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Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the San Diego Fairy Shrimp (Branchinecta sandiegonensis); Final Rule

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

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RIN 1018–AV37

Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the San Diego Fairy Shrimp (Branchinecta sandiegonensis)

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), are designating revised final critical habitat for the San Diego fairy shrimp *(Branchinecta sandiegonensis)* under the Endangered Species Act of 1973, as amended (Act). Approximately 3,082 acres (ac) (1,248 hectares (ha)) of habitat in Orange and San Diego counties, California, are being designated as critical habitat for the San Diego fairy shrimp. This revised final designation constitutes a reduction of 943 ac (382 ha) from the 2000 designation of critical habitat for the San Diego fairy shrimp.

DATE: This rule becomes effective on January 11, 2008.

ADDRESSES: Comments and materials received, as well as supporting documentation used in the preparation of this revised final rule, will be available for public inspection, by appointment, during normal business hours, at the U.S. Fish and Wildlife Service, Carlsbad Fish and Wildlife Office, 6010 Hidden Valley Road, Carlsbad, CA 92011. The revised final rule, economic analysis, and maps are available on the Internet at *http://www.fws.gov/carlsbad/*.

FOR FURTHER INFORMATION CONTACT: Jim Bartel, Field Supervisor, U.S. Fish and Wildlife Service, Carlsbad Fish and Wildlife Office (see **ADDRESSES**); telephone 760–431–9440; facsimile 760–431–5901. 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 designation of critical habitat for the San Diego fairy shrimp in this revised final rule. For more information on the taxonomy, biology, and ecology of the San Diego fairy shrimp, please refer to the final listing rule published in the **Federal Register** on February 3, 1997 (62 FR 4925), the original proposed and final critical habitat rules published in the **Federal Register** on March 8, 2000 (65 FR 12181) and October 23, 2000 (65 FR 63438), respectively, and the proposed rule to revise critical habitat published in the **Federal Register** on April 22, 2003 (68 FR 19888).

The San Diego fairy shrimp *(Branchinecta sandiegonensis)* is a small aquatic crustacean in the order Anostraca, generally restricted to vernal pools and other ephemeral (lasting a short time) basins in coastal Orange and San Diego Counties in southern California and in northwestern Baja California, Mexico. Vernal pools in southern California typically contain water in the winter and are dry in the summer. The San Diego fairy shrimp is a habitat specialist found in shallower pools that range in depth from 2 to 12 inches (in) (5 to 30 centimeters (cm)) (Simovich and Fugate 1992, p. 111; Hathaway and Simovich 1996, p. 670). San Diego fairy shrimp feed on algae, diatoms, and particulate organic matter (Parsick 2002, pp. 37–41, 65–70). Male San Diego fairy shrimp are distinguished from males of other species of *Branchinecta* by differences in the distal (located far from the point of attachment) tip of the second antennae. The females carry their eggs or cysts in an oval or elongate ventral brood sac (Eriksen and Belk 1999, pp. 20–24; Fugate 1993, p. 301). Females are distinguishable from females of other species of *Branchinecta* by the shape and length of the brood sac, the length of the ovary, and the presence of paired dorsolateral (located on the sides, toward the back) spines on five of the abdominal segments (Fugate 1993, p. 301).

San Diego fairy shrimp occur in groups of vernal pools referred to as vernal pool complexes (Keeler-Wolf *et al.* 1998, p. 9). Vernal pool complexes tend to include between 5 and 50 vernal pools, although some contain as few as two vernal pools and some contain several hundred vernal pools. Vernal pools within a complex are generally hydrologically connected, meaning that water flows over the surface from one vernal pool basin to another and/or water flows and collects below ground such that the soil becomes saturated with water, and the vernal pool basins fill with water (Hanes *et al.* 1990, pp. 51–56). For this reason the vernal pool ecosystems, on which the San Diego fairy shrimp depend, are best described from a watershed perspective (Service 1998a, p. 59). The vernal pool watershed includes all areas around a vernal pool complex needed to collect rainfall and adequately fill the vernal pool basins within the vernal pool complex. In rainy years, California's vernal pools begin to fill following the onset of fall and winter rains. Some pools in a complex have substantial watersheds that contribute to filling the vernal pools, while others fill almost entirely from rainfall (Hanes *et al.* 1990, pp. 51–54; Hanes and Stromberg 1998, pp. 38, 47–49). Subsurface inflows from surrounding soils may also be an important factor in the filling of some vernal pools (Hanes *et al.* 1990, pp. 55–56; Hanes and Stromberg 1998, pp. 41–42).

A recent mitochondrial DNA (genetic sequence) study sampled 223 San Diego fairy shrimp from 24 vernal pool complexes (Bohonak 2004, p. 2). Researchers identified 39 unique alleles; each unique allele was found only at specific vernal pool complexes or within isolated geographic areas (Bohonak 2004, pp. 2–9). This indicates that fairy shrimp within a vernal pool complex or in limited geographic areas are more closely related to each other than to those at more distant locations. This analysis of mitochondrial DNA also indicates that there are two distinct genetic clades (genetic groups within a taxa) among populations of San Diego fairy shrimp, referred to as Group A and Group B (Bohonak 2004, p. 3; Bohonak 2007, p. 1). The difference in the alleles within either of the clades is less that one percent divergence; however, between the two groups there is a 2.5 percent divergence between pairs of alleles. Bohonak states that ''this means individuals from Group A and B have been isolated from one another biologically for tens of thousands or perhaps millions of years with little or no dispersal or hybridization (2004, p. 3).'' The distribution of the two clades is unusual because with the degree of difference between the two clades one would expect them to be geographically separate; however, the two clades are somewhat intermixed geographically.

The extant range of the San Diego fairy shrimp is restricted to San Diego and Orange Counties in the United States, and in northwestern Baja California in Mexico. San Diego County supports the largest number of remaining vernal pools occupied by the San Diego fairy shrimp. Scientists estimate vernal pool soils historically covered 200 square miles (mi) (518 square kilometers (km)) in San Diego County; habitat losses have been extensive, only remnants of most vernal pool landscapes remain (Bauder and McMillan 1998, p. 66). The majority of vernal pool habitat in coastal Orange County has also been lost; currently there are only five vernal pool complexes in Orange County known to

support the San Diego fairy shrimp (Riefner and Pryor, p. 300; Keeler-Wolf *et al.* 1998, p. 63; Mattoni and Longcore 1997, pp. 71, 89; CNDDB 2004, pp. 9, 11, 12, 29–32).

Previous Federal Actions

On October 23, 2000, we published a final rule designating approximately 4,025 ac (1,629 ha) of critical habitat for the San Diego fairy shrimp in Orange and San Diego Counties, California (65 FR 63438). Following publication of the final rule, a lawsuit was filed against the Service challenging the critical habitat designation by multiple parties, including the Building Industry Association of Southern California, the National Association of Home Builders, and the Foothill/Eastern Transportation Corridor Agency (*Building Industry Association of Southern California et al.* v. *Norton*, CV 01–7028 (D.C.C., filed 1/17/01) (venue subsequently transferred to C.D.Cal. and case assigned CV 01–07028). On June 11, 2002, the U.S. District Court for the Central District of California granted our request for a remand of the San Diego fairy shrimp critical habitat designation so that we could reconsider the economic impact of designating any particular area as critical habitat. The Court ordered us to submit a new proposed rule to the **Federal Register** by April 11, 2003.

On April 22, 2003, we published a proposed rule to designate approximately 6,098 ac (2,468 ha) of land within Orange and San Diego counties, California, as critical habitat for the San Diego fairy shrimp in the **Federal Register**, and we accepted public comments on the proposed revision until June 23, 2003 (68 FR 19888). On April 8, 2004 (69 FR 18516), we published a notice in the **Federal Register** announcing: (1) The availability of the draft economic analysis (DEA) of the proposed rule to revise critical habitat for public review; (2) the reopening of the public comment period on the proposed rule; and (3) the scheduling of public hearings on the proposed critical habitat designation and DEA. Public hearings were conducted on April 29, 2004, in Carlsbad, California. The second public comment period closed on May 10, 2004.

The Service initiated work on the revised final critical habitat rule for the San Diego fairy shrimp, but because of other court-ordered priorities we did not complete the rule. On February 8, 2007, a motion was filed by the Plaintiffs requesting the Court to direct us to finalize the revised critical habitat designation for the San Diego fairy shrimp. We reached an agreement with the Plaintiffs whereby a revised final designation would be completed on or before November 1, 2007. On April 3, 2007, we published a notice in the **Federal Register** announcing the reopening of the public comment period for the April 22, 2003, proposed rule to revise critical habitat for the San Diego fairy shrimp, and we accepted comments and information until May 3, 2007 (72 FR 15857). This rule is being finalized in compliance with the court order.

Summary of Comments and Recommendations

As discussed in the Previous Federal Actions section above, we have opened three public comment periods associated with the 2003 proposed rule to revise critical habitat for the San Diego fairy shrimp; the second and third comment periods also sought public comment on the associated DEA. During these comment periods, we requested all interested parties to submit comments or information related to the proposed revision to the critical habitat designation, including, but not limited to, the following: Unit boundaries; species occurrence information and distribution; land use designations that may affect critical habitat; potential economic effects of the proposed designation; benefits associated with critical habitat designation; areas considered but not proposed for designation and the associated rationale for the non-inclusion/exclusion of these areas; and methods used to designate critical habitat.

We informed all appropriate entities of the opening of these comment periods, including State and Federal agencies, County governments, elected officials, and other interested parties through telephone calls, letters, and news releases sent by facsimile, by U.S. mail, and/or by electronic mail. During the April 22 to June 23, 2003, comment period, we also invited public comment through the publication of notices in the following newspapers: Los Angeles Times, Orange County Register, The Press-Enterprise, San Bernardino Sun, and the San Diego Union-Tribune. During the April 8 to May 10, 2004, comment period, we announced the date and times of two public hearings that were held on the 2003 proposed revision to designated critical habitat and DEA. Hearings were held on April 29, 2004, from 1 p.m. to 3 p.m. and from 6 p.m. to 8 p.m. in Carlsbad, California. Transcripts of these hearings are available for inspection (see **FOR FURTHER INFORMATION CONTACT** section above).

During the comment period that opened on April 22, 2003, and closed on June 23, 2003, we received 43 comments directly addressing the proposed critical habitat designation: 4 from peer reviewers, 3 from Federal agencies, 3 from local jurisdictions, and 33 from organizations or individuals. During the comment period that opened on April 8, 2004, and closed on May 10, 2004, we received 11 comments directly addressing the proposed critical habitat designation and the DEA. Of these latter comments, one was from a State agency, 5 were from local jurisdictions, and 5 were from organizations or individuals. During the comment period that opened on April 3, 2007, and closed May 3, 2007, we received 12 comments directly addressing the proposed revision to critical habitat and the DEA. Of these comments, 3 were from Federal agencies, 3 were from local jurisdictions, and 6 were from organizations or individuals.

Peer Review

In accordance with our policy published on July 1, 1994 (59 FR 34270), we solicited expert opinions from eight individuals with scientific expertise that included familiarity with the species, the geographic region where the species occurs, and conservation biology principles. We received responses from four of the peer reviewers. The peer reviewers were generally supportive of the designation of critical habitat. However, they stressed the importance of the genetic uniqueness of each population of San Diego fairy shrimp and the need to identify and preserve all remaining populations of the species.

We reviewed all comments received from the peer reviewers and the public for substantive issues and new information regarding critical habitat for the San Diego fairy shrimp. All comments received were grouped into general issue categories relating to the proposed rule to revise critical habitat for San Diego fairy shrimp and are addressed in the following summary and incorporated into this revised final rule as appropriate.

Peer Review Comments

Comment 1: Three peer reviewers stated we should take the genetic information on the San Diego fairy shrimp into consideration when designating critical habitat. The peer reviewers stated that allozyme (enzyme) studies (citing Davies *et al.* 1997) and mitochondrial DNA (genetic sequence) studies (citing Bohonak 2004) indicate that within pool complexes, there is a low degree of genetic variation, but

between vernal pool complexes there is a high degree of genetic variation. The analysis of mitochondrial DNA indicates that there are two distinct genetic clades (genetic groups within a taxa) among populations of San Diego fairy shrimp (Bohonak 2004, p. 3). The peer reviewers indicated that the two distinct genetic clades are important for the conservation of the San Diego fairy shrimp.

Our Response: We agree with the peer reviewers that the preservation of the genetic diversity of the San Diego fairy shrimp across its range is important to the conservation of this species, and we believe that we have captured the two distinct genetic clades referenced by the peer reviewers and described in the background section of this revised final rule in our designation. The distribution of the two clades is unusual because the two clades are not geographically separate across the extant range of the species. Our final designation captures a range of vernal pool complexes within each identified clade. Vernal pool complexes sampled in Fairview Park (subunit 1B) (Bohonak 2007, p. 1), Del Mar Mesa (subunit 4A/B), Carmel Mountain (subunit 4E and 4F), Lopez Ridge (subunit 4H), Winterwood (subunit 4I), Otay Mesa (subunit 5F), Lower Otay Reservoir (subunit 5H), and Marron Valley (subunit 5I) are in ''Group A'' (Bohonak 2004, pp. 3–9). These sites represent 10 of 16 sites in ''Group A'' sampled by researchers (Bohonak 2004, pp. 7–9). Vernal pool complexes sampled at San Onofre State Beach (subunit 2A) (Bohonak 2007, p. 1), Ramona (subunits 3E.1–3E.4), SANDER (subunit 4K), Montgomery Field (subunit 4M), Murphy Canyon (subunit 4C), and Chollas Heights (subunit 4D) are in ''Group B'' (Bohonak 2004, pp. 3–9). These sites represent 6 of 12 sites in ''Group B'' sampled by researches (Bohonak 2004, pp. 7–9; Bohonak 2007, p. 1).

Comment 2: Three peer reviewers expressed concern that Habitat Conservation Plans (HCPs) and Integrated Natural Resource Management Plans (INRMPs) may not provide the same level of protection for the San Diego fairy shrimp as critical habitat, and therefore can not be substituted for the designation of critical habitat.

Our Response: Where a Federal nexus exists, lands designated as critical habitat are protected from destruction or adverse modification under section 7 of the Act. However, to be successful, the conservation of the San Diego fairy shrimp relies on proactive conservation and management of vernal pool complexes rather than mere avoidance of certain habitat impacts under section 7 of the Act. Habitat conservation plans and INRMPs typically incorporate on-going management and protection for the San Diego fairy shrimp that will benefit, and is critical to, the long-term conservation of the species. This type of long-term management would not necessarily result from a section 7 consultation on an area where critical habitat has been designated. In addition, the protection and management afforded San Diego fairy shrimp habitat under HCPs extend to private lands that may otherwise lack a Federal nexus triggering consultation under section 7 of the Act.

Comment 3: One peer reviewer stressed the importance of viewing vernal pools as ecosystems with several important components, such as intact upland habitat and functional watersheds that contribute to the health and productivity of the vernal pool ecosystem and to the conservation of the San Diego fairy shrimp.

Our Response: We have addressed this comment by providing a more detailed description of the primary constituent elements (PCEs) in this revised final rule. The boundaries of each critical habitat subunit generally correspond to the boundaries of functional watersheds surrounding the included vernal pool complexes. We have attempted to incorporate all of the features that the peer reviewer described that we have determined to be essential to the conservation of the San Diego fairy shrimp (see the Primary Constituent Elements section for further discussion of this topic).

Public Comments

INRMPs and Department of Defense Lands

We received several comments related to the exclusion and exemption of Department of Defense (DOD) lands from the revised final critical habitat. We received comments from the U.S. Navy (Navy) regarding the proposed designation of critical habitat on Marine Corps Base Camp Pendleton (MCB Camp Pendleton), and separate comments regarding the proposed designation on Marine Corps Air Station Miramar (MCAS Miramar), Naval Radio Receiving Facility (NRRF), Naval Outlying Landing Field (NOLF), and Navy housing at Chollas Heights and Murphy Canyon under Naval Base Coronado. We also received comments from individuals, some stating that DOD lands should be designated as critical habitat, and others stating that DOD lands should not be encumbered by critical habitat.

Comment 4: The Navy requested that critical habitat not be designated at MCB Camp Pendleton, MCAS Miramar, NRRF, and NOLF, based on approved INRMPs for these installations and adverse affects to military training and readiness. Another commenter also requested that military lands at MCB Camp Pendleton not be designated as critical habitat.

Our Response: In the April 22, 2003, proposed rule to revise critical habitat for the San Diego fairy shrimp (68 FR 19888), we considered but did not propose critical habitat on MCAS Miramar, NRRF, and on mission essential training areas at MCB Camp Pendleton under section 4(b)(2) of the Act. The April 22, 2003, rule proposed to designate some non-training areas at MCP Camp Pendleton and at NOLF. In this revised final designation, we have determined that all the INRMPs in place at MCAS Miramar, NRRF, MCB Camp Pendleton, and NOLF provide a benefit to San Diego fairy shrimp, and therefore these lands are exempt from this revised final critical habitat under section 4(a)(3) of the Act (see Exemptions and Exclusions section below for a detailed discussion of these exemptions).

Comment 5: The Navy requested that critical habitat not be designated at the vernal pool areas at Murphy Canyon Navy Housing and Chollas Heights Navy Housing because they plan to complete an INRMP for these areas. The Navy continued to request that should critical habitat be designated at these areas that the Service commit to revisiting the designation upon the Navy's completion of an INRMP or other management plan for these areas.

Our Response: The vernal pool complexes at Murphy Canyon Navy Housing and Chollas Heights areas are not covered under an INRMP at this time; therefore they are not appropriate to consider for exemption under section 4(a)(3) of the Act. The vernal pool complexes at Murphy Canyon Navy Housing and Chollas Heights areas have been preserved for the benefit of the San Diego fairy shrimp and other vernal pool species. The vernal pool complexes at these two Housing Areas provide high quality habitat for the San Diego fairy shrimp and are some of the last remaining areas in urban San Diego that support this species. We applaud the past conservation work that the Navy has implemented at these two housing areas, and we look forward to working with the Navy to minimize any financial or regulatory burden associated with this critical habitat designation. It is our understanding that the Navy is working to complete an INRMP that will include these two areas and will secure funding

for the long-term management of these two areas for the benefit of the San Diego fairy shrimp. Features essential to the conservation of the San Diego fairy shrimp in these areas continue to require special management considerations and protections and are therefore included in this revised final designation. At such time as the Navy completes an INRMP for these areas, we can assess any benefits provided to the San Diego fairy shrimp and revise the designation through the rulemaking process consistent with available funding and program priorities.

Comment 6: Some commenters stated that our exclusion of INRMPs is not legally or scientifically justified because the commenter believes that the INRMPs, specifically those for MCB Camp Pendleton and MCAS Miramar, do not adequately protect vernal pools or San Diego fairy shrimp.

Our Response: Section 318 of National Defense Authorization Act for Fiscal Year 2004 (Pub. L. 108–136) amended section 4(a)(3) of Act to address the relationship of INRMPs to critical habitat by adding a new section, 4(a)(3)(B). This amendment prohibits us from designating as critical habitat any lands or other geographical areas owned or controlled by DOD, or designated for its use, that are subject to an INRMP prepared under section 101 of the Sikes Act, if the Secretary of the Interior (Secretary) determines, in writing, that such plan provides a benefit to the species for which critical habitat is proposed for designation. Lands at MCB Camp Pendleton, MCAS Miramar, NRRF, and NOLF are exempt from critical habitat for the San Diego fairy shrimp under section 4(a)(3) of the Act as we have determined that these installations' INRMPs benefit the San Diego fairy shrimp and features essential to its conservation (see Exemptions and Exclusions section below for a detailed discussion on exclusions and exemptions). We believe that these exemptions are legally and scientifically justified because implementation of these INRMPs will benefit the San Diego fairy shrimp and its habitat at each installation.

Habitat Conservation Plans and Natural Community Conservation Plans

We received several comments related to the exclusion or inclusion of Habitat Conservation Plans (HCPs) and Natural Community Conservation Plans (NCCPs). The comments that we received have been paraphrased and grouped to better clarify how we have handled HCPs and NCCPs in this revised final designation of critical habitat.

Comment 7: We received comments that discussed the benefits of excluding critical habitat in areas covered by HCPs and NCCPs and comments that discussed the benefits of designating critical habitat in areas covered by HCPs and NCCPs. Commenters that supported the exclusion of areas covered by HCPs and NCCPs stated that these plans provide superior conservation than the section 7 process because HCPs and NCCPs plan for conservation at the landscape level rather than using a project-by-project approach. Supporters of the exclusion of critical habitat in these areas stated that the exclusion of critical habitat will: Benefit partnerships and future planning; prevent additional regulation; avoid legal challenges that HCPs will result in ''adverse modification'' of critical habitat; and support Implementation Agreements. Supporters of the designation of critical habitat in areas covered by HCPs and NCCPs stated that the designation of critical habitat provides additional protection and conservation benefit to the San Diego fairy shrimp, which is needed to avoid impacts that the HCPs and NCCPs do not protect against. Other commenters stated that HCPs and NCCPs are often under-funded, and actual implementation is sometimes ineffective. One commenter stated that the exclusion of areas covered by HCPs from critical habitat is neither legally sound nor appropriate as demonstrated by the October 13, 2006, ruling by the U.S. District Court for the Southern District of California (*Southwest Center for Biological Diversity* v. *Bartel*, CV 98–2234), which clearly rules that the Multiple Species Conservation Program (MSCP) is ineffective, specifically for protecting the fairy shrimp. The commenter stated that the MSCP cannot act as a surrogate for critical habitat, and lands under the MSCP (and other HCPs) should not be excluded from critical habitat designation.

Our Response: We believe that regional HCPs and NCCPs typically provide for greater conservation benefits to species than project-by-project consultations conducted under section 7 of the Act. Because large HCPs approach conservation from a regional perspective, these plans have the advantage of addressing conservation issues from a coordinated, integrated perspective rather than a piecemeal project-by-project approach. Moreover, regional HCPs typically provide for the proactive monitoring and management of conserved lands, which is important to the survival and recovery of the San Diego fairy shrimp. Such conservation needs are typically not addressed through the application of the statutory prohibition on adverse modification or destruction of critical habitat. Section 4(b)(2) of the Act authorizes the Secretary to consider the economic impact, national security impact, and any other relevant impact of specifying any particular area as critical habitat. An area may be excluded from critical habitat if it is determined that the benefits of exclusion outweigh the benefits of specifying a particular area as critical habitat, unless the failure to designate an area as critical habitat will result in the extinction of the species. We believe that the exclusions that we made in this final revised rule are legally supported under section 4(b)(2) of the Act and scientifically justified because of the level of protection and long-term conservation for the San Diego fairy shrimp that are a result of the HCPs that we have excluded. Please see the Exemptions and Exclusions section in this revised final rule for a detailed analysis on why we reaffirmed our 2003 determination that the benefit of excluding many of these areas from critical habitat is greater than the benefit of including them in a critical habitat designation.

