent

basis, SB–4 possesses a sandbar across the mouth of the lagoon or estuary during the late spring, summer, and fall that closes or partially closes the lagoon or estuary and thereby provides relatively stable conditions (PCE 4). PCEs 1, 2, and 3 occur throughout the unit, although their precise location during any particular time period may change in response to seasonal fluctuations in precipitation and tidal inundation. This unit consists of privately owned lands. SB–4 was occupied at the time of listing and is currently occupied. SB–4 is located 2.0 mi (3.3 km) south of Cañada de Santa Anita (SB–3). The unit is separated from the nearest extant population to the south, in Cañada de Agua Caliente (SB–5), by 1.1 mi (1.8 km). This unit is important to the conservation of the species because it allows for connectivity between tidewater goby source populations, and thereby supports gene flow and metapopulation dynamics in this region. Furthermore, as described above in SB–2, we believe this unit, and units SB–2, SB–3, SB–5, and SB–6, likely act as a metapopulation as defined and discussed in the Background and Criteria Used To Identify Critical Habitat sections. Known threats to tidewater goby habitat that may require special management considerations or protection of the PCEs in this unit are described in Table 2.

SB–5: Cañada de Agua Caliente

Unit SB–5 consists of 1 ac (1 ha) located approximately 2.1 mi (3.4 km) west of Gaviota. On an intermittent basis, SB–5 possesses a sandbar across the mouth of the lagoon or estuary during the late spring, summer, and fall that closes or partially closes the lagoon or estuary and thereby provides relatively stable conditions (PCE 4). PCEs 1, 2, and 3 occur throughout the unit, although their precise location during any particular time period may change in response to seasonal fluctuations in precipitation and tidal inundation. This unit consists of privately owned land. SB–5 was occupied at the time of listing and is currently occupied. This unit also allows for connectivity between tidewater goby source populations, and thereby supports gene flow and metapopulation dynamics in this region. Furthermore, as described above in SB–2, we believe this unit, and units SB–2, SB–3, SB–4, and SB–6, likely act as a metapopulation as defined and discussed in the Background and Criteria Used To Identify Critical Habitat sections. Known threats to tidewater goby habitat that may require special management considerations or protection of the PCEs in this unit are described in Table 2.

SB–6: Gaviota Creek

Unit SB–6 consists of 9 ac (4 ha) located approximately 0.8 mi (1.3 km) west of Gaviota. On an intermittent basis, SB–6 possesses a sandbar across the mouth of the lagoon or estuary during the late spring, summer, and fall that closes or partially closes the lagoon or estuary and thereby provides relatively stable conditions (PCE 4). PCEs 1, 2, and 3 occur throughout the unit, although their precise location during any particular time period may change in response to seasonal fluctuations in precipitation and tidal inundation. This unit consists of State lands that are part of Gaviota Creek State Park, and includes some privately owned land. SB–6 was occupied at the time of listing and is currently occupied. SB–6 is located 1.5 mi (2.4 km) south of Cañada de Agua Caliente (SB–5), which is also the nearest extant population. This unit is important to the conservation of the species because it allows for connectivity between tidewater goby source populations, and thereby supports gene flow and metapopulation dynamics in this region. Furthermore, as described above in SB–2, we believe this unit, and units SB–2, SB–3, SB–4, and SB–5, likely act as a metapopulation as defined and discussed in the Background and Criteria Used To Identify Critical Habitat sections. Known threats to tidewater goby habitat that may require special management considerations or protection of the PCEs in this unit are described in Table 2.

SB–7: Winchester/Bell Canyon

Unit SB–7 consists of 6 ac (3 ha) located approximately 2.2 mi (3.5 km) west of the community of El Encanto Heights. On an intermittent basis, SB–7 possesses a sandbar across the mouth of the lagoon or estuary during the late spring, summer, and fall that closes or partially closes the lagoon or estuary and thereby provides relatively stable conditions (PCE 4). PCEs 1, 2, and 3 occur throughout the unit, although their precise location during any particular time period may change in response to seasonal fluctuations in precipitation and tidal inundation. This unit includes privately owned land, and land that is owned by local government. SB–7 was occupied at the time of listing and is currently occupied. SB–7 is located 4.3 mi (6.9 km) south of Gaviota Creek (SB–6). The unit is separated from the nearest extant population to the north, Tecolote Canyon (not designated as critical habitat), by 0.3 mi (0.4 km). This unit is important to the conservation of the species because it allows for connectivity between tidewater goby source populations, and thereby supports gene flow and metapopulation dynamics in this region. Known threats to tidewater goby habitat that may require special management considerations or protection of the PCEs in this unit are described in Table 2.

SB–8: Arroyo Burro

Unit SB–8 consists of 2 ac (1 ha) located approximately 3.6 mi (5.8 km) west of the city of Santa Barbara. On an intermittent basis, SB–8 possesses a sandbar across the mouth of the lagoon or estuary during the late spring, summer, and fall that closes or partially closes the lagoon or estuary and thereby provides relatively stable conditions (PCE 4). PCEs 1, 2, and 3 occur throughout the unit, although their precise location during any particular time period may change in response to seasonal fluctuations in precipitation and tidal inundation. This unit occurs on land that is owned by local government. Surveys for tidewater gobies were not conducted at SB–8 prior to listing, although subsequent surveys found them to be present. Because it is isolated from other tidewater goby localities, SB–8 could have been colonized after listing; therefore, we consider it to have been unoccupied at the time of listing. However, this unit is essential to the conservation of the species because it allows for connectivity between tidewater goby source populations, and thereby supports gene flow and metapopulation dynamics in this region. SB–8 is located 9.9 mi (15.9 km) south of Winchester/Bell Canyon (SB–7). The unit is separated from the nearest extant population to the south, in Laguna Channel/Mission Creek (SB–9), by 2.8 mi (4.5 km).

SB–9: Mission Creek-Laguna Channel

Unit SB–9 consists of 14 ac (6 ha) located on the southern margin of the city of Santa Barbara. On an intermittent basis, SB–9 possesses a sandbar across the mouth of the lagoon or estuary during the late spring, summer, and fall that closes or partially closes the lagoon or estuary and thereby provides relatively stable conditions (PCE 4). PCEs 1, 2, and 3 occur throughout the unit, although their precise location during any particular time period may change in response to seasonal fluctuations in precipitation and tidal inundation. A portion of this unit is owned by the city of Santa Barbara, and the remainder is privately owned. SB–

9 was occupied at the time of listing, is currently occupied, and is likely a source population for this region. SB–9 is the southernmost of the nine Santa Barbara County units and is located 2.8 mi (4.5 km) south of Arroyo Burro (SB–8). The unit is separated from the nearest extant population to the south, in Sycamore Creek (not designated as critical habitat), by 1.0 mi (1.5 km). This unit will support the recovery of the tidewater goby population along this portion of the coast and help facilitate colonization of currently unoccupied locations. Known threats to tidewater goby habitat that may require special management considerations or protection of the PCEs in this unit are described in Table 2.

VEN–1: Ventura River

Unit VEN–1 consists of 51 ac (20 ha) located on the northern border of the city of Ventura. On an intermittent basis, VEN–1 possesses a sandbar across the mouth of the lagoon or estuary during the late spring, summer, and fall that closes or partially closes the lagoon or estuary and thereby provides relatively stable conditions (PCE 4). PCEs 1, 2, and 3 occur throughout the unit, although their precise location during any particular time period may change in response to seasonal fluctuations in precipitation and tidal inundation. A portion of this unit is on State-owned land, and the remainder is privately owned. VEN–1 was occupied at the time of listing, is currently occupied, and is likely a source population for this region. VEN–1 is the northernmost of the three Ventura County units and is located 23.4 mi (37.7 km) south of the Mission Creek-Laguna Channel unit (SB–9). The unit is separated from the nearest extant population to the south, the Santa Clara River (VEN–2), by 4.3 mi (7.0 km). This unit will support the recovery of the tidewater goby population along this portion of the coast and help facilitate colonization of currently unoccupied locations. Known threats to tidewater goby habitat that may require special management considerations or protection of the PCEs in this unit are described in Table 2.

VEN–2: Santa Clara River

Unit VEN–2 consists of 350 ac (142 ha) located about 4 mi (6.4 km) southeast of the city of Ventura and 7 mi (11.3 km) northwest of Port Hueneme. On an intermittent basis, VEN–2 possesses a sandbar across the mouth of the lagoon or estuary during the late spring, summer, and fall that closes or partially closes the lagoon or estuary and thereby provides relatively stable conditions (PCE 4). PCEs 1, 2, and 3 occur throughout the unit, although their precise location during any particular time period may change in response to seasonal fluctuations in precipitation and tidal inundation. VEN–2 consists of State-owned lands, which are part of McGrath State Beach, and privately owned lands. VEN–2 was occupied by tidewater gobies at the time of listing, is currently occupied, and is likely a source population for this region. VEN–2 is located 4.3 mi (7.0 km) south of the Ventura River unit (SB–9), which is also the nearest extant population. This unit will support the recovery of the tidewater goby population along this portion of the coast and help facilitate colonization of currently unoccupied locations. This critical habitat unit is known to have tens of thousands of tidewater gobies during certain times of the year (Swift 2006), and is considered one of the largest tidewater goby populations in southern California. Known threats to tidewater goby habitat that may require special management considerations or protection of the PCEs in this unit are described in Table 2.

VEN–3: J Street Drain-Ormond Lagoon

Unit VEN–3 consists of 45 ac (18 ha) located approximately 1 mi (1.6 km) east of Port Hueneme. On an intermittent basis, VEN–3 possesses a sandbar across the mouth of the lagoon or estuary during the late spring, summer, and fall that closes or partially closes the lagoon or estuary and thereby provides relatively stable conditions (PCE 4). PCEs 1, 2, and 3 occur throughout the unit, although their precise location during any particular time period may change in response to seasonal fluctuations in precipitation and tidal inundation. This unit consists of State and local government lands. VEN–3 was occupied at the time of listing and is currently occupied. VEN–3 is the southernmost of the three Ventura County units and is located 4.3 mi (6.9 km) south of the Santa Clara River (VEN–2), which is also the nearest extant population. This unit allows for connectivity between tidewater goby source populations, and thereby supports gene flow and metapopulation dynamics in this region. Known threats to tidewater goby habitat that may require special management considerations or protection of the PCEs in this unit are described in Table 2.

LA–1: Malibu Lagoon

Unit LA–1 consists of 64 ac (27 ha) located 0.6 mi (1 km) east of Malibu Beach. On an intermittent basis, LA–1 possesses a sandbar across the mouth of the lagoon or estuary during the late spring, summer, and fall that closes or partially closes the lagoon or estuary and thereby provides relatively stable conditions (PCE 4). PCEs 1, 2, and 3 occur throughout the unit, although their precise location during any particular time period may change in response to seasonal fluctuations in precipitation and tidal inundation. This unit consists entirely of State lands that are part of Malibu Creek State Park. This unit was occupied at the time of listing, is currently occupied, and is likely a source population for this region. LA–1 is one of the two remaining extant populations of tidewater gobies within Los Angeles County, both of which have been designated as critical habitat units. LA–1 is located 29.6 mi (47.7 km) south of J Street Drain-Ormond Lagoon (VEN–3). The unit is separated from the nearest extant population to the south, in Topanga Canyon (LA–2), by 6.0 mi (9.6 km). This unit will support the recovery of the tidewater goby population along this portion of the coast and help facilitate colonization of currently unoccupied locations. Known threats to tidewater goby habitat that may require special management considerations or protection of the PCEs in this unit are described in Table 2.

LA–2: Topanga Creek

Unit LA–2 consists of 5 ac (2 ha) approximately 5.5 mi (8.9 km) northwest of the city of Santa Monica. On an intermittent basis, LA–2 possesses a sandbar across the mouth of the lagoon or estuary during the late spring, summer, and fall that closes or partially closes the lagoon or estuary and thereby provides relatively stable conditions (PCE 4). PCEs 1, 2, and 3 occur throughout the unit, although their precise location during any particular time period may change in response to seasonal fluctuations in precipitation and tidal inundation. This unit consists entirely of State lands. Tidewater goby surveys of LA–2 prior to and at the time of listing did not find them to be present. Tidewater gobies were first detected at this locality in 2001 and the unit is currently occupied. We consider this unit to be essential to the conservation of the species because it allows for connectivity between tidewater goby source populations, and thereby supports gene flow and metapopulation dynamics in this region. Tidewater gobies in Topanga Canyon are probably derived from fish that dispersed from Malibu Creek. This location is one of the only two remaining localities in Los Angeles County that are occupied by tidewater gobies. LA–2 is located 6.0 mi (9.6 km)

south of the Malibu Creek unit (LA–1), which is also the nearest extant population.

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 are not likely to destroy or adversely modify critical habitat. Decisions by the 5th and 9th Circuit Courts of Appeals have invalidated our definition of ''destruction or adverse modification'' (50 CFR 402.02) (see *Gifford Pinchot Task Force* v. *U.S. Fish and Wildlife Service,* 378 F. 3d 1059 (9th Cir 2004) and *Sierra Club* v. *U.S. Fish and Wildlife Service et al.*, 245 F.3d 434, 442F (5th Cir 2001)), and we do not rely on this regulatory definition when analyzing whether an action is likely to destroy or adversely modify critical habitat. Under the statutory provisions of the Act, we determine destruction or adverse modification on the basis of whether, with implementation of the proposed Federal action, the affected critical habitat would remain functional to serve its intended conservation role for the species.

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. As a result of this consultation, we document compliance with the requirements of section 7(a)(2) through our issuance of:

(1) A concurrence letter for Federal actions that may affect, but are not likely to adversely affect, listed species or critical habitat; or

(2) A biological opinion for Federal actions that are likely to adversely affect listed species or critical habitat.

When we issue a biological opinion concluding that a project is likely to result in jeopardy to a listed species or the destruction or adverse modification of critical habitat, we also provide reasonable and prudent alternatives to the project, if any are identifiable. We define ''Reasonable and prudent alternatives'' 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,
- Can be implemented consistent with the scope of the Federal agency's legal authority and jurisdiction,
- Are economically and technologically feasible, and
- Would, in the Director's opinion, avoid jeopardy to the listed species or 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 we have listed a new species or subsequently designated critical habitat that may be affected and the Federal agency has retained discretionary involvement or control over the action (or the agency's discretionary involvement or control is authorized by law). Consequently, Federal agencies may sometimes need to request reinitiation of consultation with us on actions for which formal consultation has been completed, if those actions with discretionary involvement or control may affect subsequently listed species or designated critical habitat.

Federal activities that may affect the tidewater goby or its designated critical habitat will require section 7(a)(2) consultation under the Act. Activities on State, Tribal, local or private lands requiring a Federal permit (such as a permit from the U.S. Army Corps of Engineers under section 404 of the Clean Water Act (33 U.S.C. 1251 *et seq.*) or a permit from us under section 10(a)(1)(B) of the Act) or involving some other Federal action (such as funding from the Federal Highway Administration, Federal Aviation Administration, or the Federal Emergency Management Agency) are also subject to the section 7(a)(2) consultation process. Federal actions not affecting listed species or critical habitat, and actions on State, Tribal, local or private lands that are not federally funded, authorized, or permitted, do not require section 7(a)(2) consultations.

Application of the ''Adverse Modification'' Standard

The key factor related to the adverse modification determination is whether, with implementation of the proposed Federal action, the affected critical habitat would continue to serve its intended conservation role for the species. Activities that may destroy or adversely modify critical habitat are those that alter the PCEs to an extent that appreciably reduces the conservation value of critical habitat for the tidewater goby. Generally, the conservation role of tidewater goby critical habitat units is to support viable metapopulations.

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, when carried out, funded, or authorized by a Federal agency, may affect critical habitat and therefore should result in consultation for the tidewater goby include, but are not limited to:

(1) Actions such as channelization and water diversion that reduce the amount of space that is available for individual and population growth and normal behavior, and reduce or eliminate sites for breeding, reproduction, and rearing (or development) of offspring.

(2) Actions that substantially alter the natural hydrologic regime upstream of the designated critical habitat units. These activities could include, but are not limited to, ground water pumping or surface water diversion activities, construction of impoundments or flood control structures, or the release of water in excess of levels that historically occurred. Such activities could result in an atypical reduction or excess amount of water that is present in the aquatic habitats that tidewater gobies occupy, and alter salinity conditions that support this species.

(3) Actions that substantially alter the channel morphology of the designated critical habitat units, or the areas up gradient from these units. Such activities may include, but are not limited to, channelization projects, road and bridge projects, removal of substrates, destruction and alteration of riparian vegetation, reduction of available floodplain, and removal of gravel or floodplain terrace materials. Such activities could increase water velocities and flush large numbers of tidewater gobies into the ocean especially during flood events.

(4) Actions that result in the discharge of agricultural and sewage effluents, or chemical or biological pollutants into the aquatic habitats where tidewater gobies occur. Such activities have the ability to degrade the water quality where tidewater gobies live, introduce toxic substances that can poison individual fish, adversely affect fish immune systems, and decrease the amount of oxygen in aquatic habitats where the species occurs.

(5) Actions that cause atypical levels of sedimentation in coastal wetland habitats or remove vegetative cover that

stabilizes stream banks. Such activities could include, but are not limited to, grazing or mining activities, road construction projects, off-road vehicle use, and other watershed and floodplain disturbance activities. Such activities have the potential to alter the amount and composition of the substrate in the habitats where tidewater gobies occur, and thereby affect the species' ability to construct breeding burrows.

(6) Actions that result in the artificial breaching of lagoon habitats. Such activities can reduce the amount of space that is available for individual and population growth; strand and desiccate tidewater goby adults, fry or eggs; and increase the risk they will be preyed upon by native or non-native predators as they become concentrated and exposed as water levels drop.

(7) Actions that create barriers that prevent tidewater gobies from accessing areas they would normally be able to access. These activities, which may include, but are not limited to, water diversions, road crossings, and sills, can reduce the amount of space that is available for individual and population growth, and reduce the number and extent of sites for breeding, reproduction, and rearing (or development) of offspring.

With the exception of the Eel River, Arroyo Burro, and Topanga Creek units, all of the critical habitat units were occupied by the species at the time of listing and contain the features essential to the conservation of the tidewater goby. Eel River, Arroyo Burro, and Topanga Creek units were not occupied at the time of listing but are currently occupied. As discussed in the Unit Descriptions section, these units are essential to the conservation of the species.

Application of Section 4(a)(3) of the Act—Approved Integrated Natural Resource Management Plans

The Sikes Act Improvement Act of 1997 (Sikes Act) (16 U.S.C. 670a) required each military installation that includes land and water suitable for the conservation and management of natural resources to complete an Integrated Natural Resource Management Plan (INRMP) by November 17, 2001. An INRMP integrates implementation of the military mission of the installation with stewardship of the natural resources found on the base. Each INRMP includes:

- An assessment of the ecological needs on the installation, including the need to provide for the conservation of listed species;
- A statement of goals and priorities;
- A detailed description of management actions to be implemented to provide for these ecological needs; and
- A monitoring and adaptive management plan.

Among other things, each INRMP must, to the extent appropriate and applicable, provide for fish and wildlife management, fish and wildlife habitat enhancement or modification, wetland protection, enhancement, and restoration where necessary to support fish and wildlife and enforcement of applicable natural resource laws.

The National Defense Authorization Act for Fiscal Year 2004 (Pub. L. 108–136) amended the Act to limit areas eligible for designation as critical habitat. Specifically, section 4(a)(3)(B)(i) of the Act (16 U.S.C. 1533(a)(3)(B)(i)) now provides: ''The Secretary shall not designate as critical habitat any lands or other geographical areas owned or controlled by the Department of Defense, or designated for its use, that are subject to an integrated natural resources management plan prepared under section 101 of the Sikes Act (16 U.S.C. 670a), if the Secretary determines in writing that such plan provides a benefit to the species for which critical habitat is proposed for designation.''

We consulted with the military on the development and implementation of INRMPs for installations with listed species. We analyzed INRMPs developed by military installations located within the range of the critical habitat designation for the tidewater goby to determine if they are exempt under section 4(a)(3) of the Act.

Marine Corps Base Camp Pendleton

At the time we designated critical habitat in 2000, the military had not completed an INRMP for the Marine Corps Base Camp Pendleton (''Base'') in northwestern San Diego County, and section 4(a)(3)(B)(i) of the Act did not exist. Therefore, the areas where the tidewater goby occurred on the Base were included in the critical habitat designation. However, subsequently the Base has completed an INRMP, and in accordance with section 4(a)(3)(B)(i) of the Act, we have determined that conservation efforts identified in the INRMP for the Base provide benefits to the tidewater goby occurring in habitats within or adjacent to the Base. The approximately 838 ac (340 ha) of essential tidewater goby habitat identified on the Base are subject to the INRMP. This habitat is located in the following areas: San Mateo Creek, San Onofre Creek, Las Flores/Pulgas Creek, Hidden Lagoon, Aliso Canyon, French Lagoon, Cockleburr Canyon, and the Santa Margarita River. Therefore, we are exempting the approximately 838 ac (340 ha) of essential habitat occurring on this installation from the critical habitat designation for tidewater goby pursuant to section 4(a)(3) of the Act for the reasons described below.

In 2001, the Marine Corps completed and approved an INRMP per the Sikes Act, as amended. All of the currently occupied tidewater goby locations in San Diego County are on the Base. Additionally, in 1995, the Marine Corps and the Service completed a large-scale programmatic consultation under section 7 of the Act addressing, among other species, the tidewater goby and its habitat. All of the conservation measures, including the Base's Estuarine/Beach Ecosystem Conservation Plan and the terms and conditions from that consultation, have been incorporated into the INRMP. The objective of the Estuarine/Beach Ecosystem Conservation Plan is to ''manage and protect the natural resources along the Base's coastline emphasizing coastal lagoons and the Santa Margarita River Estuary'', which includes tidewater goby habitat. Specific measures in the INRMP that benefit the tidewater goby include: (1) General avoidance of estuarine wetlands by all military activities, (2) maintenance of currently and historically occupied tidewater goby habitat, (3) compensation for unavoidable impacts, (4) regular monitoring of tidewater goby populations, and (5) controlling and removing exotic plants and fish. Additionally, the Base is exploring the potential for habitat enhancement to benefit the tidewater goby, including deepening smaller lagoons. Further, the Base's environmental security staff reviews Base projects and enforces existing regulations and Base orders that, through their implementation, avoid and minimize impacts to natural resources, including tidewater gobies and their habitat, and also the Marine Corps regularly consults on any of their actions that fall outside of the programmatic consultation.

Habitat features essential to the conservation of the tidewater goby exist on the Base; however, designating critical habitat on this military installation may impact its role as the Marine Corps' premier West Coast amphibious training base and therefore affect the Nation's military readiness. Activities occurring on the Base are currently being conducted in a manner that minimizes impacts to tidewater goby habitat, and the Marine Corps has committed to work closely with the Service and the State wildlife agency to

continually refine the existing INRMP as part of the Sikes Act's INRMP review process.

Vandenberg Air Force Base

Based on the considerations outlined above in the introduction to this section and in accordance with section 4(a)(3)(B)(i) of the Act, we have determined that conservation efforts identified in the INRMP for Vandenberg Air Force Base (VAFB) in Santa Barbara County provide benefits to the tidewater goby occurring in habitats within or adjacent to VAFB. The approximately 775 ac (314 ha) of essential tidewater goby habitat identified on VAFB are subject to the INRMP. This habitat is located in the following areas: Shuman Canyon, San Antonio Creek, Santa Ynez River, Cañada Honda, and Jalama Creek. Therefore, we are exempting the approximately 775 ac (314 ha) of essential habitat occurring on this installation from the critical habitat designation for tidewater goby pursuant to section 4(a)(3) of the Act for the reasons described below.

VAFB completed and approved an INRMP in 1997, which they are in the process of updating. The VAFB original 1997 INRMP provides conservation measures for the tidewater goby, as well as for the management of important wetland habitats on the base, and therefore provides a benefit to the tidewater goby. The draft update includes the same conservation measures for the tidewater goby, includes the same management of important wetland habitats on the base, and will also provide a benefit to the tidewater goby. VAFB's 1997 INRMP and draft update benefit tidewater gobies through: (1) Avoidance of tidewater gobies and their habitat, whenever possible, in project planning; (2) scheduling of activities that may affect tidewater gobies outside of the peak breeding period (March–July); (3) coordination with VAFB water quality staff to prevent degradation and contamination of aquatic habitats; and (4) prohibiting the introduction of nonnative fishes into streams on-base. Further, VAFB's environmental staff reviews projects and enforces existing regulations and orders that, through their implementation, avoid and minimize impacts to natural resources, including tidewater gobies and their habitat. In addition, VAFB's 1997 INRMP and draft update provide protection to aquatic habitats for the tidewater goby by excluding cattle from wetlands and riparian areas through the installation and maintenance of fencing. VAFB's 1997 INRMP and draft update specify periodic monitoring of the distribution and abundance of tidewater goby populations on the base.

Habitat features essential to the conservation of the tidewater goby exist on VAFB; however, designating critical habitat on this military installation may impact its mission of launching and tracking of satellites and testing and evaluating missile systems, and therefore affect the nation's military readiness. Activities occurring on VAFB are currently being conducted in a manner that minimizes impacts to tidewater goby habitat, and VAFB has committed to work closely with the Service and the State wildlife agency to continually refine their existing INRMP as part of the Sikes Act's INRMP review process.

Based on the above considerations, and in accordance with section 4(a)(3)(B)(i) of the Act, we have determined that the essential habitat identified on Marine Corps Base Camp Pendleton and Vandenberg Air Force Base are subject to the INRMPs approved for those installations, and the conservation efforts identified in the INRMPs provide benefits to the tidewater goby. Therefore, the approximately 1,613 ac (654 ha) of identified essential habitat are exempted from the critical habitat designation for the tidewater goby pursuant to section 4(a)(3) of the Act.

Application of Section 4(b)(2) of the Act

Section 4(b)(2) of the Act states that the Secretary must designate and revise critical habitat on the basis of the best available scientific data after taking into consideration the economic impact, impact on national security, and any other relevant impact, of specifying any particular area as critical habitat. The Secretary may exclude an area from critical habitat if he determines that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless he determines, based on the best scientific data available, that the failure to designate such area as critical habitat will result in the extinction of the species. In making that determination, the Congressional legislative history is clear that the Secretary has broad discretion regarding which factor(s) to use and how much weight to give to any factor.

We consider a number of factors in a section 4(b)(2) analysis. For example, we consider (1) whether there are lands owned or managed by the Department of Defense (DOD) where a national security impact might exist; (2) whether landowners have developed any conservation plans for the area; (3) whether there are conservation partnerships that would be encouraged by designation of, or exclusion from, critical habitat; (4) our government-to-government relationship with tribal entities and whether there are any Tribal issues; and (5) any social impacts that might occur because of the designation. We must also consider the economic impacts. The Service conducted an economic analysis of the impacts of the proposed critical habitat designation and related factors, which was made available for public review and comment on September 25, 2007.

In preparing this final rule, we have determined that designation of critical habitat for the tidewater goby will have no impact to national security, Tribal lands, partnerships, or habitat conservation plans. Further, our economic analysis indicates an overall economic benefit as a result of the designation, and did not identify any particular areas where the designation would result in significant economic impacts. Therefore, we have found no areas for which the benefits of exclusion outweigh the benefits of inclusion, and so have not excluded any areas from this designation of critical habitat for tidewater goby under section 4(b)(2) of the Act.

Economics

Section 4(b)(2) of the Act allows the Secretary to exclude areas from critical habitat for economic reasons if it is determined that the benefits of such exclusion exceed the benefits of designating the area as critical habitat. However, this exclusion cannot occur if it will result in the extinction of the species concerned.

Following the publication of the proposed revised designation of critical habitat, we conducted an economic analysis to estimate the potential economic effect of the designation. This draft analysis was made available for public review on September 25, 2007 (72 FR 54411). We accepted comments on the draft economic analysis until October 10, 2007. A final analysis of the potential economic effects of the proposed revised designation was then developed taking into consideration the public comments and any new information.

The economic analysis considers the potential economic effects of actions relating to the conservation of the tidewater goby, including costs associated with sections 4, 7, and 10 of the Act, and including those attributable to the designation of critical habitat. It further considers the economic effects of protective measures taken as a result of other Federal, State, and local laws that aid habitat conservation for the

tidewater goby in areas containing features essential to the conservation of the species. The analysis considers both economic efficiency and distributional effects. In the case of habitat conservation, efficiency effects generally reflect the ''opportunity costs'' associated with the commitment of resources to comply with habitat protection measures (such as lost economic opportunities associated with restrictions on land use).

The economic analysis focuses on the direct and indirect costs of the rule. However, economic impacts to land use activities can exist in the absence of critical habitat. These impacts may result from, for example, local zoning laws, State and natural resource laws, and enforceable management plans and best management practices applied by other State and Federal agencies. Economic impacts that result from these types of protections are not included in the analysis as they are considered to be part of the regulatory and policy baseline.

The analysis also addresses how potential economic impacts are likely to be distributed, including an assessment of any local or regional impacts of habitat conservation and the potential effects of conservation activities on small entities and the energy industry. This information can be used by decision-makers to assess whether the effects of the designation might unduly burden a particular group or economic sector. Finally, the analysis looks retrospectively at costs that have been incurred since the date the tidewater goby was listed as endangered (February 4, 1994 (59 FR 5494) and considers those costs that may occur in the 20 years following a designation of critical habitat.

The September 25, 2007 notice (72 FR 54411) provides a detailed economics section for the areas proposed as critical habitat for the tidewater goby. The analysis estimates post-designation costs associated with conservation efforts for the tidewater goby to be approximately $25 million (undiscounted) over the next 20 years (2007 to 2026) as a result of the proposed revised designation of critical habitat. Discounted future costs are estimated to be approximately $22 million ($1.5 million annualized) at a 3 percent discount rate or approximately $20 million ($1.8 million annualized) at a 7 percent discount rate. Potential cost savings in Unit VEN–2 associated with tidewater goby conservation efforts range from approximately $35 million to $90 million (undiscounted dollars). By combining these savings with the estimated costs of conservation efforts, an overall net cost savings of approximately $10 million to $65 million (undiscounted) could be realized over the next 20 years. In present value terms, net cost savings range from approximately $9.8 million to $60 million (assuming a 3 percent discount rate) or approximately $9.1 million to $54.0 million (assuming a 7 percent discount rate).

Appendix B of the final economic analysis estimates the potential incremental impacts of critical habitat designation for the tidewater goby. It does so by attempting to isolate those direct and indirect impacts that are expected to be triggered specifically by the critical habitat designation. The incremental conservation efforts and associated impacts included in Appendix B would not be expected to occur absent the designation of critical habitat for the tidewater goby. Total present value potential incremental impacts are estimated to be $206,000 discounted at three percent. All other impacts quantified in the final economic analysis are considered baseline impacts and are not expected to be affected by the critical habitat designation.

We have evaluated the potential economic impact of the revised designation as identified in the final economic analysis. Based on this evaluation, we believe that there are no disproportionate economic impacts resulting in the benefits of excluding an area outweighing the benefits of including an area.

A copy of the final economic analyses with supporting documents are included in our administrative record and may be obtained by contacting the Ventura Fish and Wildlife Office (see **ADDRESSES**) or on the Internet at *http://www.fws.gov/ventura.*

Required Determinations

Regulatory Planning and Review

In accordance with Executive Order 12866 (E.O. 12866), we evaluate four parameters in determining whether a rule is significant. If any one of the following four parameters is met, the Office of Management and Budget (OMB) will designate that rule as significant under E.O. 12866:

(a) The rule would have an annual economic effect of $100 million or more or adversely affect an economic sector, productivity, jobs, the environment, or other units of the government;

(b) The rule would create inconsistencies with other Federal agencies' actions;

(c) The rule would materially affect entitlements, grants, user fees, loan programs, or the rights and obligations of their recipients; or

(d) The rule would raise novel legal or policy issues.

If OMB requests to informally review a rule designating critical habitat for a species, we consider that rule to raise novel legal and policy issues. Because no other Federal agencies designate critical habitat, the designation of critical habitat will not create inconsistencies with other agencies' actions. We use the economic analysis of the critical habitat designation to evaluate the potential effects related to the other parameters of E.O. 12866 and to make a determination as to whether the regulation may be significant under parameter (a) or (c) listed above.

Based on the economic analysis of the critical habitat designation, we have determined that the designation of critical habitat for tidewater goby will not result in an annual effect on the economy of $100 million or more or affect the economy in a material way. Based on previous critical habitat designations and the economic analysis, we believe this rule will not materially affect entitlements, grants, user fees, loan programs, or the rights and obligations of their recipients. OMB has requested to informally review this rule, and thus this action does raise novel legal or policy issues. In accordance with the provisions of E.O. 12866, this rule is considered significant.

Executive Order 12866 directs Federal agencies issuing regulations to evaluate regulatory alternatives (Office of Management and Budget, Circular A–4, September 17, 2003). Under Circular A–4, once an agency determines that the Federal regulatory action is appropriate, the agency must consider alternative regulatory approaches. Because the determination of critical habitat is a statutory requirement under the Act, we must evaluate alternative regulatory approaches, where feasible, when issuing a designation of critical habitat.

In developing our designations of critical habitat, we consider economic impacts, impacts to national security, and other relevant impacts under section 4(b)(2) of the Act. Based on the discretion allowable under this provision, we may exclude any particular area from the designation of critical habitat providing that the benefits of such exclusion outweigh the benefits of specifying the area as critical habitat and that such exclusion would not result in the extinction of the species. We believe that the evaluation of the inclusion or exclusion of particular areas, or a combination of both, constitutes our regulatory alternative analysis for designations.

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

Under the Regulatory Flexibility Act (RFA; 5 U.S.C. 601 *et seq.*, as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996), whenever an agency must publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effects of the rule on small entities (small businesses, small organizations, and small government jurisdictions). However, no regulatory flexibility analysis is required if the head of the agency certifies the rule will not have a significant economic impact on a substantial number of small entities. SBREFA amended RFA to require Federal agencies to provide a statement of the factual basis for certifying that the rule will not have a significant economic impact on a substantial number of small entities. In this final rule, we are certifying that the critical habitat designation for tidewater goby will not have a significant economic impact on a substantial number of small entities. The following discussion explains our rationale.

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

To determine if the rule could significantly affect a substantial number of small entities, we consider the number of small entities affected within particular types of economic activities (e.g., grazing, oil and gas production, transportation). We apply the ''substantial number'' test individually to each industry to determine if certification is appropriate. However, the SBREFA does not explicitly define ''substantial number'' or ''significant economic impact.'' Consequently, to assess whether a ''substantial number'' of small entities is affected by this designation, this analysis considers the relative number of small entities likely to be impacted in an area. In some circumstances, especially with critical habitat designations of limited extent, we may aggregate across all industries and consider whether the total number of small entities affected is substantial. In estimating the number of small entities potentially affected, we also consider whether their activities have any Federal involvement.

Designation of critical habitat only affects activities conducted, funded, or permitted by Federal agencies. Some kinds of activities are unlikely to have any Federal involvement and so will not be affected by critical habitat designation. In areas where the species is present, Federal agencies already are required to consult with us under section 7 of the Act on activities they fund, permit, or implement that may affect the tidewater goby (see Section 7 Consultation section). Federal agencies also must consult with us if their activities may affect critical habitat. Designation of critical habitat, therefore, could result in an additional economic impact on small entities due to the requirement to reinitiate consultation for ongoing Federal activities (see Application of the ''Adverse Modification'' Standard section).

The economic analysis of the revised critical habitat designation examined the potential for goby conservation efforts to affect small business entities. This analysis was based on the estimated impacts associated with the proposed designation of critical habitat, and evaluated the potential for economic impacts related to: Water management, grazing, transportation, natural resource management, and oil and gas pipeline construction and maintenance. Based on the results of the analysis, incremental impacts are associated with additional administrative costs of section 7 consultations in water management, transportation, natural resource management, and oil and gas pipeline construction and maintenance. No additional project modification costs are expected to result from this designation. All impacts quantified in our economic analysis, other than the incremental portion of administrative costs, are forecast to occur regardless of critical habitat designation for the tidewater goby.

Additional administrative costs resulting from this designation are expected to be borne by various public agencies, including the Service, the U.S. Army Corps of Engineers, California State departments, and various California city and county governments; however, none of these qualify as small entities.[1] Del Norte County, which is the only county containing proposed critical habitat that qualifies as a small entity, is not expected to bear any incremental impacts of goby conservation from the critical habitat designation. Therefore, this analysis does not anticipate any impacts to small entities.

In summary, we have considered whether this would result in a significant economic effect on a substantial number of small entities. For the above reasons and based on currently available information, we certify that this rule will not have a significant economic impact on a substantial number of small entities. Therefore, a regulatory flexibility analysis is not required.

Small Business Regulatory Enforcement Fairness Act (5 U.S.C. 801 et seq.)

Under SBREFA, this rule is not a major rule. Our detailed assessment of the economic effects of this designation is described in the economic analysis. Based on the effects identified in the economic analysis, we believe that this rule will not have an annual effect on the economy of $100 million or more, will not cause a major increase in costs or prices for consumers, and will not have significant adverse effects on competition, employment, investment, productivity, innovation, or the ability of U.S.-based enterprises to compete with foreign-based enterprises. Refer to the final economic analysis for a discussion of the effects of this determination. (see **ADDRESSES** for information on obtaining a copy of the final economic analysis).

Executive Order 13211 (Energy Supply, Distribution, or Use)

On May 18, 2001, the President issued an Executive Order (E.O. 13211; ''Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use'') on regulations that significantly affect energy supply, distribution, and use. E.O. 13211 requires agencies to prepare Statements

[1] Section 601(5) of the RFA defines small governmental jurisdictions as governments of cities, counties, towns, townships, villages, school districts, or special districts with a population of less than 50,000.

of Energy Effects when undertaking certain actions. OMB has provided guidance for implementing this Executive Order that outlines nine outcomes that may constitute ''a significant adverse effect'' when compared without the regulatory action under consideration. The final economic analysis finds that none of these criteria are relevant to this analysis. Thus, based on information in the economic analysis, energy-related impacts associated with tidewater goby conservation activities within the final critical habitat designation are not expected. Therefore, this action is not a significant energy action and no Statement of Energy Effects is required.

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

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

(a) This rule will not produce a Federal mandate. In general, a Federal mandate is a provision in legislation, statute, or regulation that would impose an enforceable duty upon State, local, or tribal governments, or the private sector and includes both ''Federal intergovernmental mandates'' and ''Federal private sector mandates.'' These terms are defined in 2 U.S.C. 658(5)–(7). ''Federal intergovernmental mandate'' includes a regulation that ''would impose an enforceable duty upon State, local, or tribal governments'' with two exceptions. It excludes ''a condition of Federal assistance.'' It also excludes ''a duty arising from participation in a voluntary Federal program,'' unless the regulation ''relates to a then-existing Federal program under which $500,000,000 or more is provided annually to State, local, and tribal governments under entitlement authority,'' if the provision would ''increase the stringency of conditions of assistance'' or ''place caps upon, or otherwise decrease, the Federal Government's responsibility to provide funding'' and the State, local, or tribal governments ''lack authority'' to adjust accordingly. At the time of enactment, these entitlement programs were: Medicaid; AFDC work programs; Child Nutrition; Food Stamps; Social Services Block Grants; Vocational Rehabilitation State Grants; Foster Care, Adoption Assistance, and Independent Living; Family Support Welfare Services; and Child Support Enforcement. ''Federal private sector mandate'' includes a regulation that ''would impose an enforceable duty upon the private sector, except (i) a condition of Federal assistance or (ii) a duty arising from participation in a voluntary Federal program.''

The designation of critical habitat does not impose a legally binding duty on non-Federal Government entities or private parties. Under the Act, the only regulatory effect is that Federal agencies must ensure that their actions do not destroy or adversely modify critical habitat under section 7. While non-Federal entities that receive Federal funding, assistance, or permits, or that otherwise require approval or authorization from a Federal agency for an action may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency. Furthermore, to the extent that non-Federal entities are indirectly impacted because they receive Federal assistance or participate in a voluntary Federal aid program, the Unfunded Mandates Reform Act would not apply; nor would critical habitat shift the costs of the large entitlement programs listed above on to State governments.

(b) As discussed in the draft economic analysis of the proposed revised designation of critical habitat for the tidewater goby, the impacts on water management activities to Del Norte County are estimated to be $4,000 per year. Del Norte County had annual gross revenues of $51 million in 2004. Therefore impacts to Del Norte County for water management are expected to be less than 0.01 percent of yearly gross revenues. Consequently, we do not believe that the designation of critical habitat for the tidewater goby would significantly or uniquely affect any small governmental entities, and the designation of critical habitat imposes no obligations on State or local governments. As such, a Small Government Agency Plan is not required.

Takings

In accordance with Executive Order 12630 (''Government Actions and Interference with Constitutionally Protected Private Property Rights''), we have analyzed the potential takings implications of designating critical habitat for the tidewater goby in a takings implication assessment. The takings implications assessment concludes that this final designation of critical habitat for the tidewater goby does not pose significant takings implications for lands within or affected by the designation.

Federalism

In accordance with E.O. 13132 (Federalism), the rule does not have significant Federalism effects. A Federalism assessment is not required. In keeping with Department of Interior and Department of Commerce policy, we requested information from, and coordinated development of, this final critical habitat designation with appropriate State resource agencies and local jurisdictions. We received comments from the CDFG and 2 local governments; those comments and our responses are included in the Summary of Comments and Recommendations section of this final rule. The designation may have some benefit to these governments in that the areas containing the physical and biological features essential to the conservation of the species are more clearly defined, and the PCEs of the habitat essential to the conservation of the species are specifically identified. This information does not alter where and what federally sponsored activities may occur. However, it may assist these local governments in long-range planning (rather than having them wait for case-by-case section 7 consultations to occur).

Where State and local governments require approval or authorization from a Federal agency for actions that may affect critical habitat, consultation under § 7(a)(2) would be required. While non-Federal entities that receive Federal funding, assistance, or permits, or that otherwise require approval or authorization from a Federal agency for an action, may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency.

Civil Justice Reform

In accordance with E.O. 12988 (Civil Justice Reform), the Office of the Solicitor has determined that the rule does not unduly burden the judicial system and that it meets the requirements of sections 3(a) and 3(b)(2) of the Order. We are designating critical habitat in accordance with the provisions of the Endangered Species Act. This final rule uses standard property descriptions and identifies the PCEs within the designated areas to assist the public in understanding the habitat needs of the tidewater goby.

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

This rule does not contain any new collections of information that require

approval by OMB under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*). This rule will not impose recordkeeping or reporting requirements on State or local governments, individuals, businesses, or organizations. An agency 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 (NEPA)

It is our position that, outside the jurisdiction of the Circuit Court of the United States for the Tenth Circuit, we do not need to prepare environmental analyses as defined by the NEPA (42 U.S.C. 4321 *et seq.*) in connection with designating critical habitat under the Act. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244). This assertion was upheld by the Circuit Court of the United States for the Ninth Circuit (*Douglas County* v. *Babbitt*, 48 F.3d 1495 (9th Cir. 1995), cert. denied 516 U.S. 1042 (1996)).

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), E.O.13175, and the Department of the Interior's manual at 512 DM 2, we readily acknowledge our responsibility to communicate meaningfully with recognized Federal Tribes on a government-to-government basis. In accordance with Secretarial Order 3206 of June 5, 1997, ''American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act,'' we readily acknowledge our responsibilities to work directly with tribes in developing programs for healthy ecosystems, to acknowledge that tribal lands are not subject to the same controls as Federal public lands, to remain sensitive to Indian culture, and to make information available to tribes. We have determined that there are no Tribal lands that meet the definition of critical habitat for the tidewater goby. Therefore, no critical habitat for the tidewater goby has been designated on Tribal lands.

References Cited

A complete list of all references cited in this rulemaking is available on the Internet at *http://www.regulations.gov* and upon request from the Listing and Recovery Coordinator, Ventura Fish and Wildlife Office (see **ADDRESSES** section).

Author(s)

The primary author of this rule is the Ventura Fish and Wildlife Office.

List of Subjects in 50 CFR Part 17

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

Regulation Promulgation

■ Accordingly, we 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 § 17.95(e), revise the entry for Tidewater Goby (*Eucyclogobius newberryi*) under ''FISHES'' to read as follows:

§ 17.95 Critical habitat—fish and wildlife.

* * * * *

(e) *Fishes.*

* * * * *

Tidewater goby (*Eucyclogobius newberryi*)

(1) Critical habitat units are depicted for Del Norte, Humboldt, Mendocino, Sonoma, Marin, San Mateo, Santa Cruz, Monterey, San Luis Obispo, Santa Barbara, Ventura, and Los Angeles Counties, California, on the maps below.

(2) The primary constituent elements of critical habitat for the tidewater goby are the habitat components that provide:

(i) Persistent, shallow (in the range of about 0.1 to 2 m), still-to-slow-moving aquatic habitat most commonly ranging in salinity from less than 0.5 ppt to about 10 to 12 ppt;

(ii) Substrates (e.g., sand, silt, mud) suitable for the construction of burrows for reproduction;

(iii) Submerged and emergent aquatic vegetation, such as *Potamogeton pectinatus* and *Ruppia maritima,* that provides protection from predators; and

(iv) Presence of a sandbar(s) across the mouth of a lagoon or estuary during the late spring, summer, and fall that closes or partially closes the lagoon or estuary, thereby providing relatively stable water levels and salinity.

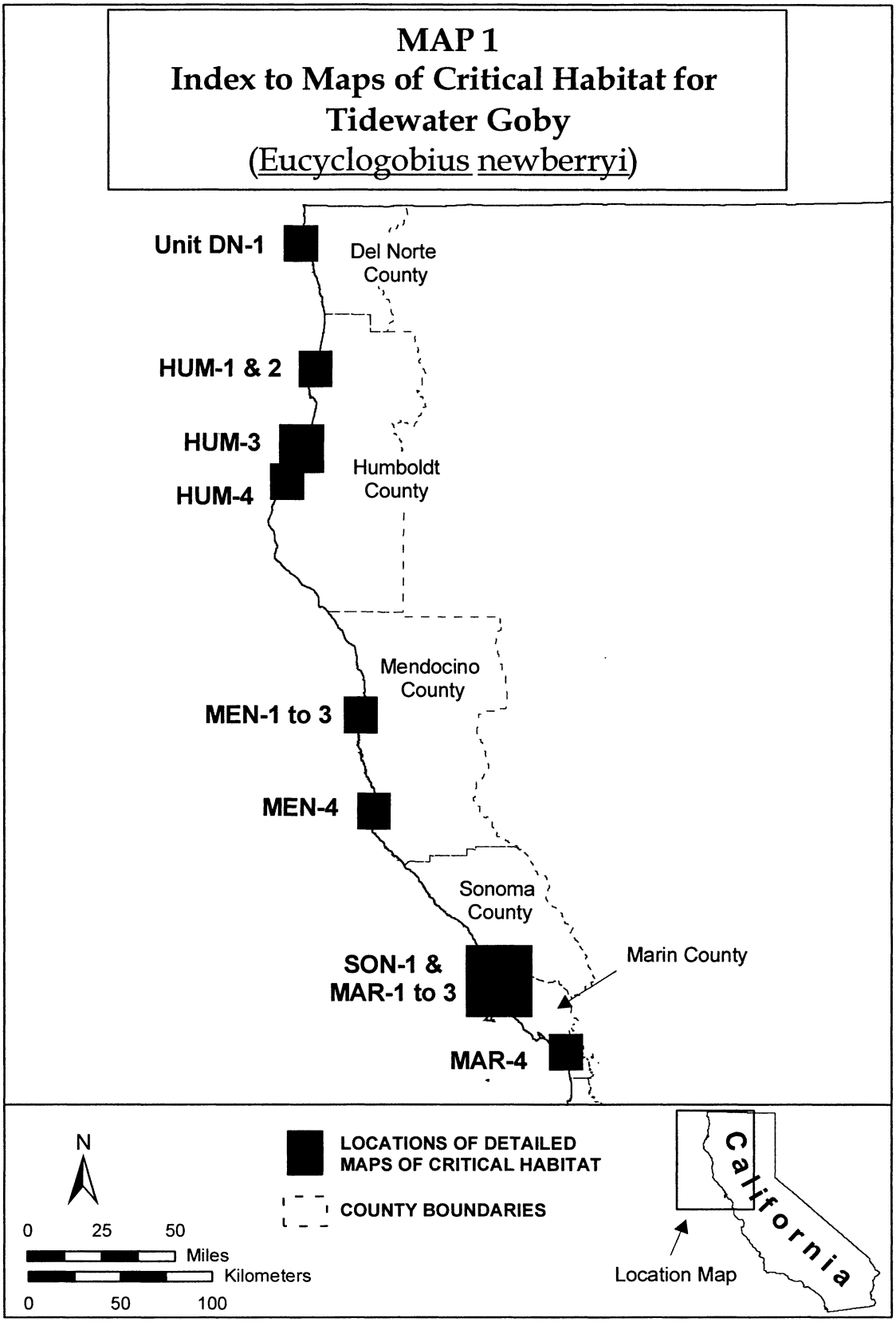
(3) Critical habitat does not include man-made structures (such as buildings, aqueducts, airports, and roads, and the land on which such structures are located) existing on the effective date of this rule and not containing one or more of the PCEs.

(4) *Critical habitat map units.* Boundaries of critical habitat were defined for most units using National Wetlands Inventory (NWI) data (both published data available over the internet and in-publication provisional data). Where NWI data was lacking, unit boundaries were digitized directly on imagery from the Department of Agriculture's National Aerial Imagery Program data (NAIP) acquired in 2005. NAIP and NWI data were projected to Universal Transverse Mercator (UTM), zones 10 and 11, on the North American Datum of 1983.

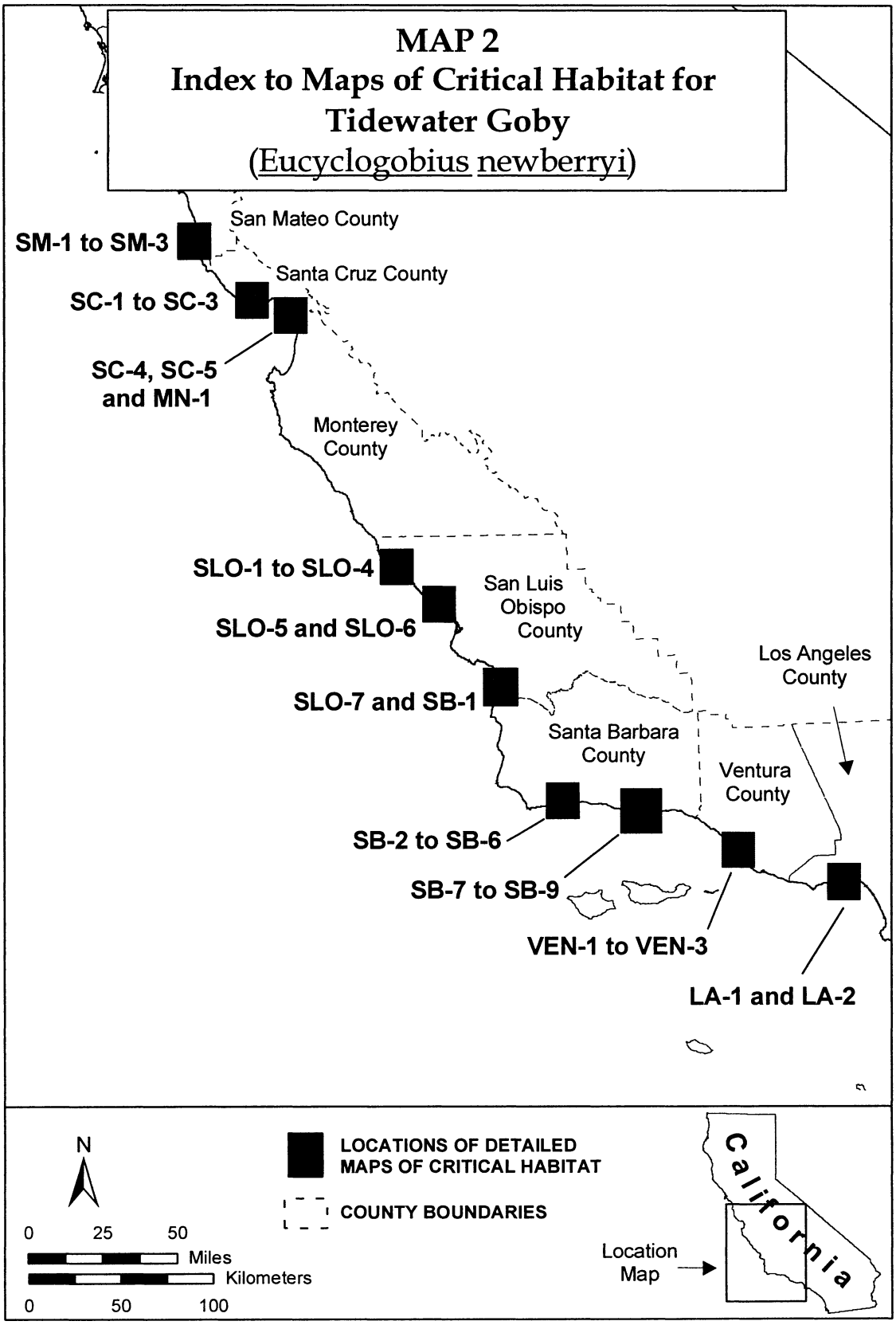
(5) Index to maps of critical habitat for tidewater goby.

(i) *Note:* Map 1 of Index to maps of critical habitat for tidewater goby follows.

BILLING CODE 4310–55–P


MAP 1
Index to Maps of Critical Habitat for Tidewater Goby
(Eucyclogobius newberryi)
Unit DN-1
Del Norte County
HUM-1 & 2
HUM-3
HUM-4
Humboldt County
Mendocino County
MEN-1 to 3
MEN-4
Sonoma County
Marin County
SON-1 & MAR-1 to 3
MAR-4
N
LOCATIONS OF DETAILED MAPS OF CRITICAL HABITAT
COUNTY BOUNDARIES
0 25 50
Miles
Kilometers
0 50 100
California
Location Map

(ii) *Note:* Map 2 of Index to maps of critical habitat for tidewater goby follows.



(6) Unit DN–1; Del Norte County, California.

(i) From USGS 1:24,000 scale quadrangle Crescent City. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 398215, 4631301; 398219, 4631313; 398228, 4631341; 398279, 4631340; 398325, 4631324; 398371, 4631334; 398505, 4631467; 398579, 4631522; 398623, 4631595; 398624, 4631645; 398600, 4631737; 398603, 4631783; 398665, 4631868; 398689, 4631921; 398709, 4631944; 398773, 4631963; 398796, 4631999; 398808, 4632080; 398826, 4632118; 398947, 4632241; 398965, 4632271; 398963, 4632327; 398939, 4632408; 398882, 4632465; 398859, 4632511; 398866, 4632625; 398895, 4632716; 398906, 4632726; 399042, 4632686; 399052, 4632691; 399053, 4632760; 399066, 4632775; 399135, 4632782; 399133, 4632845; 399118, 4632863; 399124, 4632921; 399193, 4632933; 399216, 4632958; 399222, 4633001; 399245, 4633026; 399286, 4633023; 399404, 4632945; 399553, 4632890; 399608, 4632831; 399638, 4632823; 399700, 4632835; 399800, 4632920; 399905, 4632967; 399943, 4632974; 399958, 4632972; 399988, 4632969; 400004, 4632968; 400113, 4632943; 400184, 4632937; 400229, 4632899; 400302, 4632852; 400410, 4632749; 400447, 4632700; 400513, 4632666; 400579, 4632657; 400763, 4632563; 401092, 4632485; 401201, 4632486; 401217, 4632506; 401290, 4632508; 401308, 4632531; 401307, 4632604; 401277, 4632648; 401244, 4632839; 401238, 4632974; 401205, 4633104; 401178, 4633167; 401164, 4633284; 401140, 4633371; 401108, 4633446; 401110, 4633494; 401081, 4633570; 401052, 4633650; 401017, 4633717; 400970, 4633771; 400929, 4633861; 400957, 4633954; 400911, 4634017; 400907, 4634099; 400909, 4634177; 400889, 4634229; 400864, 4634308; 400869, 4634386; 400832, 4634422; 400925, 4634573; 400940, 4634708; 400911, 4634810; 400810, 4635094; 400815, 4635251; 400789, 4635356; 400797, 4635462; 400870, 4635486; 401038, 4635437; 401156, 4635368; 401124, 4635266; 401076, 4635197; 401062, 4635148; 401147, 4635126; 401131, 4635003; 401194, 4634989; 401214, 4634885; 401247, 4634833; 401329, 4634850; 401350, 4634841; 401294, 4634706; 401211, 4634613; 401249, 4634557; 401305, 4634526; 401355, 4634518; 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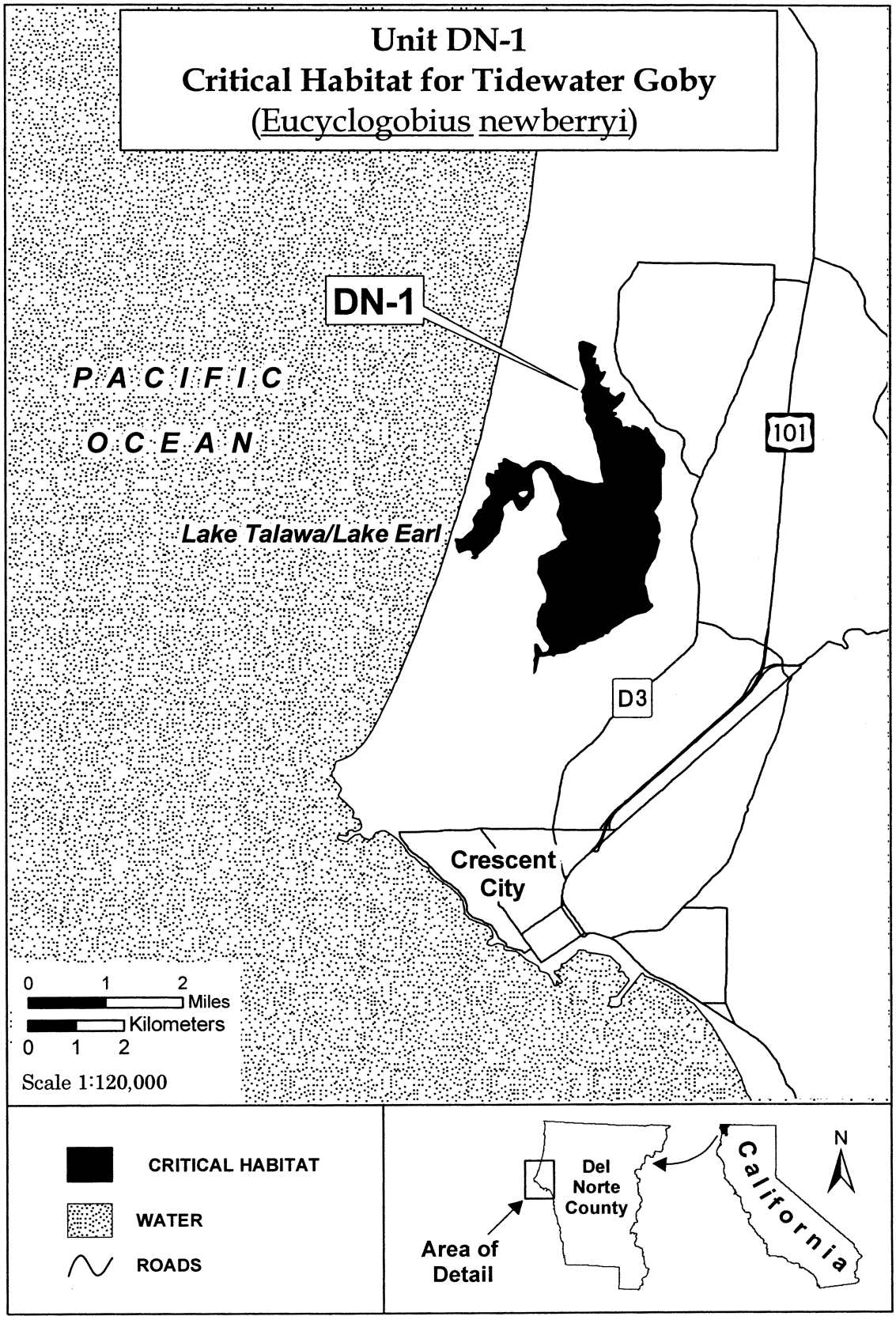
400168, 4629013; 400169, 4629089; 400069, 4629222; 400024, 4629304; 399990, 4629406; 399918, 4629514; 399917, 4629649; 399944, 4629714; 399942, 4629798; 399981, 4629859; 400033, 4629970; 400107, 4629994; 400118, 4630030; 400130, 4630189; 400096, 4630259; 400067, 4630361; 400015, 4630443; 400010, 4630473; 399975, 4630535; 399933, 4630632; 399939, 4630685; 399958, 4630728; 399953, 4630918; 399976, 4630964; 400002, 4630981; 400068, 4630996; 400135, 4631045; 400326, 4631134; 400399, 4631220; 400430, 4631267; 400453, 4631280; 400519, 4631292; 400550, 4631309; 400550, 4631345; 400488, 4631409; 400461, 4631516; 400446, 4631547; 400440, 4631608; 400423, 4631666; 400336, 4631835; 400337, 4631866; 400371, 4631952; 400398, 4632068; 400384, 4632144; 400359, 4632208; 400292, 4632357; 400242, 4632535; 400177, 4632645; 400165, 4632699; 400130, 4632750; 400063, 4632825; 400037, 4632838; 400007, 4632841; 399956, 4632826; 399884, 4632792; 399853, 4632766; 399831, 4632723; 399812, 4632678; 399823, 4632561; 399856, 4632388; 399859, 4632210; 399781, 4632145; 399737, 4632049; 399631, 4631947; 399601, 4631929; 399540, 4631945; 399500, 4631997; 399431, 4632158; 399416, 4632165; 399362, 4632153; 399223, 4632011; 399210, 4631980; 399209, 4631924; 399226, 4631861; 399225, 4631787; 399181, 4631696; 399145, 4631514; 399117, 4631451; 399021, 4631353; 398972, 4631262; 398879, 4631164; 398707, 4631027; 398691, 4631002; 398688, 4630959; 398678, 4630944; 398644, 4630929; 398561, 4630930; 398561, 4630950; 398620, 4630993; 398585, 4631026; 398570, 4631077; 398538, 4631108; 398454, 4631109; 398313, 4631043; 398283, 4631063; 398241, 4631163; 398237, 4631252; returning to 398215, 4631301; excluding land bounded by: 399568, 4632334; 399524, 4632296; 399527, 4632273; 399577, 4632222; 399640, 4632198; 399676, 4632205; 399727, 4632260; 399748, 4632318; 399744, 4632344; 399716, 4632362; 399655, 4632360; 399645, 4632357; returning to 399568, 4632334.

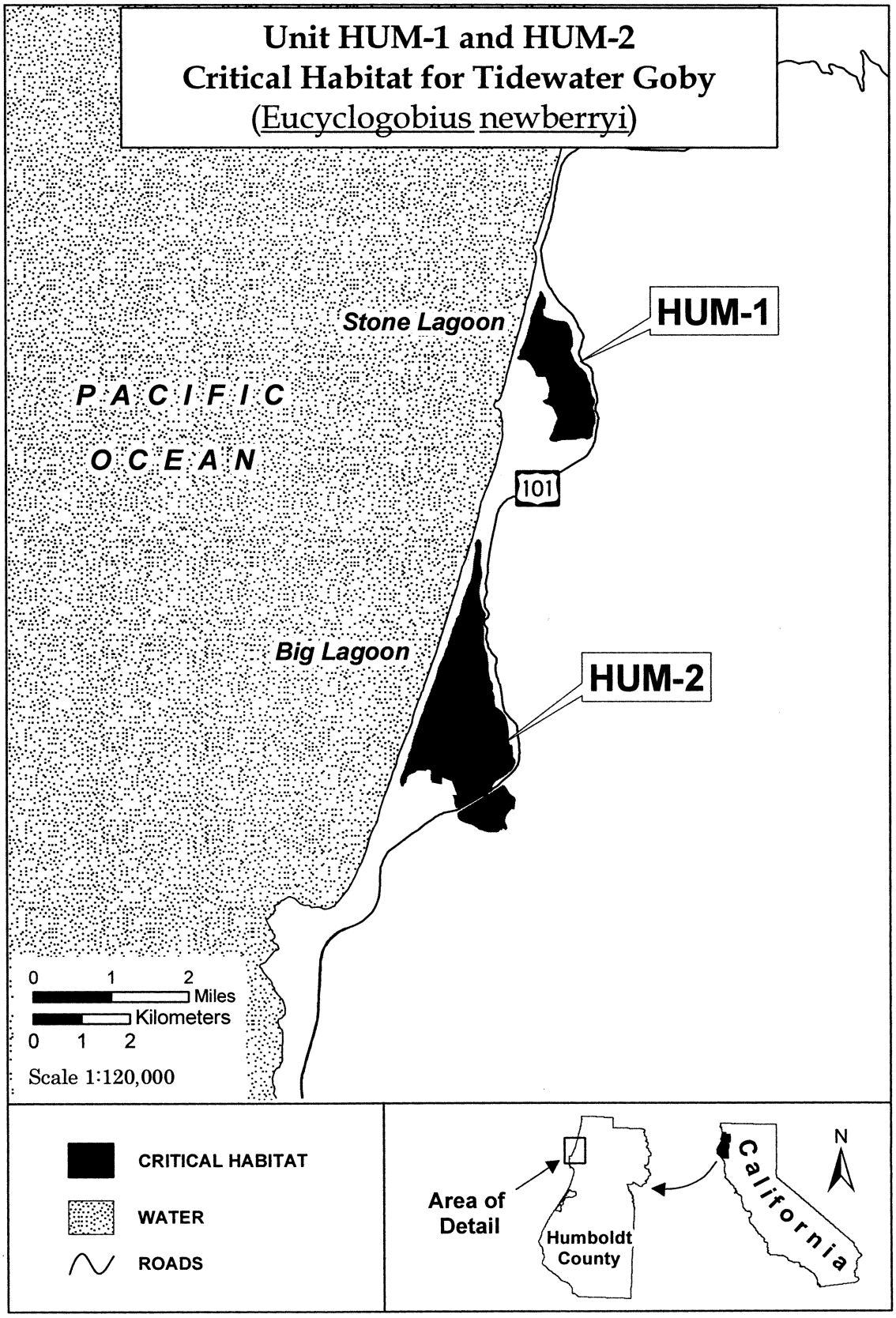
(ii) *Note:* Map of Unit DNT–1 follows.


Unit DN-1
Critical Habitat for Tidewater Goby
(Eucyclogobius newberryi)
DN-1
PACIFIC
OCEAN
Lake Talawa/Lake Earl
101
D3
Crescent City
0 1 2
Miles
Kilometers
0 1 2
Scale 1:120,000
CRITICAL HABITAT
WATER
ROADS
Del Norte County
California
Area of Detail
N

(7) Unit HUM–1; Humboldt County, California.

(i) From USGS 1:24,000 scale quadrangles Orick and Rodgers Peak. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 407547, 4566545; 407550, 4566573; 407596, 4566611; 407600, 4566697; 407685, 4566848; 407746, 4567008; 407759, 4567078; 407799, 4567202; 407828, 4567303; 407832, 4567384; 407974, 4567789; 408015, 4567860; 408016, 4567903; 408008, 4567923; 408024, 4567944; 408042, 4567946; 408057, 4567930; 408084, 4567895; 408094, 4567849; 408121, 4567815; 408131, 4567787; 408140, 4567691; 408114, 4567594; 408068, 4567595; 408070, 4567519; 408081, 4567450; 408094, 4567424; 408157, 4567386; 408316, 4567335; 408524, 4567320; 408565, 4567299; 408605, 4567256; 408669, 4567113; 408674, 4567067; 408700, 4566955; 408701, 4566818; 408646, 4566722; 408641, 4566689; 408681, 4566625; 408738, 4566495; 408790, 4566408; 408830, 4566364; 408890, 4566326; 408963, 4566238; 408983, 4566187; 408997, 4566116; 409047, 4566042; 409059, 4566011; 409061, 4565942; 409087, 4565790; 409147, 4565687; 409151, 4565626; 409115, 4565540; 409114, 4565492; 409134, 4565454; 409153, 4565319; 409156, 4565200; 409114, 4565098; 409104, 4565050; 409102, 4564916; 409066, 4564881; 409023, 4564863; 408982, 4564859; 408936, 4564880; 408858, 4564883; 408751, 4564857; 408484, 4564842; 408402, 4564830; 408359, 4564805; 408321, 4564806; 408230, 4564835; 408217, 4564848; 408220, 4564881; 408282, 4564984; 408311, 4565057; 408327, 4565146; 408385, 4565293; 408380, 4565326; 408314, 4565466; 408304, 4565505; 408271, 4565548; 408223, 4565572; 408130, 4565596; 408084, 4565629; 408087, 4565660; 408174, 4565699; 408190, 4565717; 408201, 4565793; 408222, 4565849; 408220, 4565955; 408181, 4566037; 408164, 4566124; 408132, 4566175; 407982, 4566169; 407939, 4566197; 407930, 4566266; 407815, 4566445; 407722, 4566523; 407580, 4566519; returning to 407547, 4566545.

(ii) *Note:* Map of Unit HUM–1 follows.



BILLING CODE 4310–55–C

(8) Unit HUM–2; Humboldt County, California.

(i) From USGS 1:24,000 scale quadrangles Rodgers Peak and Trinidad. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 405094, 4557688; 405100, 4557744; 405129, 4557807; 405137, 4557852; 405179, 4557936; 405195, 4558006; 405266, 4558196; 405272, 4558252; 405332, 4558393; 405341, 4558464; 405397, 4558649; 405479, 4558879; 405535, 4559074; 405569, 4559137; 405627, 4559309; 405708, 4559498; 405732, 4559592; 405763, 4559632; 405847, 4559862; 405850, 4559913; 405893, 4560073; 405961, 4560234; 405995, 4560300; 406053, 4560459; 406099, 4560535; 406102, 4560586; 406176, 4560803; 406180, 4560862; 406260, 4561023; 406274, 4561099; 406336, 4561175; 406349, 4561258; 406368, 4561312; 406382, 4561388; 406416, 4561524; 406461, 4561618; 406471, 4561671; 406526, 4561805; 406550, 4561835; 406578, 4561908; 406600, 4562053; 406611, 4562071; 406639, 4562294; 406643, 4562408; 406674, 4562489; 406675, 4562563; 406661, 4562616; 406664, 4562654; 406680, 4562702; 406698, 4562730; 406731, 4562742; 406758, 4562714; 406780, 4562645; 406770, 4562399; 406752, 4562226; 406782, 4562132; 406784, 4562089; 406791, 4562079; 406790, 4561964; 406769, 4561896; 406730, 4561655; 406742, 4561541; 406749, 4561535; 406795, 4561316; 406817, 4561265; 406857, 4561214; 406872, 4561178; 406871, 4561145; 406812, 4561055; 406799, 4561024; 406827, 4560877; 406829, 4560546; 406853, 4560442; 406885, 4560365; 406918, 4560162; 406914, 4560030; 406935, 4559890; 406950, 4559857; 406957, 4559816; 407017, 4559729; 407016, 4559635; 407005, 4559581; 407052, 4559464; 407051, 4559439; 407038, 4559396; 407059, 4559261; 407178, 4559173; 407255, 4559081; 407305, 4558973; 407340, 4558759; 407348, 4558538; 407367, 4558454; 407377, 4558449; 407418, 4558456; 407423, 4558245; 407432, 4558207; 407475, 4558133; 407474, 4558077; 407451, 4558021; 407401, 4557943; 407260, 4557821; 407078, 4557703; 407035, 4557668; 407006, 4557623; 406988, 4557555; 406934, 4557532; 406874, 4557490; 406915, 4557415; 406916, 4557415; 407112, 4557533; 407219, 4557613; 407252, 4557597; 407310, 4557530; 407325, 4557479; 407362, 4557428; 407458, 4557351; 407472, 4557318; 407468, 4557163; 407457, 4557112; 407427, 4557125; 407402, 4557125; 407353, 4557085; 407296, 4556997; 407267, 4556924; 407259, 4556860; 407276, 4556792; 407310, 4556730; 407310, 4556712; 407284, 4556690; 407224, 4556719; 407201, 4556711; 407193, 4556688; 407150, 4556679; 407129, 4556649; 407083, 4556634; 406936, 4556631; 406840, 4556662; 406792, 4556683; 406726, 4556699; 406686, 4556735; 406587, 4556795; 406428, 4556840; 406337, 4556884; 406292, 4556946; 406280, 4557002; 406285, 4557027; 406306, 4557047; 406833, 4557365; 406795, 4557435; 406716, 4557380; 406588, 4557316; 406361, 4557184; 406292, 4557149; 406261, 4557149; 406239, 4557173; 406219, 4557239; 406215, 4557313; 406191, 4557404; 406186, 4557407; 406277, 4557408; 406168, 4557710; 405948, 4557797; 405948, 4557648; 405763, 4557689; 405752, 4557707; 405737, 4557738; 405728, 4557779; 405728, 4557810; 405732, 4557839; 405741, 4557861; 405733, 4557944; 405655, 4557962; 405615, 4557924; 405524, 4557946; 405456, 4557939; 405392, 4557897; 405297, 4557858; 405264, 4557828; 405238, 4557790; 405208, 4557684; 405170, 4557664; 405146, 4557603; 405126, 4557611; returning to 405094, 4557688.