In response to the comment on the *Southwest Center for Biological Diversity* v. *Bartel*, (CV 98–2234) ruling, we have fully considered this significant information. In this challenge, brought by 14 environmental organizations, the court held that the protections afforded the San Diego fairy shrimp and six other vernal pool species under the City of San Diego's MSCP subarea plan are inadequate, and the Service's decision to issue an incidental take permit to the City based on the subarea plan was arbitrary and capricious. The court enjoined the incidental take permit with respect to ongoing and future land use activities that affect vernal pool habitat. The court concluded, in part, that the approach adopted in the City's MSCP subarea plan for evaluating project impacts on vernal pool species through the ACOE's site-specific permitting process under section 404 of the Clean Water Act had been effectively eliminated by the United States Supreme Court's *SWANCC* decision and that the remaining protections contained in the MSCP subarea plan do not adequately protect the San Diego fairy shrimp. As a result of the decision, we have designated as critical habitat lands covered by the City of San Diego's subarea plan that were considered, but not proposed, in the 2003 revised proposed rule (see Summary of Changes From Previously Designated Critical Habitat and 2003 Proposed Rule section

and Unit Descriptions section below for more details).

Comment 8: Some commenters requested that we exclude pending HCPs and lands enrolled in the NCCP program be excluded under section 4(b)(2) of the Act or that we remove designated critical habitat concurrent with the final approval of an HCP or NCCP. Commenters recommended the establishment of a set of standards for HCPs and NCCPs that would provide for the automatic removal of these areas from critical habitat at the time these plans are completed. Some commenters stated that the designation of critical habitat in these areas may have a negative effect on entities pursuing an HCP and deter the completion of these pending HCPs. Specifically, we received requests to exclude the following pending HCPs: the Orange County Southern Subregion Habitat Conservation Program (Southern Subregion HCP); the City of Carlsbad Habitat Management Plan (Carlsbad HMP) under the Northwestern San Diego County Multiple Habitat Conservation Program (MHCP); and the County of San Diego's HCP covering the proposed critical habitat in Ramona.

Our Response: Although we believe that an NCCP/HCP completed in the future will conserve the San Diego fairy shrimp if it is a covered species under the plan, we are not able to automatically remove designated critical habitat. In order to revise a critical habitat designation to take into consideration a completed NCCP or HCP, we are required under sections 4(b)(5) and 4(b)(6) of the Act to follow the appropriate rulemaking process, consistent with available funding and program priorities. We have reanalyzed the areas that were covered by pending HCPs or NCCPs at the time we proposed critical habitat and we have made the following conclusions. The Southern Subregion HCP was completed on January 10, 2007. This plan provides for the conservation of the San Diego fairy shrimp in critical habitat subunits 1D and 1E. We have determined that the benefits of exclusion outweigh the benefits of inclusion for these subunits, and therefore we have excluded these subunits from critical habitat under section 4(b)(2) of the Act (see the Exemptions and Exclusion section for more details on this exclusion.)

The Carlsbad HMP under the MHCP was completed on November 15, 2004. This plan provides for the conditional coverage of the San Diego fairy shrimp; however, the coverage of this species is contingent on the specific commitment to manage vernal pool habitat within this plan. At this time the City of Carlsbad has not committed to manage vernal pool habitat or include the area we identified as critical habitat within this plan (subunit 2G); therefore the Carlsbad HMP under the MHCP does not cover the San Diego fairy shrimp at this time, and we have not excluded lands covered under this plan from critical habitat.

At this time the HCP for northern San Diego County is still in the process of being written. No draft of this plan is available for public review. Therefore, we have not excluded lands covered under this plan from critical habitat in and around Ramona (subunits 3E.1, 3E.2, 3E.3, and 3E.4).

Comment 9: We received comments requesting that we exclude the area covered by the San Diego Gas & Electric (SDG&E) NCCP/HCP.

Our Response: We have reviewed the appropriateness of excluding lands covered by the SDG&E NCCP/HCP and determined that SDG&E does not own any lands containing features we have determined essential for the conservation of the San Diego fairy shrimp. Although SDG&E is bound by this NCCP/HCP on all easements and access roads that we have determined contain features essential to the conservation of the San Diego fairy shrimp, the actual owners of the land covered by the SDG&E NCCP/HCP are not bound by this plan. Therefore we believe it would be inappropriate to consider lands not under the control of SDG&E for exclusion based on the coverage provided in this NCCP/HCP.

Comment 10: We received a comment requesting that we reaffirm our exclusion of the Orange County Central-Coastal NCCP/HCP (Central-Coastal NCCP/HCP) in this final revised critical habitat.

Our Response: In the April 22, 2003, proposed rule to designate revised critical habitat for the San Diego fairy shrimp, we discussed the Central-Coastal NCCP/HCP and stated that areas essential to the San Diego fairy shrimp covered by this plan should be excluded from critical habitat. In our review of the proposed critical habitat we found that, although critical habitat subunits 1A, 1B, and 1C are all near the boundary of this plan, there are no areas containing features essential to the San Diego fairy shrimp within the area covered by the Central-Coastal NCCP/HCP. Furthermore, we do not know of any vernal pools occupied by the San Diego fairy shrimp within the area covered by the Central-Coastal NCCP/HCP. Therefore, we have no reason to include a discussion of the Central-Coastal NCCP/HCP in this revised final designation of critical habitat.

Other Comments on Inclusions, Exclusions, and Removals

Comment 11: One commenter requested that we exclude the Shaw Lorenz project site on Del Mar Mesa from critical habitat based on the conservation actions that the developer of the site is undertaking as part of this development.

Our Response: The vernal pool habitat on the Shaw Lorenz project site was not known to be occupied at the time of the proposed rule and the Shaw Lorenz project site was not considered in the proposed rule to revise critical habitat (68 FR 19888, April 22, 2003). Therefore, we are not designating lands at the Shaw Lorenz project site as critical habitat for the San Diego fairy shrimp.

Comment 12: The Army Corps of Engineers (ACOE) raised the following issues in their comments: (1) Some lands owned by the Department of Homeland Security (DHS) within proposed critical habitat subunits 5D and 5F have already been disturbed and developed by the construction of the 14-Mile Border Infrastructure System (BIS) project along the United States/Mexico border and should be removed from critical habitat; (2) lands owned by the DHS located north of the BIS within proposed critical habitat subunit 5F are being conserved by the DHS and should not be designated as critical habitat under section 3(5)(A) or should be excluded under section 4(b)(2) of the Act; and (3) lands within the footprint of the BIS do not or will not contain any of the PCEs for the San Diego fairy shrimp because of their use as an active enforcement zone subject to ongoing vehicular use.

Our Response: We evaluated habitat on lands owned by the DHS within proposed subunits 5D and 5F, and removed or excluded all DHS-owned lands from this final designation. Some portions of the BIS project have already been completed and the habitat impacted no longer contains the PCEs essential to support the San Diego fairy shrimp; therefore, we removed these lands from the critical habitat designation. Please see the Summary of Changes From Previously Designated Critical Habitat and 2003 Proposed Rule section for more information about the removal of these lands from critical habitat. The remaining 29 ac (12 ha) of DHS-owned land within subunit 5F includes a vernal pool restoration site (Arnie's Point) where the DHS is offsetting impacts to vernal pool habitat associated with the construction of the BIS. The DHS is implementing conservation measures for the San Diego

fairy shrimp at Arnie's Point even though they have a waiver exempting them from obligations under section 7 of the Act. The entire strip of DHS lands (29 ac (12 ha)) along the U.S./Mexico border that meet the definition of critical habitat are important to national security. We determined that the benefits of excluding this area from critical habitat outweigh the benefits of including this area in critical habitat. A detailed discussion of our rationale for excluding these lands is provided in the Exemptions and Exclusions section of this revised final rule.

Comment 13: One commenter disagreed with our proposed critical habitat unit for the land in East Otay Mesa. The commenter stated that some of the areas proposed as critical habitat have been developed. The commenter concluded that the mapping of the critical habitat is inaccurate. Another commenter provided comments on a specific area on Otay Mesa. This commenter stated that proposed critical habitat subunit 5D is completely within either the City of San Diego subarea plan under the MSCP or the County of San Diego subarea plan under the MSCP. The commenter added that a significant portion of the proposed critical habitat in subunit 5D, including nearly 100 percent of the Otay Crossings Commerce Park project, is within the MSCP boundaries. The commenter stated that the inclusion of the MSCP land in critical habitat is counter to the involvement of the Service in the HCP process. The commenter stated that the Otay Crossings Commerce Park project site has been surveyed repeatedly for vernal pools and San Diego fairy shrimp and only vernal pools that were present on the site in the recent past have been eliminated by the construction of the BIS project. The commenter indicated that the East Otay Mesa area supports relatively few known locations of the listed San Diego fairy shrimp, and that these locations are scattered and are not vernal pool complexes. The commenter stated that the mesa area generally slopes to the south, providing limited flat areas where fairy shrimp pools could become established. The commenter concluded that the designation of this area as critical habitat for the San Diego fairy shrimp would not afford additional benefits to the species and would not play a significant role in the species' recovery.

Our Response: The area identified in the April 22, 2003, proposed rule to revise critical habitat for San Diego fairy shrimp on East Otay Mesa was reevaluated at the suggestion of the commenters. Some of the land proposed as critical habitat was removed because it did not contain the PCEs, such as the lands owned by the DHS in subunit 5D. However, we found that the majority of the area was appropriately mapped and is included in the revised final designation. The areas we are designating as critical habitat contain the features essential for the conservation of the San Diego fairy shrimp. Critical habitat subunit 5D on eastern Otay Mesa contains vernal pools that support known locations of the San Diego fairy shrimp and the watershed area necessary to maintain the vernal pools. The area designated as critical habitat gently slopes to the south and contains several vernal pools dispersed across an area of approximately 391 ac (158 ha). The area on East Otay Mesa included in the designation is relatively undamaged by development and off-road vehicle activity. This area is entirely within the County of San Diego's Major and Minor Amendment Areas of the MSCP, which are not covered as part of the County's approved MSCP subarea plan. Therefore, it is not appropriate to exclude these lands because of their location within the boundaries of the MSCP (see Exemptions and Exclusions section below for a detailed discussion).

Criteria and Methodology

Comment 14: Some commenters stated that the Service has deferred determination of whether specific areas contain PCEs, leaving landowners without effective notice as to whether their property contains critical habitat.

Our Response: We have determined that all of the designated units contain all of the PCEs (see Unit Descriptions section below). In our proposed rule, we provided a description of the PCEs and maps of the areas that we proposed for critical habitat in the **Federal Register**. Additional maps showing all areas containing features arranged in the quantity and spatial configuration essential for the conservation of the San Diego fairy shrimp were made available to the public for review and comment on our Web site. Also, the contact information for the Carlsbad Fish and Wildlife Office was provided to the public. These resources were readily available to any landowner with a question regarding the critical habitat proposal, including the PCEs. We believe these measures effectively notified landowners concerning the proposed revised designation of critical habitat.

Furthermore, in this revised final rule, we have re-evaluated all units and removed any areas that do not contain the PCEs (see Summary of Changes From Previously Designated Critical Habitat and 2003 Proposed Rule section below). Where possible, the boundaries of final critical habitat have been refined to remove lands containing features such as roads, buildings, and other infrastructure that do not contain the PCEs; however, it was not possible to exclude all such areas from the designation. The scale of the maps we prepared under the parameters for publication within the Code of Federal Regulations may not reflect the exclusion of such developed areas. Any such structures and the land under them inadvertently left inside critical habitat boundaries shown on the maps of this revised final rule have been excluded by text and are not designated as critical habitat. Please refer to the Criteria Used to Identify Critical Habitat section below for more information about the mapping methodology. Landowners needing assistance in determining whether their property lies within designated critical habitat can contact the Carlsbad Fish and Wildlife Office for assistance (see **ADDRESSES**).

Comment 15: One commenter indicated that the mapping methodology to identify areas for critical habitat is too general, and does not adequately account for site-specific analysis of the size and attributes of the vernal pools. Another commenter indicated that we had no scientific basis for using a 328 feet (ft) (100 meters (m)) grid for mapping of critical habitat.

Our Response: In the April 22, 2003, proposed rule we used a 328 feet (ft) (100 meters (m)) grid to delineate critical habitat. In order to make our mapping more specific we are no longer using the 328 feet (ft) (100 meters (m)) grid, instead we are mapping the specific areas that contain the PCEs for this species. We used a number of data sources to map the vernal pool complexes identified as critical habitat in this revised final rule. The vernal pool and San Diego fairy shrimp data referenced for this revised final rule include: Beauchamp and Cass 1979 (pp. 1–15), Zedler and Ebert 1979 (pp. 1–150), Bauder 1986 (pp. 1–29, Appendices), City of San Diego 2003 (pp. 1–125, Appendices), survey reports for San Diego fairy shrimp from 10(A)(1)(a) permits, and California Natural Diversity Database (CNDDB) (2004, 2007) information. In addition to this location data for vernal pools and San Diego fairy shrimp, we used topographical maps, soil maps (Bowman 1973, pp. 7–17), and aerial imagery to capture the PCEs associated with each vernal pool complex designated as critical habitat. We also relied on information obtained from site visits to vernal pool complexes to verify the

presence of the PCEs in the areas that we identified as critical habitat.

Comment 16: One commenter stated that it is important to designate the entire area within each vernal pool complex, including the watershed of the vernal pool, in order to provide habitat for animals that are vectors for dispersal of San Diego fairy shrimp cysts. Another commenter provided similar information to specific vernal pool complexes in San Marcos, California.

Our Response: This revised final designation includes vernal pool basins and the associated watersheds necessary to support the San Diego fairy shrimp; however, we did not include larger areas of habitat needed for animal dispersal vectors. We did not have enough specific information on this topic to include other areas with any degree of certainty. We believe that our discussion of the PCEs adequately captures the physical and biological features essential for conservation of the San Diego fairy shrimp (see Primary Constituent Elements section below for details). The information regarding vernal pool complexes added to the information that we previously had on the vernal pools in San Marcos; however, it did not significantly change our analysis of this area.

Comment 17: One commenter stated that stochastic (random) events could drive the species to extinction since it no longer has the ability to meet the challenges of environmental or human-caused stress. The commenter stated that the exclusion of any area from critical habitat could result in the extinction of the San Diego fairy shrimp.

Our Response: We agree that stochastic events could negatively impact the San Diego fairy shrimp throughout its range. We reaffirmed our 2003 determination to exclude areas covered by HCPs that provide for the conservation of vernal pool habitat and the San Diego fairy shrimp because these plans incorporate management and monitoring for vernal pool ecosystems. As environmental conditions change, management of these areas will also change to address new threats to the species and its habitat. The areas we excluded also provide for management actions to address human induced stresses such as off-road vehicle use or the illegal dumping of trash in preserve areas. We determined the exclusion of these areas from critical habitat designation under section 4(b)(2) of the Act will not result in the extinction of the San Diego fairy shrimp (see Exemptions and Exclusions section below for a detailed discussion).

Comment 18: Several commenters requested that the Service expand the proposed critical habitat to include all essential vernal pools identified in the Recovery Plan for Vernal Pools of Southern California (recovery plan) (Service 1998a), including the vernal pools listed in appendices F and G.

Our Response: We believe that this final revised critical habitat reflects the intent of the recovery plan (Service 1998a). The 1998 recovery plan outlined four recovery criteria for the seven federally listed vernal pool species occurring in Southern California. In sum the recovery criteria state that: (1) Existing vernal pools and their associated watersheds that contain a federally-listed species should be secured for that specific supported species; (2) existing vernal pools and their associated watersheds need to be secured in a configuration that maintains habitat function and species viability (as determined by future research); (3) secured vernal pools be enhanced or restored such that population levels of existing species are stabilized or increased; and (4) population trends must be shown to be stable or increasing for a minimum of 10 years prior to reclassification (Service 1998a, pp. iv–vi; pp. 62–64T). The intent of the recovery criteria is to identify, protect existing vernal pools, and, as necessary, restore degraded vernal pool habitat within the range of the San Diego fairy shrimp. Appendices F and G of the recovery plan identified vernal pool complexes needed to stabilize or reclassify the San Diego fairy shrimp to threatened status based on information available to the Service in 1998. Since that time we have gained additional information about the relative significance and current status of vernal pool areas identified in appendices F and G, and we have identified several important areas that were discovered to be occupied by the San Diego fairy shrimp after the recovery plan was completed that are not analyzed in the recovery plan. The areas designated in this rule reflect our current assessment, based on the best available information, of habitat essential to the conservation of the species. Please see Table 1 and the Summary of Changes From Previously Designated Critical Habitat and 2003 Proposed Rule section below for a full discussion.

Comment 19: One commenter stated that the San Diego fairy shrimp has already gone extinct in Los Angeles and Orange counties and that it is close to extinction in Riverside and Ventura counties. The commenter indicated that all remaining habitat throughout the species' range is essential to the species' survival and will require special management. The commenter stated that we should designate critical habitat in areas where new vernal pools have been found since the publication of the proposed rule in April 2003.

Our Response: This commenter is incorrect about the historical distribution of the San Diego fairy shrimp. The best available scientific information indicates that the San Diego fairy shrimp has always been restricted to Orange and San Diego counties in the United States and to northwestern Baja California in Mexico. There is a single record of a female fairy shrimp in Santa Barbara County; however, the site where this fairy shrimp was collected from has been revisited and there is no corroborating evidence indicating San Diego fairy shrimp occupy this area. We believe this original report was an error. The San Diego fairy shrimp has never been reported from Los Angeles, Riverside, or Ventura counties. The San Diego fairy shrimp is still present in Orange County. The commenter did not provide specific information on the vernal pool complexes that they believe are essential to the conservation of the San Diego fairy shrimp, so we cannot address the reasons that these areas were not included in critical habitat. In addition, we have not evaluated new occurrences discovered after the 2003 proposed rule to determine whether they are essential to the conservation of the species. In light of the fact that the commenter did not provide any specific data and that we have not evaluated new occurrences, it would not be appropriate to include these occurrences in the final rule. Section 4 of the Act allows for revision of any critical habitat designation as appropriate to evaluate and include new information through the full rulemaking process allowing for public comment on all proposed lands.

Policy and Procedures

Comment 20: The ACOE requested clarification of the definition of ''destruction or adverse modification'' of critical habitat.

Our Response: Concerning the ACOE's request for a clarification of ''destruction or adverse modification'' of critical habitat, we have revisited the regulatory definition of adverse modification in relation to the species' conservation. Recent decisions by the Fifth and Ninth Circuit Court of Appeals have invalidated our regulatory definition of ''adverse modification'' at 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, 245 F.3d 434, 442F* (5th Cir 2001)).

Consistent with 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 (or retain the current ability for the PCEs to be functionally established) to serve the intended conservation role for the species.

Comment 21: One commenter stated an environmental impact statement (EIS) as defined under the National Environmental Policy Act (NEPA) should be written to address the potential significant impacts from the designation of San Diego fairy shrimp critical habitat.

Our Response: It is our position that, outside the Tenth Circuit Court, we do not need to prepare environmental analyses as defined by NEPA 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 position was upheld in the courts of the Ninth Circuit (*Douglas County* v. *Babbitt*, 48 F.3d 1495 (9th Cir. Ore. 1995), cert. denied 116 S. Ct. 698 (1996)).

Comment 22: Some commenters stated that it was unclear how critical habitat designation would affect private landowners.

Our Response: The designation of critical habitat does not affect State, local, private or other non-Federal landowners unless a project requires Federal funding, permits, or authorization. Critical habitat does not affect land ownership or establish a refuge, preserve, or other special conservation area. It does not allow government or public access to private lands, and will not result in the closure of an area to all access or use. Please refer to the Effects of Critical Habitat Designation section below for more information.

Comment 23: One commenter reiterated the Service's mandate to follow Secretarial Order 3206 and Executive Order 13175 regarding consultation and coordination with Tribal governments when deciding to propose critical habitat on Tribal lands.

Our Response: Executive Order 13175 and Secretarial Order 3206 direct the United States government, and specifically the Service, to establish regular and meaningful consultation and collaboration with Tribal officials in the development of Federal policies that have Tribal implications, to strengthen the government-to-government relationships with Tribes, and reduce the imposition of unfunded mandates upon Tribes. In the case of San Diego fairy shrimp, there are no known occurrences of this species on Tribal lands, nor is there any habitat essential for the conservation of the San Diego fairy shrimp on Tribal lands. Therefore, no critical habitat is designated for this species on Tribal lands.

Comment 24: One commenter requested that we extend the comment period on the proposed designation and DEA.

Our Response: Following the publication of the proposed critical habitat designation on April 22, 2003, we opened a 60-day public comment period that closed on June 23, 2003, and conducted outreach notifying affected elected officials, local jurisdictions, interest groups, and property owners. We conducted much of this outreach through legal notices in regional newspapers, telephone calls, letters, and news releases faxed and/or mailed to affected elected officials, local jurisdictions, and interest groups, and publication of the proposed designation and associated material on our Web site. We prepared a DEA of the proposed critical habitat designation, which we made available to the public on April 8, 2004 (68 FR 18516). The public comment period was reopened through May 10, 2004. During this comment period, two public hearings were held on April 29, 2004, from 1 p.m. to 3 p.m. and from 6 p.m. to 8 p.m. in Carlsbad, California. We provided notification of the DEA through telephone calls and letters and news releases faxed and/or mailed to affected elected officials, local jurisdictions, and interest groups. We also published the DEA and associated material on our Web site following the draft's release on April 8, 2004. A third period for public comment was opened from April 3, 2007, to May 3, 2007. In addition, several public comment periods were held on our earlier proposed and final critical habitat rules, which are similar in many respects to the current proposed and final rule. Because of our obligation to meet the deadline established in settlement of litigation involving critical habitat designation for the San Diego fairy shrimp, we were not able to extend or open an additional public comment period.

Economic Analysis

Comment 25: Some commenters stated, in general, that we should exclude areas from critical habitat due to the significant economic impacts associated with the designation of critical habitat.

Our Response: We have not excluded any lands based on disproportionate economic impacts to a property. We have responded to comments that provided us with specific information and maps requesting economic exclusions below.

Comment 26: One commenter stated that the placement of critical habitat over subunit 5D, especially the Otay Crossings Commerce Park project, will only divert limited staffing and financial resources towards addressing critical habitat issues instead of focusing on the successful implementation of the MSCP.

Our Response: As discussed above in the response to Comment 15 we reanalyzed subunit 5D. We removed all areas in this subunit that do not contain features essential to the conservation of the San Diego fairy shrimp. However, a large portion of subunit 5D has been designated because it contains features in quantity and spatial arrangement essential to the conservation of the San Diego fairy shrimp, i.e., PCEs (Please see Criteria Used to Identify Critical Habitat section). Our economic analysis of subunit 5D did not indicate that the economic impacts in this subunit were substantially different from other areas included in critical habitat, therefore we have not excluded this area due to disproportionate economic impacts.

Comment 27: One commenter stated that the Service's appreciation for, and earlier estimates of, the cost of the shrimp's listing have proven low. The commenter stated that delays in development associated with the breakdown of the MSCP/section 7 of the Act consultation process have been high. The commenter stated that the aftermath of the *Southwest Center for Biological Diversity* v. *Bartel* (CV 98–2234) decision has increased those costs. The commenter stated that a small property or project with a debt of just $10 million, for example, will see an additional cost in interest alone of approximately $50,000 per month of delay in the section 7 consultation process. Large projects with massive early expenditure on design, drawings, and the California Environmental Quality Act (CEQA) planning process, as well as sunk development costs will have incurred and will continue to incur extraordinary carrying costs too large to calculate except by the agency with access to all of the projects delayed and their sunk costs and carry costs. The commenter stated that the new rulemaking obliges the Service to list the projects, public and private, delayed by the ruling and the breakdown of the section 7 consultation process and use the costs to those projects as the minimum cost to date of the critical habitat designation while also calculating the additional cost of going

forward. The commenter stated that the economic analysis should also include a reasonable analysis of the impact of a critical habitat designation on that land not yet under development but newly burdened with this designation. Another commenter echoed these comments and stated that the result of a critical habitat designation would cause land owners to enter into a section 7 consultation with the Service. The commenter stated that this consultation process would lengthen the time and increase the cost to process projects. The commenter added that adding to the regulatory burden does not make sense since the MSCP was created to expedite the processing of projects within the County while providing for the long-term survival of fairy shrimp within the preserve lands.

Our Response: The draft economic analysis (DEA) addresses potential costs that a private land development may incur from the designation of critical habitat. It is not necessarily the case that delays for development projects will result from the designation of critical habitat. The need to complete section 7 consultations in and of itself does not automatically delay private development projects; these consultations can generally be coordinated with baseline land use regulatory processes and do not necessarily increase the time to obtain approvals. The DEA identified projects that were currently being processed (i.e., those that are reasonably foreseeable) or had been recently completed as the most likely projects to be delayed by the designation of critical habitat. The DEA analyzed the cost that these projects may incur and incorporated this information into the analysis. Please see the section Time-Delay Costs of the DEA (Economic and Planning Systems, Inc. 2004, pp. 53–55). Further, the economic costs associated with development delays resulting from the *Southwest Center for Biological Diversity* v. *Bartel* (CV 98–2234) decision are not the result of the existing critical habitat designation or of the revised critical habitat designation. Rather they are the result of the court's determination that there are deficiencies in the City of San Diego subarea plan under the MSCP and in the Service's decision to issue an incidental take permit based on the plan. In the aftermath of *SWANCC* and *Rapanos* it is not clear to what extent projects affected by the *Southwest Center for Biological Diversity* v. *Bartel* (CV 98–2234) decision are likely to have a Federal nexus that would trigger consultation under section 7 of the Act and an examination of the projects' impacts on critical habitat.

Comment 28: One commenter stated that the DEA was flawed because it used existing HCPs and INRMPs that are already in place as a baseline for the economic analysis. The commenter indicated that the use of baseline conditions underestimates the economic cost of the designation. The commenter also stated that the DEA fails to take into account the impact of the designation of critical habitat on the housing market or on transportation projects.

Our Response: The economic analysis used baseline conditions and regulations that are already in place for the economic analysis because the designation of critical habitat will not alter existing conditions. In areas that do not have existing HCPs or other regulations that provide for the regulation of San Diego fairy shrimp habitat, the economic analysis highlights the possible costs that may be due to the designation of critical habitat. We believe that the economic analysis did address both impacts on the housing market and transportation projects by analyzing the impacts of critical habitat on private land development and on road construction and maintenance.

Comment 29: Commenters stated that the DEA should use case studies rather than cost estimates or projections and that the economic analysis should be released to the public prior to the final designation of critical habitat. Other commenters stated that the economic analysis should be completed prior to proposing critical habitat.

Our Response: We agree that cost estimates derived from real examples are preferable. To the extent possible, our economic analysis is derived from actual cost information collected in the preparation of the economic analysis and during the comment periods. The DEA was made available for public review and comment prior to the final designation of critical habitat. Under 50 CFR 424.19, we are not required to consider the probable economic impacts of designating a particular area as critical habitat until after critical habitat is proposed. There were two comment periods for the public to provide input on the DEA, one opened on April 8, 2004, and closed May 10, 2004 (69 FR 18516), the other opened on April 3, 2007, and closed May 3, 2007. There were also public hearings on April 29, 2004, from 1 p.m. to 3 p.m. and from 6 p.m. to 8 p.m. in Carlsbad, California, to provide comments on the DEA. An additional comment period was opened from April 3, 2007, to May 3, 2007, on the DEA and proposed rule. The final designation takes into consideration the findings of the DEA, and comments and information submitted to us regarding the DEA.

Comments From State Agencies

Comment 30: California Department of Fish and Game (CDFG) supported the exclusion of Natural Communities Conservation Plans (NCCP)/HCPs that include the San Diego fairy shrimp as a covered species. Additionally, CDFG also requested that land designated as critical habitat be automatically removed from such designation upon approval of an NCCP.

Our Response: Although we agree with CDFG that an approved NCCP/HCP likely provides a conservation benefit to the species covered by that particular plan and should be considered for exclusion from critical habitat designation under section 4(b)(2) of the Act, we are not able to automatically remove designated critical habitat from areas once an NCCP/HCP is approved. In order to revise a critical habitat designation to take into consideration a completed NCCP or HCP, we are required under sections 4(b)(5) and 4(b)(6) of the Act to follow the appropriate rulemaking process. If an NCCP or HCP that includes the San Diego fairy shrimp as a covered species is approved subsequent to the designation of critical habitat for the species, we can reassess the critical habitat boundaries and revise such designation through the rulemaking process, consistent with available funding and program priorities.

Comment 31: CDFG requested that State-owned land on Del Mar Mesa be excluded from the revised final designation of critical habitat.

Our Response: The State-owned lands on Del Mar Mesa are intermingled with other conservation lands on Del Mar Mesa under Federal, local, and private ownership. We have determined that many of these lands meet the definition of critical habitat and contain the features essential to the conservation of the SDFS; we are designating these lands (including State-owned lands) as critical habitat in this final rule. Several landowners, including the State, are working together toward preservation and management of the vernal pools on Del Mar Mesa and we applaud this effort. The ''Del Mar Mesa Preserve'' lands are essential for the conservation of the San Diego fairy shrimp because they consist of one of the largest continuous blocks of largely undisturbed mesa topography, on non-military land, remaining in San Diego County. The area contains several hundred vernal pools occupied by San Diego fairy shrimp and other sensitive

vernal pool species. The lands that contain the features essential for the conservation of the San Diego fairy shrimp on Del Mar Mesa are part of the area that is within the City of San Diego subarea plan under the MSCP. Consistent with the City's subarea plan, a draft management plan for the Del Mar Mesa Preserve has been written (Recon 2002); however, the plan has not been finalized or implemented. As recognized in the plan, the Del Mar Mesa Preserve requires integrated management to control threats associated with off-road vehicle use and illegal dumping; however, the Del Mar Mesa Preserve lands are not adequately fenced or otherwise managed. Funding to implement the draft management plan has yet to be identified. Although we considered, but did not propose lands covered by the City of San Diego subarea plan under the MSCP under section 4(b)(2) in the proposed rule; we have determined that it is inappropriate to exclude lands within the City of San Diego subarea plan (including State-owned lands) under the MSCP (see Summary of Changes From Previously Designated Critical Habitat and 2003 Proposed Rule section and Exemptions and Exclusions section below for a detailed discussion).

Summary of Changes From Previously Designated Critical Habitat and 2003 Proposed Rule

On October 3, 2000, we designated five units comprising a total of 4,025 ac (1,629 ha). We proposed to revise this designation to 6,098 ac (2,468 ha) on April 22, 2003 (68 FR 19888). The areas designated in this revised final rule constitute a revision of the areas we proposed as critical habitat for San Diego fairy shrimp on April 22, 2003 (68 FR 19888). In addition, all of the land designated in this revised final rule was considered for critical habitat in the 2003 proposed rule. In this section we present the differences between what was designated in 2000, what was proposed in 2003, and what is included in this final designation.

1. The 2000 final critical habitat designation (65 FR 63438, October 3, 2000) consisted of five units totaling 4,025 ac (1,629 ha). This revision to designated critical habitat also includes five units totaling 3,082 ac (1,248 ha). The five units in this revision generally correspond to the previously designated five critical habitat units, though some vernal pool complexes have been added to units where occupancy of the San Diego fairy shrimp has been identified outside of previously designated critical habitat. Additionally, we have refined our mapping techniques (as detailed below) and used data to limit the critical habitat designation to those areas that contain the features essential to the conservation of the species that may require special management considerations or protection.

2. In the 2000 critical habitat rule (65 FR 63438, October 3, 2000), the descriptions of unit boundaries were delineated on Universal Transverse Mercator (UTM) gridlines set on a 820 ft (250 m) grid. In the 2003 revised proposed designation, we based the critical habitat boundary descriptions on UTM gridlines set every 100 m (328 ft). These square grids were overlaid on areas determined to contain the PCEs required by the species. Portions of these grid squares did not contain PCEs, and were inadvertently included within the boundaries of the critical habitat designation due to mapping limitations. The use of UTM gridlines was the best available methodology to digitize critical habitat boundaries and provide UTM coordinates to the public of the boundaries at the time of the 2000 final designation and 2003 proposed designation. We are now able to delineate critical habitat unit boundaries by screen-digitizing habitat polygons using ArcMap, a computer Geographic Information System (GIS) program. We have used this methodology to produce boundaries associated more precisely with areas that we determined contain the PCEs for the species and are essential for the conservation of the San Diego fairy shrimp, and removed large areas of habitat that do not contain the features essential to the conservation of the species (see the ''Criteria Used to Identify Critical Habitat'' section for a detailed discussion).

3. As a result of comments received, we made editorial changes to the sections of the rule pertaining to the background, the PCEs, the criteria used to identify critical habitat, and the unit descriptions. We made these changes to eliminate redundancy, improve clarity, and provide a more in-depth explanation of the biological requirements of the San Diego fairy shrimp. We have revised the PCE section since publication of the 2000 critical habitat rule (65 FR 63438, October 3, 2000) to include more information about how we developed the PCEs. We added more specific information relating to: the ponding duration and depth required by the San Diego fairy shrimp (PCE 1); surrounding upland areas that vernal pools need to function naturally (PCE 2); and the soils that vernal pools are known to form on (PCE 3). We also provided additional information in our Criteria Used to Identify Critical Habitat Section to increase the transparency of the critical habitat designation. We provided information to better explain how we identified which vernal pool complexes contain the features essential to the conservation of the San Diego fairy shrimp, and how we delineated the areas that contain the PCEs for each critical habitat subunit.

4. The 2000 designation (65 FR 63438, October 3, 2000) and the 2003 proposed revision (68 FR 19888, April 22, 2003) broadly included upland habitat surrounding many vernal pools. Much of the surrounding upland habitat did not contain the PCEs. Furthermore, the 2000 designation (65 FR 63438, October 3, 2000) and the 2003 proposed revision (68 FR 19888, April 22, 2003) included habitat that does not contribute to any vernal pool watershed; for example, these rules included lands that are down-slope from vernal pool complexes. We used recent aerial imagery to determine where development has occurred, and removed any lands from this revision that do not contain the PCEs nor support the species. We also removed areas that do not contribute to any vernal pool watershed and have no affect on the ability of the San Diego fairy shrimp to persist or be recovered within a vernal pool watershed, and are therefore not essential to the conservation of this species. The majority of these lands were on the edges of an area considered for designation.

5. The 2000 critical habitat rule (65 FR 63438, October 3, 2000), the 2003 proposed revision (68 FR 19888, April 22, 2003), and this final designation are all largely based on the 1998 recovery plan. The San Diego fairy shrimp was first taxonomically described in 1993 (Fugate 1993, pp. 296–304). The species was subsequently listed as endangered in 1997, and included in a recovery plan for seven vernal pool species (two invertebrates and five plants) in southern California published the following year. The 1998 recovery plan outlined four recovery criteria for the seven federally listed vernal pool species. In sum the recovery criteria state that: (1) Existing vernal pools and their associated watersheds that contain a federally listed species should be secured for that specific supported species; (2) existing vernal pools and their associated watersheds need to be secured in a configuration that maintains habitat function and species viability (as determined by future research); (3) secured vernal pools be enhanced or restored such that population levels of existing species are

stabilized or increased; and (4) population trends must be shown to be stable or increasing for a minimum of 10 years prior to reclassification (Service 1998a, pp. iv–vi; pp. 62–64). In addition, the 1998 recovery plan included appendices that identified specific vernal pool complexes as ''necessary to stabilize the proposed and listed vernal pool'' (appendix F) and other vernal pool complexes as ''necessary to reclassify the proposed and listed vernal pool species'' (appendix G). The recovery plan did not explain how the vernal pool complexes listed in these appendices were identified for inclusion on the list nor why other occupied vernal pool complexes were not included in these appendices. Task 113, which relates to criteria 1, recognizes that certain pools within any vernal pool complex may not be necessary to maintain habitat function and species viability (Service 1998a, p. 66). As illustrated in Table 1, the 2000 critical habitat designation included many, but not all of the vernal pools identified in appendices F and G of the recovery plan. Likewise, the 2003 proposed revision included many, but not all, of the vernal pools identified in appendices F and G and also added several occupied vernal pools that were either not identified in the recovery plan, or were identified but not included in appendices F and G. In this final designation, we reanalyzed all vernal pool complexes identified in the recovery plan and reviewed all data identifying additional vernal pool complexes occupied by the San Diego fairy shrimp to determine which vernal pool complexes are essential to the conservation of this species, including the surrounding watershed necessary to support the complex.

As a consequence, this final revision to critical habitat does not include some lands that were identified in the recovery plan for which we have no data documenting historical or existing occupancy by the species or that, because of location, we do not believe would contribute meaningfully to the conservation of the species. Though the recovery plan focused predominantly on protecting existing habitat, the recovery plan did include other tasks to reestablish vernal pool habitat based on historical structure and composition to increase genetic diversity and population stability (Service 1998a, p. 69). The recovery plan noted that historical distributions of vernal pool species can be reconstructed and the landscape restored sufficiently to allow for the reestablishment and expansion of populations, where necessary (Service 1998a, p. 71). At this time, we have not identified any specific areas within the extant range of the San Diego fairy shrimp where this species should be reestablished; therefore we are not designating any areas for this purpose. If such areas are identified and restored in the future, we may at that time revise critical habitat to include them. We also removed areas that were identified in the 1998 recovery plan as occupied but not included in either Appendix F or G as necessary to stabilize or reclassify the San Diego fairy shrimp, unless we had new information that was not evaluated at the time of the 1998 recovery plan that indicated that these areas were essential to the conservation of the species. This final revision to critical habitat includes some lands that were not identified in the recovery plan or the 2000 critical habitat designation, but which we have since concluded are within the geographical area occupied by the species at the time of listing and contain the physical and biological features essential to the conservation of the species. The designation of lands within the extant range of the San Diego fairy shrimp will adequately conserve the species.

In addition, the following specific areas are removed from critical habitat:

a. Subunit 3B, San Marcos, northwest—The recovery plan lists this area in appendix G, grouping this particular complex with other occupied vernal pools in the San Marcos area. This unit was designated in 2000 and included in the 2003 proposal to revise the critical habitat designation. However, this area is degraded, surrounded by development, and does not contribute to the watershed of any occupied vernal pool complexes within the San Marcos area. Furthermore, we do not have any evidence to indicate that the San Diego fairy shrimp has ever occupied this vernal pool complex, currently or historically. Based on this information, we have determined that these lands are not essential to the conservation of the San Diego fairy shrimp and have removed these lands from the final designation.

b. Portions of subunit 3E, Ramona—The recovery plan specifically identifies the need to secure existing vernal pools and their watersheds within the Ramona complexes that contain San Diego fairy shrimp. Since the publication of the 2000 designation and the proposed revision to critical habitat in 2003, a survey was conducted to determine the distribution of vernal pools in the area around Ramona. The 2003 proposed rule included large expanses of habitat that did not contain any vernal pool complexes. The recent surveys in Ramona allowed us to more precisely map the distribution of vernal pool habitat. We used the recent survey data to identify and group all occupied vernal pools within subunit 3E. The Ramona area is gently sloped, and the distribution of soils did not correspond to the distribution of vernal pools, adding complexity to defining the watershed area that contributes to the identified vernal pool basins. Without more specific information on the extent of the watersheds in this gently sloping area, we delineated these units by including all lands connecting the identified vernal pools. Since we removed large areas of habitat within this subunit, we renamed the remaining areas as 3E.1, 3E.2, 3E.3, and 3E.4.

c. Fieldstone—The recovery plan, which specifically identified and evaluated this area in appendix E (Status of the Vernal Pool Species Within the Management Areas), did not include this area within either appendix F or G as necessary to stabilize or reclassify the San Diego fairy shrimp. In addition, this subunit was considered but not proposed in the 2003 proposed revision to critical habitat. Finally, we do not have any evidence to indicate that the San Diego fairy shrimp has ever occupied this vernal pool complex, currently or historically. Based on the lack of occupancy data or any recent data contrary to the recovery plan, which specifically did not identify this area as necessary to stabilize or reclassify the San Diego fairy shrimp, we do not consider this complex essential to the conservation of this species.

d. Maddox—The recovery plan, which specifically identified and evaluated this area in appendix E (Status of the Vernal Pool Species Within the Management Areas), did not include this area within either appendix F or G as necessary to stabilize or reclassify the San Diego fairy shrimp. The recovery plan did specifically identify this area in appendix G as necessary to reclassify two plant species (*Eryngium aristulatum* var. *parishii* and *Pogogyne abramsii*). Though this subunit was occupied at the time of listing and it was considered in the 2003 proposed revision to critical habitat, the area was not proposed. This site has been proposed for development and we are working with landowners to identify appropriate offsite mitigation for project impacts. We have no new information on this site that was not considered at the time the recovery plan was written for the San Diego fairy shrimp, and we still conclude that these lands are not essential to the conservation of the

species. Therefore, we are not including these lands in this final designation.

e. Vernal pool complex K1, K2, K6, and K7—The recovery plan groups these complexes together in appendix G as the Otay River complexes and considers these complexes as necessary to reclassify both the San Diego fairy shrimp and *Navarretia fossalis*. The 2000 final designation included the K1 complex and K7 complex within the area designated as critical habitat (subunits 5B and 5A respectively); however, the 2000 final designation did not include complexes K2 or K6 as critical habitat for the San Diego fairy shrimp. In the 2003 proposed revision to critical habitat we proposed the K1 complex as subunit 5A; however, at that time we determined that the K2, K6, and K7 complexes were not essential to the conservation of the species, and furthermore did not include these complexes in the 2003 proposed revision to critical habitat. At this time, we do not have any records to indicate that the San Diego fairy shrimp occupies the vernal pools in the K1 complex, currently or historically. Furthermore, we do not have any records for San Diego fairy shrimp in the Otay River Valley below Lower Otay Reservoir. Conversely, eastern Otay Mesa, directly south of the Otay River Valley, supports many vernal pools where occupancy by the San Diego fairy shrimp has been confirmed although these vernal pools are not identified in the recovery plan. Therefore, consistent with the intent of the recovery plan, we are designating those complexes on eastern Otay Mesa that were not identified in the recovery plan, but are known to support the San Diego fairy shrimp (e.g., complexes in subunit 5D). However, we do not consider the K1 complex or features contained therein to be essential to the conservation of the San Diego fairy shrimp and have removed the vernal pools in the K1 complex from this final designation.

6. In the 2000 critical habitat designation (65 FR 63438, October 3, 2000), we evaluated DOD lands covered by INRMPs to determine if an INRMP that addressed the San Diego fairy shrimp adequately provided management for the species and its habitat. We determined that the INRMP for MCAS Miramar provided adequate management for San Diego fairy shrimp and its habitat; therefore, we determined that vernal pools on MCAS Miramar did not meet the definition of critical habitat and did not include this area under section 3(5)(A) of the Act. In the 2000 critical habitat rule (65 FR 63438, October 3, 2000), we also excluded lands on MCB Camp Pendleton under section 4(b)(2) of the Act. We did not exclude the portion of MCB Camp Pendleton leased to the State of California at San Onofre State Beach from the 2000 critical habitat rule. In the 2003 proposed revision to critical habitat (68 FR 19888), we considered, but did not propose as critical habitat lands, on MCAS Miramar and the NRRF in Coronado under sections 3(5)(A) and 4(b)(2) of the Act, based on the benefits provided by their completed INRMPs. We also considered, but did not propose, mission-essential training areas on MCB Camp Pendleton under section 4(b)(2) of the Act for national security reasons. In this final revised critical habitat designation, all Department of Defense lands covered by an INRMP that we have determined will provide a benefit to the San Diego fairy shrimp are exempt from this critical habitat designation under section 4(a)(3)(B) of the Act; this includes lands at MCAS Miramar, NRRF, MCB Camp Pendleton, and at NOLF (see Exemptions and Exclusions section below for a detailed discussion of each exemption).

7. The 2003 proposed rule to revise critical habitat for the San Diego fairy shrimp identified some lands that we ''considered but, did not propose'' either because we did not believe these lands met the definition of critical habitat under section 3(5)(A) of the Act or because we specified the land for exclusion under section 4(b)(2) of the Act. Although these areas were not formally identified as proposed critical habitat, we specifically sought public review and comment on these lands and provided maps on the Carlsbad Fish and Wildlife Office's public Web site to facilitate the public's ability to comment substantively on these lands. Through such notice and request for public comment, we alerted the public that the lands could potentially be included in the final designation. Lands considered but not included or proposed for designation were also analyzed for potential economic impacts in the DEA published on April 8, 2004 (69 FR 18516).