(ii) *Note:* HUM–2 included on map with unit HUM–1.

(9) Unit HUM–3; Humboldt County, California.

(i) From USGS 1:24,000 scale quadrangles Tyee City. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 405066, 4529314; 405079, 4529311; 405089, 4529308; 405101, 4529303; 405111, 4529297; 405117, 4529288; 405122, 4529288; 405124, 4529293; 405127, 4529303; 405131, 4529315; 405139, 4529323; 405140, 4529328; 405134, 4529335; 405126, 4529339; 405121, 4529352; 405117, 4529353; 405108, 4529355; 405110, 4529361; 405121, 4529366; 405136, 4529367; 405141, 4529362; 405137, 4529354; 405137, 4529349; 405146, 4529341; 405158, 4529336; 405161, 4529328; 405161, 4529322; 405154, 4529315; 405146, 4529308; 405141, 4529295; 405139, 4529273; 405130, 4529262; 405112, 4529252; 405099, 4529259; 405090, 4529274; 405089, 4529294; 405085, 4529296; 405075, 4529300; 405070, 4529307; returning to 405066, 4529314.

(ii) From USGS 1:24,000 scale quadrangle Arcata North. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 405163, 4529039; 405174, 4529059; 405184, 4529079; 405184, 4529091; 405185, 4529106; 405204, 4529103; 405209, 4529111; 405220, 4529135; 405232, 4529158; 405248, 4529168; 405248, 4529155; 405236, 4529137; 405231, 4529113; 405221, 4529095; 405206, 4529084; 405200, 4529062; 405188, 4529041; 405185, 4529031; 405213, 4529004; 405244, 4528990; 405259, 4528982; 405264, 4528990; 405264, 4529004; 405264, 4529023; 405265, 4529041; 405265, 4529051; 405253, 4529072; 405261, 4529119; 405275, 4529150; 405283, 4529165; 405296, 4529172; 405310, 4529192; 405332, 4529201; 405349, 4529201; 405375, 4529219; 405402, 4529231; 405429, 4529227; 405452, 4529225; 405492, 4529233; 405515, 4529233; 405530, 4529228; 405554, 4529232; 405574, 4529237; 405595, 4529237; 405595, 4529225; 405579, 4529223; 405543, 4529213; 405523, 4529208; 405493, 4529217; 405469, 4529212; 405442, 4529206; 405413, 4529209; 405397, 4529204; 405355, 4529185; 405343, 4529181; 405327, 4529178; 405295, 4529154; 405268, 4529082; 405275, 4529064; 405288, 4529045; 405283, 4529028; 405280, 4529011; 405279, 4528980; 405272, 4528968; 405257, 4528962; 405253, 4528929; 405240, 4528913; 405237, 4528921; 405237, 4528934; 405239, 4528952; 405244, 4528972; 405216, 4528981; 405180, 4529007; 405166, 4529027; returning to 405163, 4529039.

(iii) From USGS 1:24,000 scale quadrangles Tyee City. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 404239, 4528501; 404247, 4528509; 404275, 4528506; 404290, 4528506; 404312, 4528520; 404312, 4528532; 404306, 4528550; 404312, 4528567; 404326, 4528569; 404326, 4528564; 404334, 4528571; 404347, 4528584; 404355, 4528593; 404368, 4528597; 404393, 4528612; 404430, 4528623; 404444, 4528632; 404466, 4528628; 404475, 4528623; 404493, 4528623; 404523, 4528629; 404550, 4528646; 404569, 4528670; 404586, 4528686; 404612, 4528692; 404660, 4528695; 404679, 4528708; 404694, 4528719; 404707, 4528724; 404716, 4528726; 404730, 4528744; 404746, 4528757; 404758, 4528770; 404781, 4528786; 404791, 4528795; 404796, 4528807; 404795, 4528829; 404775, 4528866; 404761, 4528885; 404740, 4528891; 404724, 4528891; 404710, 4528879; 404700, 4528869; 404686, 4528869; 404676, 4528879; 404676, 4528897; 404677, 4528912; 404686, 4528912; 404689, 4528899; 404691, 4528885; 404698, 4528885; 404712, 4528897; 404730, 4528904; 404753, 4528903; 404772, 4528897; 404790, 4528871; 404814, 4528822; 404815, 4528806; 404812, 4528789; 404809, 4528776; 404810, 4528770; 404834, 4528767; 404854, 4528766; 404885, 4528756; 404905, 4528756;

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(iv) From USGS 1:24,000 scale quadrangle Tyee City. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 404741, 4528632; 404748, 4528640; 404760, 4528654; 404791, 4528683; 404812, 4528695; 404832, 4528699; 404854, 4528694; 404890, 4528667; 404915, 4528656; 404934, 4528658; 404965, 4528679; 404970, 4528702; 404988, 4528718; 405013, 4528721; 405032, 4528722; 405060, 4528734; 405082, 4528734; 405098, 4528734; 405123, 4528745; 405151, 4528769; 405173, 4528774; 405201, 4528780; 405218, 4528778; 405236, 4528789; 405247, 4528774; 405235, 4528764; 405205, 4528758; 405182, 4528758; 405154, 4528745; 405127, 4528725; 405103, 4528715; 405076, 4528715; 405055, 4528713; 405032, 4528702; 405020, 4528698; 404989, 4528681; 404981, 4528648; 404969, 4528632; 404966, 4528569; 404977, 4528534; 404981, 4528503; 405000, 4528469; 404998, 4528459; 404981, 4528430; 404980, 4528349; 404978, 4528329; 404968, 4528332; 404961, 4528355; 404958, 4528423; 404964, 4528439; 404980, 4528463; 404980, 4528471; 404964, 4528502; 404961, 4528524; 404945, 4528567; 404945, 4528603; 404945, 4528628; 404942, 4528638; 404934, 4528623; 404925, 4528616; 404906, 4528626; 404899, 4528639; 404896, 4528644; 404855, 4528670; 404841, 4528679; 404828, 4528682; 404811, 4528677; 404782, 4528651; 404762, 4528624; 404746, 4528624; returning to 404741, 4528632.

(v) From USGS 1:24,000 scale quadrangle Tyee City. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 404557, 4528121; 404567, 4528121; 404584, 4528095; 404593, 4528061; 404619, 4528067; 404641, 4528069; 404679, 4528071; 404796, 4528068; 404850, 4528078; 404855, 4528072; 404850, 4528061; 404836, 4528050; 404597, 4528047; 404575, 4528051; 404572, 4528060; 404572, 4528077; 404572, 4528089; 404561, 4528100; returning to 404557, 4528121.

(vi) From USGS 1:24,000 scale quadrangle Tyee City. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 404115, 4527638; 404116, 4527670; 404128, 4527680; 404140, 4527673; 404158, 4527668; 404170, 4527663; 404187, 4527670; 404202, 4527681; 404214, 4527700; 404220, 4527733; 404225, 4527780; 404234, 4527849; 404259, 4527931; 404267, 4528007; 404277, 4528012; 404277, 4527958; 404274, 4527924; 404256, 4527839; 404254, 4527797; 404247, 4527738; 404235, 4527688; 404227, 4527644; 404207, 4527596; 404180, 4527555; 404165, 4527561; 404157, 4527577; 404140, 4527591; 404126, 4527611; returning to 404115, 4527638.

(vii) From USGS 1:24,000 scale quadrangles Tyee City and Arcata North. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 404279, 4526903; 404312, 4526977; 404324, 4527086; 404336, 4527131; 404384, 4527228; 404452, 4527291; 404497, 4527349; 404526, 4527410; 404563, 4527503; 404609, 4527598; 404671, 4527686; 404788, 4527856; 404817, 4527901; 404826, 4527940; 404847, 4527983; 404873, 4528016; 404887, 4528014; 404896, 4528008; 404856, 4527955; 404842, 4527932; 404842, 4527916; 404837, 4527882; 404819, 4527851; 404790, 4527825; 404742, 4527759; 404680, 4527670; 404630, 4527603; 404600, 4527558; 404537, 4527403; 404534, 4527370; 404518, 4527333; 404457, 4527269; 404397, 4527213; 404379, 4527179; 404351, 4527124; 404339, 4527084; 404327, 4526981; 404321, 4526967; 404298, 4526905; 404327, 4526903; 404341, 4526889; 404351, 4526900; 404369, 4526926; 404391, 4526964; 404418, 4526978; 404439, 4526978; 404452, 4526972; 404473, 4526947; 404504, 4526949; 404627, 4526966; 404662, 4526983; 404677, 4527004; 404688, 4527018; 404747, 4527109; 404745, 4527165; 404685, 4527227; 404623, 4527306; 404628, 4527389; 404668, 4527473; 404794, 4527545; 404869, 4527609; 404960, 4527661; 404964, 4527713; 404988, 4527771; 404995, 4527812; 405007, 4527819; 405021, 4527842; 405025, 4527833; 405015, 4527813; 405003, 4527799; 404993, 4527744; 404981, 4527718; 404980, 4527666; 405017, 4527667; 405053, 4527647; 405075, 4527630; 405089, 4527631; 405140, 4527709; 405183, 4527846; 405171, 4527916; 405165, 4527959; 405167, 4527974; 405187, 4527977; 405209, 4527851; 405177, 4527710; 405127, 4527653; 405125, 4527623; 405111, 4527606; 405082, 4527599; 405059, 4527606; 405032, 4527634; 404997, 4527646; 404900, 4527594; 404727, 4527447; 404675, 4527395; 404678, 4527319; 404705, 4527257; 404782, 4527192; 404804, 4527136; 404722, 4526997; 404675, 4526945; 404679, 4526927; 404667, 4526923; 404652, 4526934; 404460, 4526897; 404410, 4526865; 404386, 4526854; 404360, 4526812; 404342, 4526814; 404333, 4526799; 404319, 4526753; 404312, 4526708; 404318, 4526686; 404318, 4526661; 404310, 4526651; 404300, 4526658; 404296, 4526671; 404303, 4526730; 404304, 4526761; 404313, 4526807; 404311, 4526834; 404292, 4526877; returning to 404279, 4526903.

(viii) From USGS 1:24,000 scale quadrangle Tyee City. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 404211, 4526342; 404305, 4526400; 404370, 4526424; 404419, 4526445; 404531, 4526530; 404556, 4526562; 404582, 4526596; 404653, 4526642; 404689, 4526689; 404692, 4526707; 404698, 4526708; 404702, 4526697; 404712, 4526692; 404706, 4526673; 404684, 4526646; 404686, 4526636; 404696, 4526634; 404696, 4526627; 404659, 4526616; 404649, 4526603; 404623, 4526592; 404602, 4526569; 404580, 4526538; 404553, 4526514; 404480, 4526458; 404482, 4526444; 404473, 4526441; 404463, 4526441; 404430, 4526420; 404380, 4526402; 404379, 4526385; 404431, 4526403; 404471, 4526421; 404521, 4526433; 404589, 4526432; 404677, 4526433; 404727, 4526440; 404741, 4526453; 404749, 4526473; 404752, 4526500; 404759, 4526512; 404794, 4526550; 404867, 4526594; 404884, 4526635; 404921, 4526646; 404977, 4526653; 405047, 4526650; 405064, 4526657; 405082, 4526616; 405098, 4526574; 405131, 4526543; 405195, 4526490; 405193, 4526462; 405185, 4526451; 405171, 4526459; 405160, 4526473; 405138, 4526510; 405115, 4526532; 405089, 4526556; 405070, 4526580; 405057, 4526621; 405045, 4526633; 404986, 4526635; 404909, 4526622; 404893, 4526599; 404871, 4526577; 404806, 4526526; 404781, 4526503; 404770, 4526471; 404762, 4526439; 404750, 4526427; 404732, 4526416; 404682, 4526413; 404635, 4526415; 404599, 4526410; 404542, 4526411; 404509, 4526401; 404453, 4526381; 404403, 4526348; 404328, 4526296; 404283, 4526260;

404271, 4526261; 404247, 4526282; 404245, 4526300; 404255, 4526304; 404271, 4526300; 404362, 4526375; 404362, 4526395; 404326, 4526384; 404297, 4526363; 404266, 4526349; 404242, 4526333; 404234, 4526307; 404217, 4526318; returning to 404211, 4526342.

(ix) From USGS 1:24,000 scale quadrangle Tyee City. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 404159, 4525734; 404159, 4525748; 404181, 4525799; 404211, 4525818; 404249, 4525862; 404248, 4525896; 404237, 4525939; 404229, 4525979; 404240, 4525997; 404240, 4526016; 404226, 4526037; 404220, 4526056; 404230, 4526065; 404248, 4526069; 404248, 4526063; 404241, 4526050; 404244, 4526042; 404256, 4526003; 404262, 4526012; 404270, 4526030; 404279, 4526052; 404291, 4526063; 404294, 4526077; 404303, 4526076; 404302, 4526065; 404290, 4526049; 404282, 4526037; 404277, 4526013; 404298, 4526005; 404305, 4526023; 404313, 4526030; 404321, 4526042; 404330, 4526047; 404341, 4526048; 404352, 4526038; 404366, 4526040; 404382, 4526033; 404406, 4526019; 404403, 4526008; 404365, 4526029; 404345, 4526025; 404340, 4526034; 404331, 4526038; 404324, 4526024; 404312, 4526015; 404311, 4526001; 404303, 4525992; 404289, 4525994; 404275, 4525995; 404270, 4525978; 404275, 4525948; 404271, 4525923; 404286, 4525920; 404294, 4525897; 404257, 4525843; 404257, 4525835; 404213, 4525801; 404177, 4525751; 404197, 4525737; 404215, 4525718; 404207, 4525706; 404183, 4525724; returning to 404159, 4525734.

(x) From USGS 1:24,000 scale quadrangles Tyee City, Eureka, Arcata North, and Arcata South. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 404222, 4525621; 404233, 4525683; 404286, 4525666; 404326, 4525712; 404420, 4525729; 404517, 4525742; 404587, 4525721; 404625, 4525721; 404653, 4525750; 404660, 4525799; 404660, 4525831; 404655, 4525869; 404666, 4525908; 404691, 4525984; 404736, 4526033; 404768, 4526042; 404840, 4526076; 404891, 4526105; 404946, 4526120; 405021, 4526120; 405078, 4526116; 405104, 4526101; 405138, 4526037; 405133, 4526008; 405133, 4525984; 405140, 4525965; 405155, 4525938; 405161, 4525918; 405161, 4525897; 405148, 4525861; 405118, 4525844; 405087, 4525840; 405050, 4525852; 405027, 4525887; 405012, 4525903; 404984, 4525903; 404942, 4525899; 404900, 4525884; 404861, 4525838; 404844, 4525797; 404847, 4525731; 404844, 4525704; 404823, 4525661; 404813, 4525610; 404819, 4525561; 404863, 4525511; 404947, 4525462; 404975, 4525451; 405013, 4525446; 405041, 4525430; 405084, 4525392; 405116, 4525387; 405179, 4525398; 405229, 4525398; 405282, 4525379; 405323, 4525359; 405372, 4525355; 405445, 4525370; 405490, 4525363; 405570, 4525337; 405605, 4525357; 405637, 4525391; 405686, 4525416; 405704, 4525443; 405706, 4525469; 405682, 4525524; 405643, 4525569; 405569, 4525625; 405567, 4525680; 405586, 4525707; 405602, 4525704; 405589, 4525674; 405589, 4525642; 405610, 4525629; 405663, 4525580; 405702, 4525537; 405725, 4525478; 405733, 4525427; 405680, 4525385; 405645, 4525354; 405617, 4525322; 405577, 4525312; 405532, 4525317; 405474, 4525339; 405428, 4525345; 405365, 4525332; 405310, 4525339; 405242, 4525366; 405191, 4525370; 405111, 4525358; 405064, 4525369; 405033, 4525402; 404986, 4525428; 404936, 4525443; 404906, 4525449; 404819, 4525502; 404800, 4525527; 404781, 4525585; 404783, 4525632; 404798, 4525678; 404819, 4525704; 404823, 4525725; 404821, 4525768; 404823, 4525810; 404838, 4525852; 404868, 4525886; 404897, 4525920; 404950, 4525935; 405018, 4525944; 405031, 4525933; 405046, 4525908; 405059, 4525872; 405084, 4525861; 405112, 4525863; 405131, 4525874; 405144, 4525904; 405137, 4525933; 405114, 4525961; 405097, 4525986; 405103, 4526024; 405106, 4526050; 405080, 4526080; 405052, 4526090; 405025, 4526092; 404980, 4526093; 404959, 4526078; 404933, 4526069; 404893, 4526054; 404808, 4526027; 404749, 4525997; 404713, 4525944; 404708, 4525918; 404708, 4525833; 404693, 4525734; 404687, 4525710; 404638, 4525676; 404604, 4525665; 404572, 4525680; 404521, 4525702; 404451, 4525693; 404375, 4525672; 404356, 4525644; 404345, 4525631; 404288, 4525608; returning to 404222, 4525621.

(xi) From USGS 1:24,000 scale quadrangles Tyee City, Eureka, and Arcata South. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 403248, 4524430; 403254, 4524438; 403270, 4524435; 403311, 4524427; 403363, 4524406; 403440, 4524395; 403519, 4524392; 403550, 4524407; 403578, 4524414; 403649, 4524397; 403727, 4524374; 403760, 4524362; 403801, 4524371; 403818, 4524385; 403839, 4524397; 403868, 4524417; 403906, 4524432; 403937, 4524432; 404026, 4524424; 404037, 4524434; 404034, 4524448; 404014, 4524465; 404004, 4524475; 403985, 4524495; 403978, 4524505; 403957, 4524512; 403930, 4524520; 403899, 4524527; 403879, 4524535; 403857, 4524558; 403840, 4524573; 403801, 4524577; 403771, 4524569; 403751, 4524558; 403732, 4524534; 403712, 4524518; 403707, 4524513; 403674, 4524492; 403626, 4524490; 403588, 4524495; 403564, 4524514; 403549, 4524543; 403543, 4524563; 403554, 4524565; 403572, 4524537; 403590, 4524514; 403608, 4524509; 403643, 4524506; 403680, 4524512; 403707, 4524533; 403737, 4524561; 403751, 4524575; 403793, 4524591; 403829, 4524591; 403854, 4524581; 403875, 4524566; 403897, 4524545; 403923, 4524539; 403969, 4524525; 403996, 4524508; 404007, 4524492; 404020, 4524482; 404045, 4524470; 404057, 4524469; 404069, 4524482; 404089, 4524511; 404101, 4524542; 404100, 4524557; 404113, 4524580; 404138, 4524619; 404184, 4524650; 404217, 4524650; 404271, 4524642; 404311, 4524664; 404344, 4524685; 404367, 4524687; 404407, 4524678; 404459, 4524688; 404527, 4524713; 404546, 4524740; 404544, 4524779; 404518, 4524800; 404511, 4524828; 404516, 4524851; 404544, 4524873; 404586, 4524886; 404625, 4524873; 404667, 4524862; 404677, 4524870; 404677, 4524886; 404667, 4524918; 404670, 4524951; 404662, 4524970; 404604, 4525008; 404534, 4525037; 404513, 4525052; 404507, 4525060; 404504, 4525110; 404494, 4525124; 404466, 4525133; 404442, 4525147; 404373, 4525195; 404355, 4525211; 404332, 4525234; 404324, 4525265; 404319, 4525287; 404290, 4525327; 404263, 4525354; 404260, 4525385; 404268, 4525421; 404273, 4525461; 404268, 4525495; 404275, 4525525; 404294, 4525552; 404284, 4525597; 404298, 4525599; 404304, 4525589; 404306, 4525557; 404302, 4525537; 404288, 4525504; 404294, 4525476; 404287, 4525438; 404280, 4525390; 404280, 4525359; 404309, 4525331; 404339, 4525280; 404351, 4525244; 404372, 4525214; 404388, 4525205; 404419, 4525184; 404451, 4525160; 404493, 4525144; 404514, 4525134; 404523, 4525116; 404523, 4525094; 404527, 4525068; 404539, 4525059; 404563, 4525045; 404608, 4525031; 404659, 4525002; 404673, 4524991; 404684, 4524976; 404691, 4524948; 404691, 4524914; 404698, 4524892; 404704, 4524872; 404695, 4524849; 404680, 4524844; 404653, 4524845; 404615, 4524858; 404589, 4524863; 404575, 4524863; 404545, 4524849; 404537, 4524835; 404538, 4524823; 404553, 4524803; 404575, 4524782;

404575, 4524741; 404542, 4524694; 404488, 4524671; 404440, 4524659; 404393, 4524657; 404361, 4524661; 404343, 4524661; 404306, 4524635; 404266, 4524619; 404233, 4524626; 404187, 4524622; 404153, 4524602; 404137, 4524567; 404134, 4524524; 404114, 4524497; 404086, 4524451; 404086, 4524421; 404113, 4524410; 404159, 4524406; 404188, 4524404; 404239, 4524406; 404298, 4524397; 404339, 4524371; 404371, 4524338; 404389, 4524322; 404426, 4524306; 404455, 4524291; 404464, 4524291; 404479, 4524303; 404514, 4524330; 404558, 4524348; 404604, 4524344; 404646, 4524336; 404698, 4524337; 404746, 4524364; 404770, 4524375; 404805, 4524378; 404841, 4524369; 404875, 4524354; 404921, 4524354; 404955, 4524367; 404965, 4524382; 404963, 4524392; 404954, 4524399; 404942, 4524406; 404881, 4524439; 404862, 4524464; 404862, 4524510; 404865, 4524531; 404858, 4524550; 404839, 4524570; 404831, 4524598; 404832, 4524614; 404824, 4524618; 404808, 4524614; 404802, 4524627; 404818, 4524632; 404843, 4524629; 404857, 4524632; 404877, 4524655; 404901, 4524663; 404936, 4524664; 404945, 4524669; 404946, 4524688; 404959, 4524678; 404953, 4524659; 404933, 4524653; 404907, 4524655; 404893, 4524649; 404849, 4524610; 404850, 4524587; 404878, 4524551; 404884, 4524524; 404881, 4524471; 404890, 4524452; 404963, 4524418; 404979, 4524410; 404993, 4524403; 405008, 4524430; 405017, 4524454; 405013, 4524466; 404989, 4524509; 404968, 4524546; 404968, 4524575; 404980, 4524588; 404991, 4524577; 404986, 4524560; 404997, 4524535; 405014, 4524501; 405031, 4524481; 405041, 4524464; 405040, 4524442; 405058, 4524433; 405071, 4524428; 405084, 4524439; 405100, 4524465; 405115, 4524482; 405136, 4524488; 405152, 4524500; 405169, 4524525; 405190, 4524538; 405215, 4524544; 405230, 4524555; 405233, 4524571; 405238, 4524593; 405245, 4524597; 405267, 4524597; 405280, 4524594; 405296, 4524601; 405309, 4524598; 405319, 4524591; 405312, 4524570; 405310, 4524559; 405304, 4524560; 405303, 4524573; 405301, 4524584; 405293, 4524589; 405279, 4524584; 405254, 4524584; 405249, 4524577; 405246, 4524558; 405237, 4524542; 405222, 4524531; 405202, 4524526; 405188, 4524522; 405174, 4524505; 405155, 4524485; 405139, 4524477; 405121, 4524471; 405110, 4524463; 405110, 4524459; 405102, 4524434; 405081, 4524418; 405058, 4524415; 405034, 4524431; 405018, 4524421; 405006, 4524379; 404979, 4524358; 404969, 4524347; 404940, 4524331; 404886, 4524327; 404848, 4524340; 404827, 4524351; 404791, 4524355; 404768, 4524347; 404692, 4524306; 404645, 4524303; 404601, 4524310; 404558, 4524306; 404520, 4524289; 404495, 4524264; 404499, 4524247; 404511, 4524206; 404511, 4524183; 404506, 4524140; 404517, 4524107; 404537, 4524060; 404573, 4524020; 404604, 4524002; 404615, 4524013; 404645, 4524034; 404664, 4524042; 404687, 4524042; 404704, 4524034; 404712, 4524025; 404736, 4523999; 404735, 4523971; 404729, 4523945; 404723, 4523923; 404729, 4523910; 404746, 4523900; 404781, 4523899; 404815, 4523913; 404910, 4523952; 404993, 4523987; 405015, 4524006; 405013, 4524028; 405001, 4524048; 405000, 4524051; 404990, 4524069; 404993, 4524095; 405012, 4524110; 405042, 4524111; 405069, 4524120; 405087, 4524145; 405121, 4524173; 405160, 4524231; 405194, 4524272; 405211, 4524279; 405249, 4524290; 405304, 4524301; 405331, 4524318; 405340, 4524314; 405307, 4524285; 405281, 4524281; 405225, 4524264; 405198, 4524249; 405168, 4524199; 405142, 4524158; 405099, 4524129; 405082, 4524102; 405051, 4524090; 405026, 4524089; 405014, 4524078; 405015, 4524066; 405016, 4524060; 405017, 4524060; 405038, 4524045; 405041, 4523996; 405025, 4523983; 404984, 4523964; 404843, 4523902; 404795, 4523884; 404751, 4523877; 404718, 4523888; 404702, 4523910; 404699, 4523933; 404709, 4523955; 404714, 4523982; 404701, 4524000; 404684, 4524010; 404663, 4524010; 404638, 4524002; 404621, 4523976; 404634, 4523965; 404642, 4523948; 404642, 4523938; 404631, 4523913; 404618, 4523881; 404617, 4523851; 404624, 4523820; 404646, 4523781; 404680, 4523746; 404669, 4523736; 404650, 4523746; 404614, 4523799; 404600, 4523847; 404603, 4523886; 404622, 4523951; 404596, 4523978; 404541, 4524025; 404518, 4524070; 404496, 4524114; 404492, 4524150; 404495, 4524199; 404490, 4524232; 404431, 4524286; 404361, 4524319; 404347, 4524336; 404306, 4524369; 404273, 4524378; 404215, 4524383; 404087, 4524388; 403988, 4524403; 403896, 4524407; 403867, 4524388; 403825, 4524351; 403773, 4524341; 403722, 4524350; 403647, 4524375; 403575, 4524386; 403543, 4524375; 403495, 4524367; 403447, 4524371; 403378, 4524372; 403334, 4524386; 403266, 4524414; returning to 403248, 4524430.

(xii) From USGS 1:24,000 scale quadrangles Tyee City and Eureka. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 403498, 4525062; 403498, 4525079; 403514, 4525102; 403531, 4525112; 403552, 4525117; 403569, 4525115; 403688, 4525069; 403706, 4525077; 403704, 4525089; 403602, 4525135; 403597, 4525155; 403612, 4525163; 403633, 4525198; 403653, 4525213; 403683, 4525229; 403701, 4525262; 403704, 4525297; 403693, 4525338; 403698, 4525363; 403780, 4525436; 403881, 4525538; 403921, 4525619; 403929, 4525657; 403982, 4525672; 404020, 4525647; 404101, 4525626; 404167, 4525609; 404147, 4525593; 404127, 4525586; 404127, 4525571; 404137, 4525558; 404152, 4525530; 404144, 4525495; 404124, 4525469; 404091, 4525452; 404045, 4525462; 403992, 4525474; 403962, 4525474; 403926, 4525467; 403891, 4525444; 403777, 4525310; 403772, 4525279; 403782, 4525241; 403792, 4525201; 403800, 4525178; 403790, 4525125; 403780, 4525089; 403749, 4525056; 403714, 4525034; 403681, 4525034; 403567, 4525072; 403544, 4525072; 403536, 4525056; 403514, 4525041; returning to 403498, 4525062.

(xiii) From USGS 1:24,000 scale quadrangle Eureka. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 403167, 4524519; 403174, 4524547; 403189, 4524560; 403207, 4524568; 403265, 4524580; 403301, 4524595; 403334, 4524631; 403357, 4524692; 403362, 4524742; 403341, 4524811; 403336, 4524899; 403357, 4524993; 403367, 4525029; 403402, 4525079; 403407, 4525059; 403415, 4525034; 403427, 4525011; 403453, 4525001; 403476, 4524996; 403486, 4525021; 403498, 4525031; 403519, 4525029; 403529, 4525013; 403521, 4524988; 403503, 4524960; 403473, 4524950; 403445, 4524955; 403420, 4524968; 403389, 4524988; 403379, 4524958; 403369, 4524917; 403362, 4524861; 403367, 4524841; 403405, 4524839; 403430, 4524846; 403458, 4524882; 403493, 4524920; 403544, 4524935; 403584, 4524917; 403600, 4524872; 403572, 4524826; 403521, 4524798; 403511, 4524818; 403559, 4524851; 403572, 4524874; 403564, 4524899; 403552, 4524912; 403526, 4524904; 403508, 4524889; 403478, 4524869; 403453, 4524826; 403430, 4524816; 403402, 4524808; 403369, 4524811; 403377, 4524783; 403384, 4524735; 403382, 4524689; 403367, 4524644; 403336, 4524590; 403306, 4524565; 403275, 4524557; 403222, 4524545; 403197, 4524527; 403192, 4524509; 403197, 4524484;

403174, 4524487; returning to 403167, 4524519.

(xiv) From USGS 1:24,000 scale quadrangle Arcata South. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 405091, 4523686; 405091, 4523709; 405111, 4523708; 405126, 4523698; 405147, 4523680; 405150, 4523697; 405144, 4523708; 405138, 4523722; 405133, 4523735; 405133, 4523753; 405151, 4523772; 405181, 4523791; 405207, 4523807; 405232, 4523807; 405254, 4523814; 405263, 4523828; 405260, 4523853; 405253, 4523885; 405241, 4523894; 405226, 4523911; 405217, 4523931; 405217, 4523961; 405219, 4523992; 405220, 4524014; 405220, 4524028; 405234, 4524029; 405235, 4524000; 405239, 4523951; 405241, 4523926; 405260, 4523906; 405272, 4523886; 405281, 4523851; 405285, 4523831; 405276, 4523807; 405256, 4523791; 405231, 4523782; 405209, 4523780; 405164, 4523755; 405160, 4523735; 405167, 4523716; 405173, 4523691; 405163, 4523666; 405195, 4523635; 405207, 4523605; 405232, 4523526; 405242, 4523483; 405253, 4523471; 405273, 4523471; 405276, 4523486; 405276, 4523510; 405287, 4523533; 405294, 4523563; 405295, 4523580; 405301, 4523597; 405320, 4523610; 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(xv) From USGS 1:24,000 scale quadrangle Arcata South. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 407456, 4523277; 407456, 4523282; 407462, 4523297; 407483, 4523331; 407472, 4523341; 407469, 4523345; 407465, 4523351; 407463, 4523357; 407468, 4523361; 407475, 4523359; 407480, 4523354; 407484, 4523357; 407515, 4523395; 407526, 4523407; 407540, 4523413; 407563, 4523419; 407577, 4523412; 407587, 4523403; 407599, 4523398; 407614, 4523398; 407624, 4523392; 407636, 4523390; 407643, 4523387; 407658, 4523381; 407669, 4523375; 407677, 4523367; 407686, 4523368; 407702, 4523369; 407724, 4523369; 407740, 4523370; 407751, 4523369; 407765, 4523368; 407777, 4523364; 407790, 4523358; 407797, 4523348; 407796, 4523343; 407791, 4523337; 407802, 4523332; 407810, 4523339; 407820, 4523340; 407832, 4523337; 407838, 4523331; 407844, 4523326; 407848, 4523326; 407858, 4523326; 407873, 4523320; 407927, 4523299; 407971, 4523284; 407973, 4523278; 407971, 4523270; 407954, 4523252; 407927, 4523223; 407879, 4523151; 407856, 4523115; 407830, 4523105; 407808, 4523105; 407776, 4523107; 407756, 4523116; 407754, 4523121; 407746, 4523126; 407736, 4523125; 407641, 4523175; 407640, 4523181; 407629, 4523190; 407609, 4523202; 407602, 4523203; 407591, 4523200; 407582, 4523201; 407509, 4523240; 407479, 4523254; 407465, 4523269; returning to 407456, 4523277.

(xvi) From USGS 1:24,000 scale quadrangle Arcata South. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 408209, 4523323; 408215, 4523326; 408243, 4523285; 408271, 4523261; 408326, 4523212; 408327, 4523400; 408335, 4523400; 408335, 4523243; 408349, 4523245; 408359, 4523246; 408363, 4523249; 408367, 4523266; 408369, 4523282; 408376, 4523297; 408387, 4523315; 408394, 4523328; 408393, 4523345; 408385, 4523353; 408382, 4523361; 408386, 4523369; 408393, 4523381; 408397, 4523389; 408405, 4523390; 408410, 4523396; 408411, 4523400; 408408, 4523404; 408404, 4523411; 408401, 4523423; 408403, 4523432; 408396, 4523441; 408359, 4523464; 408353, 4523470; 408353, 4523477; 408363, 4523475; 408373, 4523466; 408410, 4523443; 408413, 4523435; 408412, 4523428; 408417, 4523421; 408424, 4523421; 408428, 4523427; 408435, 4523433; 408443, 4523434; 408455, 4523436; 408465, 4523431; 408474, 4523421; 408481, 4523417; 408486, 4523421; 408488, 4523433; 408483, 4523445; 408476, 4523452; 408467, 4523461; 408460, 4523463; 408456, 4523469; 408456, 4523476; 408444, 4523491; 408435, 4523501; 408433, 4523510; 408431, 4523521; 408444, 4523532; 408457, 4523537; 408464, 4523547; 408468, 4523557; 408468, 4523567; 408470, 4523574; 408479, 4523568; 408481, 4523558; 408474, 4523549; 408470, 4523541; 408470, 4523531; 408463, 4523528; 408453, 4523523; 408446, 4523517;

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(xvii) From USGS 1:24,000 scale quadrangle Arcata South. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 408660, 4523204; 408667, 4523217; 408668, 4523242; 408674, 4523231; 408673, 4523202; 408676, 4523194; 408689, 4523183; 408689, 4523172; 408682, 4523153; 408675, 4523137; 408676, 4523121; 408681, 4523107; 408687, 4523095; 408694, 4523080; 408694, 4523067; 408701, 4523051; 408713, 4523039; 408728, 4523031; 408712, 4523031; 408685, 4523046; 408676, 4523063; 408681, 4523085; 408671, 4523106; 408664, 4523140; 408674, 4523161; 408674, 4523180; 408662, 4523195; returning to 408660, 4523204.