8. In the 2003 proposed rule to revise critical habitat for the San Diego fairy shrimp, we ''considered but, did not propose'' lands covered by the City and County of San Diego's subarea plans under the MSCP (collectively referred to as lands in the San Diego MSCP in the 2003 proposed rule). In this revised final rule, we reaffirm our exclusion of lands covered by the County of San Diego's subarea plan under section 4(b)(2) of the Act (see Exemptions and Exclusions section below for a detailed discussion of these exclusions). However, in light of a ruling issued by the U.S. District Court for the Southern District of California on October 13, 2006, (*Southwest Center for Biological Diversity* v. *Bartel*, CV 98–2234) (referred to here as the *Bartel* decision), we have reevaluated the City of San Diego's subarea plan and have determined that exclusion of lands covered by the City's subarea plan is not appropriate at this time. In a challenge brought by 14 environmental organizations, the district court held that the protections afforded the San Diego fairy shrimp and six other vernal pool species under the City of San Diego's MSCP subarea plan are inadequate, and the Service's decision to issue an incidental take permit for these species to the City based on the subarea plan was arbitrary and capricious. The court enjoined the incidental take permit with respect to ongoing and future land use activities that affect vernal pool habitat. The court concluded, in part, that the approach adopted in the City's MSCP subarea plan for evaluating project impacts on vernal pool species through the ACOE's site-specific permitting process under section 404 of the Clean Water Act had been effectively eliminated by the United States Supreme Court's decision in *Solid Waste Agency of Northern Cook County* v. *U.S. Army Corps of Engineers*, 531 U.S. 159 (2001 (*SWANCC*)) and that the remaining protections contained in the MSCP subarea plan do not adequately protect the San Diego fairy shrimp. As a result of the decision, we have designated as critical habitat the lands that we consider to be essential to the conservation of the species covered by the City of San Diego's subarea plan that were considered, but not proposed, in the 2003 revised proposed rule (see Unit Descriptions section below for more details). Although we did not formally propose these lands in the 2003 proposed rule to revise critical habitat, we notified the public that the lands had been considered for designation and invited the public to comment on our exclusion of the lands from proposed designation. We also provided maps of the lands on our Web site. In our **Federal Register** notice of April 3, 2007, that reopened the comment period on the proposed rule to revise critical habitat, we expressly asked for public comment on how the lands covered by the City of San Diego's subarea plan should be reevaluated with regard to critical habitat designation in light of the *Bartel* decision (72 FR 15857). Therefore, we believe that we provided the public with adequate notice of and an opportunity to

comment on the potential inclusion of these lands in the final designation.

9. In the 2003 proposed rule, we included land within the North Ranch Policy Planning Area, which is owned by The Irvine Company. At the time we published the proposed rule, we recognized that this area was not covered under the incidental take permit issued for the Central-Coastal NCCP/HCP, and that additional planning was necessary to determine conservation and development areas. We have reanalyzed this area, which is known presently as The Irvine Ranch, and have determined that The Irvine Ranch is permanently conserved, managed with adequate current and future funding for the entire property, and managed for the benefit of the San Diego fairy shrimp. As a result, we have excluded The Irvine Ranch under section 4(b)(2) of the Act (see the Exemptions and Exclusions section below for a discussion of these exclusions).

10. In 2003, we proposed inclusion of land in revised critical habitat of lands within the Orange County Southern Subregion HCP. At that time, the plan was still under development. This HCP, which has since been completed and approved by the Service, includes the San Diego fairy shrimp as a covered species. We have determined that the benefits of excluding essential San Diego fairy shrimp habitat lands covered by this plan outweigh the benefits of including these lands in a critical habitat designation. Therefore, we have excluded lands in Orange County covered by the Southern Subregion HCP (proposed subunits 1D and 1E) from this revised final designation under section 4(b)(2) of the Act (see Exemptions and Exclusions section below for a discussion of this exclusion).

11. We are also excluding Fairview Regional Park, City of Costa Mesa (proposed subunit 1B) under section 4(b)(2) of the Act as we have determined that the City of Costa Mesa has completed and is implementing a management plan. We have determined that the benefits of excluding Fairview Regional Park outweigh the benefits of including this area in the critical habitat designation. Please see the Exemptions and Exclusions section below for a discussion of this exclusion.

12. In 2003, we proposed to designate critical habitat on land near the United States/Mexico border. We are excluding a portion of these lands in subunit 5F from the revised final designation under section 4(b)(2) of the Act based on impacts to national security. We determined that the benefit of excluding lands at Arnie's Point outweighs the benefit of including these lands in the critical habitat designation (see the Exemptions and Exclusions section below for a discussion of this exclusion).

As a result of the above exemptions, removals, and exclusions, we are designating 3,082 ac (1,248 ha) as critical habitat in this revised final rule. The lands designated as critical habitat include areas in Orange and San Diego counties. To minimize confusion, we retained our subunit numbers from the 2003 proposed revision. Due to the inclusion of lands that were considered, but not proposed, in the 2003 rule, some of the areas that we are designating as critical habitat do not have subunit numbers. In Unit 4, the inclusion of lands on Del Mar Mesa makes proposed subunits 4A and 4B contiguous, and this area is referred to as subunit 4A/B in this revised final rule. Other areas included in Unit 4 are not contiguous with any proposed subunits and these areas are named consecutively starting with subunit 4E and continuing through subunit 4M. In Unit 5, most of the areas that were considered, but not proposed in the 2003 proposed revision are contiguous with proposed subunits and the names of the existing proposed subunits are used to refer to these areas. Three areas in Unit 5 are not contiguous with proposed subunits and these areas are referred to as subunits 5G, 5H, and 5I in this revised final rule. As previously discussed, we removed large areas of proposed critical habitat in subunit 3E; for greater clarity we renamed the remaining critical habitat in this area 3E.1; 3E.2; 3E.3; and 3E.4.

TABLE 1.—GUIDE TO CHANGES BETWEEN THE OCTOBER 23, 2000 CRITICAL HABITAT DESIGNATION, THE APRIL 22, 2003 PROPOSED DESIGNATION, AND THIS REVISED FINAL DESIGNATION

Unit	Area identification used in this rule (naming convention in recovery plan)*	Included in Appendix F or G 1998 recovery plan	San Diego fairy shrimp detected following the recovery plan	2000 Designation of critical habitat*	2003 Proposed revision to the critical habitat designation*	2007 Final revised critical habitat designation*
Unit 1 Orange County.	The Irvine Ranch		X		Subunit 1A	Excluded under 4(b)(2).
	Fairview Park	X		Unit 1	Subunit 1B	Excluded under 4(b)(2).
	Newport Banning Ranch		X		Subunit 1C	Subunit 1C.
	Chiquita Ridge		X		Subunit 1D	Excluded under 4(b)(2).
	Radio Tower Road		X		Subunit 1E	Excluded under 4(b)(2).
	San Clemente State Park	X				
Unit 2 North coastal San Diego County.	MCB Camp Pendleton (San Onofre State Lease Area).	X		Subunit 2A	Subunit 2A	Exempt under 4(a)(3).
	MCB Camp Pendleton (Cockleburr Mesa).	X		Excluded under 4(b)(2).	Subunits 2B, 2C	Exempt under 4(a)(3).
	MCB Camp Pendleton (O Neil)	X		Excluded under 4(b)(2).	Considered essential; not proposed.	Exempt under 4(a)(3).
	MCB Camp Pendleton (Las Pulgas, San Mateo, Stuart Mesa).	X		Excluded under 4(b)(2).	Considered essential; not proposed.	Exempt under 4(a)(3).

TABLE 1.—GUIDE TO CHANGES BETWEEN THE OCTOBER 23, 2000 CRITICAL HABITAT DESIGNATION, THE APRIL 22, 2003 PROPOSED DESIGNATION, AND THIS REVISED FINAL DESIGNATION—Continued

Unit	Area identification used in this rule (naming convention in recovery plan)*	Included in Appendix F or G 1998 recovery plan	San Diego fairy shrimp detected following the recovery plan	2000 Designation of critical habitat*	2003 Proposed revision to the critical habitat designation*	2007 Final revised critical habitat designation*
	MCB Camp Pendleton (Wire Mountain Housing).	X	.....	Excluded under 4(b)(2).	Subunits 2D, 2E, 2F.	Exempt under 4(a)(3).
	Palomar Airport	X	.....	Subunit 2C	Determined not to be essential.	
	Poinsettia Lane Commuter Station (JJ1, JJ3).	X	.....	Subunit 2B	Subunit 2G	Subunit 2G.
Unit 3 Inland San Diego County.	San Marcos (L15–16)	X	X	Subunit 3B	Subunit 3A	Subunit 3A.
	San Marcos (L14)	X	.....	Subunit 3A	Subunit 3B	Determined not to be essential.
	San Marcos (L1–6, 9–10)	X	X	Subunit 3C	Subunit 3C	Subunit 3C.
	San Marcos (L 11–13, 19)	X	X	Subunit 3D	Subunit 3D	Subunit 3D.
	San Marcos (L7)	X	.....	Determined not to be essential.		
	San Marcos (L8, 17–18, 20)	X				
	Ramona, grasslands	X	X	Subunit 3E	Subunit 3E	Subunit 3E.1.
	Ramona, airport	X	.....	Subunit 3E	Subunit 3E	Subunit 3E.2.
	Ramona, downtown	X	.....	Subunit 3E	Subunit 3E	Subunit 3E.3.
	Ramona, downtown	X	.....	Subunit 3F	Subunit 3E	Subunit 3E.3.
	Ramona, high school	X	.....	Subunit 3E	Subunit 3E	Subunit 3E.4.
Unit 4 Central coastal San Diego County.	Del Mar Mesa (H18–23)	X	X	Subunit 4A	Subunit 4A	Subunit 4A/B.
	Del Mar Mesa (H1–10, 13–15, Peñasquitos North/Del Mar Mesa).	X	X	Subunit 4A	Subunit 4B	Subunit 4A/B.
	Murphy Canyon Navy Housing (G1–2 Tierrasanta South, G3).	X	.....	Subunit 4C	Subunit 4C	Subunit 4C.
	Chollas Heights Navy Housing	X	.....	Subunit 4D	Subunit 4D	Subunit 4D.
	Carmel Mountain (H (undescribed))	X	.....	Considered essential; not proposed.	Considered essential; not proposed.	Subunits 4E, 4F.
	Mira Mesa North (B)	X	.....	Considered essential; not proposed.		
	Tierra Alta (B5–6)	X	.....	Subunit 4B	Considered essential; not proposed.	Subunit 4G.
	Lopez Ridge (B7–8)	X	.....	Subunit 4B	Considered essential; not proposed.	Subunit 4H.
	Winterwood (C10–16)	X	.....	Considered essential; not proposed.	Considered essential; not proposed.	Subunit 4I.
	Fieldstone (C17–18)	.....	.....	.....	Considered essential; not proposed.	Determined not to be essential.
	Mira Mesa Central (C26)	X				
	Maddox (Maddox Park)	.....	.....	.....	Considered essential; not proposed.	Determined not to be essential.
	Carroll Canyon (D5–8)	.....	X	Considered essential; not proposed.	Considered essential; not proposed.	Subunit 4J.
	MCAS Miramar (A4; F1–27; I7; U1–13; U North; Z1–3, Z6; Z7; Z10; AA1–13; EE1–2; FF1–2; HH1–4 and RR1–2).	X	.....	Not included under 3(5)(A).	Considered essential; not proposed.	Exempt under 4(a)(3).
	Miramar Industrial	X				
	Nobel Drive (X5)	X	X			

TABLE 1.—GUIDE TO CHANGES BETWEEN THE OCTOBER 23, 2000 CRITICAL HABITAT DESIGNATION, THE APRIL 22, 2003 PROPOSED DESIGNATION, AND THIS REVISED FINAL DESIGNATION—Continued

Unit	Area identification used in this rule (naming convention in recovery plan)*	Included in Appendix F or G 1998 recovery plan	San Diego fairy shrimp detected following the recovery plan	2000 Designation of critical habitat*	2003 Proposed revision to the critical habitat designation*	2007 Final revised critical habitat designation*
	New Century (BB2)	X		Considered essential; not proposed.		
	SANDER and Magnatron (U15, SANDER).	X		Excluded under 4(b)(2).	Considered essential; not proposed.	Subunit 4K.
	Cubic (U19, Cubic Pools)	X		Excluded under 4(b)(2).	Considered essential; not proposed.	Subunit 4L.
	Montgomery Field (N1–4, 6)	X	X	Considered essential; not proposed.	Considered essential; not proposed.	Subunit 4M.
Unit 5 South San Diego County.	Otay Mesa (J26)	X	X	Excluded under 4(b)(2).	Considered essential; not proposed.	Subunit 5A.
	Otay Mesa (J23–25)	X	X	Considered essential; not proposed.	Considered essential; not proposed.	Excluded under 4(b)(2).
	Otay Mesa (J29–30)	X		Considered essential; not proposed.	Considered essential; not proposed.	Subunit 5B.
	Otay Mesa (J22)		X	Subunit 5C	Subunit 5C	Subunit 5C.
	Otay Mesa (J27–28)	X	X	Considered essential; not proposed.		
	Otay Mesa		X		Considered essential; not proposed.	Subunit 5D.
	Naval Base Coronado, Naval Radar Receiving Facility.		X		Considered essential; not proposed.	Exempt under 4(a)(3).
	Naval Base Coronado, Navy Outlying Landing Field (Tijuana Estuary).	X		Subunit 5D	Subunit 5E	Exempt under 4(a)(3).
	Otay Mesa (J11–21)	X		Considered essential; not proposed.	Considered essential; not proposed.	Subunit 5F.
	Otay Mesa (J2, 5, 7)	X		Considered essential; not proposed.	Considered essential; not proposed.	Subunit 5G.
	Otay River Valley (K1)	X		Subunit 5B	Considered essential; not proposed.	Determined not to be essential.
	Otay River Valley (K2)	X		Determined not to be essential.		
	Otay River Valley (K6)	X				
	Lower Otay Reservoir (K3–5)		X		Considered essential; not proposed.	Subunit 5H.
	Otay Lakes Road (K7)	X		Subunit 5A	Determined not to be essential.	
	Marron Valley		X		Considered essential; not proposed.	Subunit 5I.

*The unit and subunit areas listed in this table have changed in size and configuration, largely due to the various methods that were used to delineate critical habitat. The table is provided to make general comparisons between analogous areas, but not meant to define which individual vernal pools were or were not included in each specific unit or subunit.

Critical Habitat

Critical habitat is defined in section 3(5)(A) of the Act as:

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

(I) Essential to the conservation of the species and

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

(ii) Specific areas outside the geographical area occupied by the 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 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. Such methods and procedures include, but are not limited to, all activities associated with scientific resources management such as research, census, law enforcement, habitat acquisition and maintenance, propagation, live trapping, and transplantation, and, in the extraordinary case where population pressures within a given ecosystem cannot be otherwise relieved, may include regulated taking.

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 to access private lands. Such designation does not require implementation of restoration, recovery, or enhancement measures by the landowner. Where the landowner seeks or requests federal agency funding or authorization that may affect a listed species or critical habitat, the consultation requirements of Section 7 would apply, but even in the event of a destruction or adverse modification finding, the landowner'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.

For inclusion 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. Critical habitat designations 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 primary constituent elements, as defined at 50 CFR 424.12(b)).

Occupied habitat that contains the features essential to the conservation of the species meets the definition of critical habitat only if those features may require special management considerations or protection.

Under the Act, we can designate areas outside of the geographical area occupied by the species at the time of listing only when we determine that the best available scientific data demonstrate that the designation of such areas is essential to the conservation needs 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 the associated Information Quality Guidelines issued by the Service, provide criteria, establish procedures, and provide guidance to ensure that our 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 should be designated as critical habitat, our primary source of information is generally the information developed during the listing process for the species. Additional information sources may 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, or 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 designation of critical habitat may not include all of the habitat areas that we may eventually determine, based on scientific data not now available to the Service, are necessary for the recovery of the species. For these reasons, a critical habitat designation does not signal that habitat outside the designated area is unimportant or may not be required for recovery of the species.

Areas that support populations of San Diego fairy shrimp, but are outside the critical habitat designation, will continue to be subject to conservation actions we implement under section 7(a)(1) of the Act. They 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 new information available to 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 by the species at the time of listing to designate as critical habitat, we consider the 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, or 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.

We derive the specific primary constituent elements required for the San Diego fairy shrimp from the biological needs of the San Diego fairy shrimp as described in the proposed critical habitat rule published in the

Federal Register on April 22, 2003 (68 FR 19888), and below.

Space for Individual and Population Growth, and for Normal Behavior

San Diego fairy shrimp require vernal pool habitat to grow and reproduce. Their life cycle requires periods of inundation as well as dry periods (Ripley *et al.* 2004, pp. 221–223). The San Diego fairy shrimp is most often found in vernal pools or vernal pool complexes that have the appropriate temperature, water chemistry, depth, and duration. More specifically, San Diego fairy shrimp are found in vernal and ephemeral wetlands that range in ponding duration from 7 days to 2 months and that range in depth from less than 2 inches (in) (5 centimeters (cm)) to over 12 in (30 cm) (Simovich and Fugate 1992, p. 111; Hathaway and Simovich 1996, p. 670). For the appropriate conditions to occur, the following factors are necessary: (1) Associated hydrology that provides water to fill the pools; and (2) any soil type with a claypan or hardpan component that forms an impermeable layer and provides space for individual and population growth and normal behavior. Vernal pool hydrology (i.e., seasonal filling and drying of vernal pools) is an essential feature that governs the life cycle of the San Diego fairy shrimp; proper timing, duration, and depth of these hydrological processes is necessary for cyst hatching and successful reproduction of San Diego fairy shrimp.

Vernal pools generally occur in complexes. Vernal pool complexes are defined by two or more vernal pools in the context of a larger vernal pool watershed. Adjacent upland habitat also contributes to the overall functions important to the vernal pool ecosystem. Protection of the upland habitat between vernal pools within the vernal pool watershed is important for maintaining the hydroperiods of adequate length to support the entire reproductive cycle for San Diego fairy shrimp and to buffer the vernal pools from edge effects. During periods of high rainfall, adult fairy shrimp and cysts (dormant eggs) may be transported between vernal pools in a complex as individual pools become connected by over surface flows of water. To maintain high-quality vernal pool ecosystems, all components including the vernal pool basin, the vernal pool watershed, and the surrounding upland habitat must be available and functional (Hanes and Stromberg 1998, p. 38). Many of the remaining pools that support the San Diego fairy shrimp are no longer in a pristine or undisturbed state. Yet these pools, and the associated upland habitat, continue to function and provide space for individual and population growth and for normal behavior.

Food, Water, Air, Light, Minerals, or Other Nutritional or Physiological Requirements

Temperature, water chemistry, and length of time vernal pools are inundated with water are factors that play an important role in the distribution and temporal appearance of the San Diego fairy shrimp (Gonzalez *et al.* 1996, pp. 315–316; Hathway and Simovich 1996, p. 669). San Diego fairy shrimp hatch and reproduce in water at temperatures that range from 41 to 68 degrees Fahrenheit (F) (5 to 20 degrees Celsius (C)), and do not hatch at temperature greater than 77 degrees F (25 degrees C) (Hathway and Simovich 1996, pp. 674–675). This limitation keeps San Diego fairy shrimp from hatching during the summer months if the vernal pools were to fill with water. Also, San Diego fairy shrimp do not survive well in temperatures below 41 degrees F (5 degrees C) (Hathaway and Simovich 1996, pp. 674–675). San Diego fairy shrimp typically inhabit dilute, freshwater pools with low levels of total dissolved solids (low ion levels (Na^+ concentrations below 60 millimoles per liter (mmol/l)), low alkalinity levels (lower than 80 to 1,000 milligrams per liter (mg/l)), and that are characterized by a range of pH levels from neutral to alkaline (8.0 to 10.3) (Gonzalez *et al.* 1996, pp. 319–322). The San Diego fairy shrimp is not known to successfully mature and reproduce outside these limits in laboratory conditions; therefore, proper temperature, water chemistry, and length of time vernal pools are inundated may be necessary for survival and successful reproduction.

San Diego fairy shrimp have been shown to tightly regulate their internal body chemistry in pool environments that have low salinity and low alkalinity (Gonzalez *et al.* 1996, pp. 319–322). In a laboratory experiment, San Diego fairy shrimp were unable to maintain their body chemistry balance in conditions with sodium ion (Na+) concentrations greater than 60 mmol/l but less than half survived when concentrations exceeded 100 mmol/l (Gonzalez *et al.* 1996, pp. 319–322). This limited tolerance for saline conditions is one of the factors that restrict the San Diego fairy shrimp to its current range. San Diego fairy shrimp are filter feeders and their diet consists mostly of algae, bacteria, and other microorganisms (Parsick 2002, pp. 37–41, 65–70). In a natural vernal pool setting these food items are readily available.

Sites for Breeding, Reproduction and Rearing of Offspring

Adult San Diego fairy shrimp are usually observed from January to March. In years with early or late rainfall, the hatching period may be extended. When vernal pools fill with water the cysts hatch and juvenile fairy shrimp quickly develop into adults. San Diego fairy shrimp can reach sexually maturity and begin mating in 7 to 10 days from the time the vernal pool fills with water. When the females' eggs are fertilized they begin to develop; however, the development of the fertilized eggs stops at an early stage and the eggs become dormant. The dormant eggs are referred to as ''cysts'' or ''resting eggs'' and each egg is smaller than the tip of a pencil and contains a dormant fairy shrimp embryo encased in a hard outer shell. Cysts drop to the bottom of the vernal pool and then become part of the cyst bank in the soil of the vernal pool. In the absence of more rainfall the vernal pool dries and any remaining adult San Diego fairy shrimp die as the water evaporates. The cysts, however, are capable of withstanding temperature extremes and prolonged drying (i.e., drought conditions lasting several years). During subsequent filling events these cysts will emerge from dormancy and hatch. Researchers have found that only a small portion of the cysts in the cyst bank hatch each time the vernal pool fills. Simovich and Hathaway (1997, pp. 40–43) referred to this as ''bet-hedging'' and concluded that it allows the San Diego fairy shrimp to survive in an unpredictable environment. Many times when a vernal pool fills, the pool will evaporate before San Diego fairy shrimp are able to reproduce (Ripley *et al.* 2004, pp. 221–223). The ''bet-hedging'' insures that some cysts will hatch when the vernal pools hold water for a period long enough for the San Diego fairy shrimp to complete its entire life cycle. Thus, reproductive output of small aquatic crustaceans living in variable environments is spread over several seasons.

Primary Constituent Elements for the San Diego Fairy Shrimp

Within the geographical area occupied by the San Diego fairy shrimp, we must identify the PCEs that may require special management considerations or protection. All areas designated as critical habitat for San Diego fairy shrimp are occupied, within the species' geographic range, and contain sufficient PCEs to support at

least one life history function. In the case of this designation, all of the units contain all of the PCEs. The data provided in these PCEs have been generalized from existing scientific data. There may be cases where San Diego fairy shrimp persist in conditions outside the ranges expressed in these PCEs. It is also important to note that the variable amounts and timing of precipitation in southern California do not result in favorable conditions for San Diego fairy shrimp in every year.

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 San Diego fairy shrimp's PCEs are:

(1) Vernal pools with shallow to moderate depths (2 in (5 cm) to 12 in (30 cm)) that hold water for sufficient lengths of time (7 to 60 days) necessary for incubation, maturation, and reproduction of the San Diego fairy shrimp, in all but the driest years;

(2) Topographic features characterized by mounds and swales and depressions within a matrix of surrounding uplands that result in complexes of continuously, or intermittently, flowing surface water in the swales connecting the pools described in PCE 1, providing for dispersal and promoting hydroperiods of adequate length in the pools (i.e., the vernal pool watershed); and

(3) Flat to gently sloping topography, and any soil type with a clay component and/or an impermeable surface or subsurface layer known to support vernal pool habitat (including Carlsbad, Chesterton, Diablo, Huerhuero, Linne, Olivenhain, Placentia, Redding, and Stockpen soils).

We have designed this revised final designation for the conservation of PCEs necessary to support the life history functions and the areas containing those PCEs. The matrix of vernal pools/ephemeral wetlands, upland habitats, and underlying soil substrates in combination create ecologically functional units. These features and the lands that they represent are essential to the conservation of the San Diego fairy shrimp. All lands designated as critical habitat contain all of the features essential to the conservation of the San Diego fairy shrimp (i.e., PCEs). As stated in the Summary of Changes section of this rule, we believe that a designation limited to the extant range is adequate to conserve the San Diego fairy shrimp.

We designate units based on sufficient PCEs being present to support at least one of the species' life history functions. In the case of this designation, all of the units contain all of the PCEs.

Special Management Considerations or Protection

When designating critical habitat under the first prong of the statutory definition of critical habitat, as here, we assess whether areas within the geographical area occupied by the species contain features that are essential to the conservation of the species and that may require special management considerations or protection. In this section, we describe special management considerations and protection required to conserve the PCEs for the San Diego fairy shrimp.

The most pressing threat to critical habitat for the San Diego fairy shrimp is the loss of habitat. Vernal pools supporting the San Diego fairy shrimp are found on level or gently sloping land within 40 mi (64 km) of the coast. Virtually all of this land is sought after for commercial and residential development. Soils supporting vernal pools have been almost completely lost to development (Bauder and McMillan 1998, p. 56). Development of an area can directly impact all the PCEs for this species if the vernal pool basins are lost during the development process. The vernal pool basin (PCE 1) can also be indirectly impacted by development if the vernal pool watershed (PCE 2) is impacted during the development process. Development can also indirectly impact PCE 1 and PCE 2 if the vernal pool soils or topography is altered (PCE 3). Specifically, the following subunits include land that is not protected from development through ownership by a conservation organization or by a conservation easement or other similar legal mechanisms: 1C; 3A; 3C; 3E.1; 3E.2; 3E.3; 3E.4; 4A/B; 4H; 4J–4M; 5A–5D; 5F; and 5G. These lands require special management considerations or protections from negative impacts associated with development.

Once a vernal pool complex has been protected from loss from habitat conversion or development, it is still necessary to ensure that the habitat is not degraded as a result of altered hydrology, contamination, nonnative species invasions, or other incompatible land uses (e.g., off-road vehicle use, mountain bike use, illegal dumping). Special management considerations are necessary to ensure that vernal pool habitat protected for the San Diego fairy shrimp retains the physical and biological features essential to the conservation of the San Diego fairy shrimp. As discussed below, all of the subunits designated as critical habitat require some form of special management consideration or protection of their constituent PCEs.

Special management may be necessary to prevent and reduce incursion of nonnative invasive plant species that alter PCE 1. Nonnative plant species can impact the duration of ponding in a vernal pool basin. Nonnative plant species can also impact the vernal pool watershed (PCE 2) by reducing the inundation period through an over-abundance of vegetation within the watershed (Marty 2005, p. 1630). Special management actions can be taken to reduce the negative effects of such invasions. Removal of weed species by hand, increased planting of vernal pool species, mowing, restoration of native species in the upland areas, and prescribed burns may be potential tools to manage this threat. Nonnative species threaten the following subunits: 1C; 2G; 3A; 3C; 3D; 3E.1; 3E.2; 3E.3; 3E.4; 4I–4M; 5A–5D; 5F; 5G; and 5I.

Special management considerations or protections may be necessary to protect and restore vernal pool hydrology (PCE 1 and PCE 2). Alteration of natural hydrology directly threatens San Diego fairy shrimp, and the invasion of nonnative species may be facilitated by alterations in the natural vernal pool hydrology. Runoff from adjacent developments should be monitored to ensure that a pool's hydrology has not been altered, either through changes in ponding duration or changes to water temperature or chemistry. Discing, grading and digging in ways that impact the topography and soils near vernal pool complexes (PCE 3) can also indirectly impact the hydrology (PCE 1 and PCE 2). Altered hydrology threatens the following subunits: 1C; 2G; 3A; 3C; 3D; 3E.1; 3E.2; 3E.3; 3E.4; 4A/B; 4I–4M; 5A–5D; 5F; 5G and 5I.

Special management considerations or protection may be necessary to reduce degradation of vernal pools. Management actions such as fencing, trail building, and sign posting can help to reduce human activities that threaten San Diego fairy shrimp habitat. Vehicular traffic can impact to adult and juvenile San Diego fairy shrimp, and may crush cysts during the wet season (Hathaway *et al.* 1996, p. 451). Motorized and non-motorized off-road vehicle use, illegal trash dumping, and trampling can: (1) Affect the ponding duration in the vernal pool by increasing or decreasing the amount of water in the basin (PCE 1) or move soils and alter the topography, and (2) divert water or compact the soil such that the water does not saturate the soils (PCE 2). Degradation associated with human

activities threatens the following subunits: 1C; 2G; 3A; 3C; 3D; 3E.1; 3E.2; 3E.3; 3E.4; 4A/B; 4C–4F; 4I–4M; 5A–5I.

The control of invasive nonnative species, the maintenance and enhancement of natural vernal pool hydrology, and the control of incompatible and often illegal activities, such as off-road vehicle use and trash dumping, will help to ensure the preservation of vernal pool complexes. Ongoing monitoring of the threats to preserved vernal pool complexes and the San Diego fairy shrimp in each vernal pool complex is necessary for the long-term conservation of the San Diego fairy shrimp.

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 listing that contain the features essential to the conservation of species which may require special management considerations or protection, as well as when determining if any specific areas outside the geographical area occupied by the species at listing are essential to the conservation of the species. We only designate areas outside the geographical area occupied at the time of listing by a species when a designation limited to its present range would be inadequate to ensure the conservation of the species (50 CFR 424.12(e)).

We based this final revision to the critical habitat designation on the 1998 recovery plan, which calls for the preservation and enhancement of existing vernal pools that are within the extant range of the San Diego fairy shrimp (Service 1998a). We used all scientific and commercial data available to identify existing vernal pool complexes that contain San Diego fairy shrimp. Occupancy status was determined using occurrence data from the CNDDB (2001, 2004, 2007), the City of San Diego's Vernal Pool Inventory (2003), the Ramona Vernal Pool Conservation Study (TAIC and EDAW 2005), Appendix E of the Recovery Plan for Vernal Pools of Southern California (Service 1998a, pp. E1–E16), and 10(A)(1)(a) reports submitted to the Service for San Diego fairy shrimp. Since the publication of the recovery plan we have become aware of several more vernal pool complexes that are occupied by the San Diego fairy shrimp. In addition to vernal pool complexes identified in appendices F and G, we have included the following areas in this designation that were not identified as essential to the San Diego fairy shrimp in the recovery plan or the 2000 designation of critical habitat: Subunits 1A; 1B; 1C; 1D; 5D; 5H; and 5I (see Table 1).

We consider all of the vernal pool complexes designated as critical habitat to have been occupied at the time of listing and to be currently occupied by the San Diego fairy shrimp. Genetic studies indicate that there is low rate of dispersal for this species, meaning that it is infrequent for San Diego fairy shrimp to move from one area to another. The San Diego fairy shrimp was first described in 1993, and there are only a limited number of people who have been trained to survey for this species (Fugate 1993, pp. 296–304). As a result, ''new'' populations of this species have been identified since listing in 1997, not because the San Diego fairy shrimp recently appeared there, but rather San Diego fairy shrimp were discovered at new locations the first time focused surveys were conducted at those locations. For these reasons we believe that all areas designated as critical habitat were occupied by San Diego fairy shrimp at the time of listing. As stated above, we believe that a designation encompassing habitat within the extant range of the San Diego fairy shrimp is adequate to conserve this species. After we delineated all of the vernal pool complexes occupied by San Diego fairy shrimp, we examined the complexes to delineate the watersheds associated with the complexes and determined the extent of the PCEs in each complex and watershed. Areas determined to contain the PCEs were based on the boundaries of vernal pool complexes delineated in Beauchamp and Cass 1979 (pp. 12–13) and Bauder 1986 (Appendix 4). However, these boundaries were drawn to group and classify vernal pool complexes and did not always capture the entire watershed area needed to support the vernal pool complex. To better capture the watershed areas in the critical habitat we included areas of similar topography and soil type (Service GIS database; soils described by Bowman 1973, pp. 7–17).

Finally, we removed vernal pool complexes that lack any evidence to indicate historical or current occupancy by San Diego fairy shrimp or that are unlikely to contribute to the conservation of the species due to location or other limitations. We removed subunit 3B in San Marco; the Fieldstone vernal pools; and the K1, K2 and K6 vernal pool complexes (see Summary of Changes From Previously Designated Critical Habitat and 2003 Proposed Rule for additional details on these areas).

When determining critical habitat boundaries within this final rule, we made every effort to avoid including developed areas such as lands containing buildings, paved areas, and other structures that lack PCEs for San Diego fairy shrimp. The scale of the maps we prepared under the parameters for publication within the Code of Federal Regulations may not reflect the exclusion of such developed areas. Any such structures and the land under them inadvertently left inside critical habitat boundaries shown on the maps of this final rule are excluded by text in the final rule and are not designated as critical habitat. Therefore, Federal actions involving these areas would not trigger section 7 consultation with respect to critical habitat and the requirement of no adverse modification unless the specific action would affect the primary constituent elements in the adjacent critical habitat.

Revisions to the Critical Habitat Designation

We are designating 3,082 ac (1,248 ha) of land as critical habitat for San Diego fairy shrimp in 5 units with a total of 29 subunits. Table 2 outlines the areas included (definitional areas) and the areas excluded and exempt from this revised final critical habitat. Subunits designated as critical habitat are discussed in detail below in the Unit Description section; exempt or excluded subunits are further discussed in the Exemptions and Exclusions section below. The five units in this final revision to critical habitat are defined by the Management Areas described in the recovery plan (Service 1998a, pp. 35–44). The critical habitat areas described below constitute our best assessment of the areas that are within the geographical area occupied by the San Diego fairy shrimp at the time of listing and that contain the primary constituent elements essential to the conservation of the San Diego fairy shrimp that may require special management considerations or protection.

TABLE 2.—SIZE OF AREAS CONTAINING FEATURES ESSENTIAL TO THE CONSERVATION OF THE SAN DIEGO FAIRY SHRIMP (DEFINITIONAL AREA), THE AREA EXCLUDED OR EXEMPT FROM THE FINAL CRITICAL HABITAT DESIGNATION (EXCLUDED AND EXEMPT AREA), AND THE TOTAL AREA DESIGNATED FOR EACH SUBUNIT OF CRITICAL HABITAT (TOTAL DESIGNATED). NUMBERS HAVE BEEN ROUNDED TO THE NEAREST WHOLE DIGIT AND MAY OVERESTIMATE AREA DUE TO ROUNDING

Unit/subunit	Geographic area	Definitional area	Excluded and exempt area	Total designated
Unit 1	Orange County.			
1A	North Ranch Policy Plan Area	4 ac (2 ha)	4 ac (2 ha)	0 ac (0 ha).
1B	Costa Mesa Fairview Park	43 ac (17 ha)	43 ac (17 ha)	0 ac (0 ha).
1C	Newport-Banning Ranch	15 ac (6 ha)	0 ac (0 ha)	15 ac (6 ha).
1D	Chiquita Ridge	56 ac (23 ha)	56 ac (23 ha)	0 ac (0 ha).
1E	Radio Tower Road	84 ac (34 ha)	84 ac (34 ha)	0 ac (0 ha).
Subtotal for Unit 1.		202 ac (82 ha)	187 ac (76 ha)	15 ac (6 ha).
Unit 2	North Coastal Mesa, San Diego County.			
2A	MCB Camp Pendleton, San Onofre State Lease Area.	17 ac (9 ha)	17 ac (9 ha)	0 ac (0 ha).
2B	MCB Camp Pendleton, Cockleburr Mesa.	43 ac (17 ha)	43 ac (17 ha)	0 ac (0 ha).
2C	MCB Camp Pendleton, Cockleburr Mesa.	132 ac (53 ha)	132 ac (53 ha)	0 ac (0 ha).
2D	MCB Camp Pendleton, Wire Mountain Housing.	155 ac (63 ha)	155 ac (63 ha)	0 ac (0 ha).
2E	MCB Camp Pendleton, Wire Mountain Housing.	18 ac (7 ha)	18 ac (7 ha)	0 ac (0 ha).
2F	MCB Camp Pendleton, Wire Mountain Housing.	203 ac (82 ha)	203 ac (82 ha)	0 ac (0 ha).
2G	Poinsettia Lane Commuter Station	6 ac (3 ha)	0 ac (0 ha)	6 ac (3 ha).
	MCB Camp Pendleton, training areas.	7182 ac (2906 ha)	7182 ac (2906 ha)	0 ac (0 ha).
Subtotal for Unit 2.		7756 ac (3140 ha)	7750 ac (3137 ha)	6 ac (3 ha).
Unit 3	Inland Valley, San Diego County.			
3A	San Marcos, northeast unit	17 ac (7 ha)	0 ac (0 ha)	17 ac (7 ha).
3C	San Marcos, southwest unit	63 ac (25 ha)	0 ac (0 ha)	63 ac (25 ha).
3D	San Marcos, southeast unit	5 ac (2 ha)	0 ac (0 ha)	5 ac (2 ha).
3E.1	Ramona, grasslands	382 ac (154 ha)	0 ac (0 ha)	382 ac (154 ha).
3E.2	Ramona, airport	191 ac (77 ha)	0 ac (0 ha)	191 ac (77 ha).
3E.3	Ramona, downtown	27 ac (11 ha)	0 ac (0 ha)	27 ac (11 ha).
3E.4	Ramona, high school	40 ac (16 ha)	0 ac (0 ha)	40 ac (16 ha).
Subtotal for Unit 3.		725 ac (292 ha)*	0 ac (0 ha)	725 ac (292 ha).*
Unit 4	Central Coastal Mesa, San Diego County.			
4A/B	Del Mar Mesa	252 ac (102 ha)	0 ac (0 ha)	252 ac (102 ha).
4C	Murphy Canyon Navy Housing	41 ac (17 ha)	0 ac (0 ha)	41 ac (17 ha).
4D	Chollas Heights Navy Housing	16 ac (7 ha)	0 ac (0 ha)	16 ac (7 ha).
4E	Carmel Mountain, west	32 ac (13 ha)	0 ac (0 ha)	32 ac (13 ha).
4F	Carmel Mountain, east	4 ac (2 ha)	0 ac (0 ha)	4 ac (2 ha).
4G	Tierra Alta	5 ac (2 ha)	0 ac (0 ha)	5 ac (2 ha).
4H	Lopez Ridge	11 ac (4 ha)	0 ac (0 ha)	11 ac (4 ha).
4I	Winterwood	17 ac (7 ha)	0 ac (0 ha)	17 ac (7 ha).
4J	Carroll Canyon	14 ac (6 ha)	0 ac (0 ha)	14 ac (6 ha).
4K	Sander and Magnatron	56 ac (23 ha)	0 ac (0 ha)	56 ac (23 ha).
4L	Cubic	7 ac (3 ha)	0 ac (0 ha)	7 ac (3 ha).
4M	Montgomery Field	96 ac (39 ha)	0 ac (0 ha)	96 ac (39 ha).
	MCAS Miramar	1703 ac (689 ha)	1703 ac (689 ha)	0 ac (0 ha).
Subtotal for Unit 4.		2254 ac (914 ha)	1703 ac (689 ha)	551 ac (225 ha).
Unit 5	Southern Coastal Mesa, San Diego County.			
5A	Otay Mesa, northeast unit	234 ac (95 ha)	196 ac (79 ha)	38 ac (16 ha).
5B	Otay Mesa, north unit	327 ac (132 ha)	23 ac (9 ha)	304 ac (123 ha).
5C	Otay Mesa, east unit	75 ac (30 ha)	0 ac (0 ha)	75 ac (30 ha).
5D	Otay Mesa, southeast unit	391 ac (158 ha)	0 ac (0 ha)	391 ac (158 ha).

TABLE 2.—SIZE OF AREAS CONTAINING FEATURES ESSENTIAL TO THE CONSERVATION OF THE SAN DIEGO FAIRY SHRIMP (DEFINITIONAL AREA), THE AREA EXCLUDED OR EXEMPT FROM THE FINAL CRITICAL HABITAT DESIGNATION (EXCLUDED AND EXEMPT AREA), AND THE TOTAL AREA DESIGNATED FOR EACH SUBUNIT OF CRITICAL HABITAT (TOTAL DESIGNATED). NUMBERS HAVE BEEN ROUNDED TO THE NEAREST WHOLE DIGIT AND MAY OVERESTIMATE AREA DUE TO ROUNDING—Continued

Unit/subunit	Geographic area	Definitional area	Excluded and exempt area	Total designated
5E	Naval Outlying Landing Field (NOLF).	8 ac (3 ha)	8 ac (3 ha)	0 ac (0 ha).
5F	Otay Mesa, southwest unit	650 ac (263 ha)	29 ac (12 ha)	621 ac (251 ha).
5G	Otay Mesa, northwest unit	132 ac (53 ha)	0 ac (0 ha)	132 ac (53 ha).
5H	Lower Otay Reservoir	205 ac (83 ha)	5 ac (2 ha)	200 ac (81 ha).
5I	Marron Valley	24 ac (10 ha)	0 ac (0 ha)	24 ac (10 ha).
	Naval Radar Receiving Facility (NRRF).	161 ac (65 ha)	161 ac (61 ha)	0 ac (0 ha).
Subtotal for Unit 5.		2,207 ac (892 ha)*	422 ac (170 ha)*	1,785 ac (722 ha).*
Total		13,144 ac (5,320 ha)*	10,062 ac (4,072 ha)*	3,082 ac (1,248 ha).*

*Figures in table may not sum due to rounding.

The approximate area encompassed within each critical habitat subunit by landownership is shown in Table 3.

TABLE 3.—CRITICAL HABITAT UNITS AND SUBUNITS FOR THE SAN DIEGO FAIRY SHRIMP. NUMBERS HAVE BEEN ROUNDED TO THE NEAREST WHOLE DIGIT AND MAY OVERESTIMATE AREA DUE TO ROUNDING

Unit/subunit	Geographic area	Owner	Total designated
Unit 1	Orange County.		
1C	Newport-Banning Ranch	Private	15 ac (6 ha).
Unit 2	North Coastal Mesa, San Diego County.		
2G	Poinsettia Lane Commuter Station	Private	2 ac (1 ha).
		North County Transit District (NCTD)	4 ac (2 ha).
Unit 3	Inland Valley, San Diego County.		
3A	San Marcos, northeast unit	Private	16 ac (6 ha).
		Other Special Districts	1 ac (<1 ha).
3C	San Marcos, southwest unit	City of San Marcos	11 ac (4 ha).
		Water District	4 ac (2 ha).
		Private	48 ac (19 ha).
3D	San Marcos, southeast unit	Private	5 ac (2 ha).
3E.1	Ramona, grasslands	Water District	1 ac (<1 ha).
		Private	381 ac (153 ha).
3E.2	Ramona, airport	County of San Diego	67 ac (27 ha).
		Private	124 ac (50 ha).
3E.3	Ramona, downtown	Private	26 ac (10 ha).
		County of San Diego	1 ac (<1 ha).
3E.4	Ramona, high school	Ramona Unified School District	35 ac (14 ha).
		Private	5 ac (2 ha).
Unit 4	Central Coastal Mesa, San Diego County.		
4A/B	Del Mar Mesa	U.S. Fish and Wildlife Service	41 ac (16 ha).
		State of California	56 ac (23 ha).
		County of San Diego	5 ac (2 ha).
		City of San Diego	51 ac (21 ha).
		Private	99 ac (40 ha).
4C	Murphy Canyon Navy Housing	Department of Defense	40 ac (16 ha).
		City of San Diego	1 ac (<1 ha).
4D	Chollas Heights Navy Housing	Department of Defense	16 ac (7 ha).
4E	Carmel Mountain, west	City of San Diego	31 ac (12 ha).
		Private	1 ac (<1 ha).
4F	Carmel Mountain, east	City of San Diego	4 ac (2 ha).
4G	Tierra Alta	City of San Diego	2 ac (1 ha).
		Private	3 ac (1 ha).
4H	Lopez Ridge	City of San Diego	7 ac (3 ha).
		Private	4 ac (2 ha).
4I	Winterwood	City of San Diego	17 ac (7 ha).

TABLE 3.—CRITICAL HABITAT UNITS AND SUBUNITS FOR THE SAN DIEGO FAIRY SHRIMP. NUMBERS HAVE BEEN ROUNDED TO THE NEAREST WHOLE DIGIT AND MAY OVERESTIMATE AREA DUE TO ROUNDING—Continued

Unit/subunit	Geographic area	Owner	Total designated
4J	Carroll Canyon	City of San Diego	13 ac (5 ha).
		Private	1 ac (<1 ha).
4K	SANDER and Magnatron	City of San Diego	55 ac (22 ha).
		Private	1 ac (1 ha).
4L	Cubic	Private	7 ac (3 ha).
4M	Montgomery Field	City of San Diego	96 ac (39 ha).
Unit 5	Southern Coastal Mesa, San Diego County.		
5A	Otay Mesa, northeast unit	State of California	16 ac (7 ha).
		County of San Diego	8 ac (3 ha).
		Water District	1 ac (<1 ha).
		Private	13 ac (5 ha).
5B	Otay Mesa, north unit	Private	304 ac (123 ha).
5C	Otay Mesa, east unit	Private	75 ac (30 ha).
5D	Otay Mesa, southeast unit	Private	391 ac (158 ha).
5F	Otay Mesa, southwest unit	U.S. Government	11 ac (4 ha).
		City of San Diego	73 ac (30 ha).
		Private	537 ac (217 ha).
5G	Otay Mesa, northwest unit	City of San Diego	19 ac (7 ha).
		Private	113 ac (46 ha).
5H	Lower Otay Reservoir	City of San Diego	200 ac (81 ha).
5I	Marron Valley	City of San Diego	24 ac (10 ha)
Total			3,082 ac (1,248 ha)*.