(xviii) From USGS 1:24,000 scale quadrangle Arcata South. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 408793, 4522282; 408793, 4522296; 408825, 4522296; 408833, 4522299; 408837, 4522310; 408836, 4522332; 408837, 4522391; 408835, 4522418; 408840, 4522429; 408844, 4522442; 408852, 4522450; 408863, 4522457; 408866, 4522470; 408865, 4522485; 408865, 4522489; 408856, 4522499; 408848, 4522510; 408848, 4522523; 408844, 4522556; 408840, 4522588; 408833, 4522611; 408835, 4522635; 408833, 4522645; 408834, 4522681; 408842, 4522682; 408844, 4522664; 408849, 4522639; 408875, 4522638; 408897, 4522641; 408914, 4522643; 408919, 4522662; 408924, 4522681; 408935, 4522701; 408951, 4522718; 408950, 4522738; 408940, 4522755; 408926, 4522768; 408912, 4522791; 408910, 4522816; 408912, 4522838; 408923, 4522862; 408938, 4522878; 408950, 4522895; 408967, 4522927; 408965, 4522951; 408965, 4522982; 408968, 4522998; 408979, 4523015; 408980, 4523030; 408969, 4523034; 408948, 4523039; 408931, 4523045; 408918, 4523056; 408911, 4523066; 408911, 4523088; 408918, 4523111; 408918, 4523134; 408916, 4523154; 408922, 4523173; 408933, 4523186; 408942, 4523195; 408947, 4523213; 408939, 4523225; 408935, 4523238; 408933, 4523254; 408936, 4523273; 408946, 4523297; 408946, 4523315; 408948, 4523329; 408963, 4523352; 408962, 4523356; 408949, 4523354; 408920, 4523357; 408907, 4523372; 408907, 4523396; 408918, 4523417; 408923, 4523428; 408919, 4523434; 408905, 4523431; 408886, 4523431; 408866, 4523447; 408862, 4523480; 408865, 4523500; 408862, 4523514; 408859, 4523536; 408867, 4523548; 408872, 4523517; 408876, 4523505; 408877, 4523483; 408877, 4523453; 408895, 4523446; 408921, 4523451; 408941, 4523444; 408948, 4523432; 408943, 4523418; 408933, 4523396; 408926, 4523383; 408931, 4523375; 408950, 4523375; 408960, 4523378; 408976, 4523375; 408988, 4523365; 408988, 4523353; 408984, 4523343; 408973, 4523331; 408965, 4523310; 408960, 4523286; 408956, 4523255; 408955, 4523244; 408959, 4523233; 408966, 4523221; 408967, 4523207; 408965, 4523192; 408959, 4523182; 408950, 4523172; 408941, 4523161; 408938, 4523147; 408938, 4523133; 408939, 4523118; 408936, 4523097; 408938, 4523075; 408945, 4523064; 408966, 4523064; 408988, 4523062; 409003, 4523050; 409010, 4523037; 409011, 4523020; 409002, 4523004; 408992, 4522992; 408988, 4522978; 408987, 4522960; 408991, 4522950; 409012, 4522962; 409018, 4522973; 409015, 4522988; 409016, 4523007; 409029, 4523016; 409037, 4523024; 409046, 4523024; 409053, 4523037; 409051, 4523054; 409043, 4523075; 409030, 4523083; 409013, 4523089; 409002, 4523098; 408994, 4523110; 408992, 4523125; 408998, 4523139; 409021, 4523155; 409041, 4523166; 409043, 4523178; 409034, 4523189; 409035, 4523198; 409043, 4523198; 409049, 4523191; 409056, 4523176; 409049, 4523158; 409035, 4523147; 409018, 4523138; 409007, 4523124; 409007, 4523115; 409020, 4523101; 409031, 4523096; 409047, 4523088; 409057, 4523072; 409067, 4523046; 409064, 4523034; 409094, 4523071; 409208, 4523215; 409257, 4523257; 409260, 4523264; 409271, 4523270; 409272, 4523284; 409272, 4523312; 409284, 4523305; 409284, 4523266; 409277, 4523258; 409269, 4523250; 409216, 4523202; 409191, 4523170; 409111, 4523070; 409042, 4522982; 409290, 4523125; 409523, 4523257; 409534, 4523249; 409430, 4523189; 409262, 4523087; 409267, 4523076; 409267, 4523062; 409267, 4523049; 409270, 4523031; 409278, 4523026; 409286, 4523022; 409299, 4523016; 409305, 4523023; 409309, 4523035; 409310, 4523047; 409314, 4523062; 409319, 4523062; 409325, 4523062; 409326, 4523068; 409324, 4523074; 409326, 4523079; 409331, 4523070; 409331, 4523055; 409326, 4523041; 409331, 4523025; 409341, 4523014; 409356, 4523005; 409366, 4522997; 409375, 4522973; 409379, 4522960; 409379, 4522943; 409374, 4522934; 409375, 4522929; 409383, 4522929; 409381, 4522921; 409376, 4522914; 409381, 4522905; 409389, 4522905; 409396, 4522901; 409395, 4522895; 409384, 4522891; 409375, 4522880; 409367, 4522874; 409359, 4522878; 409353, 4522872; 409343, 4522872; 409333, 4522882; 409336, 4522900; 409331, 4522916; 409318, 4522917; 409308, 4522930; 409288, 4522927; 409281, 4522907; 409282, 4522874; 409278, 4522827; 409272, 4522806; 409270, 4522792; 409267, 4522783; 409261, 4522773; 409312, 4522791; 409388, 4522813; 409447, 4522839; 409449, 4522830; 409433, 4522821; 409377, 4522797; 409326, 4522785; 409326, 4522778; 409325, 4522764; 409318, 4522747; 409309, 4522736; 409298, 4522731;

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(xix) From USGS 1:24,000 scale quadrangle Arcata South. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 408827, 4521822; 408829, 4521942; 408843, 4521954; 408843, 4521975; 408843, 4522009; 408845, 4522060; 408845, 4522106; 408851, 4522108; 408854, 4522062; 408853, 4522015; 408853, 4521970; 408853, 4521951; 408872, 4521939; 408924, 4521913; 408962, 4521881; 409011, 4521849; 409066, 4521844; 409121, 4521841; 409164, 4521843; 409207, 4521848; 409259, 4521862; 409305, 4521866; 409322, 4521839; 409379, 4521833; 409431, 4521840; 409461, 4521827; 409545, 4521805; 409543, 4521570; 409520, 4521641; 409490, 4521729; 409460, 4521729; 409406, 4521743; 409376, 4521785; 409317, 4521785; 409291, 4521799; 409279, 4521824; 409249, 4521818; 409223, 4521781; 409178, 4521760; 409135, 4521759; 409101, 4521756; 409063, 4521752; 409020, 4521786; 408982, 4521820; 408911, 4521823; 408880, 4521831; returning to 408827, 4521822.

(xx) From USGS 1:24,000 scale quadrangle Arcata South. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 408824, 4521590; 408824, 4521640; 408825, 4521658; 408832, 4521672; 408843, 4521692; 408856, 4521723; 408874, 4521738; 408899, 4521738; 408914, 4521726; 408927, 4521705; 408940, 4521678; 408949, 4521649; 408959, 4521631; 408969, 4521621; 408982, 4521615; 409005, 4521615; 409027, 4521604; 409016, 4521599; 408839, 4521613; 408835, 4521597; returning to 408824, 4521590.

(xxi) From USGS 1:24,000 scale quadrangle Arcata South. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 405365, 4517762; 405372, 4517778; 405520, 4517852; 405888, 4518096; 406038, 4518193; 406162, 4518274; 406251, 4518332; 406342, 4518391; 406487, 4518485; 406790, 4518682; 406988, 4518812; 407152, 4518919; 407287, 4519007; 407490, 4519140; 407589, 4519191; 407724, 4519261; 407788, 4519302; 407816, 4519302; 407839, 4519293; 407861, 4519261; 407859, 4519254; 407846, 4519259; 407820, 4519286; 407805, 4519292; 407786, 4519287; 407728, 4519246; 407596, 4519179; 407526, 4519144; 407446, 4519099; 407284, 4518991; 407182, 4518928; 407085, 4518861; 406976, 4518791; 406930, 4518760; 406804, 4518673; 406819, 4518664; 406839, 4518649; 406862, 4518632; 406882, 4518617; 406906, 4518595; 406933, 4518577; 406955, 4518580; 406974, 4518587; 406998, 4518591; 407032, 4518590; 407062, 4518581; 407073, 4518570; 407089, 4518568; 407115, 4518574; 407140, 4518584; 407153, 4518587; 407162, 4518582; 407176, 4518568; 407193, 4518534; 407204, 4518516; 407223, 4518499; 407243, 4518482; 407263, 4518464; 407273, 4518444; 407298, 4518423; 407312, 4518402; 407317, 4518372; 407325, 4518329; 407331, 4518317; 407336, 4518304; 407343, 4518293; 407357, 4518273; 407374, 4518266; 407404, 4518252; 407421, 4518239; 407439, 4518209; 407447, 4518186; 407447, 4518177; 407434, 4518179; 407422, 4518204; 407407, 4518230; 407387, 4518243; 407364, 4518250; 407347, 4518259;

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(xxii) From USGS 1:24,000 scale quadrangle Arcata South. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 406574, 4517557; 406583, 4517571; 406601, 4517590; 406623, 4517598; 406653, 4517604; 406676, 4517602; 406693, 4517598; 406706, 4517594; 406715, 4517590; 406735, 4517588; 406757, 4517604; 406755, 4517624; 406734, 4517661; 406722, 4517698; 406731, 4517723; 406751, 4517753; 406765, 4517773; 406786, 4517793; 406795, 4517794; 406800, 4517782; 406800, 4517768; 406790, 4517749; 406796, 4517748; 406807, 4517765; 406825, 4517775; 406843, 4517776; 406861, 4517775; 406875, 4517775; 406897, 4517765; 406883, 4517749; 406888, 4517737; 406909, 4517734; 406932, 4517733; 406941, 4517726; 406917, 4517719; 406891, 4517714; 406873, 4517728; 406852, 4517739; 406845, 4517716; 406861, 4517718; 406875, 4517717; 406872, 4517707; 406862, 4517704; 406851, 4517693; 406862, 4517689; 406883, 4517678; 406901, 4517666; 406909, 4517655; 406926, 4517654; 406946, 4517644; 406960, 4517629; 406974, 4517625; 406986, 4517617; 406983, 4517601; 406991, 4517593; 406994, 4517571; 406994, 4517555; 407006, 4517562; 407007, 4517579; 407019, 4517593; 407044, 4517603; 407049, 4517596; 407040, 4517581; 407040, 4517568; 407041, 4517549; 407040, 4517530; 407028, 4517525; 407029, 4517498; 407014, 4517484; 407018, 4517468; 407008, 4517462; 407007, 4517444; 407007, 4517432; 407013, 4517414; 407011, 4517402; 407013, 4517396; 407030, 4517396; 407052, 4517392; 407062, 4517389; 407067, 4517377; 407067, 4517361; 407060, 4517343; 407035, 4517339; 407012, 4517338; 406986, 4517338; 406971, 4517344; 406959, 4517357; 406962, 4517371; 406972, 4517383; 406978, 4517403; 406978, 4517424; 406978, 4517444; 406978, 4517462; 406983, 4517469; 406980, 4517483; 406966, 4517494; 406949, 4517493; 406932, 4517500; 406924, 4517505; 406910, 4517499; 406889, 4517499; 406867, 4517515; 406848, 4517523; 406840, 4517512; 406825, 4517501; 406811, 4517518; 406810, 4517539; 406795, 4517555; 406784, 4517551; 406763, 4517556; 406752, 4517556; 406765, 4517517; 406783, 4517446; 406794, 4517410; 406817, 4517384; 406896, 4517344; 406983, 4517309; 407020, 4517310; 407049, 4517333; 407053, 4517329; 407051, 4517319; 407025, 4517299; 407010, 4517295; 406988, 4517297; 406944, 4517309; 406861, 4517348; 406820, 4517367; 406799, 4517382; 406785, 4517400; 406775, 4517428; 406763, 4517475; 406755, 4517511; 406735, 4517560; 406708, 4517585; 406683, 4517591; 406652, 4517593; 406614, 4517582; 406591, 4517558; 406581, 4517551; returning to 406574, 4517557.

(xxiii) From USGS 1:24,000 scale quadrangle Arcata South. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 406455, 4517395; 406458, 4517402; 406470, 4517401; 406477, 4517392; 406493, 4517382; 406512, 4517379; 406525, 4517388; 406537, 4517407; 406545, 4517421; 406551, 4517452; 406551, 4517470; 406552, 4517498; 406558, 4517527; 406568, 4517544; 406574, 4517541; 406567, 4517521; 406562, 4517477; 406563, 4517451; 406554, 4517421; 406547, 4517391; 406533, 4517368; 406506, 4517361; 406483, 4517370; 406464, 4517382; returning to 406455, 4517395.

(xxiv) From USGS 1:24,000 scale quadrangle Arcata South. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 406478, 4517065; 406493, 4517065; 406523, 4517064; 406555, 4517073; 406576, 4517093; 406592, 4517123; 406597, 4517143; 406596, 4517164; 406584, 4517198; 406558, 4517223; 406546, 4517240; 406543, 4517267; 406549, 4517293; 406562, 4517308; 406581, 4517318; 406595, 4517335; 406612, 4517374; 406622, 4517410; 406625, 4517451; 406627, 4517498; 406638, 4517514; 406652, 4517518; 406669, 4517502; 406684, 4517464; 406699, 4517394; 406709, 4517355; 406741, 4517320; 406802, 4517291; 406869, 4517272; 406912, 4517261; 406937, 4517250; 406978, 4517233; 407002, 4517232; 407048, 4517243; 407079, 4517253; 407111, 4517276; 407135, 4517306; 407151, 4517349; 407154, 4517391; 407154, 4517429; 407155, 4517456; 407176, 4517471; 407205, 4517471; 407229, 4517460; 407260, 4517439; 407279, 4517399; 407288, 4517331; 407300, 4517248; 407313, 4517232; 407335, 4517233; 407360, 4517241; 407377, 4517245; 407389, 4517249; 407391, 4517242; 407370, 4517231; 407341, 4517222; 407320, 4517206; 407322, 4517183; 407332, 4517164; 407334, 4517151; 407333, 4517135; 407344, 4517115; 407361, 4517098; 407379, 4517089; 407394, 4517089; 407425, 4517099; 407463, 4517107; 407540, 4517113; 407594, 4517110; 407635, 4517099; 407671, 4517083; 407702, 4517056; 407724, 4517032; 407744, 4516996; 407745, 4516952; 407743, 4516874; 407757, 4516822; 407763, 4516772; 407761, 4516749;

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(xxv) From USGS 1:24,000 scale quadrangle Arcata South. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 405813, 4517245; 405816, 4517250; 405826, 4517237; 405837, 4517224; 405928, 4517186; 405951, 4517171; 405959, 4517164; 405976, 4517143; 406004, 4517145; 406019, 4517149; 406019, 4517135; 406010, 4517105; 406005, 4517086; 405999, 4517070; 405992, 4517046; 405992, 4517030; 406004, 4517019; 406022, 4517018; 406045, 4517021; 406064, 4517034; 406084, 4517044; 406114, 4517049; 406132, 4517051; 406145, 4517046; 406162, 4517035; 406188, 4517013; 406198, 4516996; 406210, 4516994; 406211, 4516980; 406203, 4516973; 406200, 4516934; 406203, 4516879; 406201, 4516860; 406223, 4516835; 406234, 4516805; 406230, 4516793; 406248, 4516768; 406282, 4516711; 406319, 4516696; 406408, 4516682; 406449, 4516663; 406518, 4516641; 406574, 4516627; 406599, 4516602; 406609, 4516562; 406591, 4516501; 406570, 4516455; 406459, 4516384; 406401, 4516334; 406356, 4516286; 406348, 4516251; 406353, 4516233; 406403, 4516214; 406401, 4516206; 406350, 4516216; 406339, 4516232; 406334, 4516249; 406335, 4516276; 406345, 4516297; 406359, 4516315; 406398, 4516354; 406447, 4516400; 406522, 4516450; 406553, 4516470; 406586, 4516555; 406587, 4516581; 406574, 4516603; 406538, 4516619; 406437, 4516647; 406397, 4516665; 406322, 4516677; 406282, 4516687; 406257, 4516711; 406225, 4516768; 406216, 4516782; 406211, 4516778; 406202, 4516774; 406193, 4516776; 406191, 4516782; 406193, 4516790; 406178, 4516812; 406168, 4516825; 406164, 4516834; 406144, 4516876; 406139, 4516879; 406132, 4516879; 406130, 4516884; 406134, 4516888; 406137, 4516893;

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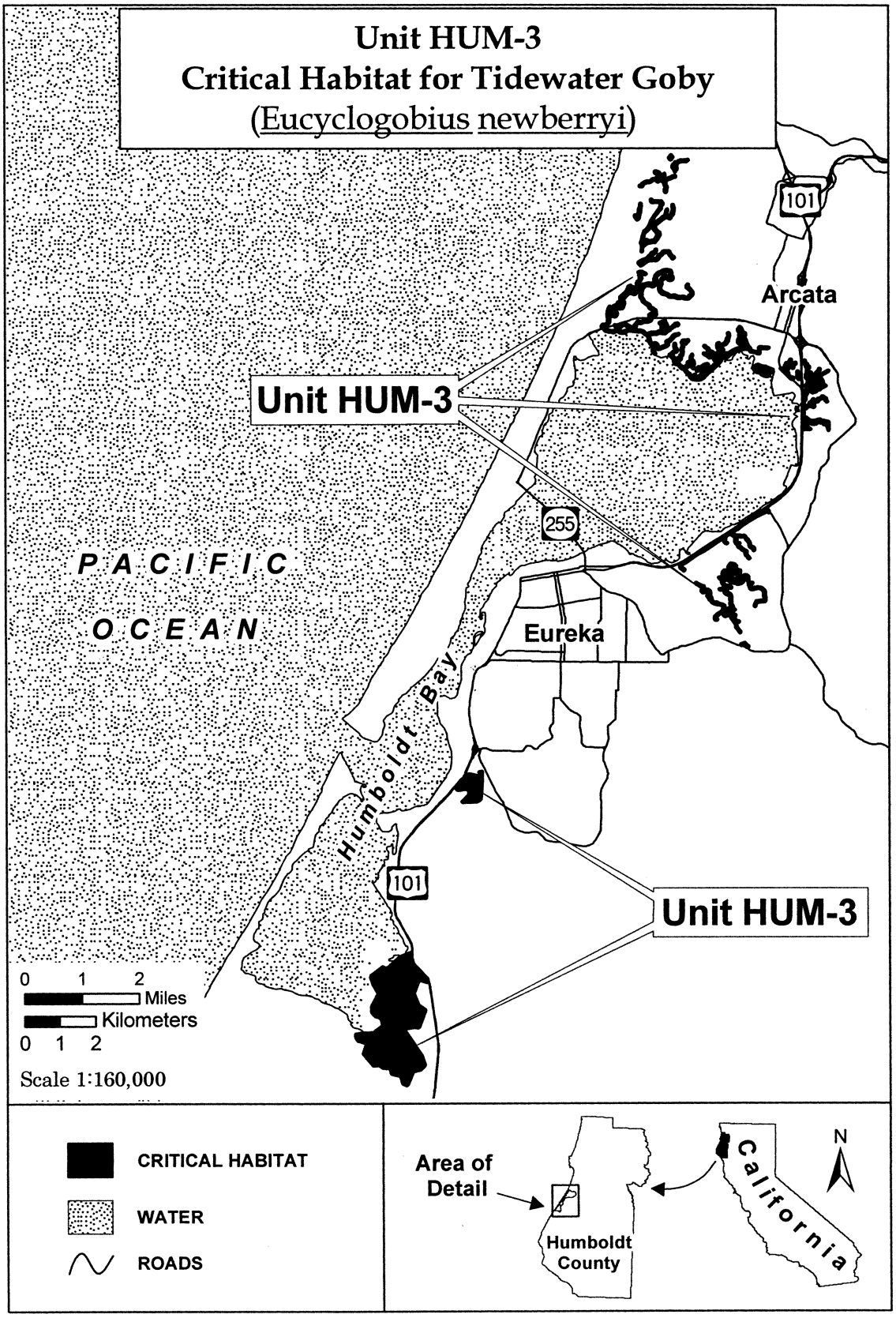
(xxvi) From USGS 1:24,000 scale quadrangle Arcata South. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 407085, 4515505; 407087, 4515512; 407130, 4515530; 407145, 4515540; 407173, 4515552; 407184, 4515539; 407203, 4515520; 407223, 4515509; 407236, 4515491; 407238, 4515481; 407244, 4515471; 407268, 4515463; 407278, 4515449; 407282, 4515436; 407272, 4515442; 407265, 4515454; 407245, 4515461; 407231, 4515476; 407226, 4515491; 407211, 4515506; 407190, 4515513; 407169, 4515516; 407155, 4515518; 407152, 4515510; 407139, 4515507; 407127, 4515502; 407113, 4515499; 407106, 4515498; 407099, 4515496; 407097, 4515490; 407098, 4515483; 407094, 4515481; 407088, 4515485; 407088, 4515490; 407088, 4515498; returning to 407085, 4515505.

(xxvii) From USGS 1:24,000 scale quadrangles Eureka and Fields Landing. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 399065, 4511443; 399073, 4511482; 399088, 4511516; 399110, 4511539; 399153, 4511567; 399203, 4511583; 399264, 4511622; 399286, 4511651; 399296, 4511673; 399356, 4511801; 399406, 4511839; 399422, 4511844; 399444, 4511846; 399672, 4511791; 399693, 4511796; 399721, 4511806; 399736, 4511816; 399738, 4511835; 399733, 4511864; 399717, 4511910; 399781, 4511918; 399776, 4511662; 399738, 4511155; 399643, 4511079; 399235, 4511068; 399406, 4511265; 399422, 4511318; 399429, 4511358; 399388, 4511425; 399364, 4511436; 399325, 4511440; 399315, 4511444; 399149, 4511407; 399109, 4511407; 399080, 4511422; returning to 399065, 4511443.

(xxviii) From USGS 1:24,000 scale quadrangle Fields Landing. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 396204, 4504399; 396220, 4504485; 396333, 4504495; 396700, 4504525; 396964, 4504736; 396961, 4504902; 396868, 4504978; 396753, 4505018; 396680, 4505107; 396673, 4505269; 396855, 4505633; 396706, 4505904; 396637, 4506093; 396657, 4506149; 396973, 4506376; 397092, 4506339; 397457, 4506666; 397761, 4506800; 397765, 4506657; 397817, 4506487; 397978, 4506317; 398219, 4506049; 398235, 4505961; 398020, 4506037; 397955, 4505986; 397823, 4505633; 397955, 4505312; 398163, 4505180; 397980, 4504676; 397910, 4504693; 397854, 4504693; 397547, 4504641; 398043, 4503896; 398135, 4503602; 398020, 4503486; 397810, 4503449; 397646, 4503052; 397527, 4503096; 397464, 4503316; 397212, 4503386; 397193, 4503531; 396973, 4503537; 396872, 4503619; 396708, 4503606; 396425, 4503934; 396513, 4504185; 396488, 4504244; 396369, 4504280; 396266, 4504313; returning to 396204, 4504399.

(xxix) *Note:* Map of Unit HUM–3 follows.

BILLING CODE 4310–55–P



BILLING CODE 4310–55–C

(10) Unit HUM–4; Humboldt County, California.

(i) From USGS 1:24,000 scale quadrangles, Cannibal Island. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 393052, 4504207; 393102, 4504275; 393146, 4504303; 393119, 4504226; 393143, 4504186; 393184, 4504123; 393203, 4504065; 393203, 4504037; 393158, 4503967; 393129, 4503919; 393122, 4503876; 393131, 4503835; 393167, 4503811; 393283, 4503811; 393324, 4503806; 393374, 4503784; 393408, 4503743; 393412, 4503698; 393412, 4503618; 393412, 4503570; 393441, 4503549; 393583, 4503585; 393593, 4503570; 393403, 4503501; 393396, 4503534; 393374, 4503575; 393369, 4503628; 393372, 4503678; 393360, 4503719; 393324, 4503755; 393290, 4503772; 393158, 4503767; 393117, 4503765; 393081, 4503782; 393062, 4503823; 393054, 4503864; 393062, 4503909; 393090, 4503967; 393136, 4504008; 393167, 4504058; 393090, 4504198; 393074, 4504198; returning to 393052, 4504207.

(ii) From USGS 1:24,000 scale quadrangles, Cannibal Island. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 392678, 4504120; 392705, 4504134; 392705, 4504156; 392716, 4504160; 392724, 4504145; 392751, 4504139; 392780, 4504123; 392788, 4504107; 392780, 4504083; 392770, 4504058; 392772, 4504035; 392799, 4503999; 392824, 4503999; 392850, 4504003; 392874, 4504002; 392882, 4503994; 392885, 4503976; 392874, 4503937; 392859, 4503937; 392867, 4503967; 392859, 4503981; 392839, 4503978; 392797, 4503978; 392767, 4503994; 392749, 4504026; 392743, 4504048; 392746, 4504067; 392759, 4504091; 392761, 4504105; 392727, 4504120; 392714, 4504107; 392684, 4504099; returning to 392678, 4504120.

(iii) From USGS 1:24,000 scale quadrangles, Cannibal Island. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 392357, 4503825; 392357, 4503890; 392427, 4503892; 392410, 4503830; 392408, 4503789; 392432, 4503765; 392470, 4503770; 392492, 4503799; 392504, 4503842; 392526, 4503890; 392562, 4503919; 392603, 4503933; 392631, 4503928; 392720, 4503892; 392773, 4503890; 392819, 4503885; 392845, 4503871; 392869, 4503844; 392879, 4503806; 392874, 4503765; 392860, 4503715; 392862, 4503691; 392869, 4503664; 392884, 4503654; 392908, 4503645; 392949, 4503659; 392982, 4503676; 393030, 4503683; 393066, 4503674; 393102, 4503654; 393126, 4503621; 393131, 4503582; 393117, 4503532; 393098, 4503498; 393090, 4503469; 393090, 4503433; 393074, 4503407; 393030, 4503359; 393002, 4503368; 392970, 4503361; 392893, 4503479; 392824, 4503481; 392790, 4503469; 392761, 4503462; 392742, 4503424; 392768, 4503390; 392773, 4503373; 392773, 4503277; 392716, 4503140; 392696, 4503143; 392696, 4503152; 392752, 4503275; 392756, 4503306; 392747, 4503373; 392723, 4503414; 392737, 4503465; 392752, 4503484; 392792, 4503496; 392807, 4503513; 392913, 4503486; 392934, 4503457; 392961, 4503419; 392999, 4503402; 393045, 4503414; 393054, 4503450; 393069, 4503501; 393093, 4503556; 393088, 4503594; 393062, 4503626; 393011, 4503635; 392937, 4503614; 392869, 4503597; 392824, 4503640; 392809, 4503681; 392824, 4503734; 392833, 4503789; 392814, 4503823; 392788, 4503849; 392728, 4503859; 392636, 4503876; 392588, 4503876; 392562, 4503847; 392528, 4503779; 392497, 4503734; 392451, 4503722; 392410, 4503727; 392381, 4503743; 392360, 4503775; returning to 392357, 4503825.

(iv) From USGS 1:24,000 scale quadrangles, Cannibal Island. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 391919, 4503618; 391946, 4503641; 391966, 4503662; 391975, 4503643; 391991, 4503633; 392018, 4503619; 392046, 4503599; 392061, 4503604; 392084, 4503608; 392108, 4503598; 392129, 4503596; 392146, 4503583; 392175, 4503547; 392209, 4503507; 392263, 4503444; 392272, 4503416; 392267, 4503402; 392246, 4503386; 392224, 4503371; 392207, 4503350; 392213, 4503321; 392224, 4503286; 392232, 4503240; 392232, 4503208; 392243, 4503184; 392252, 4503171; 392271, 4503171; 392296, 4503177; 392314, 4503191; 392331, 4503204; 392355, 4503207; 392381, 4503201; 392404, 4503193; 392432, 4503184; 392448, 4503173; 392467, 4503152; 392467, 4503138; 392453, 4503144; 392434, 4503165; 392408, 4503175; 392380, 4503185; 392361, 4503193; 392346, 4503193; 392331, 4503184; 392306, 4503162; 392278, 4503153; 392243, 4503154; 392231, 4503171; 392212, 4503205; 392209, 4503255; 392188, 4503311; 392185, 4503342; 392189, 4503363; 392227, 4503398; 392246, 4503412; 392244, 4503432; 392134, 4503560; 392112, 4503567; 392082, 4503584; 392042, 4503575; 392023, 4503584; 391962, 4503625; 391942, 4503619; 391920, 4503608; returning to 391919, 4503618.

(v) From USGS 1:24,000 scale quadrangles, Cannibal Island. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 391651, 4503288; 391674, 4503278; 391699, 4503243; 391720, 4503213; 391720, 4503176; 391720, 4503121; 391768, 4503087; 391773, 4503064; 391763, 4503029; 391780, 4502984; 391830, 4502950; 391850, 4502901; 391879, 4502858; 391909, 4502870; 391954, 4502856; 391976, 4502860; 391981, 4502893; 391991, 4502922; 392026, 4502928; 392053, 4502927; 392071, 4502901; 392071, 4502868; 392080, 4502840; 392105, 4502829; 392121, 4502843; 392141, 4502885; 392130, 4502901; 392106, 4502901; 392071, 4502918; 392051, 4502942; 392036, 4502980; 392036, 4503020; 392049, 4503032; 392059, 4503015; 392058, 4502987; 392069, 4502953; 392100, 4502925; 392133, 4502920; 392155, 4502918; 392168, 4502890; 392150, 4502846; 392118, 4502803; 392074, 4502803; 392044, 4502835; 392041, 4502873; 392039, 4502896; 392019, 4502895; 392006, 4502870; 391991, 4502821; 391961, 4502821; 391924, 4502835; 391885, 4502829; 391848, 4502828; 391803, 4502920; 391788, 4502933; 391746, 4502963; 391726, 4503019; 391730, 4503061; 391701, 4503084; 391676, 4503121; 391684, 4503169; 391683, 4503211; 391654, 4503240; returning to 391651, 4503288.

(vi) From USGS 1:24,000 scale quadrangles, Cannibal Island. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 392724, 4502551; 392748, 4502590; 392799, 4502607; 392846, 4502615; 392877, 4502593; 392901, 4502547; 392935, 4502527; 392974, 4502527; 393001, 4502544; 393003, 4502602; 393028, 4502675; 393064, 4502717; 393118, 4502770; 393193, 4502821; 393242, 4502836; 393356, 4502865; 393407, 4502855; 393448, 4502814; 393436, 4502794; 393404, 4502804; 393392, 4502826; 393365, 4502838; 393273, 4502821; 393178, 4502780; 393127, 4502760; 393096, 4502704; 393052, 4502668; 393028, 4502576; 393025, 4502530; 393016, 4502515; 392955, 4502498; 392921, 4502510; 392884, 4502527; 392836, 4502593; 392807, 4502588; 392768, 4502571; 392756, 4502544; 392758, 4502508; 392768, 4502474; 392787, 4502440; 392826, 4502411; 392914, 4502386; 392940, 4502372; 392955, 4502338; 392955, 4502306; 392943, 4502253; 392909, 4502192; 392877, 4502136; 392860, 4502085; 392880, 4502051; 392875, 4502015; 392790, 4502019; 392785, 4502053; 392826, 4502078; 392853, 4502160; 392880, 4502202; 392916, 4502306; 392909, 4502350; 392833, 4502381; 392765, 4502403; 392741, 4502454; returning to 392724, 4502551.

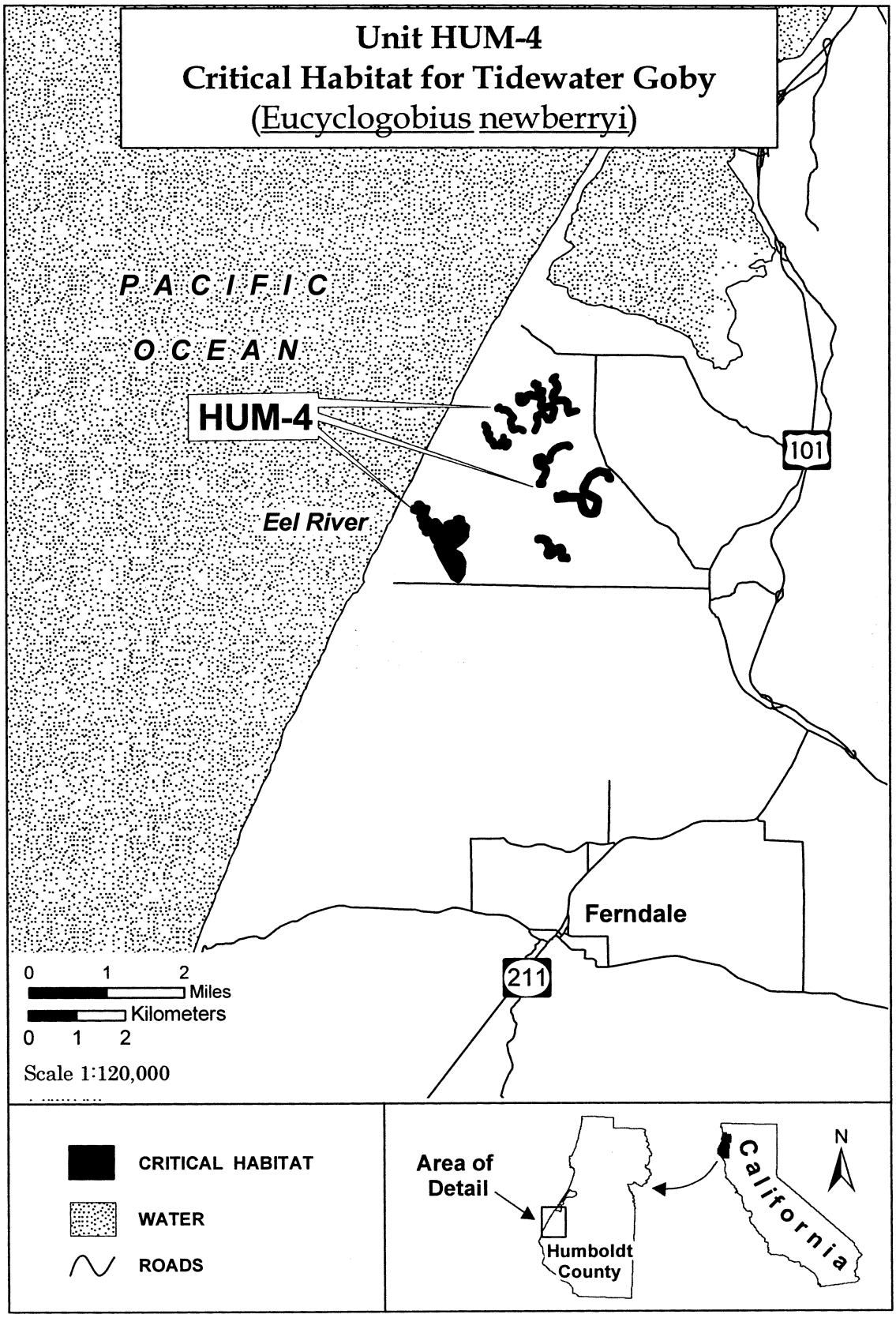
(vii) From USGS 1:24,000 scale quadrangles, Cannibal Island. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 393154, 4501798; 393227, 4501791; 393249, 4501813; 393285, 4501830; 393312, 4501808; 393317, 4501830; 393382, 4501791; 393548, 4501791; 393611, 4501786; 393672, 4501755; 393701, 4501711; 393730, 4501568; 393749, 4501521; 393761, 4501487; 393795, 4501456; 393832, 4501434; 393871, 4501429; 393922, 4501451; 393968, 4501568; 393985, 4501633; 393980, 4501665; 393970, 4501684; 393953, 4501704; 393744, 4501810; 393718, 4501830; 393698, 4501878; 393693, 4501920; 393715, 4502002; 393825, 4502187; 393861, 4502228; 393995, 4502311; 394048, 4502323; 394206, 4502289; 394225, 4502250; 394245, 4502214; 394274, 4502189; 394289, 4502153; 394289, 4502124; 394272, 4502112; 394240, 4502129; 394216, 4502158; 394216, 4502192; 394213, 4502214; 394170, 4502238; 394106, 4502262; 394046, 4502272; 394002, 4502248; 393929, 4502211; 393859, 4502163; 393774, 4502002; 393759, 4501956; 393749, 4501915; 393764, 4501871; 393934, 4501781; 394000, 4501738; 394034, 4501689; 394031, 4501638; 393987, 4501439; 393961, 4501402; 393880, 4501380; 393793, 4501393; 393727, 4501434; 393691, 4501478; 393664, 4501541; 393652, 4501616; 393628, 4501701; 393572, 4501725; 393409, 4501721; 393305, 4501716; 393161, 4501696; returning to 393154, 4501798.

(viii) From USGS 1:24,000 scale quadrangles, Cannibal Island. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 392754, 4500850; 392754, 4500887; 392781, 4500908; 392815, 4500908; 392872, 4500908; 392953, 4500871; 392987, 4500820; 392994, 4500793; 393011, 4500756; 393034, 4500736; 393068, 4500702; 393068, 4500645; 393027, 4500604; 393017, 4500581; 393041, 4500574; 393081, 4500614; 393149, 4500689; 393196, 4500716; 393243, 4500716; 393287, 4500658; 393290, 4500601; 393277, 4500537; 393284, 4500496; 393368, 4500507; 393381, 4500446; 393324, 4500453; 393274, 4500453; 393250, 4500456; 393236, 4500480; 393236, 4500540; 393250, 4500591; 393247, 4500631; 393230, 4500648; 393182, 4500648; 393135, 4500594; 393081, 4500544; 393044, 4500520; 393004, 4500520; 392967, 4500520; 392947, 4500557; 392947, 4500598; 392960, 4500638; 393000, 4500648; 393017, 4500672; 393000, 4500689; 392980, 4500695; 392960, 4500726; 392940, 4500773; 392923, 4500813; 392879, 4500840; 392852, 4500864; 392829, 4500864; 392791, 4500850; returning to 392754, 4500850.

(ix) From USGS 1:24,000 scale quadrangles, Cannibal Island. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 390162, 4501488; 390181, 4501544; 390239, 4501544; 390239, 4501568; 390250, 4501613; 390277, 4501632; 390311, 4501632; 390346, 4501592; 390375, 4501549; 390389, 4501514; 390423, 4501541; 390469, 4501533; 390437, 4501429; 390421, 4501365; 390434, 4501333; 390477, 4501288; 390514, 4501237; 390570, 4501240; 390607, 4501245; 390650, 4501245; 390677, 4501216; 390709, 4501179; 390762, 4501109; 390802, 4501069; 390839, 4501064; 390850, 4501117; 390863, 4501184; 390909, 4501219; 390964, 4501227; 391021, 4501232; 391053, 4501240; 391053, 4501296; 391116, 4501323; 391180, 4501315; 391191, 4501256; 391180, 4501208; 391223, 4501179; 391284, 4501131; 391276, 4501067; 391258, 4501016; 391258, 4500931; 391215, 4500877; 391146, 4500816; 391077, 4500768; 391002, 4500717; 390994, 4500640; 391123, 4500560; 391196, 4500393; 391183, 4500150; 391103, 4500023; 390997, 4500083; 390759, 4500488; 390701, 4500616; 390656, 4500728; 390658, 4500824; 390610, 4500832; 390581, 4500904; 390538, 4501008; 390511, 4501053; 390490, 4501008; 390450, 4500997; 390410, 4501019; 390410, 4501059; 390389, 4501107; 390349, 4501139; 390349, 4501165; 390346, 4501197; 390354, 4501251; 390314, 4501285; 390301, 4501325; 390303, 4501363; 390319, 4501416; 390319, 4501474; 390295, 4501485; 390277, 4501458; 390226, 4501458; returning to 390162, 4501488.

(x) *Note:* Map of Unit HUM–4 follows.

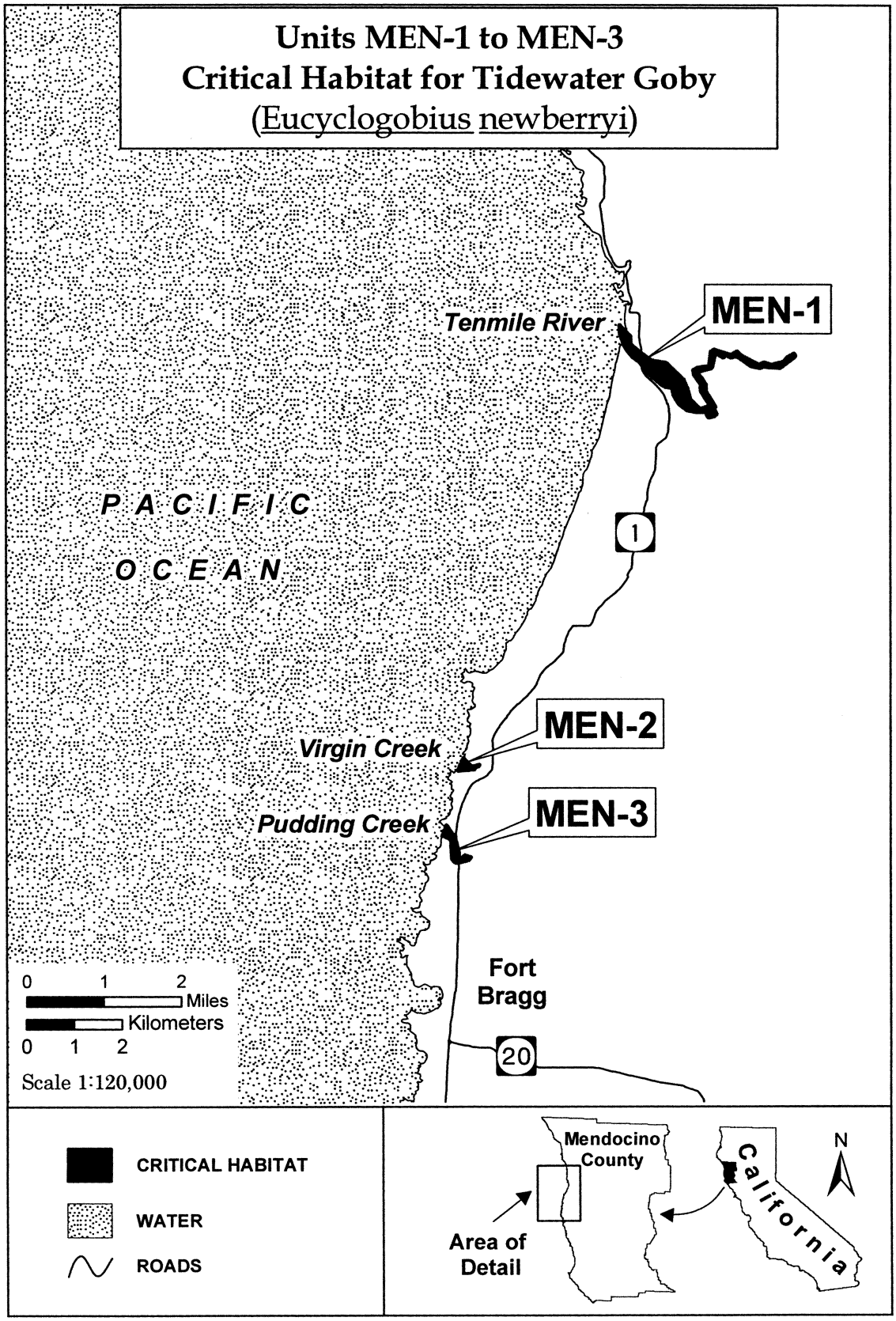
BILLING CODE 4310–55–P


Unit HUM-4
Critical Habitat for Tidewater Goby
(Eucyclogobius newberryi)
PACIFIC
OCEAN
HUM-4
Eel River
101
Ferndale
211
0 1 2
Miles
Kilometers
0 1 2
Scale 1:120,000
CRITICAL HABITAT
WATER
ROADS
Area of Detail
Humboldt County
California
N

(11) Unit MEN–1; Mendocino County, California.

(i) From USGS 1:24,000 scale quadrangles Inglenook and Covelo. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 434019, 4378674; 434159, 4378526; 434233, 4378461; 434247, 4378280; 434478, 4378076; 434692, 4377937; 434979, 4377882; 435336, 4377548; 435424, 4377344; 435480, 4377126; 435688, 4376927; 435897, 4376996; 435707, 4377288; 435693, 4377376; 435721, 4377427; 435563, 4377645; 435549, 4377742; 435633, 4377784; 435878, 4377831; 435915, 4378132; 435976, 4378169; 436337, 4378053; 436458, 4378136; 436536, 4378048; 436921, 4377849; 437014, 4377900; 437158, 4377844; 437408, 4377905; 437501, 4378007; 437644, 4378085; 437667, 4378039; 437348, 4377793; 437144, 4377798; 437009, 4377817; 436930, 4377784; 436731, 4377835; 436453, 4378039; 436332, 4378007; 436235, 4378053; 436179, 4378007; 435999, 4378104; 435925, 4377789; 435748, 4377742; 435619, 4377696; 435721, 4377571; 435813, 4377423; 435813, 4377293; 436003, 4376968; 435985, 4376913; 436031, 4376815; 435976, 4376774; 435855, 4376755; 435832, 4376802; 435938, 4376839; 435887, 4376885; 435781, 4376866; 435605, 4376857; 435424, 4376899; 435262, 4377015; 435169, 4377140; 435132, 4377219; 435095, 4377376; 434979, 4377390; 434854, 4377455; 434594, 4377687; 434427, 4377905; 434288, 4378016; 434159, 4378169; 434103, 4378280; 434024, 4378489; returning to 434019, 4378674.

(ii) *Note:* Map of Unit MEN–1 follows.


Units MEN-1 to MEN-3
Critical Habitat for Tidewater Goby
(Eucyclogobius newberryi)
MEN-1
Tenmile River
PACIFIC
OCEAN
1
MEN-2
Virgin Creek
MEN-3
Pudding Creek
Fort
Bragg
20
0 1 2
Miles
Kilometers
0 1 2
Scale 1:120,000
CRITICAL HABITAT
WATER
ROADS
Mendocino
County
Area of
Detail
California
N

(12) Unit MEN–2; Mendocino County, California.

(i) From USGS 1:24,000 scale quadrangle Fort Bragg. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 430656, 4369380; 430767, 4369639; 430910, 4369479; 430972, 4369449; 430976, 4369468; 431094, 4369506; 431096, 4369479; 431000, 4369454; 431000, 4369421; 430989, 4369407; 430950, 4369412; 430899, 4369412; 430865, 4369388; returning to 430656, 4369380.

(ii) *Note:* MEN–2 included on map with unit MEN–1.

(13) Unit MEN–3; Mendocino County, California.

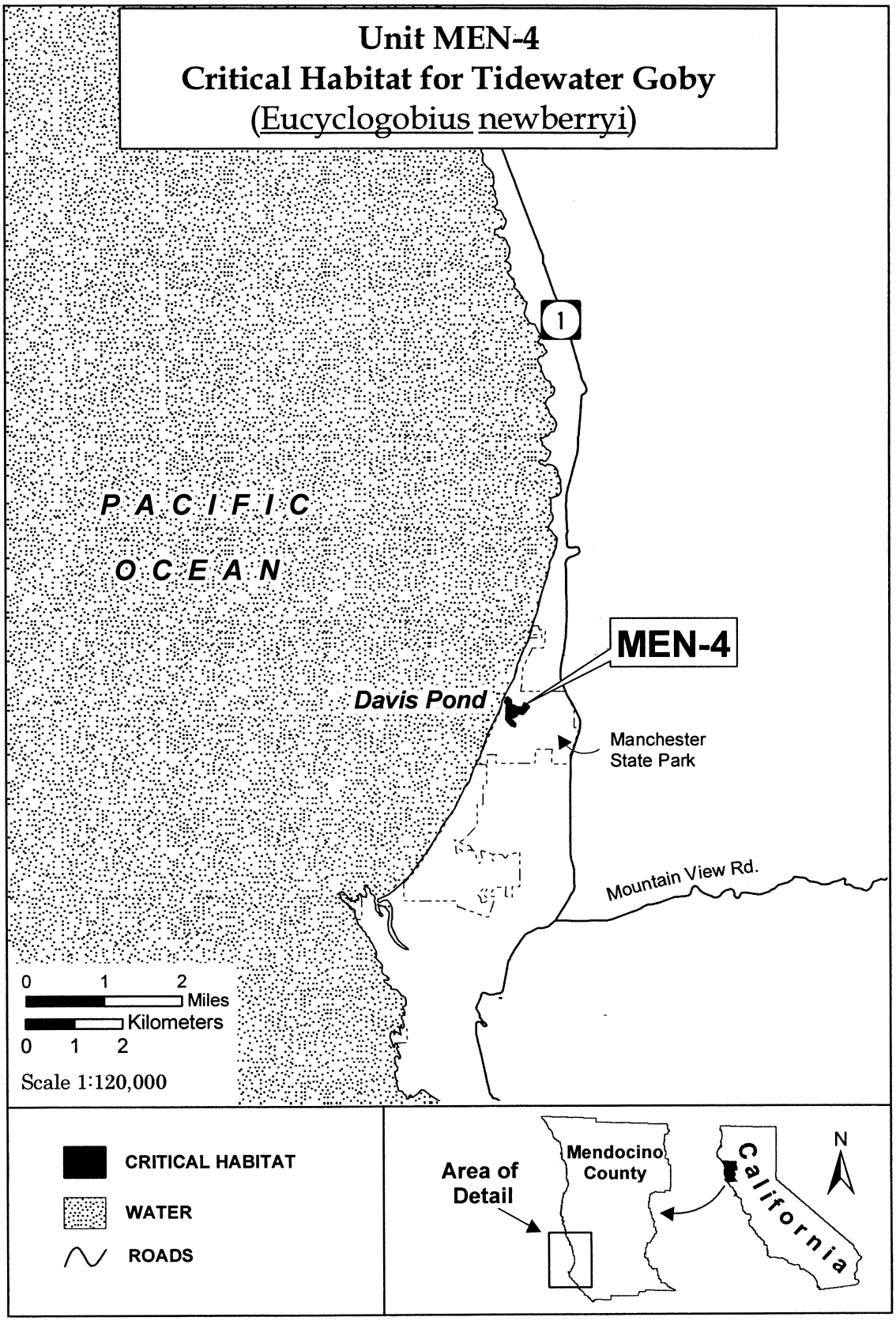
(i) From USGS 1:24,000 scale quadrangle Fort Bragg. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 430347, 4368031; 430419, 4368232; 430587, 4367989;430582, 4367872; 430631, 4367632; 430657, 4367494; 430697, 4367505; 430797, 4367598; 430912, 4367562; 430873, 4367497; 430797, 4367486; 430664, 4367452; 430595, 4367459; 430535, 4367532; 430524, 4367693; 430519, 4367942; returning to 430347, 4368031.

(ii) *Note:* MEN–3 included on map with unit MEN–1.

(14) Unit MEN–4; Mendocino County, California.

(i) From USGS 1:24,000 scale quadrangle Point Arena. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 439145, 4316147; 439192, 4316229; 439254, 4316165; 439256, 4316086; 439350, 4316041; 439362, 4316012; 439390, 4316024; 439513, 4316022; 439550, 4316105; 439639, 4316044; 439513, 4315901; 439409, 4315918; 439385, 4315866; 439323, 4315822; 439232, 4315851; 439219, 4315807; 439348, 4315686; 439345, 4315644; 439279, 4315654; 439168, 4315782; 439190, 4316105; returning to 439145, 4316147.

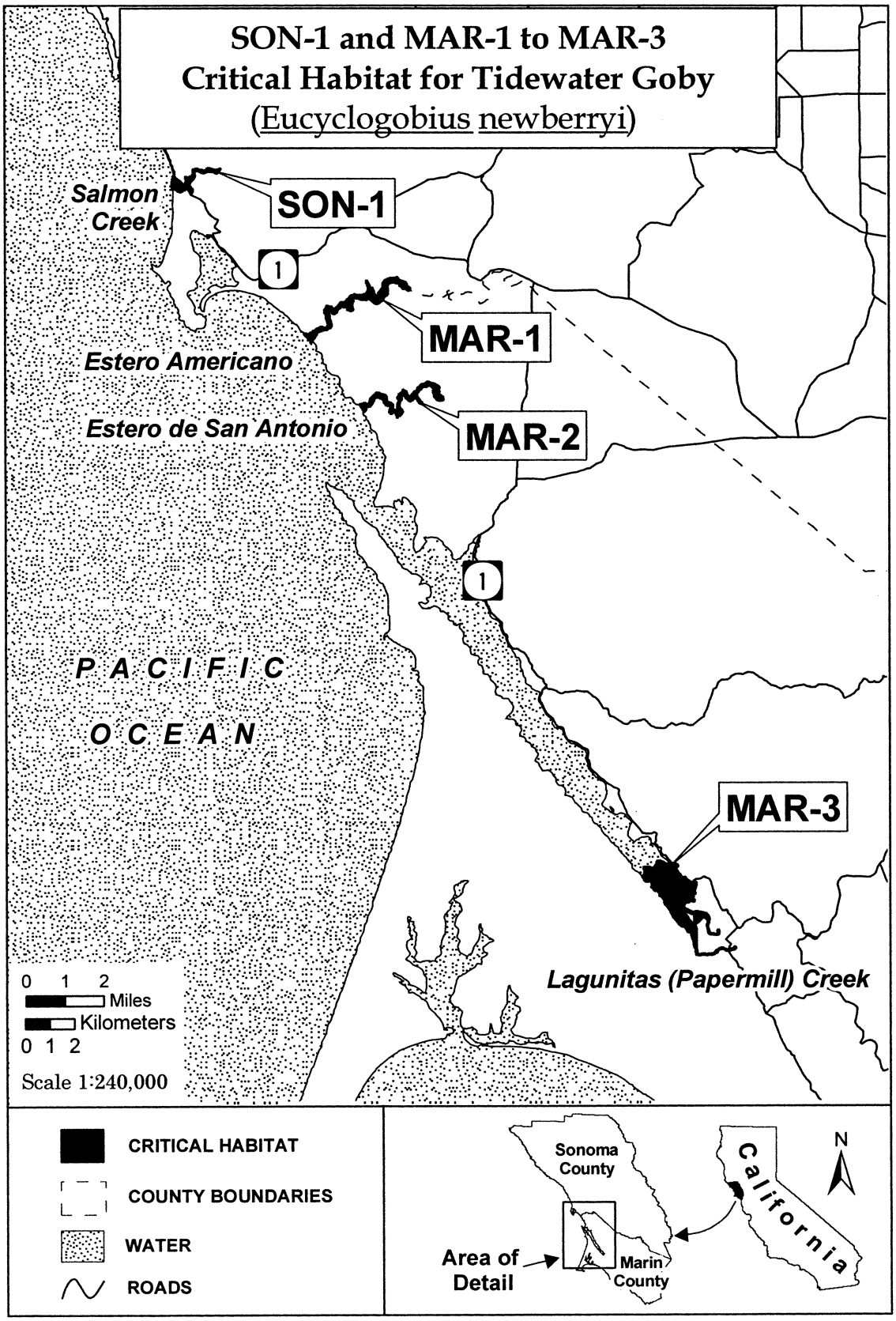
(ii) *Note:* Map of Unit MEN–4 follows.


Unit MEN-4
Critical Habitat for Tidewater Goby
(Eucyclogobius newberryi)
1
PACIFIC
OCEAN
MEN-4
Davis Pond
Manchester
State Park
Mountain View Rd.
0 1 2
Miles
Kilometers
0 1 2
Scale 1:120,000
CRITICAL HABITAT
WATER
ROADS
Area of
Detail
Mendocino
County
California
N

(15) Unit SON–1; Sonoma County, California.

(i) From USGS 1:24,000 scale quadrangle Bodega Head. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 494029, 4245091; 494029, 4245106; 494036, 4245131; 494041, 4245198; 494050, 4245233; 494073, 4245274; 494080, 4245308; 494081, 4245316; 494073, 4245356; 494213, 4245202; 494304, 4245147; 494330, 4245161; 494341, 4245148; 494426, 4245084; 494451, 4245051; 494457, 4245031; 494458, 4245013; 494444, 4244966; 494449, 4244941; 494461, 4244924; 494471, 4244920; 494485, 4244921; 494549, 4244956; 494562, 4244956; 494569, 4244952; 494592, 4244913; 494602, 4244907; 494608, 4244931; 494609, 4244954; 494600, 4245040; 494601, 4245099; 494607, 4245125; 494623, 4245134; 494628, 4245199; 494625, 4245218; 494629, 4245237; 494620, 4245265; 494594, 4245320; 494593, 4245331; 494605, 4245344; 494628, 4245343; 494677, 4245310; 494703, 4245301; 494715, 4245302; 494746, 4245315; 494781, 4245340; 494815, 4245357; 494875, 4245365; 494881, 4245417; 494889, 4245435; 494907, 4245440; 494925, 4245435; 494924, 4245474; 494906, 4245525; 494897, 4245563; 494898, 4245597; 494905, 4245625; 494916, 4245639; 494931, 4245646; 494959, 4245647; 494969, 4245645; 494979, 4245653; 494988, 4245663; 495013, 4245674; 495036, 4245678; 495061, 4245677; 495081, 4245671; 495164, 4245635; 495262, 4245628; 495332, 4245612; 495382, 4245613; 495458, 4245624; 495476, 4245621; 495496, 4245673; 495503, 4245680; 495533, 4245699; 495573, 4245702; 495727, 4245656; 495813, 4245627; 495827, 4245616; 495853, 4245586; 495900, 4245620; 495918, 4245629; 495989, 4245658; 496042, 4245675; 496042, 4245667; 496033, 4245648; 495976, 4245573; 495937, 4245541; 495896, 4245514; 495879, 4245508; 495861, 4245505; 495846, 4245507; 495814, 4245522; 495787, 4245547; 495781, 4245562; 495759, 4245564; 495748, 4245571; 495723, 4245577; 495679, 4245569; 495661, 4245569; 495613, 4245587; 495591, 4245589; 495524, 4245584; 495468, 4245561; 495408, 4245529; 495372, 4245517; 495333, 4245519; 495313, 4245525; 495276, 4245527; 495243, 4245538; 495213, 4245553; 495155, 4245570; 495099, 4245606; 495033, 4245614; 495010, 4245623; 494990, 4245635; 494977, 4245628; 494961, 4245596; 494954, 4245561; 494956, 4245494; 494973, 4245403; 494973, 4245381; 494964, 4245333; 494949, 4245307; 494935, 4245291; 494922, 4245282; 494901, 4245243; 494864, 4245207; 494847, 4245196; 494810, 4245178; 494803, 4245154; 494785, 4245119; 494774, 4245104; 494779, 4245101; 494765, 4245074; 494755, 4245029; 494729, 4245001; 494720, 4244984; 494721, 4244960; 494740, 4244928; 494751, 4244917; 494797, 4244925; 494807, 4244920; 494817, 4244908; 494831, 4244855; 494837, 4244846; 494851, 4244836; 494864, 4244832; 494875, 4244821; 494871, 4244811; 494858, 4244803; 494856, 4244797; 494858, 4244786; 494877, 4244749; 494885, 4244717; 494864, 4244697; 494852, 4244674; 494830, 4244664; 494822, 4244665; 494811, 4244673; 494800, 4244698; 494798, 4244738; 494783, 4244774; 494769, 4244837; 494761, 4244845; 494743, 4244848; 494733, 4244860; 494722, 4244859; 494697, 4244843; 494687, 4244843; 494676, 4244847; 494645, 4244892; 494637, 4244898; 494613, 4244856; 494585, 4244822; 494556, 4244807; 494537, 4244790; 494454, 4244761; 494407, 4244738; 494377, 4244733; 494344, 4244733; 494300, 4244747; 494282, 4244762; 494224, 4244795; 494181, 4244836; 494164, 4244901; 494122, 4244924; 494104, 4244921; 494098, 4244912; 494092, 4244885; 494085, 4244825; 494042, 4244824; 494037, 4244931; 494037, 4245018; returning to 494029, 4245091.

(ii) *Note:* Map of Unit SON–1 follows.



BILLING CODE 4310–55–C

(16) Unit MAR–1; Marin County, California.

(i) From USGS 1:24,000 scale quadrangles Bodega Head and Valley Ford. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 499504, 4238760; 499508, 4238800; 499544, 4238796; 499614, 4238765; 499677, 4238749; 499701, 4238735; 499736, 4238762; 499804, 4238825; 499878, 4238873; 499903, 4238902; 499936, 4238909; 500005, 4238953; 500027, 4238964; 500062, 4238972; 500063, 4238985; 500072, 4238994; 500100, 4239010; 500161, 4239021; 500178, 4239034; 500184, 4239047; 500198, 4239059; 500220, 4239069; 500240, 4239071; 500280, 4239066; 500327, 4239054; 500356, 4239032; 500372, 4239015; 500401, 4239022; 500461, 4239056; 500481, 4239078; 500498, 4239106; 500507, 4239129; 500505, 4239157; 500488, 4239281; 500455, 4239440; 500447, 4239534; 500437, 4239556; 500385, 4239650; 500373, 4239685; 500370, 4239722; 500370, 4239741; 500381, 4239770; 500400, 4239802; 500413, 4239834; 500423, 4239848; 500435, 4239857; 500442, 4239859; 500443, 4239878; 500452, 4239910; 500464, 4239937; 500475, 4239950; 500488, 4239952; 500503, 4239946; 500514, 4239928; 500526, 4239920; 500570, 4239933; 500596, 4239933; 500608, 4239929; 500623, 4239921; 500628, 4239914; 500637, 4239890; 500673, 4239876; 500707, 4239844; 500730, 4239829; 500749, 4239824; 500758, 4239816; 500773, 4239811; 500798, 4239818; 500819, 4239834; 500849, 4239869; 500906, 4239912; 500936, 4239957; 500954, 4239973; 500970, 4239994; 500983, 4240021; 500996, 4240042; 501030, 4240066; 501062, 4240083; 501083, 4240087; 501104, 4240080; 501184, 4240091; 501238, 4240117; 501251, 4240132; 501253, 4240151; 501270, 4240163; 501277, 4240172; 501286, 4240190; 501287, 4240205; 501325, 4240204; 501341, 4240219; 501359, 4240245; 501384, 4240271; 501430, 4240315; 501465, 4240370; 501486, 4240380; 501517, 4240388; 501575, 4240419; 501609, 4240427; 501636, 4240412; 501655, 4240406; 501738, 4240407; 501777, 4240401; 501811, 4240400; 501881, 4240411; 501960, 4240413; 502040, 4240423; 502095, 4240446; 502106, 4240461; 502129, 4240476; 502144, 4240499; 502160, 4240550; 502173, 4240630; 502180, 4240746; 502176, 4240765; 502158, 4240809; 502119, 4240886; 502104, 4240923; 502098, 4240980; 502114, 4240991; 502136, 4240976; 502169, 4240898; 502220, 4240806; 502244, 4240731; 502265, 4240626; 502278, 4240594; 502293, 4240580; 502315, 4240584; 502326, 4240599; 502327, 4240626; 502320, 4240691; 502322, 4240700; 502338, 4240702; 502371, 4240621; 502400, 4240576; 502405, 4240557; 502399, 4240509; 502399, 4240489; 502413, 4240468; 502434, 4240452; 502450, 4240428; 502466, 4240397; 502495, 4240363; 502519, 4240346; 502537, 4240338; 502557, 4240342; 502584, 4240363; 502595, 4240388; 502602, 4240418; 502605, 4240470; 502611, 4240479; 502718, 4240572; 502725, 4240593; 502723, 4240624; 502747, 4240642; 502754, 4240651; 502758, 4240669; 502767, 4240688; 502777, 4240705; 502797, 4240718; 502794, 4240800; 502795, 4240867; 502798, 4240896; 502808, 4240933; 502821, 4240957; 502873, 4240992; 502884, 4241002; 502891, 4241014; 502911, 4241029; 502933, 4241039; 502970, 4241050; 502985, 4241060; 503052, 4241081; 503082, 4241096; 503092, 4241105; 503148, 4241109; 503171, 4241106; 503196, 4241111; 503252, 4241107; 503260, 4241117; 503306, 4241118; 503358, 4241139; 503404, 4241121; 503447, 4241049; 503487, 4241012; 503527, 4240985; 503593, 4240965; 503689, 4240957; 503712, 4240949; 503723, 4240932; 503726, 4240904; 503748, 4240861; 503776, 4240796; 503793, 4240777; 503845, 4240733; 503901, 4240690; 503854, 4240598; 503832, 4240606; 503760, 4240646; 503716, 4240677; 503695, 4240688; 503642, 4240678; 503618, 4240683; 503600, 4240693; 503594, 4240691; 503576, 4240744; 503558, 4240771; 503515, 4240790; 503496, 4240806; 503469, 4240838; 503463, 4240852; 503463, 4240865; 503405, 4240913; 503397, 4240906; 503384, 4240904; 503351, 4240912; 503293, 4240922; 503255, 4240935; 503212, 4240946; 503163, 4240942; 503094, 4240925; 503034, 4240899; 503007, 4240876; 502992, 4240860; 502956, 4240784; 502952, 4240757; 502968, 4240700; 502981, 4240553; 502979, 4240509; 502974, 4240477; 502975, 4240464; 502952, 4240418; 502940, 4240408; 502929, 4240403; 502891, 4240364; 502871, 4240362; 502855, 4240349; 502840, 4240302; 502819, 4240265; 502790, 4240237; 502768, 4240229; 502751, 4240182; 502735, 4240168; 502708, 4240157; 502680, 4240126; 502668, 4240105; 502656, 4240106; 502633, 4240099; 502615, 4240079; 502587, 4240057; 502546, 4240046; 502506, 4240050; 502469, 4240064; 502368, 4240139; 502323, 4240192; 502289, 4240214; 502257, 4240244; 502227, 4240264; 502205, 4240291; 502195, 4240299; 502180, 4240298; 502165, 4240287; 502136, 4240228; 502114, 4240207; 502103, 4240203; 502083, 4240207; 502049, 4240229; 501943, 4240211; 501923, 4240214; 501862, 4240241; 501805, 4240273; 501697, 4240287; 501618, 4240289; 501585, 4240280; 501564, 4240264; 501552, 4240243; 501547, 4240214; 501547, 4240185; 501553, 4240163; 501554, 4240137; 501549, 4240107; 501528, 4240059; 501501, 4239941; 501502, 4239930; 501510, 4239922; 501526, 4239886; 501540, 4239833; 501544, 4239784; 501530, 4239776; 501472, 4239756; 501450, 4239758; 501427, 4239768; 501398, 4239791; 501386, 4239793; 501365, 4239788; 501343, 4239779; 501329, 4239789; 501320, 4239805; 501313, 4239853; 501323, 4239877; 501301, 4239910; 501160, 4239932; 501112, 4239952; 501083, 4239959; 501064, 4239952; 501020, 4239893; 500941, 4239832; 500923, 4239812; 500907, 4239788; 500882, 4239732; 500853, 4239686; 500819, 4239653; 500803, 4239642; 500779, 4239634; 500746, 4239629; 500732, 4239634; 500695, 4239671; 500631, 4239724; 500592, 4239779; 500583, 4239790; 500563, 4239803; 500548, 4239805; 500519, 4239790; 500512, 4239790; 500512, 4239787; 500487, 4239769; 500481, 4239732; 500484, 4239711; 500498, 4239665; 500510, 4239647; 500534, 4239627; 500555, 4239571; 500568, 4239495; 500569, 4239439; 500588, 4239379; 500606, 4239340; 500613, 4239309; 500628, 4239185; 500629, 4239095; 500623, 4239078; 500620, 4239047; 500608, 4239036; 500519, 4239007; 500496, 4238993; 500476, 4238973; 500456, 4238963; 500416, 4238961; 500331, 4238943; 500280, 4238939; 500261, 4238934; 500243, 4238921; 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(ii) Note: MAR–1 included on map with unit SON–1.

(17) Unit MAR–2; Marin County, California.

(i) From USGS 1:24,000 scale quadrangle Valley Ford. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 501844, 4235816;

501869, 4235829; 501901, 4235841; 501952, 4235843; 501975, 4235847; 502011, 4235864; 502034, 4235869; 502045, 4235867; 502058, 4235854; 502094, 4235857; 502155, 4235838; 502166, 4235832; 502185, 4235799; 502195, 4235787; 502209, 4235779; 502227, 4235790; 502243, 4235803; 502264, 4235828; 502260, 4235848; 502249, 4235874; 502238, 4235889; 502232, 4235915; 502237, 4235926; 502247, 4235933; 502257, 4235980; 502256, 4236020; 502264, 4236059; 502279, 4236074; 502285, 4236075; 502294, 4236087; 502311, 4236103; 502370, 4236146; 502433, 4236217; 502476, 4236246; 502492, 4236265; 502505, 4236290; 502517, 4236302; 502541, 4236310; 502566, 4236312; 502597, 4236307; 502617, 4236298; 502639, 4236278; 502660, 4236266; 502678, 4236265; 502726, 4236249; 502763, 4236251; 502786, 4236244; 502820, 4236221; 502854, 4236206; 502885, 4236185; 502899, 4236169; 502916, 4236138; 502922, 4236113; 502924, 4236033; 502954, 4235919; 502987, 4235904; 503034, 4235892; 503094, 4235861; 503142, 4235831; 503162, 4235831; 503169, 4235826; 503182, 4235792; 503185, 4235721; 503181, 4235680; 503167, 4235654; 503148, 4235640; 503132, 4235639; 503121, 4235623; 503090, 4235589; 503084, 4235575; 503083, 4235547; 503086, 4235533; 503098, 4235529; 503114, 4235528; 503137, 4235533; 503147, 4235538; 503150, 4235551; 503168, 4235574; 503201, 4235589; 503217, 4235593; 503267, 4235588; 503320, 4235567; 503338, 4235553; 503363, 4235519; 503369, 4235498; 503372, 4235469; 503382, 4235452; 503417, 4235436; 503435, 4235434; 503450, 4235439; 503484, 4235464; 503498, 4235485; 503517, 4235531; 503520, 4235579; 503457, 4235629; 503421, 4235649; 503398, 4235676; 503391, 4235697; 503386, 4235757; 503391, 4235822; 503401, 4235854; 503452, 4235951; 503458, 4235990; 503453, 4236015; 503426, 4236053; 503411, 4236053; 503397, 4236064; 503392, 4236074; 503390, 4236108; 503395, 4236119; 503407, 4236128; 503413, 4236128; 503452, 4236228; 503469, 4236249; 503487, 4236266; 503520, 4236286; 503557, 4236296; 503561, 4236310; 503582, 4236325; 503594, 4236340; 503616, 4236424; 503645, 4236420; 503664, 4236395; 503682, 4236381; 503722, 4236372; 503735, 4236366; 503742, 4236358; 503755, 4236305; 503769, 4236280; 503754, 4236250; 503758, 4236236; 503780, 4236212; 503809, 4236187; 503841, 4236174; 503847, 4236126; 503871, 4236121; 503909, 4236129; 503925, 4236140; 503987, 4236215; 504003, 4236228; 504043, 4236285; 504055, 4236311; 504077, 4236343; 504097, 4236363; 504139, 4236392; 504153, 4236397; 504170, 4236395; 504184, 4236416; 504201, 4236467; 504217, 4236496; 504254, 4236533; 504290, 4236560; 504326, 4236578; 504330, 4236597; 504346, 4236625; 504363, 4236642; 504432, 4236677; 504471, 4236682; 504504, 4236676; 504530, 4236696; 504546, 4236721; 504555, 4236721; 504543, 4236680; 504532, 4236598; 504554, 4236596; 504566, 4236592; 504567, 4236647; 504576, 4236685; 504602, 4236760; 504618, 4236767; 504641, 4236767; 504678, 4236742; 504735, 4236729; 504793, 4236721; 504804, 4236713; 504863, 4236692; 504887, 4236680; 504910, 4236676; 504929, 4236666; 504957, 4236659; 504991, 4236641; 505002, 4236627; 505042, 4236595; 505080, 4236573; 505091, 4236558; 505100, 4236531; 505101, 4236511; 505091, 4236502; 505080, 4236484; 505076, 4236463; 505083, 4236421; 505099, 4236388; 505102, 4236369; 505100, 4236348; 505086, 4236314; 505064, 4236296; 505030, 4236286; 505011, 4236268; 505015, 4236246; 505038, 4236204; 505059, 4236193; 505078, 4236186; 505096, 4236190; 505122, 4236211; 505142, 4236209; 505203, 4236170; 505228, 4236139; 505242, 4236138; 505261, 4236028; 505202, 4236006; 505148, 4236000; 505092, 4236005; 505048, 4236022; 505012, 4236055; 504974, 4236101; 504934, 4236137; 504925, 4236150; 504915, 4236176; 504902, 4236219; 504899, 4236245; 504886, 4236289; 504868, 4236337; 504863, 4236360; 504862, 4236421; 504870, 4236478; 504870, 4236492; 504866, 4236505; 504856, 4236527; 504833, 4236558; 504806, 4236588; 504779, 4236609; 504732, 4236630; 504711, 4236629; 504639, 4236597; 504582, 4236580; 504502, 4236569; 504448, 4236572; 504430, 4236570; 504411, 4236573; 504400, 4236571; 504384, 4236563; 504385, 4236542; 504375, 4236517; 504337, 4236457; 504298, 4236426; 504219, 4236346; 504201, 4236315; 504183, 4236293; 504173, 4236272; 504167, 4236249; 504168, 4236222; 504173, 4236197; 504205, 4236146; 504236, 4236076; 504315, 4235970; 504353, 4235929; 504369, 4235918; 504395, 4235892; 504417, 4235851; 504409, 4235842; 504360, 4235869; 504323, 4235875; 504306, 4235882; 504277, 4235922; 504198, 4236053; 504159, 4236097; 504137, 4236114; 504091, 4236117; 504064, 4236104; 504018, 4236049; 504006, 4236040; 503995, 4236025; 503979, 4236011; 503938, 4236007; 503929, 4236000; 503921, 4235982; 503903, 4235971; 503890, 4235970; 503870, 4235977; 503825, 4236018; 503808, 4236039; 503778, 4236065; 503757, 4236078; 503658, 4236217; 503631, 4236246; 503606, 4236256; 503573, 4236228; 503559, 4236211; 503533, 4236121; 503531, 4236101; 503542, 4236018; 503539, 4236000; 503530, 4235984; 503514, 4235972; 503498, 4235963; 503491, 4235963; 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(ii) *Note:* MAR–2 included on map with unit SON–1.