*Figures in table may not sum due to rounding.

Unit Descriptions

We present brief descriptions of all units and reasons why they meet the definition of critical habitat for the San Diego fairy shrimp below.

Unit 1: Orange County (15 ac (6 ha))

Unit 1 is located in Orange County, California. The area was occupied at the time of listing and contains the PCEs essential to the conservation of the San Diego fairy shrimp that may require special management considerations or protection. The majority of the vernal pools in Orange County were eliminated prior to 1950 and only a small number of vernal pool complexes remain (Riefner and Pryor 1996, p. 300). This unit represents the northern extent of the species' distribution in southern California and represents the historical distribution of coastal terrace vernal pools in this area. The vernal pools in Orange County are the only pools that form on Alo clay, Calleguas clay loam, Cieneba sandy loam, and Soper gravelly loam that support the San Diego fairy shrimp. This unit contains vernal pools that support San Diego fairy shrimp populations in the ''Group A'' genetic clade (Bohonak 2007, p. 1). For these reasons this unit is essential for recovery of the San Diego fairy shrimp. For more information about Unit 1 please see the proposed rule (68 FR 19888; April 22, 2003).

Subunit 1A: The Irvine Ranch (Formerly North Ranch Policy Plan Area)

We are excluding Subunit 1A from critical habitat because this area is part of The Irvine Ranch. We have determined that the benefits of excluding this subunit from the final designation outweigh the benefits of including it (see Exemptions and Exclusions section below for a detailed discussion of this exclusion).

Subunit 1B: Fairview Park

We are excluding Subunit 1B from critical habitat because this area is part of the Fairview Park Master Plan. We have determined that the benefits of excluding this subunit from the final designation outweigh the benefits of including it (see Exemptions and Exclusions section below for a detailed discussion of this exclusion).

Subunit 1C: Newport-Banning Ranch

We are designating subunit 1C as critical habitat for the San Diego fairy shrimp. Subunit 1C consists of 15 ac (6 ha) of habitat occupied by the species at the time of listing and the species continues to occur within this subunit. This subunit contains all of the features essential to the conservation of the species. It is located south of the Santa Ana River, 2 mi (3 km) inland from the coast. Subunit 1C consists of privately owned land.

The vernal pool complex at Newport-Banning Ranch is one of only five known vernal pool complexes containing the San Diego fairy shrimp in Orange County. This vernal pool complex and the vernal pool complex at Fairview Park (subunit 1B) represent the only remaining examples of coastal vernal pools in Orange County. Subunit 1C is closed to recreational use; however, this area has been degraded by past activities and may face future impacts from the development of this site and/or its watershed. The PCEs in this critical habitat subunit may require special management considerations or protection to address threats from development activities and nonnative species that may negatively impact the San Diego fairy shrimp, its PCEs, and its habitat.

Subunit 1D: Chiquita Ridge

We are excluding Subunit 1D from critical habitat because this area is part of the Southern Subregion NCCP/HCP. We have determined that the benefits of excluding this subunit from the final designation outweigh the benefits of including it (see Exemptions and Exclusions section below for a detailed discussion of this exclusion).

Subunit 1E: Radio Tower Road

We are excluding Subunit 1E from critical habitat because this area is part of the Southern Subregion NCCP/HCP. We have determined that the benefits of excluding this subunit from the final designation outweigh the benefits of

including it (see Exemptions and Exclusions section below for a detailed discussion of this exclusion).

Unit 2: San Diego, North Coastal Mesa (6 ac (3 ha))

Unit 2 is located in San Diego County, California. The area was occupied at the time of listing and contains the features we have identified as essential to the conservation of the San Diego fairy shrimp that may require special management considerations or protection. The vernal pool complexes in this unit occur on Carlsbad gravelly loam sand, Diablo clay, and Salinas clay. As a result of coastal development, most vernal pools supporting the San Diego fairy shrimp on coastal terraces in San Diego County have been lost. Unit 2 represents the largest collection of vernal pools on coastal terraces that remain in San Diego County. Given the rarity of the San Diego fairy shrimp and the limited amount of remaining vernal pool habitat, this unit is essential to the conservation of this species because of the need to conserve vernal pools throughout the range of the species. This unit contains vernal pools that support San Diego fairy shrimp populations in the ''Group B'' genetic clade (Bohonak 2007, p. 1). This unit is also essential due to its role in maintaining the genetic diversity and population stability of the San Diego fairy shrimp. For more information about Unit 2 please see the proposed rule (68 FR 19888; April 22, 2003).

We have determined that MCB Camp Pendleton's INRMP provides a benefit to the San Diego fairy shrimp and therefore MCB Camp Pendleton, including the proposed subunits 2A–2F, is exempt from the designation of critical habitat pursuant to section 4(a)(3) of the Act (see Summary of Changes From Previously Designated Critical Habitat and 2003 Proposed Rule and Exemptions and Exclusions sections for more information on this exemption).

Subunit 2G: Poinsettia Lane Commuter Station

We are designating subunit 2G as critical habitat for the San Diego fairy shrimp. Subunit 2G consists of 6 ac (3 ha) of habitat occupied by the species at the time of listing and the species continues to occur within this subunit. This subunit contains all of the features essential to the conservation of the species. It is located in Carlsbad, California, north of Poinsettia Lane, 0.25 mi (0.4 km) inland from the coast. Subunit 2G consists of 4 ac (2 ha) of public land owned by the North County Transit District (NCTD) and 2 ac (1 ha) of private land.

Lands in this subunit owned by NCTD are in a conservation easement managed by CDFG. However, at this time additional management measures, such as monitoring of water quality and the restoration of native vegetation around the vernal pools, may be needed to conserve the PCEs for San Diego fairy shrimp. The PCEs in this critical habitat subunit may also require special management considerations or protection to address threats from altered hydrology and nonnative species that may negatively impact the San Diego fairy shrimp and its habitat.

Unit 3: San Diego, Inland Valley (725 ac (292 ha))

Unit 3 contains vernal pool complexes within the jurisdiction of the City of San Marcos and the community of Ramona. The area was occupied at the time of listing and contains the features essential to the conservation of the San Diego fairy shrimp that may require special management considerations or protection for the San Diego fairy shrimp. The vernal pool complexes in unit 3 are associated with alluvial or volcanic type soils and include the only vernal pool complexes known to occur on Placentia soils (Service GIS database; soils described by Bowman 1973, pp. 68–69). The vernal pool complexes in San Marcos are associated with a unique plant association of multiple species of *Brodiaea* (Armstrong 2007, pp. 11–16). The recovery plan specifically identifies these vernal pools as essential for the recovery of the San Diego fairy shrimp. This unit includes vernal pools within the easternmost edge of the geographical distribution of the species and at the highest elevation where this species occurs. This unit contains vernal pools that support San Diego fairy shrimp populations in the ''Group B'' genetic clade (Bohonak 2004, pp. 3–9). Conservation of vernal pools in this unit will help maintain the diversity of vernal pool habitats and their unique geological substrates, and will retain the genetic diversity of these geographically distinct populations. For more information about Unit 3 please see the proposed rule (68 FR 19888; April 22, 2003).

Subunit 3A: San Marcos: Northeast

We are designating subunit 3A as critical habitat for the San Diego fairy shrimp. Subunit 3A consists of 17 ac (7 ha) of habitat occupied by the species at the time of listing and the species continues to occur within this subunit. This subunit contains all of the features essential to the conservation of the species. Subunit 3A is located north of State Route 78, just south of Palomar Community College, 8 mi (13 km) inland from the coast. Subunit 3A consists of 16 ac (6 ha) of privately owned land and of 1 ac (<1 ha) of land owned by a Special District.

This site has been proposed for development, and it is likely that the vernal pools within this subunit will be directly or indirectly impacted by the development. The PCEs within this critical habitat subunit may require special management considerations or protection to address threats from development, off-road vehicles, and nonnative species that may negatively impact the San Diego fairy shrimp and its habitat.

Subunit 3C: San Marcos: Southwest

We are designating subunit 3C as critical habitat for the San Diego fairy shrimp. Subunit 3C consists of 63 ac (25 ha) of habitat occupied by the species at the time of listing and the species continues to occur within this subunit. This subunit contains all of the features essential to the conservation of the species. Subunit 3C is located south of State Route 78, to the north of San Marcos Boulevard between South Pacific Street and South Las Posas Road, 8 mi (13 km) inland from the coast. Subunit 3C consists of 11 ac (4 ha) of land owned by the City of San Marcos, 4 ac (2 ha) of land owned by the Water District, and 48 ac (19 ha) of privately owned land.

This site is currently not fenced and the vernal pool habitat in this subunit is subject to continuing impacts from off-road vehicles and illegal dumping. The PCEs in this critical habitat subunit may require special management considerations or protection to address threats from development, off-road vehicles, and nonnative species that may negatively impact the San Diego fairy shrimp and its habitat.

Subunit 3D: San Marcos: Southeast

We are designating subunit 3D as critical habitat for the San Diego fairy shrimp. Subunit 3D consists of 5 ac (2 ha) of habitat occupied by the species at the time of listing and the species continues to occur within this subunit. This subunit contains all of the features essential to the conservation of the species. Subunit 3D is located south of State Route 78, east of Linda Vista Drive and west of Bent Avenue, 9 mi (14 km) inland from the coast. Subunit 3C is privately owned. The PCEs in this critical habitat subunit may require special management considerations or protection to address threats from altered hydrology and nonnative species

that may negatively impact the San Diego fairy shrimp and its habitat.

Subunit 3E.1: Ramona Grasslands

We are designating subunit 3E.1 as critical habitat for the San Diego fairy shrimp. Subunit 3E.1 consists of 382 ac (154 ha) of habitat occupied by the species at the time of listing and the species continues to occur within this subunit. This subunit contains all of the features essential to the conservation of the species. Subunit 3E.1 is located in the western portion of the Santa Maria Valley, north of the Santa Maria Creek and southwest of the Ramona Airport, 20 mi (32 km) inland from the coast. Subunit 3E.1 consists of 1 ac (<1 ha) land owned by the Water District and 381 ac (153 ha) of privately owned land.

Various conservation organizations are in the process of acquiring land within this subunit; however, not all of the land is conserved at this point and there is no long-term management plan for the conservation of the San Diego fairy shrimp and its vernal pool habitat. The PCEs in this critical habitat subunit may require special management considerations or protection to address threats from development, off-road vehicles, altered hydrology, and nonnative species that may negatively impact the San Diego fairy shrimp and its habitat.

Subunit 3E.2: Ramona Airport

We are designating subunit 3E.2 as critical habitat for the San Diego fairy shrimp. Subunit 3E.2 consists of 191 ac (77 ha) of habitat occupied by the species at the time of listing and the species continues to occur within this subunit. This subunit contains all of the features essential to the conservation of the species. Subunit 3E.2 is located in the central portion of the Santa Maria Valley, north of the Santa Maria Creek and south of the Ramona Airport, 21 mi (34 km) inland from the coast. Subunit 3E.2 consists of 67 ac (27 ha) public land owned by the County of San Diego and 124 ac (50 ha) of privately owned land.

Various conservation organizations are in the process of acquiring land within this subunit; however, not all of the land is conserved at this point and there is no long-term management plan for the conservation of the San Diego fairy shrimp. The PCEs in this critical habitat subunit may require special management considerations or protection to address threats from development, off-road vehicles, altered hydrology, and nonnative species that may negatively impact the San Diego fairy shrimp and its habitat.

Subunit 3E.3: Ramona, Main Street

We are designating subunit 3E.3 as critical habitat for the San Diego fairy shrimp. Subunit 3E.3 consists of 27 ac (11 ha) of habitat occupied by the species at the time of listing and the species continues to occur within this subunit. This subunit contains all of the features essential to the conservation of the species. Subunit 3E.3 is located along Main Street in Ramona, 23 mi (37 km) inland from the coast. Subunit 3E.3 consists of 1 ac (<1 ha) of land owned by the County of San Diego and 26 ac (10 ha) of private land.

This site is privately owned and subject to potential development. In addition, the site is currently not fenced and its vernal pool habitat is subject to continuing impacts from off-road vehicles. The PCEs in this critical habitat subunit may require special management considerations or protection to address threats from development, off-road vehicles, altered hydrology, and nonnative species that may negatively impact the San Diego fairy shrimp and its habitat.

Subunit 3E.4: Ramona High School

We are designating subunit 3E.4 as critical habitat for the San Diego fairy shrimp. Subunit 3E.4 consists of 40 ac (16 ha) of habitat occupied by the species at the time of listing and the species continues to occur within this subunit. This subunit contains all of the features essential to the conservation of the species. Subunit 3E.4 is located east of State Route 67, 24 mi (39 km) inland from the coast. Subunit 3E.4 consists of 35 ac (14 ha) of land owned by the Ramona Unified School District and 5 ac (2 ha) of privately owned land. The PCEs in this critical habitat subunit may require special management considerations or protection to address current development threats, and impacts from off-road vehicles, altered hydrology, and nonnative species that may negatively impact the San Diego fairy shrimp and its habitat.

Unit 4: San Diego, Central Coastal Mesas (551 ac (225 ha))

Unit 4 is located in San Diego County, California. The area was occupied at the time of listing and contains the features essential to the conservation of the San Diego fairy shrimp. These features may require special management considerations or protection due to threats from development, illegal trash dumping, OHV activity, and nonnative plant species. The occurrences of San Diego fairy shrimp in Unit 4 are associated with coastal terraces and mesas found south of the San Dieguito River to the Sweetwater River. While many of the vernal pool complexes in this unit have been destroyed or fragmented, the complexes being designated represent some of the best remaining vernal pools in San Diego County. Many of the vernal pools in this unit receive conservation protection by virtue of their land ownership; however, they may require additional management to maintain populations of San Diego fairy shrimp. This unit contains vernal pools that support San Diego fairy shrimp populations in both the ''Group A'' and ''Group B'' genetic clade (Bohonak 2004, pp. 3–9). This unit includes vernal pools that are within the center of this species' geographical distribution and retains the genetic diversity of these geographically distinct populations. For more information about Unit 4 please see the proposed rule (68 FR 19888; April 22, 2003).

We have determined that MCAS Miramar's INRMP provides a benefit to the San Diego fairy shrimp and, therefore, MCAS Miramar is exempt from the designation pursuant to section 4(a)(3) of the Act (see Exemptions and Exclusions section below for a detailed discussion of this exemption).

Subunit 4A/B: Del Mar Mesa

We are designating subunit 4A/B as critical habitat for the San Diego fairy shrimp. Subunit 4A/B consists of 252 ac (102 ha) of habitat occupied by the species at the time of listing and the species continues to occur within this subunit. This subunit contains all of the features essential to the conservation of the species. Subunit 4A/B is located south of State Route 56 and north of Los Peñasquitos Canyon, 6 mi (10 km) inland from the coast. Subunit 4A/B consists 51 ac (21 ha) land owned by the City of San Diego, 5 ac (2 ha) land owned by the County of San Diego, 56 ac (23 ha) land owned by the State of California, 41 ac (16 ha) land owned by the Service, and 99 ac (40 ha) is privately owned land.

The PCEs in this critical habitat subunit may require special management considerations or protection to address threats from development, off-road vehicles, altered hydrology, and nonnative species that may negatively impact the San Diego fairy shrimp and its habitat.

Subunit 4C: Murphy Canyon Navy Housing

We are designating subunit 4C as critical habitat for the San Diego fairy shrimp. Subunit 4C consists of 41 ac (17 ha) of habitat occupied by the species at the time of listing and the species

continues to occur within this subunit. This subunit contains all of the features essential to the conservation of the species. Subunit 4C is located northeast of the junction of Interstate 8 and Interstate 15, 10 mi (16 km) inland from the coast. Subunit 4C consists of 40 ac (16 ha) of DOD land and 1 ac (<1 ha) of public land owned by the City of San Diego.

As a result of two section 7 consultations (Service 2002; Service 2003), the vernal pool habitat in this subunit and in subunit 4D were restored to offset project impacts. The Navy has completed a 5-year monitoring and management period as described in the section 7 consultations and is now seeking funds for a long-term management plan for this area (Jacobsen 2007, p. 1). However, at this time additional management measures may be needed for the conservation of San Diego fairy shrimp. The PCEs in this subunit may require special management considerations or protection to address on-going threats from recreational activities, illegal dumping, and nonnative species that may negatively impact the San Diego fairy shrimp and its habitat.

Subunit 4D: Chollas Heights Navy Housing

We are designating subunit 4D as critical habitat for the San Diego fairy shrimp. Subunit 4D consists of 16 ac (7 ha) of habitat occupied by the species at the time of listing and the species continues to occur within this subunit. This subunit contains all of the features essential to the conservation of the species. Subunit 4D is located north of State Route 94 and north Chollas Reservoir, 8 mi (13 km) inland from the coast. Subunit 4D consists entirely of DOD land.

As a result of two section 7 consultations (Service 2002; Service 2003), the vernal pool habitat in this subunit and in subunit 4C were restored to offset project impacts. The Navy has completed a 5-year monitoring and management period as described in the section 7 consultations and is now seeking funds for a long-term management plan for this area (Jacobsen 2007, p. 1). However, at this time additional management measures may be needed for the conservation of San Diego fairy shrimp. The PCEs in this subunit may require special management considerations or protection to address on-going threats from nonnative species that may negatively impact the San Diego fairy shrimp and its habitat.

Subunit 4E: Carmel Mountain, West

We are designating subunit 4E as critical habitat for the San Diego fairy shrimp. Subunit 4E consists of 32 ac (13 ha) of habitat occupied by the species at the time of listing and the species continues to occur within this subunit. This subunit contains all of the features essential to the conservation of the species. Subunit 4E is located south of State Route 56 and north of Los Peñasquitos Canyon, 3 mi (5 km) inland from the coast. Subunit 4E consists of 31 ac (13 ha) of public land owned by the City of San Diego and 1 ac (<1 ha) of privately owned land.

The PCEs in this critical habitat subunit may require special management considerations or protection to address threats from off-road vehicles, altered hydrology, and nonnative species that may negatively impact the San Diego fairy shrimp and its habitat.

Subunit 4F: Carmel Mountain, East

We are designating subunit 4F as critical habitat for the San Diego fairy shrimp. Subunit 4F consists of 4 ac (2 ha) of habitat occupied by the species at the time of listing and the species continues to occur within this subunit. This subunit contains all of the features essential to the conservation of the species. It is located south of State Route 56 and north of Los Peñasquitos Canyon, 3 mi (5 km) inland from the coast. Subunit 4F consists entirely of public land owned by the City of San Diego.

The PCEs in this critical habitat subunit may require special management considerations or protection to address threats from off-road vehicles, altered hydrology, and nonnative species that may negatively impact the San Diego fairy shrimp and its habitat.

Subunit 4G: Tierra Alta

We are designating subunit 4G as critical habitat for the San Diego fairy shrimp. Subunit 4G consists of 5 ac (2 ha) of habitat occupied by the species at the time of listing and the species continues to occur within this subunit. This subunit contains all of the features essential to the conservation of the species. Subunit 4G is located north of Calle Cristobal and south of Los Peñasquitos Canyon, 6 mi (10 km) inland from the coast. Subunit 4G consists of 2 ac (1 ha) of public land owned by the City of San Diego and 3 ac (1 ha) of privately owned land.

The private land in subunit 4G is conserved and maintained by the Tierra Alta Home Owner's Association. This subunit is considered to be in the same complex and series as the Lopez Ridge vernal pools to the south (subunit 4H). However, at this time additional management measures may be needed for the conservation of San Diego fairy shrimp. The PCEs in this subunit may require special management considerations or protection to address on-going threats from recreational activities and illegal dumping that may negatively impact the San Diego fairy shrimp and its habitat.

Subunit 4H: Lopez Ridge

We are designating subunit 4H as critical habitat for the San Diego fairy shrimp. Subunit 4H consists of 11 ac (4 ha) of habitat occupied by the species at the time of listing and the species continues to occur within this subunit. This subunit contains all of the features essential to the conservation of the species. Subunit 4H is located north of Calle Cristobal and south of Los Peñasquitos Canyon, 6 mi (10 km) inland from the coast. Subunit 4H consists of 7 ac (3 ha) of public land owned by the City of San Diego and 4 ac (2 ha) of privately owned land.

The private portion of this subunit is zoned for single family residential and it is vulnerable to impacts associated with development. The publicly owned portion of this critical habitat unit is preserved as a mitigation site as a condition of a Service Biological Opinion (1–1–83–F–29R (Service 1983)). However, at this time additional management measures may be needed for the conservation of San Diego fairy shrimp. The PCEs in this critical habitat subunit may require special management considerations or protection to address threats from development, off-road vehicles, altered hydrology, and nonnative species that may negatively impact the San Diego fairy shrimp and its habitat.

Subunit 4I: Winterwood

We are designating subunit 4I as critical habitat for the San Diego fairy shrimp. Subunit 4I consists of 17 ac (7 ha) of habitat occupied by the species at the time of listing and the species continues to occur within this subunit. This subunit contains all of the features essential to the conservation of the species. Subunit 4I is located to the south of Challenger Middle School in Mira Mesa, 6 mi (10 km) inland from the coast. Subunit 4I consists entirely of public land owned by the City of San Diego.

This area is currently owned and managed by the City of San Diego Parks and Recreation Department. The subunit is partially conserved as mitigation as a

result of U.S. Environmental Protection Agency compliance order CWA 404–09a–94–005 (see RECON 1996 for additional information). However, at this time additional management measures may be needed for the conservation of San Diego fairy shrimp. The PCEs in this subunit may require special management considerations or protection to address threats from recreational activities, nonnative weed invasion, illegal dumping, and off-road vehicle use that may negatively impact the San Diego fairy shrimp and its habitat.

Subunit 4J: Carroll Canyon

We are designating subunit 4J as critical habitat for the San Diego fairy shrimp. Subunit 4J consists of 14 ac (6 ha) of habitat occupied by the species at the time of listing and the species continues to occur within this subunit. This subunit contains all of the features essential to the conservation of the species. Subunit 4J is located at the southern terminus of Parkdale Avenue in Mira Mesa, 6 mi (10 km) inland from the coast. Subunit 4J consists of 14 ac (6 ha) of public land owned by the City of San Diego and 1 ac (<1 ha) of privately owned land.

A portion of this subunit was conserved as mitigation pursuant to the requirements of the Service Biological Opinions 1–1–82–F–108 (Service 1982a) and 1–1–82–F–108R (Service 1982b). An additional area within this subunit was purchased by the City of San Diego with money from the City of San Diego's Vernal Pool Preservation Fund. The site has been maintained per the requirements of Service Biological Opinions 1–1–82–F–108 and 1–1–82–F–108R, and the City of San Diego's Vernal Pool Management Plan (City of San Diego 1996). However, at this time additional management measures may be needed for the conservation of San Diego fairy shrimp. The PCEs in this subunit may require special management considerations or protection to address threats from on-going recreational activities and illegal dumping that may negatively impact the San Diego fairy shrimp and its habitat.

Subunit 4K: San Diego Energy Recovery (SANDER) and Magnatron

We are designating subunit 4K as critical habitat for the San Diego fairy shrimp. Subunit 4K consists of 56 ac (23 ha) of habitat occupied by the species at the time of listing and the species continues to occur within this subunit. This subunit contains all of the features essential to the conservation of the species. Subunit 4K is located to the west of the intersection of Magnatron Boulevard and State Route 163 and south of State Route 52, 7 mi (11 km) inland from the coast. Subunit 4K consists of 55 ac (22 ha) of public land owned by the City of San Diego and 1 ac (<1 ha) of privately owned land.

Subunit 4K has an ''Industrial Parks'' zoning designation and is not currently conserved or being managed for the San Diego fairy shrimp or its habitat. The PCEs in subunit may require special management considerations or protection to address on-going threats from development, recreational activities, nonnative weed invasion, illegal dumping, and off-road vehicle use that may negatively impact the San Diego fairy shrimp and its habitat.

Subunit 4L: Cubic

We are designating subunit 4L as critical habitat for the San Diego fairy shrimp. Subunit 4L consists of 7 ac (3 ha) of habitat occupied by the species at the time of listing and the species continues to occur within this subunit. This subunit contains all of the features essential to the conservation of the species. Subunit 4L is located between State Route 52 and State Route 163 at the northeastern terminus of Kearny Mesa Road in Kearny Mesa, 8 mi (13 km) inland from the coast. Subunit 4L consists of privately owned land.

Subunit 4L has an ''Industrial Parks'' zoning designation and is not conserved or being managed to protect the San Diego fairy shrimp or its habitat. The PCEs within this subunit may require special management considerations or protection to address on-going threats from development, recreational activities, nonnative weed invasion, illegal trash dumping, and off-road vehicle use that may negatively impact the San Diego fairy shrimp and its habitat.

Subunit 4M: Montgomery Field

We are designating subunit 4M as critical habitat for the San Diego fairy shrimp. Subunit 4M consists of 96 ac (39 ha) of habitat occupied by the species at the time of listing and the species continues to occur within this subunit. This subunit contains all of the features essential to the conservation of the species. Subunit 4M is located north of Aero Drive in Kearny Mesa, 7 mi (11 km) inland from the coast. Subunit 4M is owned and managed by the City of San Diego, Airports Division.

The vernal pool complexes within subunit 4M are managed according to the Service Biological Opinion 1–6–94–F–32 (Service 1995, pp. 1–33), the Montgomery Field Final Conceptual Mitigation Plan (P&D Technologies 1994), and the Vernal Pool Management Plan (City of San Diego 1996). The PCEs in this subunit may require special management considerations or protection to address threats from development, on-going operational management for the airport, and nonnative weed invasion that may negatively impact the San Diego fairy shrimp and its habitat.

Unit 5: San Diego, Southern Coastal Mesa (1,785 ac (722 ha))

Unit 5 is located in San Diego County, California. The area was occupied at the time of listing and contains the features essential to the conservation of the San Diego fairy shrimp that may require special management considerations or protection. This southernmost unit of critical habitat is essential to the conservation of the San Diego fairy shrimp because it helps to maintain the ecological distribution and genetic diversity of the species. Due to the rapid urbanization on both sides of the border between the U.S. and Mexico, nearly all vernal pool habitat in this region has been lost. This unit contains vernal pools that support San Diego fairy shrimp populations in the ''Group A'' genetic clade (Bohonak 2004, pp. 3–9). The conservation of the remaining vernal pools in this unit is essential to maintain continuity in the range between the U.S. and Mexico as well as the genetic diversity of the species. For more information about Unit 5 please see the proposed rule (68 FR 19888; April 22, 2003).

We have determined that the INRMP for Naval Base Coronado, which includes the Navy Outlying Landing Field and Naval Radar Receiving Facility, provides a benefit to the San Diego fairy shrimp and therefore Department of Defense lands that are part of Naval Base Coronado's INRMP are exempt from critical habitat pursuant to section 4(a)(3) of the Act (see Exemptions and Exclusions section below for a detailed discussion of this exemption).

Subunit 5A: Otay Mesa, Northeast

We are designating subunit 5A as critical habitat for the San Diego fairy shrimp. Subunit 5A consists of 38 ac (16 ha) of habitat occupied by the species at the time of listing and the species continues to occur within this subunit. This subunit contains all of the features essential to the conservation of the species. Subunit 5A is located south of Otay River at the base of Otay Mountain, 12 mi (19 km) inland from the coast. Subunit 5A consists of 8 ac (3 ha) land owned by the County of San Diego, 16 ac (7 ha) land owned by the State of California, 1 ac (<1 ha) land owned by

the Water District, and 13 ac (5 ha) privately owned land.

We have excluded land covered by the County of San Diego subarea plan under the MSCP in this subunit because we have determined that the benefits of exclusion outweigh the benefits of inclusion (see Exemptions and Exclusions section below for a detailed discussion of this exclusion). However, lands within Major/Minor Amendment Areas in this subunit are not covered by the County of San Diego subarea plan under the MSCP. These areas contain sensitive resources that were not addressed during the development of the County of San Diego subarea plan under the MSCP and are to be addressed in a future amendment to the MSCP. We are designating all lands in subunit 5A that are not covered by the County of San Diego subarea plan under the MSCP, including these future amendment areas. The PCEs in this subunit may require special management considerations or protection to address threats from development, off-road vehicle use, and nonnative weed invasion that may negatively impact the San Diego fairy shrimp and its habitat.

Subunit 5B: Otay Mesa, North

We are designating 304 ac (123 ha) of subunit 5B as critical habitat for the San Diego fairy shrimp. Subunit 5B consists of habitat occupied by the species at the time of listing and the species continues to occur within this subunit. This subunit contains all of the features essential to the conservation of the species. Subunit 5B is located central Otay Mesa, north of Otay Mesa Road, east of Brown Field, 9 mi (15 km) inland from the coast. Subunit 5B consists of privately owned land. The PCEs in this subunit may require special management considerations or protection to address threats from development, off-road vehicle use, and nonnative weed invasion that may negatively impact the San Diego fairy shrimp and its habitat.

We have excluded land covered by the County of San Diego subarea plan under the MSCP in this subunit because we have determined that the benefits of excluding this subunit from the final designation outweigh the benefits of including it (see Exemptions and Exclusions section below for a detailed discussion of this exclusion).

Subunit 5C: Otay Mesa, East

We are designating subunit 5C as critical habitat for the San Diego fairy shrimp. Subunit 5C consists of 75 ac (30 ha) of habitat occupied by the species at the time of listing and the species continues to occur within this subunit. This subunit contains all of the features essential to the conservation of the species. Subunit 5C is located on eastern Otay Mesa, northeast of Otay Mesa Road, 12 mi (19 km) inland from the coast. Subunit 5C consists of privately owned land.

This vernal pool complex has had relatively little human disturbance compared to most vernal pool complexes on Otay Mesa. However, the PCEs in this subunit may require special management considerations or protection to address threats from development, off-road vehicle use, and nonnative weed invasion that may negatively impact the San Diego fairy shrimp and its habitat.

Subunit 5D: Otay Mesa, Southeast

We are designating subunit 5D as critical habitat for the San Diego fairy shrimp. Subunit 5D consists of 391 ac (158 ha) of habitat occupied by the species at the time of listing and the species continues to occur within this subunit. This subunit contains all of the features essential to the conservation of the species. Subunit 5D is located north of the United States/Mexico border, at the base of Otay Mountain, 13 mi (21 km) inland from the coast. Subunit 5D consists entirely of privately owned land.

The vernal pool complexes in this unit have not yet been directly impacted by development or fragmentation. The populations of San Diego fairy shrimp in this subunit are the closest United States population to any of the populations of San Diego fairy shrimp in Mexico. As vernal pool complexes become more fragmented by development in both the United States and Mexico, the preservation of vernal pool complexes near to one another will be increasingly important to these ecosystems to provide continuity in the range between the United States and Mexico. The PCEs in this subunit may require special management considerations or protection to address on-going threats from development, off-road vehicle use, and nonnative weed invasion that may negatively impact the San Diego fairy shrimp and its habitat.

Subunit 5F: Otay Mesa, Southwest

We are designating subunit 5F as critical habitat for the San Diego fairy shrimp. Subunit 5F consists of 621 ac (251 ha) of habitat occupied by the species at the time of listing and the species continues to occur within this subunit. This subunit contains all of the features essential to the conservation of the species. Subunit 5F is located south of Otay Mesa Road and north of the United States/Mexico border on the western portion of Otay Mesa, 7 mi (11 km) inland from the coast. Subunit 5F consists of 11ac (4 ha) of land owned by the U.S. Government, 73 ac (30 ha) of land owned by the City of San Diego, and 537 ac (217 ha) of privately owned land.

Some of the land within this subunit has been purchased for conservation; however, these areas may require measures to ensure that the San Diego fairy shrimp is conserved on these lands. Additionally, there are lands in this subunit that are privately owned and may be partially developed. Conservation measures may be required in these areas to ensure that the structure and function of the vernal pool habitat for San Diego fairy shrimp is not altered and that the PCEs are protected. The PCEs in this subunit may require special management considerations or protection to address threats from development, off-road vehicle use, and nonnative weed invasion that may negatively impact the San Diego fairy shrimp and its habitat.

We are excluding DHS-owned land at Arnie's Point (29 ac (12 ha)) from this subunit because we have determined that the benefits of exclusion outweigh the benefits of inclusion (see Exemptions and Exclusions section below for a detailed discussion of this exclusion).

Subunit 5G: Otay Mesa, Northwest

We are designating subunit 5G as critical habitat for the San Diego fairy shrimp. Subunit 5G consists of 132 ac (53 ha) of habitat occupied by the species at the time of listing and the species continues to occur within this subunit. This subunit contains all of the features essential to the conservation of the species. Subunit 5G is located north of Otay Mesa Road on the mesa tops around Dennery Canyon, 7 mi (11 km) inland from the coast. Subunit 5G consists of public and private land. Subunit 5G consists of 19 ac (7 ha) of land owned by the City of San Diego and 113 ac (46 ha) of privately owned land.

Subunit 5G includes a number of vernal pool complexes. Most of the vernal pool complexes in this unit have been purchased for conservation; however, some of the unprotected areas may be impacted by development. In addition to the threats posed by development to PCEs in some portions of the subunit, the PCEs throughout the subunit may require special management considerations or protection to address threats from off-road vehicle use, and nonnative weed

invasion that may negatively impact the San Diego fairy shrimp and its habitat.

Subunit 5H: Lower Otay Reservoir

We are designating subunit 5H as critical habitat for the San Diego fairy shrimp. Subunit 5H consists of 200 ac (81 ha) of habitat occupied by the species at the time of listing and the species continues to occur within this subunit. This subunit contains all of the features essential to the conservation of the species. The portion of subunit 5H being designated as critical habitat is located on the south side of Lower Otay Reservoir, 15 mi (24 km) inland from the coast. Subunit 5H is entirely public land owned by the City of San Diego.

We have excluded all of the land covered by the County of San Diego subarea plan under the MSCP in this subunit because we have determined that the benefits of excluding this subunit from the final designation outweigh the benefits of including it (see Exemptions and Exclusions section below for a detailed discussion of this exclusion).

Remaining vernal pool complexes in this subunit are isolated from urbanized areas of San Diego and this subunit may be one of the few places where indirect effects from development have not placed stress on the population of San Diego fairy shrimp. However, the PCEs in this subunit may require special management considerations or protection to address threats from off-road vehicles and nonnative weed invasion that may negatively impact the San Diego fairy shrimp and its habitat.

Subunit 5I: Marron Valley

We are designating subunit 5I as critical habitat for the San Diego fairy shrimp. Subunit 5I consists of 24 ac (10 ha) of habitat occupied by the species at the time of listing and the species continues to occur within this subunit. This subunit contains all of the features essential to the conservation of the species. Subunit 5I is located approximately 25 mi (40 km) east of the coast along the United States/Mexico border. Subunit 5I is entirely public land owned by the City of San Diego.

This area is isolated from urbanized areas of San Diego and may be one of the few places where indirect effects from development have not placed stress on the population of San Diego fairy shrimp. Subunit 5I is within the Marron Valley Conservation Bank, which is included in the MSCP Cornerstone Bank Agreement. The PCEs in this subunit may require special management considerations or protection to address threats from off-road vehicles use and nonnative weed invasion that may negatively impact the San Diego fairy shrimp and its habitat.

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 Court 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 (or retain the current ability for the PCEs to be functionally established) to serve its intended conservation role for the species.

Section 7(a)(4) of the Act requires Federal agencies to confer with the Service on any action that is likely to jeopardize the continued existence of a species proposed for listing or result in destruction or adverse modification of proposed critical habitat. This is a procedural requirement only, as any conservation recommendations in a conference report or opinion are strictly advisory. However, once a species proposed for listing becomes listed, or proposed critical habitat is designated as final, the full prohibitions of section 7(a)(2) apply to any discretionary Federal action. The primary utility of the conference procedures is to allow a Federal agency to maximize its opportunity to adequately consider species proposed for listing and proposed critical habitat and to avoid potential delays in implementing their proposed action because of the section 7(a)(2) compliance process, if we list those species or designate critical habitat.

Under conference procedures, we may provide advisory conservation recommendations to assist the agency in eliminating conflicts that may be caused by the proposed action. We may conduct conferences either informally or formally. Informal conferences are typically used if the proposed action is not likely to have any adverse effects to the species proposed for listing or proposed critical habitat. Formal conferences are typically used when the Federal agency or the Service believes the proposed action is likely to cause adverse effects to species proposed for listing or critical habitat, inclusive of those that may cause jeopardy or adverse modification.

We generally provide the results of an informal conference in a conference report, while we provide the results of a formal conference in a conference opinion. Conference opinions on proposed species or critical habitat are typically prepared according to 50 CFR 402.14, as if the proposed species were already listed or the proposed critical habitat was already designated. We may adopt the conference opinion as the biological opinion when the species is listed or the critical habitat is designated, if no substantial new information or changes in the action alter the content of the opinion (see 50 CFR 402.10(d)).

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

When we issue a biological opinion concluding that a project is likely to jeopardize the continued existence of a listed species or destroy or adversely modify 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 jeopardizing the continued existence of the listed species or destroying or adversely modifying 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 San Diego fairy shrimp or its designated critical habitat require consultation under section 7 of 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 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, or would retain its current ability for the primary constituent elements to be functionally established. 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 San Diego fairy shrimp. Generally, the conservation role of San Diego fairy shrimp critical habitat units is to support viable core area populations.

Section 4(b)(8) of the Act requires us to briefly evaluate and describe, in any proposed or final regulation that designates critical habitat, 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 San Diego fairy shrimp include, but are not limited to:

(1) Actions that would permanently reduce or increase: the depth of a vernal pool; the ponding duration and inundation of the vernal pool; or other vernal pool features beyond the tolerances of the San Diego fairy shrimp (PCE 1). Actions that could permanently alter the features in the vernal pool basin that the San Diego fairy shrimp requires include, but are not limited to: discharge of dredged or fill material into vernal pools; erosion of sediments from fill material; the introduction of water, other liquids, or chemicals (including herbicides and pesticides) into the vernal pool basin; the disturbance of soil profile by grading, digging or other earthmoving work in and around the vernal pool basin; and/or other activities such as off-road vehicle use, heavy foot traffic, grazing, vegetation removal, or road construction within the watershed for the vernal pools.

(2) Actions that impact the watershed and the local hydrology of a vernal pool complex (PCE 2). These actions could increase or decrease the amount of water that comes into a vernal pool complex (PCE 2). These actions could also change the timing or amount of water that flows into a vernal pool complex and alter the timing, duration, and amount of water in the vernal pool basins (PCE 1). Actions that could alter the hydrology of a vernal pool complex include, but are not limited to: the creation of impervious surfaces around a vernal pool complex; channeling water runoff into a vernal pool complex; the use of artificial irrigation near a vernal pool complex; cut and fill work in or adjacent to the vernal pool watersheds that disrupts the surface and subsurface water flow; creating structures that limit the amount of natural water runoff into a vernal pool complex; and/or grading, digging or other earthmoving work in and around the vernal pool watershed.

(3) Actions that would permanently alter the function of the underlying claypan or hardpan soil layer (PCE 3) to hold and retain water in the vernal pool basin (PCE 1). Damage to the claypan or hardpan layer could impact the hydrology of a vernal pool complex and disrupt the ability of the vernal pools in the complex to fill with water or to hold water (PCE 1). Actions that disturb the claypan or hardpan layer can also impact the flow of water at the surface and subsurface level so that the vernal pool watershed is impacted and the amount of water following into or out of a vernal pool complex is altered (PCE 3). Actions that could permanently alter the function of the underlying claypan or hardpan soil layer (PCE 3) include, but are not limited to: grading or earthmoving work that disrupts or rips into the claypan or hardpan soil layer; cut and fill work that disrupts the surface or subsurface water flow by disrupting the claypan or hardpan soil layer; digging, trenching, mining, and/or drilling into the claypan or hardpan soil layer; and/or construction activities that create cut slopes, which disrupt the claypan or hardpan soil layer.

We consider all of the units designated as critical habitat, as well as those that have been excluded or exempt, to contain features essential to the conservation of the San Diego fairy shrimp. All units are within the geographical area occupied by the species at the time of listing and are likely to be used by the San Diego fairy shrimp. Federal agencies already consult with us on activities in areas currently occupied by the San Diego fairy shrimp, or if the species may be affected by the action, to ensure that their actions do not jeopardize the continued existence of the San Diego fairy shrimp.

Application of Section 4(a)(3) and Exclusions Under Section 4(b)(2) of the Act

Section 4(a)(3)

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 consult 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 proposed critical habitat designation for San Diego fairy shrimp to determine if they are exempt under section 4(a)(3) of the Act.

Approved INRMPs

In the April 22, 2003, proposed rule (68 FR 19888), we considered but did not propose as critical habitat lands on MCAS Miramar and U.S. Navy's NRRF under Naval Base Coronado under sections 3(5)(A) and 4(b)(2) of the Act, based on the benefits provided by their completed INRMPs. We also considered, but did not propose, mission-essential training areas on MCB Camp Pendleton under section 4(b)(2) of the Act for national security reasons. However, non-training areas on MCB Camp Pendleton were included in the 2003 proposed critical habitat designation.

Following the publication of the proposed rule, the Act was amended to include section 4(a)(3)(B)(i). As stated above, 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.'' The INRMPs for MCAS Miramar, MCB Camp Pendleton, NRRF, and NOLF include measures that benefit the San Diego fairy shrimp (a brief discussion of the benefits of each INRMP follows below). Therefore, under Section 4(a)(3)(B)(i) of the Act, we are exempting lands on MCAS Miramar, MCB Camp Pendleton, NRRF, or NOLF from critical habitat for the San Diego fairy shrimp, and we are not relying on section 3(5)(A) of the Act as an additional basis for our decision not to designate these military lands.

Marine Corps Air Station Miramar (MCAS Miramar)

We have determined that conservation efforts identified in the INRMP for MCAS Miramar provide a benefit to the San Diego fairy shrimp occurring on MCAS Miramar. This includes 1,703 ac (689 ha) of habitat throughout the western portion of MCAS Miramar. Therefore, this installation is exempt from critical habitat for San Diego fairy shrimp under section 4(a)(3) of the Act for the reasons described below.

MCAS Miramar completed a final INRMP in May 2000. MCAS Miramar revised and updated its INRMP in 2006 to address conservation and management recommendations within the scope of the installation's military mission, including conservation measures for the San Diego fairy shrimp and vernal pool habitat on the base (MCAS Miramar 2006, Section 7, pp. 17–23).

We have determined that MCAS Miramar's INRMP benefits the San Diego fairy shrimp through ongoing efforts to avoid and minimize impacts to the species and vernal pool habitat. The INRMP classifies nearly all of the vernal pool basins and watersheds on MCAS Miramar as a Level I Management Area. Under the INRMP, Level I Management Areas receive the highest conservation priority of the various levels of Management Areas on MCAS Miramar. The conservation of vernal pool basins and watersheds in Level I Management Areas is achieved through: (1) Education of base personnel; (2) implementation of proactive measures that help avoid accidental impacts (e.g., signs and fencing); (3) development of procedures to respond to and restore accidental impacts on vernal pools; and (4) maintenance of an inventory of vernal pool basins and the associated watersheds on MCAS Miramar. Further, the MCAS Miramar's environmental security staff reviews projects and enforces existing regulations and orders that, through their implementation, avoid and minimize impacts to natural resources, including the San Diego fairy shrimp and its habitat. Activities occurring on MCAS Miramar are currently being conducted in a manner that minimizes impacts to San Diego fairy shrimp and prevents degradation or destruction of vernal pool habitat.

This military installation has an approved INRMP that we have determined provides a benefit to the San Diego fairy shrimp, and the Marine Corps has committed to work closely with the Service and CDFG to continually refine the existing INRMP as part of the Sikes Act's INRMP review process. Based on the above considerations, and consistent with the direction provided in section 4(a)(3)(B)(i) of the Act, this installation is exempt from this critical habitat designation.

Marine Corps Base Camp Pendleton (MCB Camp Pendleton)

We have determined that conservation efforts identified in the INRMP for MCB Camp Pendleton provide a benefit to the San Diego fairy shrimp occurring on MCB Camp Pendleton. This includes 7,750 ac (3,137 ha) of habitat located in the following areas: Cockleburr Mesa; La Pulgas; San Mateo; the State Park Lease Area (San Onofre State Park); Stuart Mesa; Wire Mountain; and O'Neill (names of areas follow those used in the recovery plan (Service 1998a, Appendix E)). Therefore, this installation is exempt from critical habitat for San Diego fairy shrimp pursuant to section 4(a)(3) of the Act for the reasons described below.

MCB Camp Pendleton completed their INRMP in November 2001. MCB Camp Pendleton revised and updated its INRMP in 2007 to address conservation and management recommendations within the scope of the installation's military mission, including conservation measures for the San Diego fairy shrimp and vernal pool habitat on the base (MCB Camp Pendleton 2007, Section 4, pp. 51–76). Also, according to the 2007 INRMP, California State Parks is required to conduct its natural resources management consistent with the philosophies and supportive of the objectives of the revised 2007 INRMP (MCB Camp Pendleton 2007, pp. 2–31).