(18) Unit MAR–3; Marin County, California.

(i) From USGS 1:24,000 scale quadrangle Inverness. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 513514, 4216097; 513604, 4216208; 513584, 4216239; 513583, 4216271; 513625, 4216303;

513631, 4216312; 513619, 4216354; 513565, 4216417; 513558, 4216445; 513563, 4216473; 513569, 4216476; 513611, 4216470; 513644, 4216503; 513772, 4216500; 513830, 4216473; 513917, 4216413; 513956, 4216410; 513973, 4216431; 513982, 4216471; 513991, 4216493; 514025, 4216527; 514042, 4216554; 514108, 4216683; 514150, 4216742; 514170, 4216757; 514220, 4216753; 514364, 4216710; 514436, 4216662; 514458, 4216654; 514485, 4216622; 514695, 4216634; 514738, 4216644; 514826, 4216626; 514851, 4216613; 514891, 4216579; 514929, 4216557; 514938, 4216548; 514941, 4216524; 514889, 4216463; 514891, 4216417; 514873, 4216385; 514953, 4216265; 514968, 4216251; 514978, 4216230; 515061, 4216173; 515095, 4216115; 515134, 4216070; 515170, 4216051; 515245, 4216023; 515278, 4216002; 515326, 4215955; 515348, 4215915; 515357, 4215910; 515373, 4215919; 515394, 4215921; 515420, 4215916; 515450, 4215900; 515490, 4215873; 515512, 4215854; 515537, 4215818; 515553, 4215809; 515579, 4215809; 515596, 4215817; 515627, 4215839; 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516151, 4214529; 516178, 4214500; 516248, 4214402; 516261, 4214304; 516251, 4214239; 516237, 4214171; 516220, 4214124; 516202, 4214086; 516207, 4213985; 516216, 4213934; 516245, 4213826; 516255, 4213737; 516284, 4213721; 516329, 4213708; 516419, 4213704; 516441, 4213694; 516470, 4213674; 516509, 4213674; 516549, 4213676; 516587, 4213676; 516625, 4213683; 516626, 4213696; 516616, 4213734; 516605, 4213779; 516613, 4213820; 516638, 4213856; 516667, 4213844; 516668, 4213799; 516667, 4213744; 516668, 4213721; 516661, 4213677; 516632, 4213669; 516591, 4213664; 516521, 4213656; 516474, 4213655; 516446, 4213669; 516428, 4213682; 516402, 4213685; 516366, 4213679; 516328, 4213674; 516290, 4213681; 516259, 4213703; 516235, 4213723; 516227, 4213780; 516212, 4213839; 516212, 4213862; 516201, 4213911; 516187, 4213972; 516182, 4214029; 516185, 4214073; 516186, 4214098; 516201, 4214132; 516216, 4214174; 516225, 4214210; 516236, 4214278; 516173, 4214318; 516046, 4214400; 516005, 4214397; 515781, 4214163; 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513903, 4215786; 513903, 4215802; 513905, 4215825; 513920, 4215877; 513919, 4215910; 513904, 4215922; 513884, 4215922; 513765, 4215908; 513738, 4215900; 513682, 4215900; 513653, 4215910; 513577, 4215954; 513558, 4215989; 513534, 4216071; returning to 513514, 4216097.

(ii) *Note:* MAR–3 included on map with unit SON–1.

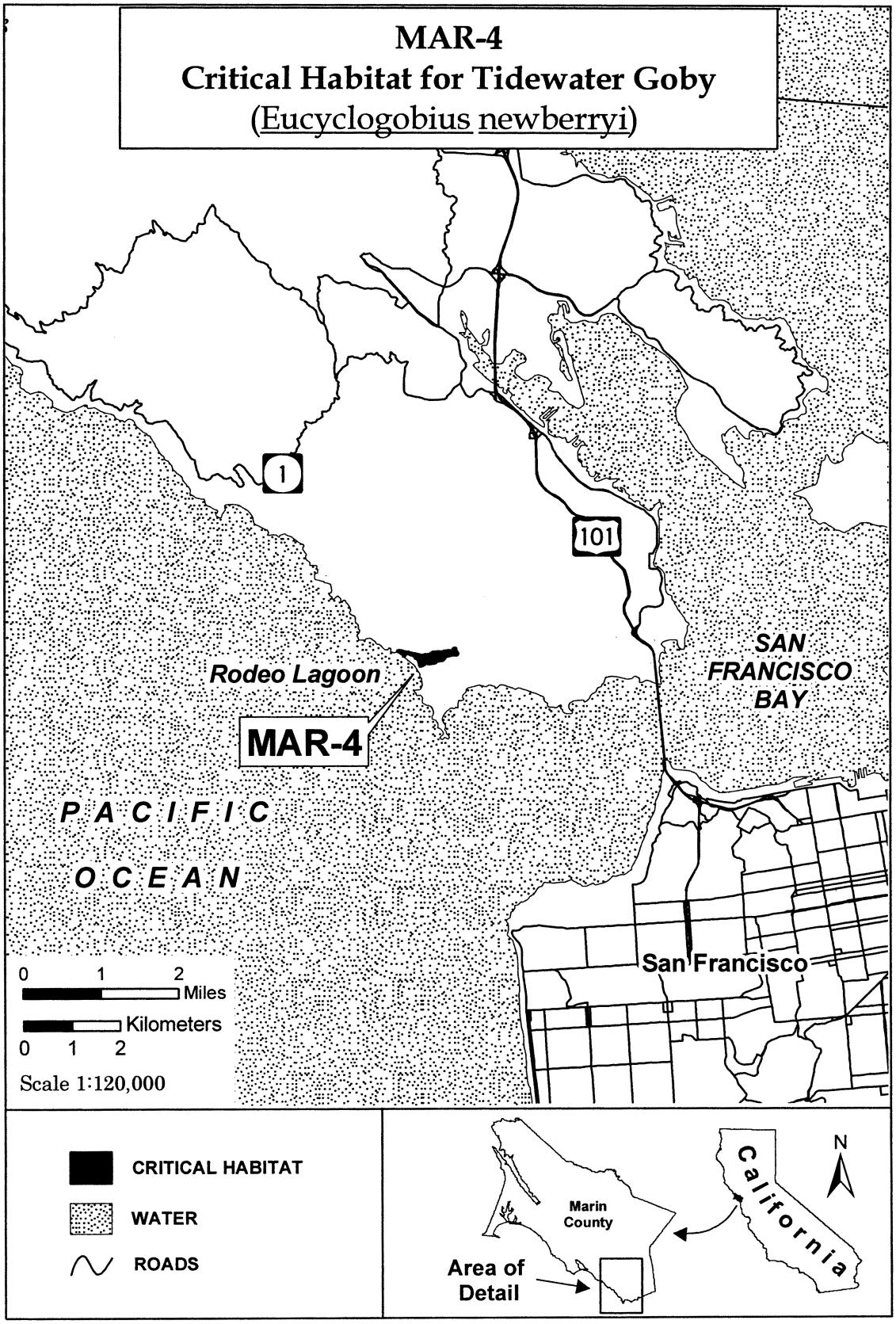
(19) Unit MAR–4; Marin County, California.

(i) From USGS 1:24,000 scale quadrangle Point Bonita. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 540461, 4187256; 540478, 4187263; 540497, 4187265; 540522, 4187261; 540558, 4187249; 540606, 4187242; 540637, 4187227; 540692, 4187224; 540716, 4187211; 540738, 4187212; 540797, 4187198; 540841, 4187197; 540908, 4187177; 540933, 4187165; 540960, 4187172; 541012, 4187168; 541039, 4187176; 541116, 4187175; 541129, 4187180; 541157, 4187206; 541177, 4187219; 541199, 4187225; 541320, 4187238; 541372, 4187230; 541384, 4187231;

541435, 4187247; 541521, 4187268; 541564, 4187257; 541591, 4187261; 541605, 4187268; 541649, 4187308; 541658, 4187309; 541669, 4187303; 541677, 4187291; 541702, 4187235; 541718, 4187190; 541716, 4187182; 541698, 4187171; 541614, 4187164; 541520, 4187142; 541501, 4187142; 541483, 4187137; 541407, 4187061; 541393, 4187058; 541379, 4187060; 541367, 4187056; 541315, 4187050; 541277, 4187033; 541269, 4187022; 541254, 4187011; 541227, 4187001; 541195, 4186993; 541106, 4186984; 541072, 4186990; 541049, 4186990; 541017, 4186963; 540991, 4186948; 540940, 4186941; 540927, 4186948; 540922, 4186958; 540907, 4187027; 540893, 4187060; 540879, 4187076; 540838, 4187110; 540823, 4187139; 540776, 4187161; 540758, 4187164; 540691, 4187189; 540644, 4187199; 540628, 4187211; 540619, 4187155; 540594, 4187167; 540557, 4187191; 540546, 4187209; 540521, 4187230; 540490, 4187247; returning to 540461, 4187256.

(ii) *Note:* Map of Unit MAR–4 follows.

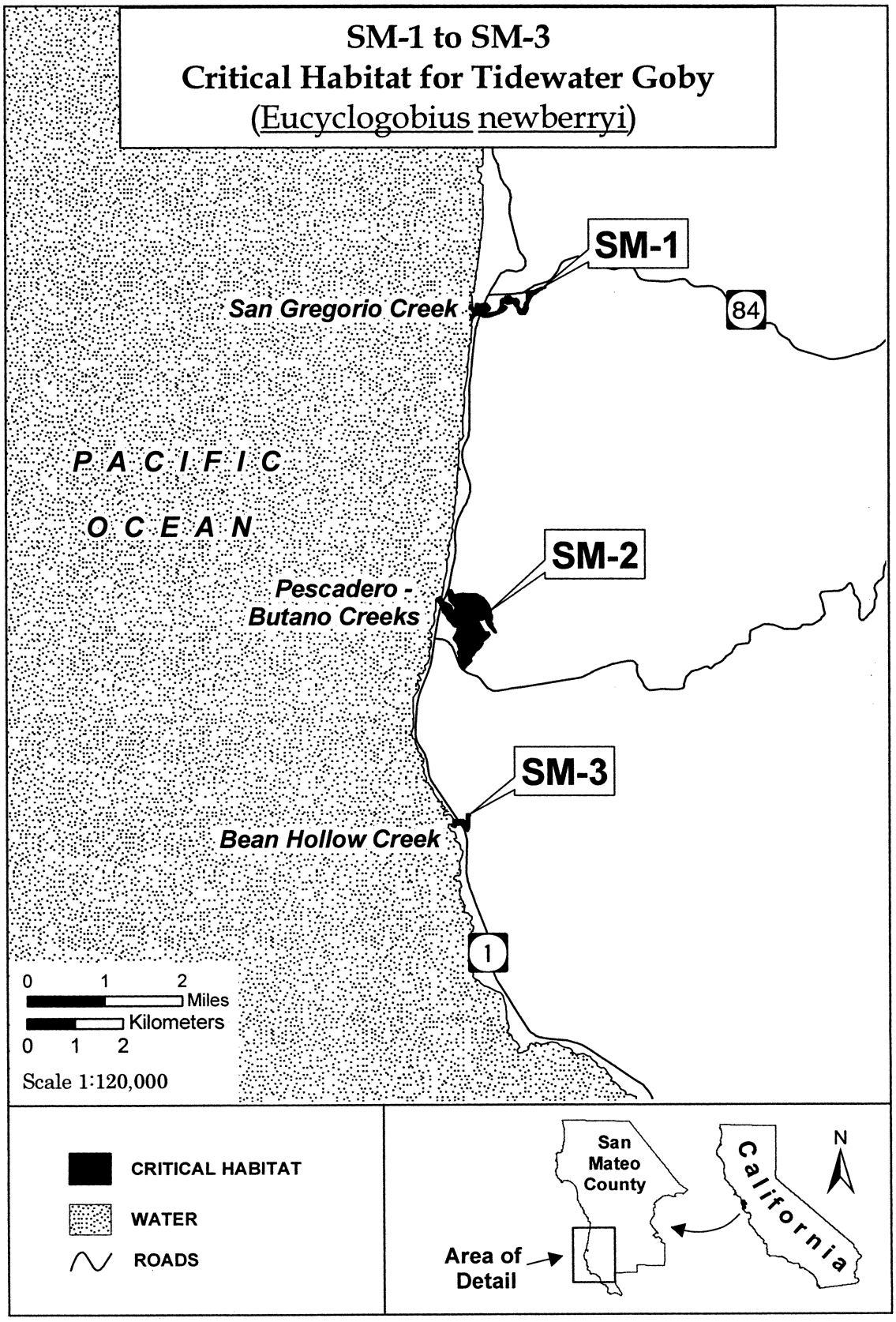
BILLING CODE 4310–55–P


MAR-4
Critical Habitat for Tidewater Goby
(Eucyclogobius newberryi)
1
101
Rodeo Lagoon
MAR-4
SAN FRANCISCO BAY
PACIFIC OCEAN
San Francisco
0 1 2 Miles
Kilometers
0 1 2
Scale 1:120,000
CRITICAL HABITAT
WATER
ROADS
Marin County
Area of Detail
California
N

(20) Unit SM–1; San Mateo County, California.

(i) From USGS 1:24,000 scale quadrangle San Gregorio. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 552769, 4130764; 552784, 4130813; 552806, 4130800; 552837, 4130766; 552869, 4130686; 552884, 4130681; 552903, 4130686; 552920, 4130694; 552922, 4130709; 552911, 4130785; 552902, 4130822; 552922, 4130836; 552970, 4130825; 553001, 4130812; 553002, 4130822; 553007, 4130831; 553023, 4130833; 553044, 4130845; 553055, 4130845; 553062, 4130833; 553033, 4130773; 553019, 4130747; 552990, 4130725; 552984, 4130712; 552986, 4130699; 552996, 4130680; 552994, 4130669; 553045, 4130645; 553053, 4130658; 553042, 4130666; 553031, 4130662; 553018, 4130666; 553014, 4130673; 553014, 4130685; 553029, 4130715; 553082, 4130729; 553095, 4130737; 553114, 4130758; 553104, 4130777; 553074, 4130796; 553064, 4130807; 553070, 4130823; 553087, 4130854; 553098, 4130853; 553127, 4130841; 553134, 4130834; 553164, 4130795; 553180, 4130782; 553192, 4130766; 553191, 4130751; 553175, 4130728; 553151, 4130709; 553105, 4130698; 553092, 4130688; 553065, 4130685; 553055, 4130679; 553064, 4130660; 553067, 4130638; 553129, 4130636; 553186, 4130647; 553246, 4130652; 553343, 4130671; 553365, 4130689; 553384, 4130713; 553395, 4130732; 553402, 4130752; 553430, 4130800; 553435, 4130825; 553429, 4130884; 553430, 4130910; 553441, 4130936; 553453, 4130944; 553467, 4130948; 553502, 4130945; 553508, 4130973; 553528, 4130987; 553549, 4130991; 553571, 4131006; 553586, 4131011; 553605, 4131002; 553659, 4130945; 553667, 4130948; 553723, 4130945; 553737, 4130947; 553753, 4130942; 553768, 4130928; 553780, 4130897; 553784, 4130877; 553777, 4130834; 553779, 4130818; 553776, 4130791; 553818, 4130733; 553862, 4130714; 553887, 4130720; 553893, 4130736; 553893, 4130747; 553919, 4130794; 553919, 4130845; 553929, 4130866; 553957, 4130889; 553968, 4130919; 553968, 4130976; 553972, 4131011; 553977, 4131026; 553974, 4131044; 553980, 4131056; 553980, 4131066; 553976, 4131079; 553951, 4131094; 553947, 4131102; 553959, 4131114; 553985, 4131130; 553993, 4131115; 553993, 4131101; 553988, 4131093; 553990, 4131079; 554001, 4131070; 554018, 4131066; 554040, 4131090; 554062, 4131105; 554119, 4131109; 554269, 4131178; 554316, 4131182; 554333, 4131195; 554351, 4131198; 554351, 4131196; 554335, 4131192; 554317, 4131179; 554288, 4131168; 554267, 4131164; 554208, 4131138; 554147, 4131083; 554077, 4131038; 554060, 4131018; 554043, 4130994; 554019, 4130938; 553999, 4130900; 553966, 4130851; 553964, 4130761; 553940, 4130687; 553915, 4130651; 553885, 4130640; 553858, 4130640; 553825, 4130650; 553796, 4130668; 553782, 4130691; 553778, 4130741; 553774, 4130763; 553739, 4130802; 553689, 4130875; 553674, 4130880; 553655, 4130880; 553595, 4130860; 553571, 4130860; 553542, 4130867; 553528, 4130882; 553496, 4130890; 553483, 4130887; 553469, 4130877; 553458, 4130860; 553466, 4130828; 553466, 4130811; 553525, 4130783; 553526, 4130769; 553516, 4130741; 553478, 4130715; 553457, 4130694; 553430, 4130682; 553407, 4130693; 553406, 4130691; 553427, 4130681; 553393, 4130665; 553379, 4130655; 553201, 4130593; 553153, 4130581; 553106, 4130582; 553063, 4130589; 552978, 4130631; 552944, 4130637; 552870, 4130605; 552858, 4130583; 552836, 4130558; 552806, 4130534; 552796, 4130562; 552814, 4130572; 552831, 4130587; 552845, 4130628; 552848, 4130683; 552812, 4130742; 552795, 4130760; 552781, 4130745; returning to 552769, 4130764.

(ii) *Note:* Map of Unit SM–1 follows.



BILLING CODE 4310–55–C

(21) Unit SM–2; San Mateo County, California.

(i) From USGS 1:24,000 scale quadrangle San Gregorio. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 552093, 4124660; 552152, 4124706; 552208, 4124607; 552227, 4124591; 552243, 4124592; 552325, 4124545; 552363, 4124496; 552398, 4124421; 552447, 4124421; 552455, 4124442; 552467, 4124459; 552488, 4124471; 552450, 4124533; 552377, 4124608; 552346, 4124657; 552335, 4124723; 552321, 4124759; 552323, 4124841; 552354, 4124844; 552378, 4124827; 552397, 4124804; 552407, 4124755; 552427, 4124731; 552597, 4124774; 552629, 4124773; 552719, 4124759; 552869, 4124762; 552893, 4124753; 552993, 4124703; 553029, 4124682; 553080, 4124628; 553127, 4124563; 553153, 4124520; 553167, 4124484; 553187, 4124393; 553202, 4124352; 553210, 4124314; 553217, 4124262; 553193, 4124183; 553219, 4124140; 553217, 4124107; 553244, 4124048; 553299, 4123975; 553291, 4123974; 553283, 4123980; 553247, 4124020; 553193, 4124079; 553160, 4124113; 553090, 4124253; 553059, 4124264; 553043, 4124264; 553015, 4124246; 552988, 4124239; 552956, 4124241; 552929, 4124251; 552910, 4124268; 552904, 4124290; 552879, 4124333; 552822, 4124365; 552750, 4124346; 552794, 4124318; 552923, 4124211; 552939, 4124187; 552949, 4124149; 553065, 4123962; 553146, 4123962; 553167, 4123910; 553011, 4123777; 553011, 4123740; 553008, 4123719; 552983, 4123672; 552957, 4123643; 552869, 4123570; 552848, 4123540; 552830, 4123498; 552782, 4123479; 552779, 4123446; 552755, 4123403; 552782, 4123375; 552764, 4123347; 552691, 4123276; 552643, 4123214; 552613, 4123228; 552596, 4123246; 552575, 4123285; 552556, 4123361; 552537, 4123392; 552532, 4123420; 552548, 4123460; 552514, 4123531; 552519, 4123555; 552546, 4123582; 552538, 4123656; 552519, 4123697; 552511, 4123732; 552439, 4123832; 552435, 4123848; 552437, 4123872; 552479, 4123937; 552486, 4123961; 552533, 4124099; 552484, 4124100; 552447, 4124107; 552422, 4124127; 552410, 4124150; 552382, 4124180; 552343, 4124217; 552325, 4124244; 552294, 4124280; 552279, 4124320; 552239, 4124387; 552218, 4124395; 552203, 4124420; 552187, 4124528; 552156, 4124540; 552144, 4124553; 552149, 4124572; 552134, 4124599; 552104, 4124618; returning to 552093, 4124660.

(ii) *Note:* SM–2 included on map with unit SM–1.

(22) Unit SM–3; San Mateo County, California.

(i) From USGS 1:24,000 scale quadrangle Pigeon Point. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 552371, 4119927; 552402, 4119965; 552411, 4119992; 552409, 4120039; 552436, 4120046; 552446, 4120041; 552461, 4120039; 552483, 4120043; 552490, 4120040; 552498, 4120036; 552507, 4120016; 552533, 4120028; 552537, 4120034; 552560, 4120032; 552569, 4120040; 552589, 4120043; 552606, 4120035; 552637, 4119992; 552655, 4119973; 552683, 4120024; 552688, 4120146; 552701, 4120157; 552725, 4120160; 552741, 4120157; 552744, 4120134; 552741, 4120114; 552729, 4120090; 552723, 4119997; 552717, 4119970; 552724, 4119920; 552712, 4119843; 552702, 4119832; 552699, 4119819; 552690, 4119819; 552665, 4119838; 552657, 4119853; 552653, 4119871; 552624, 4119887; 552596, 4119949; 552581, 4119953; 552563, 4119975; 552548, 4120000; 552519, 4119990; 552522, 4119981; 552529, 4119976; 552532, 4119967; 552532, 4119958; 552529, 4119953; 552507, 4119957; 552477, 4119953; 552450, 4119940; 552444, 4119914; 552440, 4119907; 552423, 4119907; 552413, 4119910; 552398, 4119928; 552390, 4119932; returning to 552371, 4119927.

(ii) *Note:* SM–3 included on map with unit SM–1.

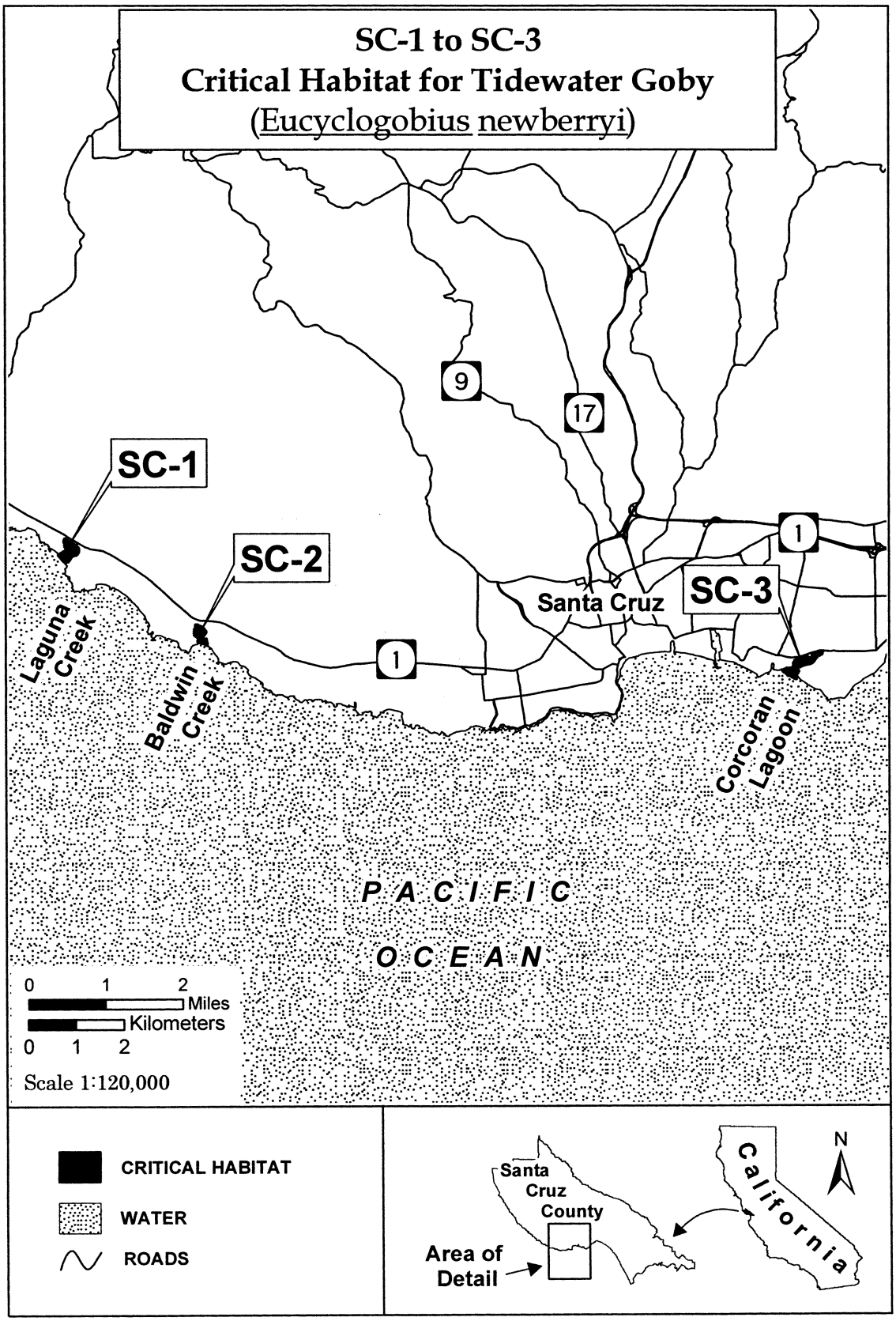
(23) Unit SC–1; Santa Cruz County, California.

(i) From USGS 1:24,000 scale quadrangle Santa Cruz. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 575050, 4093349; 575122, 4093391; 575122, 4093392; 575142, 4093406; 575179, 4093428; 575186, 4093431; 575194, 4093426; 575207, 4093421; 575221, 4093430; 575228, 4093440; 575233, 4093453; 575226, 4093467; 575203, 4093491; 575189, 4093516; 575180, 4093533; 575177, 4093546; 575175, 4093575; 575172, 4093616; 575172, 4093657; 575174, 4093688; 575437, 4093542; 575447, 4093510; 575461, 4093501; 575468, 4093490; 575471, 4093482; 575471, 4093452; 575471, 4093430; 575469, 4093412; 575462, 4093384; 575451, 4093363; 575429, 4093350; 575408, 4093342; 575379, 4093334; 575356, 4093328; 575341, 4093320; 575330, 4093309; 575312, 4093295; 575303, 4093272; 575287, 4093241; 575274, 4093224; 575264, 4093209; 575251, 4093203; 575235, 4093206; 575231, 4093207; 575220, 4093204; 575213, 4093197; 575207, 4093172; 575189, 4093186; 575186, 4093200; 575167, 4093210; 575139, 4093240; 575068, 4093327; returning to 575050, 4093349.

(ii) *Note:* Map of Unit SC–1 follows.

[Insert Map of Unit SC–1]

BILLING CODE 4310–55–P


SC-1 to SC-3
Critical Habitat for Tidewater Goby
(Eucyclogobius newberryi)
SC-1
SC-2
SC-3
Santa Cruz
9
17
1
1
Laguna Creek
Baldwin Creek
Corcoran Lagoon
PACIFIC
OCEAN
0 1 2
Miles
Kilometers
0 1 2
Scale 1:120,000
CRITICAL HABITAT
WATER
ROADS
Santa Cruz County
Area of Detail
California
N

(24) Unit SC–2; Santa Cruz County, California.

(i) From USGS 1:24,000 scale quadrangle Santa Cruz. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 577882, 4091692; 577882, 4091713; 577882, 4091737; 577886, 4091758; 577894, 4091784; 577904, 4091804; 577908, 4091830; 577906, 4091840; 577903, 4091858; 577905, 4091866; 577913, 4091867; 577922, 4091862; 577922, 4091865; 577927, 4091871; 577933, 4091876; 577958, 4091870; 577982, 4091859; 577997, 4091852; 578011, 4091846; 578028, 4091831; 578063, 4091813; 578083, 4091801; 578108, 4091775; 578122, 4091750; 578126, 4091742; 578129, 4091738; 578130, 4091726; 578126, 4091708; 578116, 4091686; 578103, 4091670; 578083, 4091655; 578068, 4091641; 578063, 4091620; 578073, 4091597; 578080, 4091577; 578083, 4091568; 578084, 4091569; 578087, 4091564; 578094, 4091561; 578105, 4091570; 578111, 4091578; 578117, 4091583; 578126, 4091580; 578137, 4091574; 578147, 4091568; 578143, 4091563; 578141, 4091553; 578141, 4091542; 578142, 4091530; 578147, 4091513; 578151, 4091504; 578159, 4091444; 578158, 4091445; 578076, 4091483; 577988, 4091509; 577974, 4091504; 577961, 4091520; 577961, 4091536; 577966, 4091552; 577968, 4091571; 577965, 4091588; 577956, 4091603; 577941, 4091617; 577923, 4091635; 577910, 4091641; 577896, 4091659; 577885, 4091673; returning to 577882, 4091692.

(ii) *Note:* SC–2 included on map with unit SC–1.

(25) Unit SC–3; Santa Cruz County, California.

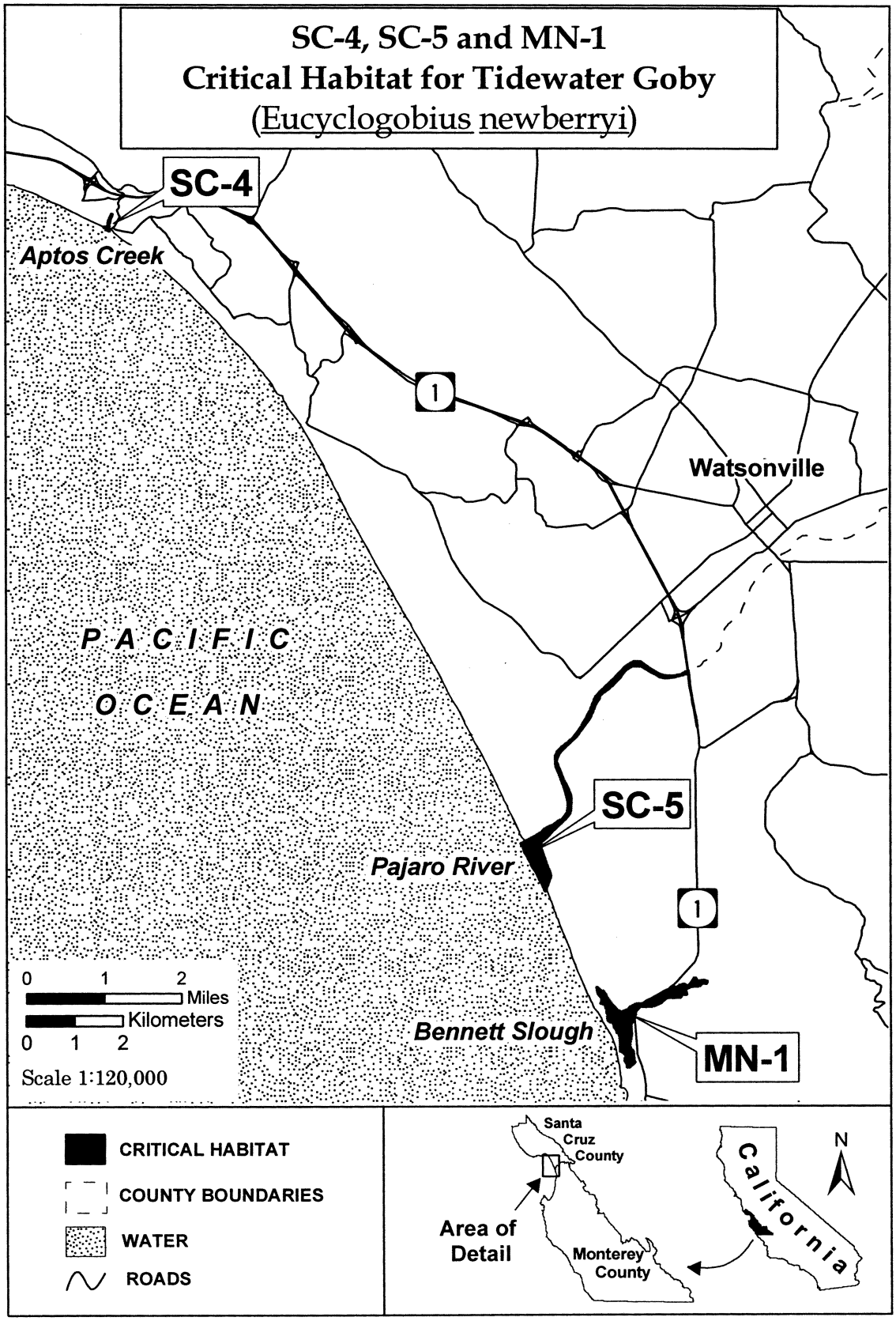
(i) From USGS 1:24,000 scale quadrangle Soquel. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 590179, 4090901; 590236, 4090929; 590236, 4090930; 590282, 4090945; 590313, 4090956; 590335, 4090952; 590350, 4090945; 590362, 4090937; 590375, 4090930; 590378, 4090927; 590380, 4090934; 590391, 4090956; 590400, 4090976; 590411, 4090978; 590412, 4090977; 590420, 4090993; 590424, 4091004; 590423, 4091011; 590425, 4091018; 590424, 4091018; 590423, 4091049; 590423, 4091065; 590425, 4091074; 590426, 4091079; 590429, 4091087; 590437, 4091096; 590448, 4091112; 590464, 4091125; 590480, 4091138; 590489, 4091143; 590497, 4091150; 590518, 4091158; 590549, 4091161; 590573, 4091153; 590581, 4091147; 590587, 4091146; 590601, 4091147; 590611, 4091146; 590620, 4091149; 590623, 4091152; 590629, 4091168; 590631, 4091183; 590643, 4091197; 590660, 4091205; 590683, 4091207; 590701, 4091194; 590718, 4091184; 590745, 4091164; 590763, 4091166; 590776, 4091162; 590791, 4091175; 590795, 4091180; 590800, 4091192; 590809, 4091208; 590817, 4091231; 590829, 4091245; 590855, 4091265; 590889, 4091279; 590909, 4091283; 590935, 4091291; 590950, 4091295; 590968, 4091298; 590984, 4091301; 591003, 4091304; 591012, 4091305; 591015, 4091305; 591021, 4091304; 591025, 4091302; 591027, 4091299; 591028, 4091294; 591027, 4091289; 591024, 4091284; 591018, 4091272; 591014, 4091260; 591005, 4091248; 590999, 4091240; 590990, 4091234; 590973, 4091227; 590957, 4091222; 590947, 4091218; 590938, 4091211; 590929, 4091206; 590919, 4091196; 590912, 4091188; 590905, 4091177; 590890, 4091164; 590878, 4091145; 590873, 4091136; 590865, 4091127; 590859, 4091118; 590854, 4091110; 590842, 4091096; 590836, 4091087; 590827, 4091080; 590819, 4091073; 590804, 4091062; 590794, 4091057; 590785, 4091053; 590755, 4091042; 590739, 4091039; 590719, 4091037; 590699, 4091033; 590672, 4091029; 590653, 4091024; 590636, 4091018; 590619, 4091011; 590604, 4091005; 590582, 4090991; 590566, 4090982; 590554, 4090977; 590542, 4090972; 590532, 4090972; 590524, 4090973; 590507, 4090980; 590496, 4090986; 590477, 4090999; 590468, 4091002; 590457, 4091003; 590446, 4091004; 590436, 4091010; 590428, 4091003; 590427, 4090993; 590425, 4090970; 590427, 4090970; 590460, 4090956; 590495, 4090941; 590530, 4090892; 590533, 4090873; 590502, 4090842; 590465, 4090818; 590459, 4090810; 590474, 4090794; 590480, 4090791; 590477, 4090718; 590430, 4090743; 590366, 4090776; 590323, 4090794; 590283, 4090828; 590242, 4090855; 590204, 4090874; returning to 590179, 4090901.

(ii) *Note:* SC–3 included on map with unit SC–1.

(26) Unit SC–4; Santa Cruz County, California.

(i) From USGS 1:24,000 scale quadrangle Soquel. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 597246, 4092023; 597317, 4092033; 597320, 4092041; 597331, 4092080; 597348, 4092134; 597363, 4092174; 597373, 4092199; 597378, 4092211; 597386, 4092225; 597396, 4092249; 597406, 4092262; 597412, 4092279; 597423, 4092294; 597429, 4092282; 597416, 4092251; 597402, 4092211; 597389, 4092165; 597381, 4092140; 597372, 4092109; 597361, 4092080; 597359, 4092059; 597359, 4092049; 597358, 4092042; 597360, 4092040; 597373, 4091945; 597351, 4091956; 597327, 4091965; 597310, 4091976; 597273, 4092007; returning to 597246, 4092023.

(ii) *Note:* Map of Unit SC–4 follows.



BILLING CODE 4310–55–C

(27) Unit SC–5; Santa Cruz and Monterey Counties, California.

(i) From USGS 1:24,000 scale quadrangles Watsonville West and Moss Landing. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 605911, 4079111; 606162, 4079236; 606226, 4079281; 606361, 4079366; 606416, 4079419; 606517, 4079467; 606577, 4079500; 606717, 4079591; 606758, 4079610; 606799, 4079640; 606872, 4079760; 606899, 4079887; 606895, 4079983; 606875, 4080067; 606845, 4080174; 606820, 4080259; 606672, 4080641; 606643, 4080737; 606629, 4080919; 606631, 4080943; 606662, 4081020; 606737, 4081107; 606879, 4081225; 607000, 4081337; 607128, 4081485; 607218, 4081624; 607254, 4081690; 607346, 4081878; 607382, 4081974; 607445, 4082127; 607474, 4082175; 607528, 4082251; 607556, 4082275; 607765, 4082472; 607861, 4082567; 608079, 4082792; 608147, 4082847; 608282, 4082921; 608395, 4082922; 608595, 4082775; 608783, 4082658; 608883, 4082624; 609077, 4082620; 609255, 4082657; 609368, 4082708; 609375, 4082666; 609278, 4082633; 609137, 4082597; 608957, 4082582; 608884, 4082583; 608799, 4082604; 608730, 4082648; 608623, 4082704; 608418, 4082820; 608332, 4082826; 608241, 4082819; 608098, 4082739; 608020, 4082648; 607992, 4082604; 607858, 4082457; 607748, 4082360; 607606, 4082244; 607551, 4082207; 607554, 4082147; 607512, 4082084; 607476, 4082012; 607382, 4081813; 607334, 4081708; 607165, 4081477; 607075, 4081361; 607035, 4081316; 606828, 4081128; 606753, 4081051; 606698, 4080981; 606661, 4080886; 606657, 4080844; 606664, 4080807; 606743, 4080589; 606791, 4080489; 606893, 4080276; 606950, 4080145; 606963, 4080070; 606955, 4079974; 606947, 4079787; 606932, 4079740; 606900, 4079696; 606815, 4079589; 606672, 4079474; 606516, 4079318; 606445, 4079230; 606343, 4079151; 606304, 4079085; 606413, 4078742; 606426, 4078716; 606465, 4078622; 606499, 4078532; 606527, 4078444; 606525, 4078404; 606510, 4078342; 606420, 4078101; 606395, 4078140; 606354, 4078244; 606255, 4078416; 606218, 4078509; 606137, 4078641; 606080, 4078773; 605983, 4078937; 605936, 4079066; returning to 605911, 4079111.

(ii) *Note:* SC–5 included on map with unit SC–4.

(28) Unit MN–1; Monterey County, California.

(i) From USGS 1:24,000 scale quadrangle Moss Landing. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 607479, 4076078; 607484, 4076090; 607498, 4076089; 607529, 4076051; 607548, 4076043; 607563, 4076019; 607614, 4076009; 607664, 4075939; 607690, 4075882; 607715, 4075845; 607729, 4075835; 607765, 4075780; 607782, 4075742; 607812, 4075704; 607871, 4075651; 607909, 4075602; 607954, 4075586; 607997, 4075559; 608003, 4075571; 608095, 4075612; 608137, 4075638; 608191, 4075683; 608295, 4075738; 608324, 4075749; 608380, 4075742; 608433, 4075743; 608480, 4075770; 608516, 4075767; 608595, 4075832; 608670, 4075851; 608730, 4075908; 608780, 4075917; 608883, 4075966; 608963, 4075985; 609014, 4076006; 609042, 4076037; 609037, 4076049; 609013, 4076060; 609044, 4076094; 609091, 4076103; 609112, 4076082; 609143, 4076090; 609157, 4076088; 609189, 4076107; 609209, 4076135; 609217, 4076139; 609244, 4076120; 609275, 4076145; 609305, 4076143; 609358, 4076120; 609383, 4076127; 609404, 4076121; 609432, 4076149; 609503, 4076272; 609517, 4076283; 609538, 4076279; 609555, 4076242; 609578, 4076223; 609706, 4076239; 609760, 4076224; 609779, 4076203; 609772, 4076170; 609753, 4076155; 609723, 4076168; 609685, 4076167; 609634, 4076122; 609612, 4076120; 609599, 4076111; 609506, 4076108; 609466, 4076097; 609458, 4076097; 609442, 4076119; 609421, 4076115; 609420, 4076100; 609370, 4076068; 609357, 4076066; 609330, 4076024; 609311, 4076009; 609343, 4075983; 609352, 4075945; 609253, 4075939; 609243, 4075925; 609243, 4075893; 609227, 4075876; 609161, 4075881; 609129, 4075874; 609059, 4075870; 609031, 4075875; 608941, 4075867; 608898, 4075846; 608822, 4075769; 608732, 4075714; 608647, 4075693; 608547, 4075694; 608506, 4075687; 608402, 4075693; 608353, 4075656; 608310, 4075612; 608290, 4075582; 608286, 4075529; 608272, 4075483; 608276, 4075466; 608265, 4075456; 608242, 4075392; 608231, 4075376; 608212, 4075371; 608190, 4075328; 608188, 4075271; 608202, 4075096; 608174, 4074988; 608165, 4074913; 608166, 4074872; 608185, 4074802; 608203, 4074780; 608226, 4074768; 608242, 4074744; 608258, 4074610; 608252, 4074570; 608269, 4074527; 608281, 4074517; 608171, 4074429; 608104, 4074419; 608100, 4074483; 608083, 4074522; 608056, 4074561; 608053, 4074583; 608078, 4074657; 608074, 4074686; 608032, 4074719; 607975, 4074748; 607977, 4074840; 607971, 4074920; 607954, 4075047; 607939, 4075108; 607952, 4075166; 607977, 4075198; 608060, 4075233; 608126, 4075235; 608142, 4075229; 608140, 4075250; 608116, 4075255; 608060, 4075248; 607991, 4075229; 607968, 4075216; 607945, 4075190; 607915, 4075141; 607899, 4075150; 607880, 4075203; 607852, 4075240; 607821, 4075335; 607810, 4075348; 607763, 4075361; 607751, 4075370; 607720, 4075398; 607707, 4075421; 607704, 4075490; 607715, 4075546; 607696, 4075565; 607696, 4075616; 607674, 4075642; 607667, 4075662; 607669, 4075707; 607619, 4075744; 607571, 4075762; 607582, 4075819; 607578, 4075867; 607549, 4075918; 607530, 4075928; 607502, 4075961; 607490, 4076020; 607493, 4076054; returning to 607479, 4076078.

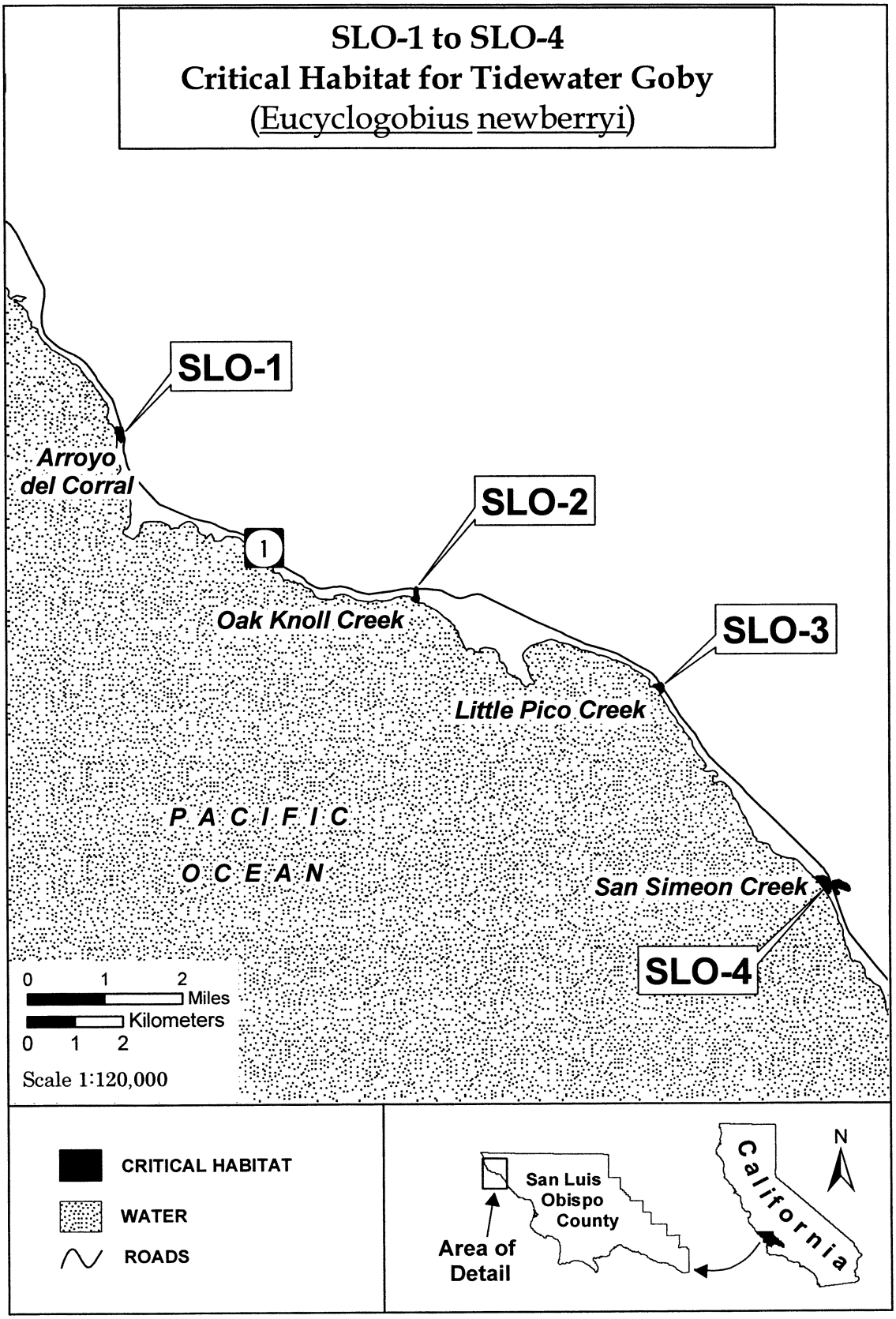
(ii) *Note:* MN–1 included on map with unit SC–4.

(29) Unit SLO–1; San Luis Obispo County, California.

(i) From USGS 1:24,000 scale quadrangle Piedras Blancas. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 654950, 3950321; 654974, 3950315; 654982, 3950312; 654990, 3950310; 654996, 3950309; 654997, 3950309; 654998, 3950309; 654998, 3950310; 654999, 3950310; 655014, 3950305; 655018, 3950303; 655018, 3950310; 655014, 3950319; 655017, 3950328; 655026, 3950331; 655031, 3950331; 655039, 3950328; 655065, 3950249; 655066, 3950238; 655058, 3950233; 655048, 3950227; 655043, 3950217; 655042, 3950199; 655044, 3950183; 655048, 3950169; 655053, 3950162; 655057, 3950157; 655061, 3950151; 655065, 3950138; 655068, 3950128; 655076, 3950120; 655081, 3950111; 655081, 3950090; 655081, 3950083; 655068, 3950080; 655058, 3950077; 655052, 3950072; 655047, 3950069; 655041, 3950056; 655036, 3950067; 655032, 3950077; 655028, 3950090; 655025, 3950104; 655020, 3950111; 655020, 3950118; 655018, 3950124; 655018, 3950131; 655007, 3950129; 655006, 3950130; 655005, 3950130; 655004, 3950130; 655003, 3950130; 654997, 3950121; 654996, 3950121; 654996, 3950120; 654996, 3950115; 654994, 3950108; 654990, 3950103; 654990, 3950105; 654983, 3950122; 654985, 3950133; 654987, 3950145; 654985, 3950156; 654982, 3950192; 654978, 3950211; 654974, 3950231; 654973, 3950246; 654958, 3950299; returning to 654950, 3950321.

(ii) *Note:* Map of Unit SLO–1 follows.

BILLING CODE 4310–55–P


SLO-1 to SLO-4
Critical Habitat for Tidewater Goby
(Eucyclogobius newberryi)
SLO-1
Arroyo del Corral
SLO-2
1
Oak Knoll Creek
SLO-3
Little Pico Creek
PACIFIC
OCEAN
San Simeon Creek
SLO-4
0 1 2
Miles
Kilometers
0 1 2
Scale 1:120,000
CRITICAL HABITAT
WATER
ROADS
San Luis Obispo County
Area of Detail
California
N

(30) Unit SLO–2; San Luis Obispo County, California.

(i) From USGS 1:24,000 scale quadrangle San Simeon. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 661106, 3946736; 661136, 3946762; 661138, 3946761; 661154, 3946765; 661163, 3946776; 661162, 3946822; 661160, 3946859; 661160, 3946860; 661165, 3946889; 661168, 3946920; 661171, 3946938; 661172, 3946939; 661172, 3946940; 661173, 3946940; 661174, 3946940; 661175, 3946940; 661176, 3946940; 661176, 3946939; 661177, 3946939; 661177, 3946938; 661178, 3946946; 661187, 3946945; 661187, 3946940; 661190, 3946912; 661190, 3946884; 661192, 3946849; 661193, 3946836; 661194, 3946826; 661195, 3946809; 661200, 3946789; 661205, 3946777; 661207, 3946759; 661208, 3946746; 661205, 3946734; 661200, 3946728; 661198, 3946727; 661194, 3946723; 661191, 3946717; 661190, 3946711; 661193, 3946705; 661197, 3946699; 661197, 3946695; 661194, 3946690; 661195, 3946685; 661196, 3946682; 661182, 3946684; 661133, 3946718; returning to 661106, 3946736.

(ii) *Note:* SLO–2 included on map with unit SLO–1.

(31) Unit SLO–3; San Luis Obispo County, California.

(i) From USGS 1:24,000 scale quadrangle San Simeon. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 666127, 3944901; 666136, 3944903; 666152, 3944900; 666193, 3944908; 666235, 3944880; 666260, 3944893; 666263, 3944905; 666258, 3944930; 666258, 3944937; 666297, 3944877; 666294, 3944848; 666275, 3944773; 666254, 3944801; 666226, 3944828; 666172, 3944870; 666152, 3944892; returning to 666127, 3944901.

(ii) *Note:* SLO–3 included on map with unit SLO–1.

(32) Unit SLO–4; San Luis Obispo County, California.

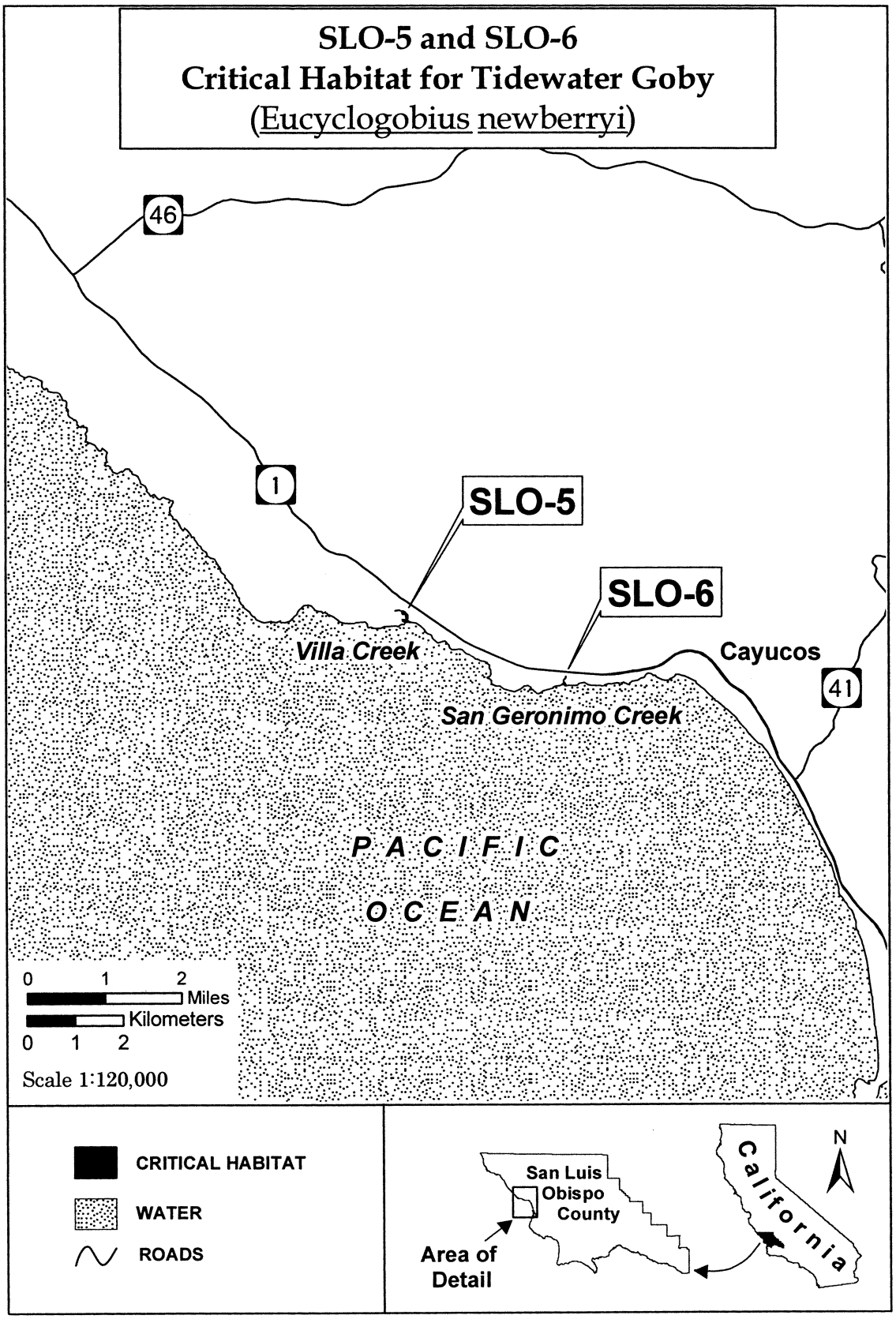
(i) From USGS 1:24,000 scale quadrangles Pico Creek and Cambria. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 669487, 3940858; 669537, 3940865; 669549, 3940860; 669550, 3940860; 669551, 3940861; 669551, 3940862; 669551, 3940863; 669558, 3940865; 669574, 3940868; 669596, 3940871; 669606, 3940872; 669615, 3940872; 669625, 3940869; 669635, 3940866; 669641, 3940863; 669648, 3940859; 669655, 3940853; 669662, 3940850; 669669, 3940846; 669676, 3940839; 669685, 3940832; 669694, 3940814; 669705, 3940798; 669720, 3940774; 669737, 3940755; 669748, 3940744; 669753, 3940740; 669756, 3940738; 669765, 3940735; 669776, 3940736; 669785, 3940735; 669801, 3940730; 669815, 3940738; 669819, 3940742; 669823, 3940747; 669826, 3940754; 669830, 3940758; 669836, 3940761; 669840, 3940764; 669847, 3940765; 669851, 3940765; 669859, 3940765; 669864, 3940767; 669868, 3940768; 669885, 3940776; 669895, 3940780; 669904, 3940778; 669916, 3940781; 669926, 3940784; 669937, 3940786; 669948, 3940784; 669958, 3940779; 669969, 3940773; 669980, 3940763; 669989, 3940756; 670000, 3940750; 670012, 3940746; 670031, 3940741; 670041, 3940734; 670052, 3940727; 670069, 3940719; 670090, 3940712; 670098, 3940704; 670107, 3940697; 670113, 3940691; 670118, 3940683; 670126, 3940676; 670135, 3940668; 670137, 3940659; 670136, 3940652; 670135, 3940646; 670140, 3940642; 670144, 3940636; 670147, 3940629; 670154, 3940620; 670152, 3940618; 670152, 3940616; 670151, 3940613; 670131, 3940620; 670120, 3940628; 670120, 3940629; 670112, 3940625; 670102, 3940623; 670082, 3940627; 670069, 3940637; 670060, 3940645; 670050, 3940648; 670042, 3940658; 670040, 3940667; 670031, 3940666; 670022, 3940657; 670005, 3940658; 669988, 3940665; 669979, 3940674; 669973, 3940681; 669965, 3940681; 669943, 3940680; 669929, 3940684; 669913, 3940680; 669904, 3940670; 669900, 3940657; 669894, 3940653; 669881, 3940659; 669872, 3940670; 669861, 3940680; 669853, 3940680; 669860, 3940645; 669865, 3940630; 669871, 3940615; 669882, 3940606; 669886, 3940598; 669885, 3940590; 669886, 3940583; 669894, 3940570; 669914, 3940559; 669928, 3940548; 669935, 3940540; 669933, 3940533; 669923, 3940536; 669916, 3940542; 669908, 3940546; 669898, 3940551; 669889, 3940557; 669879, 3940562; 669876, 3940568; 669871, 3940577; 669866, 3940594; 669865, 3940613; 669860, 3940628; 669854, 3940643; 669850, 3940659; 669844, 3940675; 669842, 3940680; 669842, 3940681; 669842, 3940682; 669842, 3940683; 669843, 3940684; 669838, 3940694; 669828, 3940703; 669819, 3940707; 669810, 3940703; 669809, 3940703; 669804, 3940697; 669800, 3940691; 669796, 3940683; 669779, 3940659; 669769, 3940648; 669753, 3940628; 669743, 3940614; 669743, 3940602; 669743, 3940595; 669745, 3940584; 669744, 3940577; 669743, 3940570; 669731, 3940561; 669705, 3940611; 669665, 3940672; 669651, 3940695; 669651, 3940696; 669640, 3940712; 669586, 3940765; 669537, 3940814; 669504, 3940842; returning to 669487, 3940858.

(ii) *Note:* SLO–4 included on map with unit SLO–1.

(33) Unit SLO–5; San Luis Obispo County, California.

(i) From USGS 1:24,000 scale quadrangle Cayucos. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 683953, 3926198; 683960, 3926205; 683980, 3926215; 683989, 3926218; 684058, 3926215; 684072, 3926209; 684105, 3926205; 684129, 3926198; 684168, 3926177; 684195, 3926145; 684206, 3926138; 684229, 3926116; 684237, 3926088; 684228, 3926074; 684232, 3926054; 684232, 3926033; 684224, 3926020; 684280, 3925950; 684232, 3925959; 684197, 3925958; 684178, 3925954; 684167, 3925958; 684135, 3925976; 684115, 3925983; 684106, 3925983; 684109, 3926014; 684123, 3926021; 684155, 3926025; 684180, 3926034; 684182, 3926053; 684170, 3926109; 684162, 3926125; 684124, 3926123; 684108, 3926128; 684097, 3926146; 684096, 3926185; 684062, 3926201; 684018, 3926207; 683993, 3926207; 683962, 3926192; returning to 683953, 3926198.

(ii) *Note:* Map of Unit SLO–5 follows.


SLO-5 and SLO-6
Critical Habitat for Tidewater Goby
(Eucyclogobius newberryi)
46
1
SLO-5
SLO-6
Villa Creek
Cayucos
41
San Geronimo Creek
PACIFIC
OCEAN
0 1 2
Miles
Kilometers
0 1 2
Scale 1:120,000
CRITICAL HABITAT
WATER
ROADS
San Luis
Obispo
County
Area of
Detail
California
N

(34) Unit SLO–6; San Luis Obispo County, California.

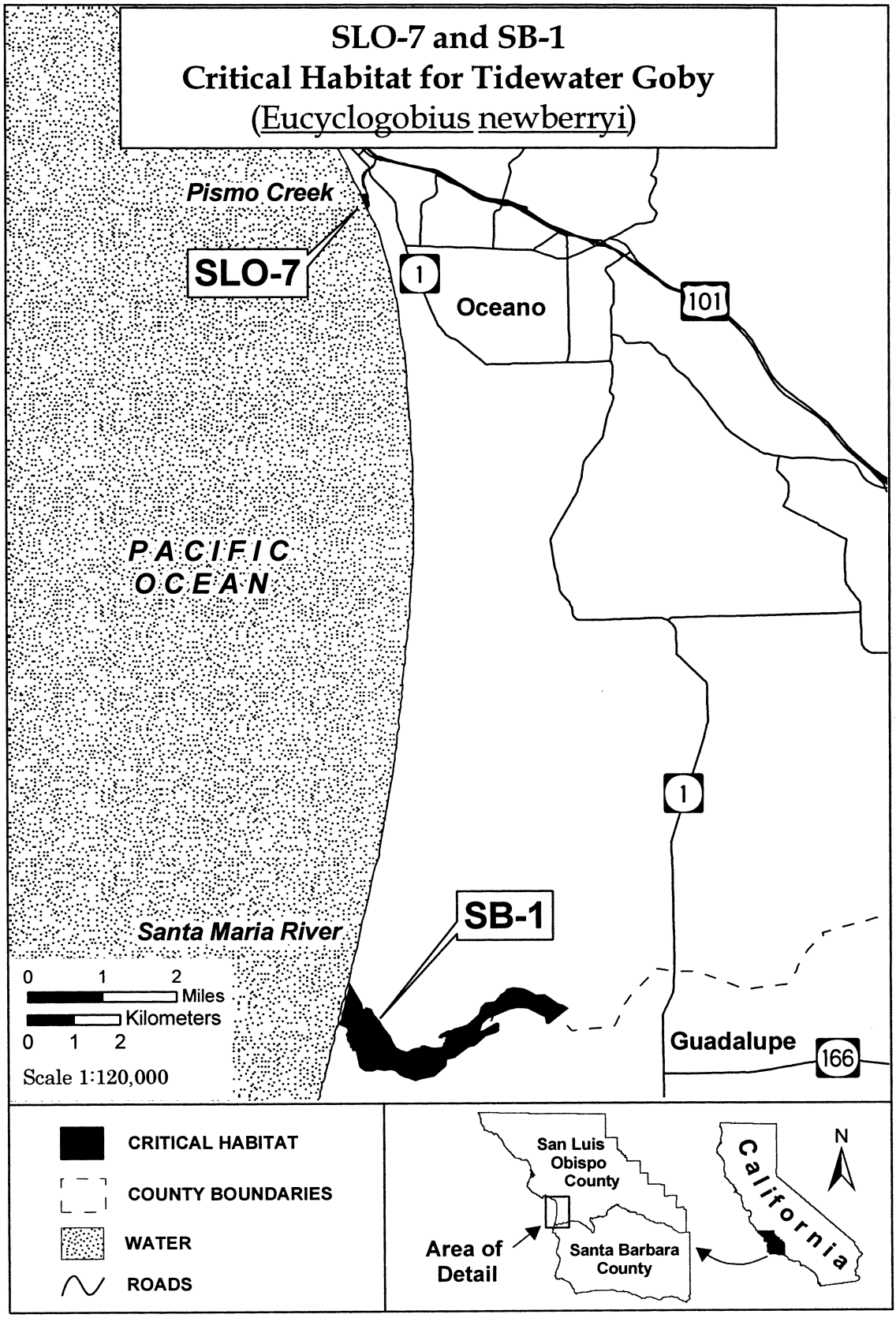
(i) From USGS 1:24,000 scale quadrangle Cayucos. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 687453, 3924653; 687454, 3924656; 687457, 3924661; 687465, 3924675; 687477, 3924685; 687487, 3924688; 687483, 3924691; 687479, 3924691; 687482, 3924700; 687481, 3924701; 687481, 3924702; 687480, 3924702; 687481, 3924703; 687478, 3924708; 687475, 3924719; 687473, 3924731; 687473, 3924738; 687474, 3924744; 687475, 3924745; 687476, 3924748; 687476, 3924749; 687484, 3924762; 687485, 3924762; 687490, 3924765; 687504, 3924774; 687517, 3924796; 687526, 3924818; 687527, 3924824; 687528, 3924826; 687529, 3924827; 687530, 3924828; 687531, 3924828; 687532, 3924827; 687533, 3924826; 687533, 3924825; 687533, 3924824; 687533, 3924823; 687532, 3924817; 687532, 3924816; 687522, 3924793; 687526, 3924794; 687530, 3924798; 687532, 3924805; 687534, 3924812; 687537, 3924813; 687536, 3924802; 687535, 3924794; 687535, 3924789; 687535, 3924785; 687532, 3924782; 687528, 3924784; 687525, 3924783; 687524, 3924778; 687522, 3924774; 687521, 3924770; 687519, 3924766; 687514, 3924765; 687509, 3924764; 687504, 3924761; 687500, 3924757; 687493, 3924753; 687484, 3924744; 687481, 3924741; 687480, 3924732; 687482, 3924723; 687485, 3924719; 687489, 3924715; 687494, 3924710; 687501, 3924707; 687506, 3924703; 687510, 3924698; 687513, 3924691; 687508, 3924690; 687503, 3924690; 687500, 3924689; 687510, 3924687; 687523, 3924678; 687531, 3924666; 687532, 3924663; 687533, 3924657; 687534, 3924651; 687534, 3924650; 687536, 3924646; 687536, 3924645; 687537, 3924643; 687534, 3924643; 687519, 3924641; 687499, 3924649; 687475, 3924655; 687456, 3924653; returning to 687453, 3924653.

(ii) *Note:* SLO–6 included on map with unit SLO–5.

(35) Unit SLO–7; San Luis Obispo County, California.

(i) From USGS 1:24,000 scale quadrangle Pismo Beach. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 714995, 3890262; 715095, 3890271; 715104, 3890261; 715109, 3890252; 715120, 3890240; 715127, 3890233; 715138, 3890227; 715149, 3890213; 715148, 3890223; 715145, 3890233; 715140, 3890238; 715136, 3890243; 715134, 3890254; 715132, 3890272; 715129, 3890286; 715125, 3890297; 715119, 3890324; 715116, 3890338; 715112, 3890351; 715108, 3890361; 715100, 3890375; 715095, 3890385; 715088, 3890392; 715082, 3890396; 715076, 3890399; 715069, 3890401; 715065, 3890405; 715061, 3890408; 715060, 3890415; 715058, 3890429; 715056, 3890444; 715053, 3890455; 715051, 3890473; 715048, 3890488; 715045, 3890504; 715042, 3890521; 715039, 3890539; 715035, 3890553; 715033, 3890566; 715032, 3890574; 715031, 3890588; 715031, 3890606; 715033, 3890623; 715033, 3890645; 715034, 3890667; 715041, 3890681; 715046, 3890692; 715055, 3890706; 715062, 3890722; 715067, 3890730; 715070, 3890736; 715074, 3890743; 715082, 3890752; 715093, 3890762; 715101, 3890768; 715119, 3890786; 715130, 3890799; 715145, 3890809; 715163, 3890821; 715178, 3890830; 715194, 3890837; 715205, 3890845; 715221, 3890859; 715236, 3890869; 715252, 3890885; 715262, 3890891; 715268, 3890896; 715276, 3890902; 715283, 3890912; 715289, 3890922; 715296, 3890932; 715305, 3890943; 715310, 3890953; 715317, 3890972; 715318, 3890984; 715319, 3891005; 715323, 3891027; 715326, 3891034; 715335, 3891032; 715336, 3891031; 715342, 3891028; 715347, 3891021; 715345, 3891004; 715340, 3890985; 715331, 3890962; 715321, 3890938; 715310, 3890916; 715296, 3890885; 715287, 3890864; 715277, 3890859; 715272, 3890854; 715258, 3890837; 715241, 3890825; 715232, 3890816; 715226, 3890810; 715212, 3890802; 715200, 3890802; 715186, 3890801; 715179, 3890795; 715169, 3890778; 715154, 3890761; 715142, 3890751; 715133, 3890737; 715127, 3890720; 715122, 3890708; 715117, 3890704; 715109, 3890684; 715103, 3890669; 715099, 3890654; 715092, 3890642; 715084, 3890623; 715080, 3890608; 715077, 3890585; 715075, 3890559; 715079, 3890539; 715083, 3890515; 715090, 3890484; 715097, 3890454; 715105, 3890425; 715111, 3890398; 715118, 3890380; 715129, 3890356; 715141, 3890327; 715153, 3890297; 715164, 3890254; 715170, 3890229; 715174, 3890208; 715177, 3890185; 715178, 3890165; 715176, 3890142; 715177, 3890130; 715176, 3890123; 715183, 3890106; 715187, 3890085; 715189, 3890067; 715193, 3890044; 715200, 3890028; 715137, 3889924; 715128, 3889946; 715121, 3889965; 715115, 3889981; 715110, 3889994; 715106, 3890007; 715102, 3890018; 715095, 3890036; 715090, 3890049; 715082, 3890067; 715076, 3890080; 715069, 3890095; 715062, 3890111; 715052, 3890126; 715044, 3890146; 715034, 3890166; 715029, 3890185; 715022, 3890203; 715013, 3890222; 715004, 3890241; returning to 714995, 3890262.

(ii) *Note:* Map of Unit SLO–7 follows.



BILLING CODE 4310–55–C

(36) Unit SB–1; Santa Barbara County, California.

(i) From USGS 1:24,000 scale quadrangles Point Sal and Guadalupe. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 714486, 3872122; 714493, 3872165; 714530, 3872230; 714539, 3872329; 714554, 3872389; 714594, 3872480; 714613, 3872646; 714626, 3872708; 714651, 3872747; 714689, 3872903; 714703, 3873025; 714969, 3872560; 714988, 3872467; 715039, 3872436; 715055, 3872488; 715175, 3872451; 715237, 3872326; 715354, 3872192; 715434, 3872073; 715583, 3871865; 715637, 3871734; 715713, 3871614; 715807, 3871544; 715939, 3871505; 716019, 3871535; 716044, 3871566; 716102, 3871589; 716153, 3871603; 716222, 3871602; 716268, 3871649; 716299, 3871655; 716334, 3871652; 716452, 3871607; 716526, 3871594; 716558, 3871593; 716701, 3871615; 716807, 3871341; 716785, 3871204; 716542, 3870984; 716348, 3870951; 716245, 3870930; 716125, 3870887; 716029, 3870923; 715975, 3870952; 715899, 3870968; 715803, 3871010; 715682, 3871109; 715600, 3871122; 715455, 3871112; 715304, 3871140; 715197, 3871101; 715115, 3871098; 715046, 3871108; 714985, 3871140; 714935, 3871180; 714908, 3871224; 714839, 3871547; 714773, 3871548; 714762, 3871579; 714753, 3871608; 714720, 3871626; 714713, 3871685; 714656, 3871775; 714650, 3871830; 714624, 3871908; 714676, 3871989; 714646, 3872058; returning to 714486, 3872122.

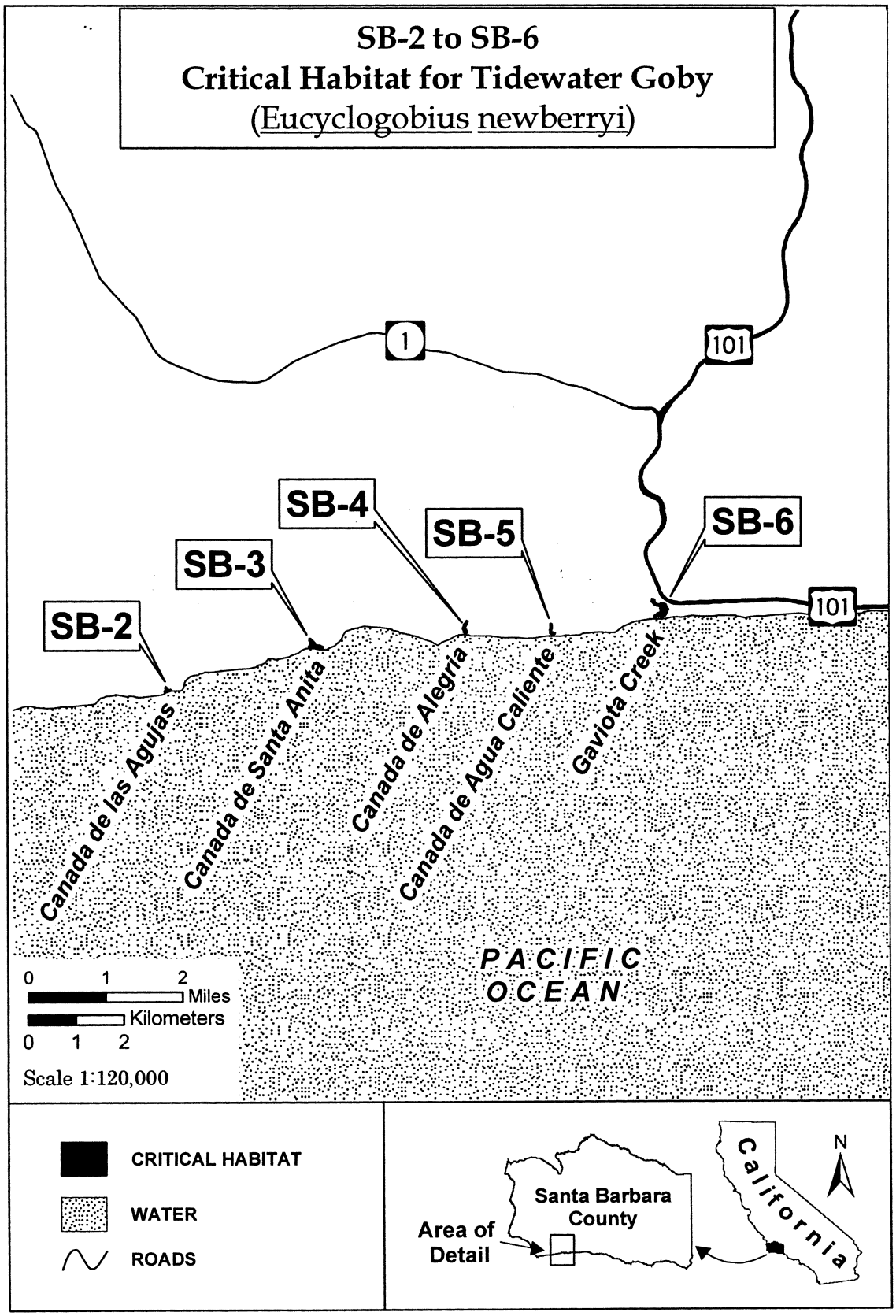
(ii) *Note:* SB–1 included on map with unit SLO–7.

(37) Unit SB–2; Santa Barbara County, California.

(i) From USGS 1:24,000 scale quadrangle Point Conception. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 744289, 3816310; 744302, 3816318; 744310, 3816324; 744314, 3816329; 744320, 3816334; 744322, 3816336; 744326, 3816338; 744320, 3816343; 744314, 3816346; 744311, 3816351; 744310, 3816356; 744308, 3816361; 744308, 3816366; 744307, 3816371; 744306, 3816376; 744305, 3816383; 744304, 3816387; 744307, 3816387; 744312, 3816379; 744313, 3816373; 744314, 3816366; 744315, 3816359; 744315, 3816356; 744317, 3816352; 744320, 3816347; 744325, 3816346; 744330, 3816344; 744336, 3816342; 744339, 3816341; 744350, 3816340; 744358, 3816339; 744369, 3816340; 744373, 3816338; 744377, 3816336; 744383, 3816336; 744391, 3816337; 744397, 3816339; 744402, 3816338; 744407, 3816337; 744373, 3816328; 744350, 3816322; 744343, 3816320; 744335, 3816318; 744308, 3816313; 744298, 3816310; returning to 744289, 3816310.

(ii) *Note:* Map of Unit SB–2 follows.

BILLING CODE 4310–55–P


SB-2 to SB-6
Critical Habitat for Tidewater Goby
(Eucyclogobius newberryi)
1
101
101
SB-2
SB-3
SB-4
SB-5
SB-6
Canada de las Agujas
Canada de Santa Anita
Canada de Alegria
Canada de Agua Caliente
Gaviota Creek
PACIFIC OCEAN
0 1 2
Miles
Kilometers
0 1 2
Scale 1:120,000
CRITICAL HABITAT
WATER
ROADS
Santa Barbara County
Area of Detail
California
N

(38) Unit SB–3; Santa Barbara County, California.

(i) From USGS 1:24,000 scale quadrangle Point Conception. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 747310, 3817233; 747358, 3817279; 747376, 3817283; 747396, 3817298; 747384, 3817307; 747357, 3817311; 747334, 3817326; 747324, 3817337; 747314, 3817372; 747318, 3817391; 747323, 3817394; 747338, 3817375; 747376, 3817348; 747386, 3817331; 747413, 3817305; 747435, 3817265; 747509, 3817255; 747522, 3817247; 747556, 3817236; 747588, 3817216; 747550, 3817228; 747506, 3817229; 747494, 3817235; 747346, 3817239; returning to 747310, 3817233.

(ii) *Note:* SB–3 included on map with unit SB–2.

(39) Unit SB–4; Santa Barbara County, California.

(i) From USGS 1:24,000 scale quadrangle Point Conception. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 750530, 3817616; 750546, 3817669; 750554, 3817688; 750582, 3817711; 750595, 3817736; 750602, 3817758; 750608, 3817758; 750598, 3817712; 750570, 3817678; 750570, 3817666; 750559, 3817649; 750559, 3817614; 750565, 3817606; 750567, 3817590; 750580, 3817583; 750585, 3817577; 750588, 3817572; 750582, 3817557; 750602, 3817534; 750563, 3817537; 750547, 3817533; 750553, 3817561; 750542, 3817580; 750540, 3817593; returning to 750530, 3817616.

(ii) *Note:* Unit SB–4 included on map with unit SB–2.

(40) Unit SB–5; Santa Barbara County, California.

(i) From USGS 1:24,000 scale quadrangle Point Conception. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 752340, 3817567; 752343, 3817589; 752347, 3817598; 752351, 3817624; 752351, 3817636; 752357, 3817675; 752353, 3817702; 752366, 3817705; 752370, 3817675; 752364, 3817634; 752364, 3817623; 752360, 3817595; 752353, 3817577; 752354, 3817544; 752362, 3817533; 752363, 3817528; 752366, 3817524; 752380, 3817515; 752388, 3817512; 752427, 3817506; 752442, 3817500; 752435, 3817500; 752388, 3817494; 752363, 3817498; 752345, 3817533; 752341, 3817543; returning to 752340, 3817567.

(ii) *Note:* SB–5 included on map with unit SB–2.

(41) Unit SB–6; Santa Barbara County, California.

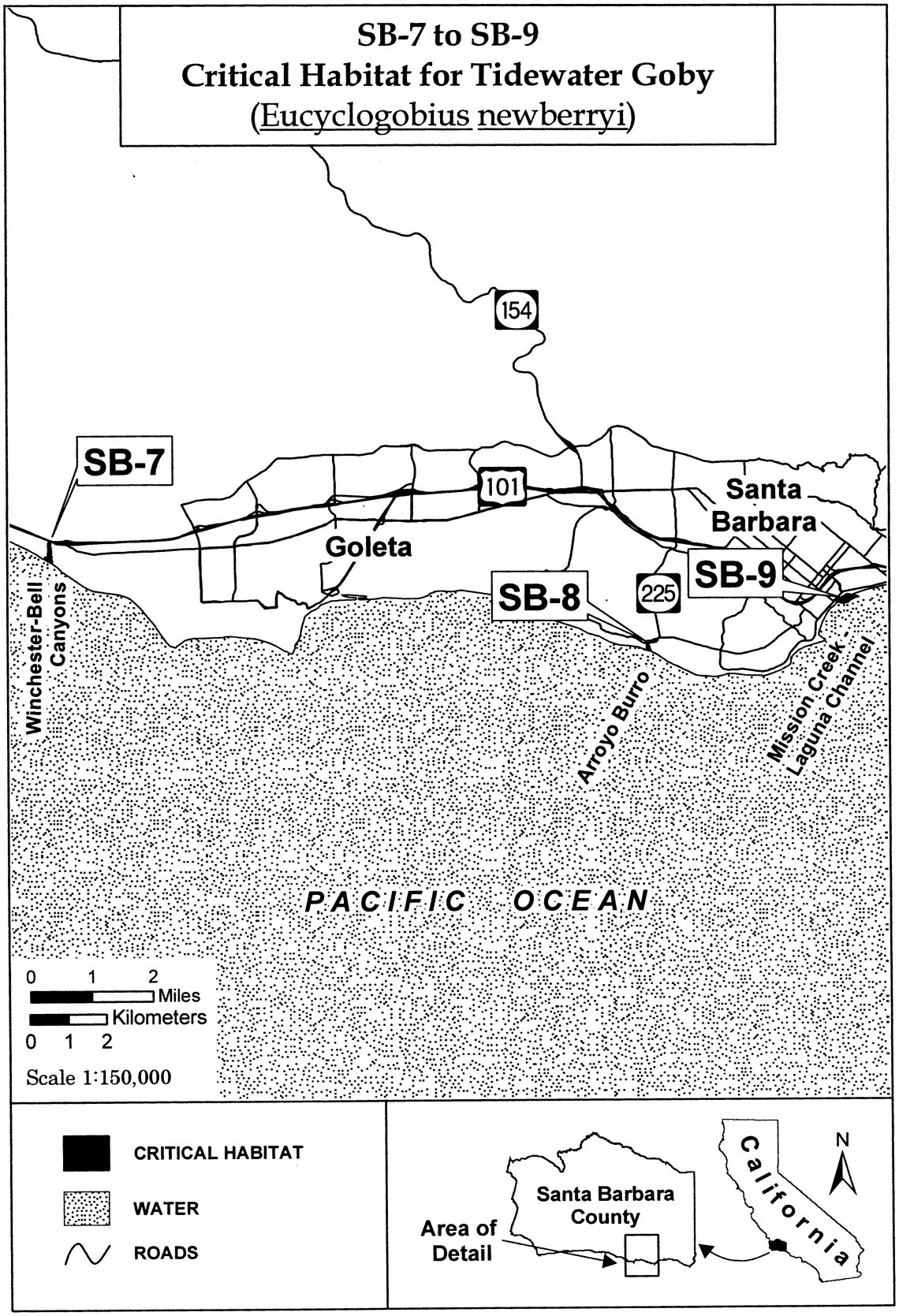
(i) From USGS 1:24,000 scale quadrangle Gaviota. Land bounded by the following UTM zone 10 NAD83 coordinates (E, N): 754473, 3818173; 754487, 3818216; 754512, 3818201; 754519, 3818189; 754526, 3818145; 754537, 3818130; 754567, 3818121; 754588, 3818106; 754643, 3818104; 754672, 3818114; 754733, 3818115; 754752, 3818107; 754778, 3818058; 754782, 3818039; 754797, 3818005; 754793, 3817977; 754787, 3817954; 754777, 3817948; 754768, 3817931; 754759, 3817922; 754756, 3817901; 754735, 3817880; 754733, 3817870; 754727, 3817868; 754718, 3817855; 754606, 3817863; 754568, 3817859; 754534, 3817850; 754531, 3817853; 754571, 3817881; 754575, 3817891; 754586, 3817901; 754597, 3817906; 754626, 3817916; 754643, 3817913; 754654, 3817916; 754687, 3817910; 754709, 3817914; 754707, 3817922; 754727, 3817941; 754703, 3817949; 754680, 3817949; 754669, 3817954; 754665, 3817960; 754666, 3817978; 754657, 3817995; 754655, 3818033; 754643, 3818075; 754629, 3818079; 754624, 3818085; 754625, 3818089; 754618, 3818091; 754564, 3818094; 754541, 3818104; 754479, 3818161; 754480, 3818169; returning to 754473, 3818173.

(ii) *Note:* Unit SB–6 included on map with unit SB–2.

(42) Unit SB–7; Santa Barbara County, California.

(i) From USGS 1:24,000 scale quadrangle Dos Pueblos Canyon. Land bounded by the following UTM zone 11 NAD83 coordinates (E, N): 232224, 3813614; 232337, 3813596; 232345, 3813600; 232348, 3813614; 232342, 3813631; 232314, 3813641; 232303, 3813652; 232297, 3813683; 232307, 3813732; 232313, 3813743; 232321, 3813769; 232323, 3813789; 232318, 3813850; 232320, 3813928; 232340, 3813983; 232370, 3813973; 232363, 3813947; 232346, 3813948; 232329, 3813927; 232329, 3813905; 232339, 3813898; 232350, 3813875; 232355, 3813835; 232366, 3813794; 232370, 3813748; 232359, 3813698; 232353, 3813689; 232345, 3813688; 232363, 3813651; 232357, 3813646; 232363, 3813625; 232373, 3813614; 232373, 3813605; 232360, 3813572; 232383, 3813490; 232287, 3813570; returning to 232224, 3813614.

(ii) *Note:* Map of Unit SB–7 follows.


SB-7 to SB-9
Critical Habitat for Tidewater Goby
(Eucyclogobius newberryi)
154
SB-7
101
Santa Barbara
Goleta
SB-8
225
SB-9
Winchester-Bell Canyons
Arroyo Burro
Mission Creek - Laguna Channel
PACIFIC OCEAN
0 1 2
Miles
Kilometers
0 1 2
Scale 1:150,000
CRITICAL HABITAT
WATER
ROADS
Santa Barbara County
Area of Detail
California
N

(43) Unit SB–8; Santa Barbara County, California.

(i) From USGS 1:24,000 scale quadrangle Santa Barbara. Land bounded by the following UTM zone 11 NAD83 coordinates (E, N): 247839, 3810209; 247844, 3810255; 247848, 3810256; 247841, 3810295; 247851, 3810332; 247867, 3810357; 247884, 3810364; 247967, 3810388; 247988, 3810390; 248001, 3810387; 248032, 3810399; 248051, 3810400; 248079, 3810406; 248097, 3810417; 248108, 3810428; 248117, 3810441; 248118, 3810451; 248124, 3810453; 248122, 3810439; 248113, 3810425; 248100, 3810412; 248082, 3810401; 248068, 3810396; 248033, 3810393; 248002, 3810381; 247988, 3810384; 247969, 3810383; 247885, 3810357; 247877, 3810347; 247868, 3810332; 247876, 3810282; 247893, 3810265; 247900, 3810237; 247897, 3810226; 247933, 3810166; returning to 247839, 3810209.

(ii) *Note:* SB–8 included on map with unit SB–7.

(44) Unit SB–9; Santa Barbara County, California.

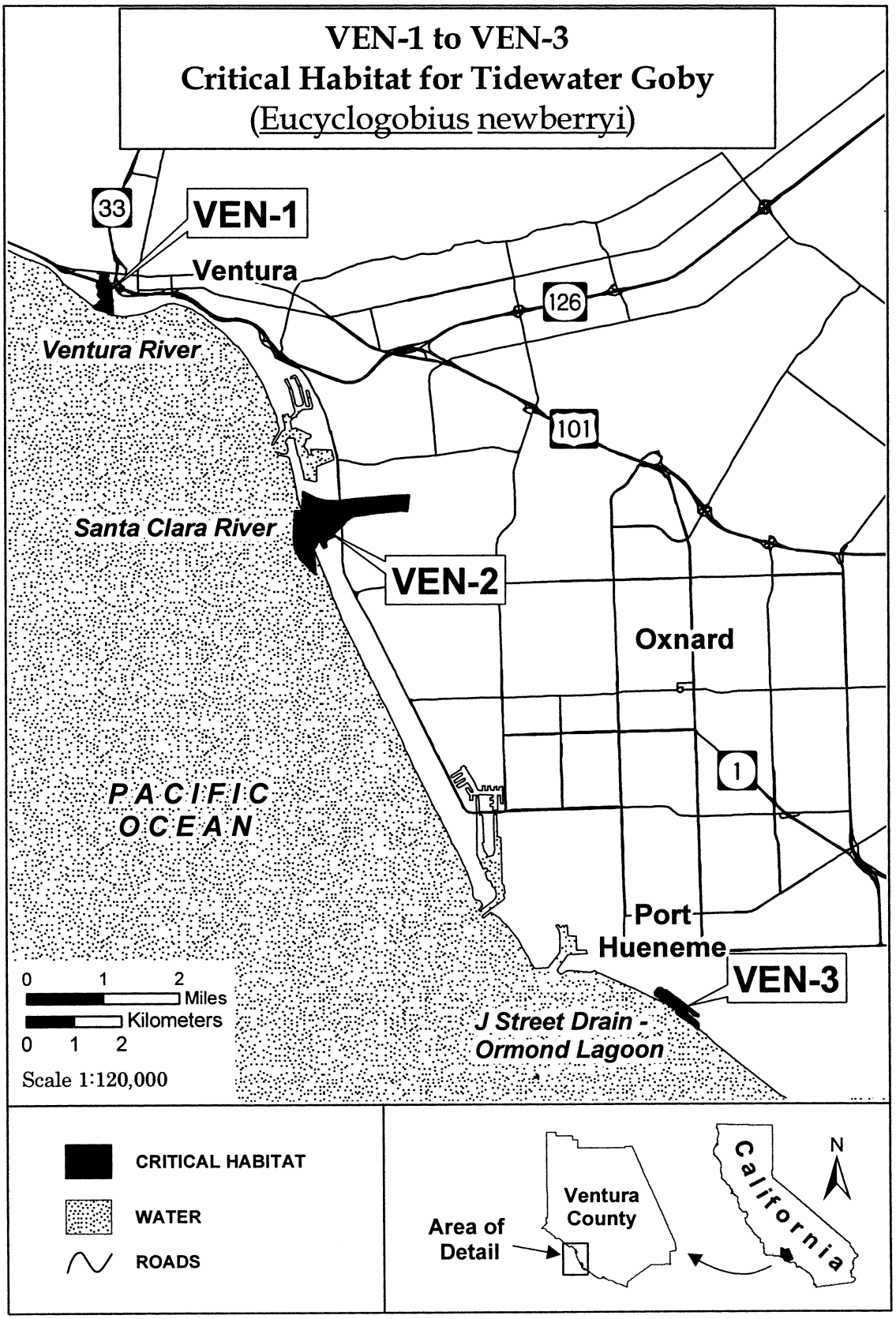
(i) From USGS 1:24,000 scale quadrangle Santa Barbara. Land bounded by the following UTM zone 11 NAD83 coordinates (E, N): 252846, 3811168; 252864, 3811187; 252923, 3811193; 252975, 3811204; 253049, 3811235; 253166, 3811297; 253182, 3811299; 253183, 3811277; 253187, 3811278; 253202, 3811303; 253199, 3811317; 253207, 3811319; 253209, 3811311; 253445, 3811254; 253412, 3811247; 253337, 3811217; 253311, 3811202; 253275, 3811190; 253256, 3811174; 253236, 3811170; 253226, 3811163; 253219, 3811147; 253195, 3811137; 253122, 3811115; 253088, 3811099; 252918, 3811155; 252928, 3811169; 252923, 3811172; 252908, 3811174; returning to 252846, 3811168.

(ii) *Note:* Unit SB–9 included on map with unit SB–7.

(45) Unit VEN–1; Ventura County, California.

(i) From USGS 1:24,000 scale quadrangle Ventura. Land bounded by the following UTM zone 11 NAD83 coordinates (E, N): 287223, 3795128; 287297, 3795133; 287329, 3795156; 287356, 3795190; 287377, 3795209; 287407, 3795228; 287424, 3795254; 287428, 3795275; 287423, 3795289; 287371, 3795326; 287361, 3795337; 287356, 3795349; 287354, 3795362; 287365, 3795411; 287383, 3795461; 287376, 3795489; 287364, 3795493; 287349, 3795520; 287341, 3795563; 287347, 3795595; 287357, 3795620; 287385, 3795609; 287392, 3795618; 287391, 3795629; 287398, 3795650; 287405, 3795682; 287419, 3795720; 287424, 3795745; 287423, 3795766; 287442, 3795795; 287436, 3795813; 287435, 3795806; 287423, 3795804; 287419, 3795818; 287379, 3795831; 287372, 3795843; 287571, 3795810; 287572, 3795798; 287586, 3795788; 287590, 3795779; 287581, 3795765; 287580, 3795748; 287569, 3795726; 287556, 3795683; 287576, 3795664; 287578, 3795617; 287588, 3795605; 287602, 3795595; 287634, 3795581; 287634, 3795510; 287632, 3795455; 287626, 3795410; 287625, 3795362; 287618, 3795309; 287632, 3795287; 287630, 3795263; 287632, 3795216; 287627, 3795163; 287626, 3795106; 287622, 3795028; 287625, 3794917; 287577, 3794954; 287470, 3795013; 287404, 3795023; 287293, 3795067; returning to 287223, 3795128.

(ii) *Note:* Map of Unit VEN–1 follows.


VEN-1 to VEN-3
Critical Habitat for Tidewater Goby
(Eucyclogobius newberryi)
33
VEN-1
Ventura
126
Ventura River
101
Santa Clara River
VEN-2
Oxnard
1
PACIFIC
OCEAN
Port
Hueneme
VEN-3
J Street Drain -
Ormond Lagoon
0 1 2
Miles
Kilometers
0 1 2
Scale 1:120,000
CRITICAL HABITAT
WATER
ROADS
Ventura
County
Area of
Detail
California
N

(46) Unit VEN–2; Ventura County, California.

(i) From USGS 1:24,000 scale quadrangle Oxnard. Land bounded by the following UTM zone 11 NAD83 coordinates (E, N): 291159, 3789957; 291223, 3790506; 291369, 3790503; 291384, 3790685; 291387, 3790730; 291415, 3790767; 291412, 3790821; 291419, 3790906; 291669, 3790758; 291809, 3790713; 291890, 3790691; 291995, 3790673; 292105, 3790669; 292514, 3790691; 292880, 3790694; 293336, 3790700; 293629, 3790695; 293448, 3790404; 292910, 3790378; 292682, 3790364; 292456, 3790341; 292380, 3790320; 292284, 3790262; 292160, 3790123; 292097, 3790078; 292034, 3790039; 292005, 3789999; 291995, 3789923; 291937, 3789922; 291862, 3789890; 291823, 3789847; 291809, 3789796; 291814, 3789722; 291781, 3789705; 291689, 3789886; 291558, 3789684; 291564, 3789160; 291272, 3789495; 291176, 3789721; returning to 291159, 3789957.

(ii) *Note:* Unit VEN–2 included on map with unit VEN–1.

(47) Unit VEN–3; Ventura County, California.

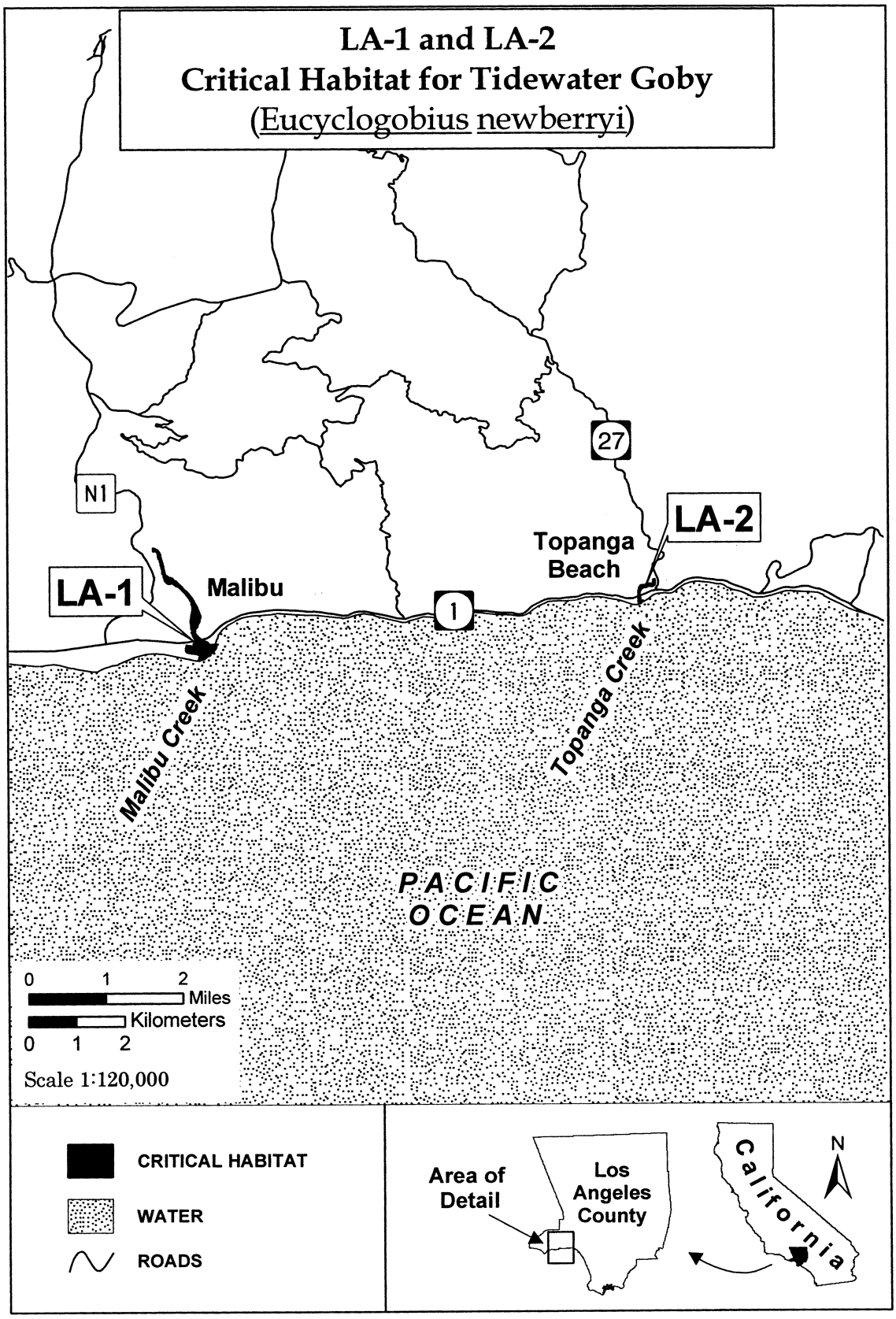
(i) From USGS 1:24,000 scale quadrangle Oxnard. Land bounded by the following UTM zone 11 NAD83 coordinates (E, N): 298163, 3779838; 298231, 3779920; 298245, 3779905; 298274, 3779893; 298310, 3779870; 298354, 3779843; 298335, 3779822; 298379, 3779795; 298443, 3779754; 298494, 3779730; 298528, 3779695; 298555, 3779675; 298592, 3779644; 298678, 3779570; 298699, 3779579; 298578, 3779686; 298385, 3779845; 298325, 3779874; 298289, 3779897; 298267, 3779918; 298269, 3779922; 298290, 3779914; 298338, 3779882; 298379, 3779865; 298393, 3779856; 298562, 3779713; 298614, 3779669; 298798, 3779514; 298880, 3779430; 299009, 3779320; 299029, 3779318; 299028, 3779279; 299001, 3779300; 298958, 3779309; 298863, 3779394; 298792, 3779416; 298790, 3779357; 299022, 3779125; 299018, 3779003; 298939, 3779085; 298884, 3779132; 298659, 3779308; 298603, 3779365; 298638, 3779430; 298164, 3779790; returning to 298163, 3779838.

(ii) *Note:* Unit VEN–3 included on map with unit VEN–1.

(48) Unit LA–1; Los Angeles County, California.

(i) From USGS 1:24,000 scale quadrangle Malibu Beach. Land bounded by the following UTM zone 11 NAD83 coordinates (E, N): 343854, 3769197; 343855, 3769238; 343878, 3769230; 343927, 3769201; 343954, 3769178; 343968, 3769157; 343970, 3769141; 343966, 3769111; 343979, 3769096; 343980, 3769072; 344025, 3768898; 344034, 3768802; 344047, 3768729; 344054, 3768697; 344071, 3768661; 344079, 3768650; 344134, 3768608; 344162, 3768595; 344209, 3768580; 344224, 3768555; 344259, 3768529; 344278, 3768520; 344300, 3768489; 344324, 3768469; 344335, 3768450; 344393, 3768395; 344431, 3768343; 344499, 3768273; 344516, 3768245; 344552, 3768200; 344595, 3768138; 344644, 3768041; 344671, 3767978; 344710, 3767877; 344715, 3767848; 344735, 3767804; 344738, 3767775; 344745, 3767750; 344727, 3767736; 344724, 3767686; 344715, 3767665; 344675, 3767601; 344657, 3767564; 344613, 3767516; 344605, 3767490; 344605, 3767470; 344606, 3767425; 344613, 3767401; 344663, 3767338; 344688, 3767314; 344709, 3767297; 344732, 3767260; 344754, 3767249; 344787, 3767242; 344795, 3767231; 344811, 3767219; 344835, 3767224; 344861, 3767204; 344868, 3767186; 344886, 3767171; 344912, 3767158; 345030, 3767154; 345032, 3767118; 345025, 3767101; 344993, 3767067; 344983, 3767048; 344967, 3767027; 344926, 3766990; 344900, 3766951; 344815, 3766930; 344784, 3766918; 344753, 3766885; 344670, 3766849; 344660, 3766846; 344681, 3766899; 344724, 3766933; 344722, 3766964; 344680, 3766974; 344629, 3767002; 344606, 3767012; 344589, 3767003; 344548, 3767011; 344503, 3767018; 344449, 3767035; 344427, 3767050; 344414, 3767071; 344417, 3767121; 344431, 3767168; 344492, 3767156; 344536, 3767136; 344562, 3767136; 344597, 3767140; 344607, 3767146; 344581, 3767201; 344587, 3767205; 344612, 3767184; 344640, 3767179; 344650, 3767181; 344639, 3767234; 344617, 3767298; 344596, 3767334; 344579, 3767376; 344563, 3767443; 344567, 3767500; 344565, 3767521; 344556, 3767534; 344551, 3767568; 344554, 3767606; 344549, 3767633; 344545, 3767683; 344557, 3767730; 344577, 3767833; 344594, 3767899; 344599, 3767949; 344599, 3767985; 344592, 3768023; 344593, 3768082; 344574, 3768100; 344545, 3768164; 344527, 3768194; 344497, 3768232; 344481, 3768259; 344413, 3768328; 344375, 3768381; 344352, 3768405; 344310, 3768439; 344301, 3768439; 344276, 3768447; 344250, 3768468; 344220, 3768505; 344210, 3768511; 344198, 3768511; 344169, 3768497; 344152, 3768492; 344122, 3768500; 344105, 3768509; 344062, 3768572; 344040, 3768628; 344043, 3768668; 344032, 3768690; 344028, 3768708; 344011, 3768799; 344002, 3768895; 343975, 3768996; 343956, 3769033; 343941, 3769077; 343946, 3769149; 343936, 3769163; 343914, 3769182; 343886, 3769197; 343863, 3769200; returning to 343854, 3769197.

(ii) *Note:* Map of Unit LA–1 follows.


LA-1 and LA-2
Critical Habitat for Tidewater Goby
(Eucyclogobius newberryi)
27
N1
LA-2
Topanga
Beach
LA-1
Malibu
1
Malibu Creek
Topanga Creek
PACIFIC
OCEAN
0 1 2
Miles
Kilometers
0 1 2
Scale 1:120,000
CRITICAL HABITAT
WATER
ROADS
Area of
Detail
Los
Angeles
County
California
N

(49) Unit LA–2; Los Angeles County, California.

(i) From USGS 1:24,000 scale quadrangle Topanga. Land bounded by the following UTM zone 11 NAD83 coordinates (E, N): 353851, 3767575; 353859, 3767610; 353860, 3767654; 353855, 3767659; 353856, 3767672; 353860, 3767720; 353880, 3767768; 353908, 3767818; 353919, 3767829; 353921, 3767837; 353942, 3767845; 354016, 3767844; 354041, 3767856; 354080, 3767864; 354109, 3767861; 354127, 3767851; 354139, 3767850; 354166, 3767854; 354179, 3767883; 354179, 3767917; 354187, 3767930; 354186, 3767938; 354203, 3767945; 354205, 3767873; 354198, 3767851; 354181, 3767831; 354156, 3767825; 354134, 3767824; 354088, 3767836; 354071, 3767836; 354051, 3767831; 354024, 3767819; 353969, 3767820; 353945, 3767792; 353933, 3767786; 353918, 3767769; 353904, 3767745; 353894, 3767733; 353876, 3767699; 353873, 3767653; 353875, 3767609; 353881, 3767598; 353879, 3767586; 353889, 3767512; 353906, 3767526; 353936, 3767510; 353887, 3767481; 353856, 3767475; 353856, 3767503; 353867, 3767505; 353862, 3767528; 353856, 3767538; 353857, 3767554; returning to 353851, 3767575.

(ii) *Note:* Unit LA–2 included on map with unit LA–1.

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Dated: January 17, 2008.

David M. Verhey,

Acting Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 08–264 Filed 1–30–08; 8:45 am]

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