MCB Camp Pendleton's INRMP benefits the San Diego fairy shrimp through ongoing efforts to survey and monitor the species and to provide this information to all necessary personnel through MCB Camp Pendleton's GIS database on sensitive resources and in their published resource atlas. MCB Camp Pendleton's INRMP also benefits the San Diego fairy shrimp by implementing the following base directives to avoid and minimize adverse effects to the species: (1) Bivouac, command post, and field support activities should be no closer than 984 ft (300 m) to occupied San Diego fairy shrimp habitat year round; (2) vehicle and equipment operations are limited to existing road and trail networks year round; and (3) any soil excavation, filling, or grading require environmental clearance. Further, MCB Camp Pendleton's environmental security staff review projects and enforces existing regulations and orders that, through their implementation, avoid and minimize impacts to natural resources, including the San Diego fairy shrimp and its habitat. Activities occurring on MCB Camp Pendleton are currently being conducted in a manner that minimizes impacts to San Diego fairy shrimp habitat. In addition, MCB Camp Pendleton provides training to personnel on environmental awareness for sensitive resources on the base including San Diego fairy shrimp and vernal pool habitat. We are also consulting with the Marine Corps under section 7 of the Act to programmatically address potential impacts to the San Diego fairy shrimp (and several other species) as a result of military training and other activities on MCB Camp Pendleton. Upon completion of this consultation, we anticipate additional measures that benefit San Diego fairy shrimp will be incorporated into the INRMP for MCB Camp Pendleton.

MCB Camp Pendleton has an approved INRMP that we have determined provides a benefit to the San Diego fairy shrimp and the Marine Corps has committed to work closely with the Service, CDFG, and California Department of Parks and Recreation to continually refine the existing INRMP as part of the Sikes Act's INRMP review process. Based on the above considerations, and consistent with the direction provided in section 4(a)(3)(B)(i) of the Act, MCB Camp Pendleton, including those lands leased to the California State Parks (i.e., San Onofre State Beach) is exempt from this critical habitat.

Naval Base Coronado (Including Naval Radar Receiving Facility and Naval Outlying Landing Field)

We have determined that conservation efforts identified in the INRMP for Naval Base Coronado (Naval Base Coronado 2002, Section 4, pp. 4–47) provide a benefit to the San Diego fairy shrimp. This includes 169 ac (68 ha) of habitat covered by Naval Base Coronado's INRMP at the following installations: the Naval Radar Receiving Facility (NRRF) and the Naval Outlying Landing Field (NOLF). Therefore, this installation is exempt from critical habitat for San Diego fairy shrimp under section 4(a)(3) of the Act for the reasons described below.

Naval Base Coronado completed an INRMP in May 2002, which includes NRRF south of Coronado and NOLF in Imperial Beach. Naval Base Coronado completed the INRMP to address conservation and management recommendations within the scope of the installation's military mission. Naval Base Coronado's INRMP provides conservation measures for the San Diego fairy shrimp and vernal pool habitat on NRRF and NOLF.

One of the goals of Naval Base Coronado's INRMP is to conserve the San Diego fairy shrimp through the management of vernal pool habitat, including the following provisions: (1) Monitor the status of San Diego fairy shrimp populations; (2) post signs around vernal pools; (3) advise personnel to keep vehicles on the main roads while traveling through the property; and (4) seek opportunities to restore disturbed vernal pool habitats while considering potential impacts to the San Diego fairy shrimp. Further, the Naval Base Coronado's environmental security staff reviews projects and enforces existing regulations and orders that, through their implementation, avoid and minimize impacts to natural resources, including San Diego fairy shrimp and their habitat. Activities occurring on NRRF and NOLF are currently being conducted in a manner that minimizes impacts to San Diego fairy shrimp habitat.

Naval Base Coronado, which includes NRRF and NOLF, has an approved INRMP that we have determined provides a benefit to the San Diego fairy shrimp and the Navy has committed to work closely with the Service and CDFG to continually refine the existing INRMP as part of the Sikes Act's INRMP review process. Based on the above considerations, and consistent with the direction provided in section 4(a)(3)(B)(i) of the Act, this installation is exempt from this critical habitat designation.

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, national security impact, 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 Record is clear that the Secretary has broad discretion regarding which factor(s) to use and how much weight to give to any factor.

Under section 4(b)(2) of the Act, in considering whether to exclude a particular area from the designation, we must identify the benefits of including the area in the designation, identify the benefits of excluding the area from the designation, and determine whether the benefits of exclusion outweigh the benefits of inclusion. If based on this analysis, we make this determination, then we can exclude the area only if such exclusion would not result in the extinction of the species. In the following sections, we address a number of general issues that are relevant to the exclusions we considered.

In addition, we conducted a DEA of the impacts of the proposed revision to designated critical habitat and related factors (referred to here as the DEA). The DEA was made available for public review and comment from April 8, 2004, to May 10, 2004 (69 FR 18516). Substantive comments and information received on the DEA are summarized above in the Public Comment section and have been incorporated into the final analysis, as appropriate. Based on public comment on the DEA, the proposed revision to critical habitat, and the information in this revised final designation of critical habitat and the final economic analysis, we have excluded areas from critical habitat under the provisions of section 4(b)(2) of the Act. This is also addressed in our implementing regulations at 50 CFR 424.19.

Benefits of Designating Critical Habitat

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 those areas outside the geographical area occupied by the species at the time of listing that are essential to the conservation of the species. In identifying those lands, the Service must consider the recovery needs of the species, such that, on the basis of the best scientific and commercial data available at the time of designation, the habitat that is identified, if managed, could provide for the survival and recovery of the species.

The identification of those areas that are essential for the conservation of the species and can, if managed, provide for the recovery of a species is beneficial. The process of proposing and finalizing a critical habitat rule provides the Service with the opportunity to determine the features or PCEs essential for conservation of the species within the geographical area occupied by the species at the time of listing, as well as to determine other areas essential to the conservation of the species. The designation process includes peer review and public comment on the identified features and areas. This process is valuable to land owners and managers in developing conservation management plans for identified areas, as well as any other occupied habitat or suitable habitat that may not have been included in the Service's determination of essential habitat.

The consultation provisions under section 7(a) of the Act constitute the regulatory benefits of critical habitat. As discussed above, Federal agencies must consult with us on actions that may affect critical habitat and must avoid destroying or adversely modifying critical habitat. Federal agencies must also consult with us on actions that may affect a listed species and refrain from undertaking actions that are likely to jeopardize the continued existence of such species. The analysis of effects to critical habitat is a separate and different analysis from that of the effects to the species. Therefore, the difference in outcomes of these two analyses represents the regulatory benefit of critical habitat. For some species, and in some locations, the outcome of these analyses will be similar, because effects on habitat will often result in effects on the species. However, the regulatory standard is different: the jeopardy analysis looks at the action's impact on survival and recovery of the species, while the adverse modification analysis looks at the action's effects on the designated habitat's contribution to the species' conservation. This will, in many instances, lead to different results and different regulatory requirements.

For 30 years prior to the Ninth Circuit's decision in *Gifford Pinchot*, consistent with the 1986 regulations, we essentially combined the jeopardy standard with the standard for destruction or adverse modification of critical habitat when evaluating Federal actions that affected currently occupied critical habitat. However, the court of appeals ruled that the two standards are distinct and that adverse modification evaluations require consideration of impacts on species recovery. Thus, critical habitat designations may provide greater regulatory benefits to the recovery of a species than would listing alone.

There are two limitations to the regulatory effect of critical habitat. First, a section 7(a)(2) consultation is required only where there is a Federal nexus (an action authorized, funded, or carried out by any Federal agency)—if there is no Federal nexus, the critical habitat designation of private lands itself does not restrict any actions that destroy or adversely modify critical habitat. Second, the designation only limits destruction or adverse modification. By its nature, the prohibition on adverse modification is designed to ensure that the conservation role and function of those areas that contain the physical and biological features essential to the conservation of the species or of unoccupied areas that are essential to the conservation of the species is not appreciably reduced. Critical habitat designation alone, however, does not require property owners to undertake specific steps toward recovery of the species.

Once an agency determines that consultation under section 7(a)(2) of the Act is necessary, the process may conclude informally when we concur in writing that the proposed Federal action is not likely to adversely affect critical habitat. However, if we determine through informal consultation that adverse impacts are likely to occur, then we would initiate formal consultation, which would conclude when we issue a biological opinion on whether the proposed Federal action is likely to result in destruction or adverse modification of critical habitat.

For critical habitat, a biological opinion that concludes in a determination of no destruction or adverse modification may contain discretionary conservation recommendations to minimize adverse effects to primary constituent elements, but it would not suggest the implementation of any reasonable and prudent alternative. We suggest reasonable and prudent alternatives to the proposed Federal action only when our biological opinion results in an adverse modification conclusion.

As stated above, the designation of critical habitat does not require that any management or recovery actions take place on the lands included in the designation. Even in cases where consultation has been initiated under section 7(a)(2) of the Act, the end result of consultation is to avoid jeopardy to the species and/or adverse modification of its critical habitat, but not specifically to manage remaining lands or institute recovery actions on remaining lands. Conversely, voluntary conservation efforts implemented through management plans institute proactive actions over the lands they encompass and are put in place to remove or reduce known threats to a species or its habitat; therefore, implementing recovery actions. We believe that in many instances the benefit to a species and/or its habitat realized through the designation of critical habitat is low when compared to the conservation benefit that can be achieved through voluntary conservation efforts or management plans. The conservation achieved through implementing HCPs or other habitat management plans can be greater than what we achieve through multiple site-by-site, project-by-project, section 7(a)(2) consultations involving consideration of critical habitat. Management plans may commit resources to implement long-term management and protection to particular habitat for at least one and possibly additional listed or sensitive species. Section 7(a)(2) consultations commit Federal agencies to preventing adverse modification of critical habitat caused by the particular project only, and not to providing conservation or long-term benefits to areas not affected by the proposed project. Thus, implementation of any HCP or management plan that considers enhancement or recovery as the management standard may often provide as much or more benefit than a consultation for critical habitat designation.

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. This helps focus and promote conservation efforts by other parties by clearly delineating areas of high conservation value for the coastal California gnatcatcher. In general, critical habitat designation always has

educational benefits; however, in some cases, they may be redundant with other educational effects. For example, HCPs have significant public input and may largely duplicate the educational benefits of a critical habitat designation. Including lands in critical habitat also would inform State agencies and local governments about areas that could be conserved under State laws or local ordinances.

Conservation Partnerships on Non-Federal Lands

Most federally listed species in the United States will not recover without cooperation of non-Federal landowners. More than 60 percent of the United States is privately owned (National Wilderness Institute 1995), and at least 80 percent of endangered or threatened species occur either partially or solely on private lands (Crouse *et al.* 2002). Stein et al. (1995) found that only about 12 percent of listed species were found almost exclusively on Federal lands (90 to 100 percent of their known occurrences restricted to Federal lands) and that 50 percent of federally listed species are not known to occur on Federal lands at all.

Given the distribution of listed species with respect to land ownership, conservation of listed species in many parts of the United States is dependent upon working partnerships with a wide variety of entities and the voluntary cooperation of many non-Federal landowners (Wilcove and Chen 1998; Crouse *et al.* 2002; James 2002). Building partnerships and promoting voluntary cooperation of landowners are essential to our understanding the status of species on non-Federal lands, and necessary for us to implement recovery actions such as reintroducing listed species and restoring and protecting habitat.

Many non-Federal landowners derive satisfaction from contributing to endangered species recovery. We promote these private-sector efforts through the Department of the Interior's Cooperative Conservation philosophy. Conservation agreements with non-Federal landowners (HCPs, safe harbor agreements, other conservation agreements, easements, and State and local regulations) enhance species conservation by extending species protections beyond those available through section 7 consultations. In the past decade, we have encouraged non-Federal landowners to enter into conservation agreements, based on the view that we can achieve greater species conservation on non-Federal land through such partnerships than we can through regulatory methods (61 FR 63854; December 2, 1996).

Many private landowners, however, are wary of the possible consequences of attracting endangered species to their property. Mounting evidence suggests that some regulatory actions by the Federal Government, while well-intentioned and required by law, can (under certain circumstances) have unintended negative consequences for the conservation of species on private lands (Wilcove *et al.* 1996; Bean 2002; Conner and Mathews 2002; James 2002; Koch 2002; Brook *et al.* 2003). Many landowners fear a decline in their property value due to real or perceived restrictions on land-use options where threatened or endangered species are found. Consequently, harboring endangered species is viewed by many landowners as a liability. This perception results in anti-conservation incentives, because maintaining habitats that harbor endangered species represents a risk to future economic opportunities (Main *et al.* 1999; Brook *et al.* 2003).

According to some researchers, the designation of critical habitat on private lands significantly reduces the likelihood that landowners will support and carry out conservation actions (Main *et al.* 1999; Bean 2002; Brook *et al.* 2003). The magnitude of this outcome is greatly amplified in situations where active management measures (such as reintroduction, fire management, control of invasive species) are necessary for species conservation (Bean 2002). We believe that the judicious use of excluding specific areas of non-federally owned lands from critical habitat designations can contribute to species recovery and provide a superior level of conservation than critical habitat alone.

The purpose of designating critical habitat is to contribute to the conservation of threatened and endangered species and the ecosystems upon which they depend. The outcome of the designation, triggering regulatory requirements for actions funded, authorized, or carried out by Federal agencies under section 7(a)(2) of the Act, can sometimes be counterproductive to its intended purpose on non-Federal lands. Thus the benefits of excluding areas that are covered by effective partnerships or other voluntary conservation commitments can often be high.

Benefits of Excluding Lands With HCPs or Other Approved Management Plans

The benefits of excluding lands with HCPs or other approved long-term management plans from critical habitat designation include relieving landowners, communities, and counties of any additional regulatory burden that might be imposed by critical habitat. Many HCPs and other conservation plans take years to develop, and upon completion, are consistent with recovery objectives for listed species that are covered within the plan area. Many also provide conservation benefits to unlisted sensitive species. Imposing an additional regulatory review as a result of the designation of critical habitat may undermine conservation efforts and partnerships in many areas. Our experience in implementing the Act has found that designation of critical habitat within the boundaries of management plans that provide conservation measures for a species is a disincentive to many entities which are either currently developing such plans, or contemplating doing so in the future, because one of the incentives for undertaking conservation is greater ease of permitting where listed species will be affected. Addition of a new regulatory requirement would remove a significant incentive for undertaking the time and expense of management planning. In fact, designating critical habitat in areas covered by a pending HCP or conservation plan could result in the loss of some species' benefits if participants abandon the planning process, in part because of the strength of the perceived additional regulatory compliance that such designation would entail. The time and cost of regulatory compliance for a critical habitat designation do not have to be quantified for them to be perceived as additional Federal regulatory burden sufficient to discourage continued participation in developing plans targeting listed species' conservation.

A related benefit of excluding lands within approved HCPs and management plans from critical habitat designation is the unhindered, continued ability it gives us to seek new partnerships with future plan participants, including States, counties, local jurisdictions, conservation organizations, and private landowners, which together can implement conservation actions that we would be unable to accomplish otherwise. Designating lands within approved management plan areas as critical habitat would likely have a negative effect on our ability to establish new partnerships to develop these plans, particularly plans that address landscape-level conservation of species and habitats. By excluding these lands, we preserve our current partnerships and encourage additional conservation actions in the future.

Furthermore, both HCP and Natural Communities Conservation Plan (NCCP)-HCP applications require consultation, which would review the effects of all HCP-covered activities that might adversely impact the species under a jeopardy standard, including possibly significant habitat modification (see definition of ''harm'' at 50 CFR 17.3), even without the critical habitat designation. In addition, all other Federal actions that may affect the listed species would still require consultation under section 7(a)(2) of the Act, and we would review these actions for possibly significant habitat modification in accordance with the definition of harm referenced above.

The information provided in the previous section applies to all the following discussions of benefits of inclusion or exclusion of critical habitat.

Areas Excluded Under Section 4(b)(2) of the Act

In the April 22, 2003, proposed rule, we considered, but did not propose as critical habitat under section 4(b)(2) of the Act, lands covered by the City of San Diego subarea plan under the MSCP and the County of San Diego subarea plan under the MSCP (collectively referred to as lands in the San Diego MSCP in the 2003 proposed rule). In this revised final rule, we reaffirm our exclusion of lands covered by the County of San Diego subarea plan under the MSCP under section 4(b)(2) of the Act. We have also excluded lands from this revised final designation under section 4(b)(2) that are covered by the Southern Subregion HCP, a recently completed HCP in Orange County. However, we have not excluded lands covered by the City of San Diego subarea plan under the MSCP (see Summary of Changes From Previously Designated Critical Habitat and 2003 Proposed Rule section above for a detailed discussion). The conservation value of the excluded County of San Diego and southern Orange County lands for San Diego fairy shrimp has been addressed by the respective habitat conservation plans covering these lands. A detailed analysis of our exclusion of these lands under section 4(b)(2) of the Act is provided in the paragraphs that follow under the section heading, Relationship of Critical Habitat to Habitat Conservation Plan Lands—Exclusions Under Section 4(b)(2) of the Act.

Additionally, we excluded, under section 4(b)(2) of the Act, essential habitat in the following areas: (1) The Irvine Ranch in Orange County; (2) Fairview Park in the City of Costa Mesa; and (3) Department of Homeland Security lands at Arnie's Point in San Diego. The conservation value of these lands for San Diego fairy shrimp has been addressed by existing protective actions and exclusion of these lands under the provisions of section 4(b)(2) is appropriate. We are excluding areas (1) through (3) because we believe that either their value for conservation will be preserved for the foreseeable future by existing protective actions, or they are appropriate for exclusion under the ''other relevant factor'' provisions of section 4(b)(2) of the Act.

A detailed analysis of our exclusion of these lands under section 4(b)(2) of the Act is provided in the paragraphs that follow.

Habitat Conservation Plan Lands—Exclusions Under Section 4(b)(2) of the Act

In reviewing approved HCPs for potential exclusion under section 4(b)(2) we consider, in addition to the general partnership relationships identified above, whether the plan provides for protection and appropriate management, if necessary, of essential habitat within the plan area and incorporates conservation strategies and measures consistent with currently accepted principles of conservation biology.

Orange County Southern Subregion Habitat Conservation Plan (Southern Subregion HCP)

The Southern Subregion HCP was developed in support of applications for incidental take permits for several covered species, including the San Diego fairy shrimp, by Orange County, Rancho Mission Viejo, and the Santa Margarita Water District in connection with proposed residential development and related actions in southern Orange County. The Service issued permits based on the plan on January 10, 2007. At this time an NCCP permit has not been granted for this plan.

The Southern Subregion HCP action area encompasses 86,076 ac (34,834 ha) (Service 2007, p. 24) and provides for the conservation of covered species, including the San Diego fairy shrimp, through the establishment of an approximately 30,426 ac (12,313 ha) habitat reserve and 4,456 ac (1,803 ha) of supplemental open space areas (Service 2007, p. 19). Subunits 1D and 1E fall within the boundaries of the habitat reserve of this HCP.

Implementation of the covered development activities under the Southern Subregion HCP will not permanently impact any areas that we have determined contain the features essential to the conservation of the San Diego fairy shrimp (Service 2007, p. 142). Critical habitat subunits 1D and 1E, which encompass the vernal pool basins and associated vernal pool watersheds on Chiquita Ridge and Radio Tower Road, will be conserved and managed within the habitat reserve (Service 2007, p. 142). The adaptive management program for the San Diego fairy shrimp incorporated into this HCP, includes regular monitoring and necessary management, and will address potential sources of habitat degradation to ensure that all existing pools within subunits 1D and 1E are managed in a way that will maintain the ecological distribution and genetic variability of this species on a broad geographic scale (Service 2007, p. 142). The underlying hydrogeomorphic processes that support these vernal pools will be preserved through the protection of the vernal pool watersheds (PCE 2) from any development activities (Service 2007, p. 10).

The Southern Subregion HCP benefits the PCEs essential to the conservation of the San Diego fairy shrimp through the implementation of the following conservation measures: conservation of vernal pools within the habitat reserve (PCE 1); minimizing impacts to vernal pools from development; maintaining water quality/quantity (PCE 2 and PCE 3); controlling non-native invasive species (PCE 1 and PCE 2); managing livestock grazing (PCE 1 and PCE 2); and minimizing human access and disturbance (PCE 1, PCE 2, and PCE 3). Specifically, any development must be located at least 1000 ft (305 m) away from the vernal pools and built at a lower elevation than the vernal pools to avoid hydrological alterations (PCE 1 and PCE 2) (Service 2007, p. 143). Water quality monitoring will be conducted throughout the life of the permit at occupied vernal pools near development (PCE 2) (Service 2007, p. 143). Management tools will be developed specifically for controlling nonnative plant species in the watersheds of the Chiquita Ridge and Radio Tower Road vernal pools, so that nonnative plants do not alter the ponding depth or duration of the vernal pools by directly growing in the vernal pool basin or by indirectly diverting water from the vernal pool by growing in the vernal pool watershed (PCE 1 and PCE 2) (Service 2007, p. 143). Furthermore, livestock grazing in vernal pool areas will be monitored and can be managed by implementing seasonal exclusion of cattle through the placement of temporary fencing around vernal pools, which will ensure that cattle do not impact the vernal pool basin by compacting the soil or greatly

alter the water quality in the vernal pool while it is filled with water (PCE 1) (Service 2007, p. 143). Exclusionary fencing has already been placed around Chiquita Ridge vernal pools, and public access to the habitat reserve will be limited protecting the ponding duration (PCE 1), the hydrology (PCE 2), and the underlying claypan or hardpan soil layer (PCE 3) (Service 2007, p. 144). Properly timed prescribed burns can effectively control nonnative species, thereby, protecting the ability of the vernal pools to hold water for the appropriate duration (PCE 1). Prescribed burns will include any necessary impact avoidance minimization measures to ensure that the populations of San Diego fairy shrimp are conserved (Service 2007, p. 144).

In the 1997 final rule listing this species as endangered (62 FR 4925, February 3, 1997), we identified habitat destruction and fragmentation from urban development and agricultural conversion, alterations of vernal pool hydrology, off-road vehicle activity, and livestock grazing as primary threats to the species. As described above, the Southern Subregion HCP provides protection and appropriate management for the San Diego fairy shrimp, its habitat, and its PCEs through implementation of conservation strategies that are consistent with generally accepted principles of conservation biology. The Southern Subregion HCP preserves habitat that supports identified core populations of this species and therefore provides for recovery.

Benefits of Exclusion Outweigh Benefits of Inclusion

As discussed in the Benefits of Designating Critical Habitat section, we believe that the regulatory benefit of critical habitat is low when essential habitat is protected under an HCP or management plan such as the Southern Subregion HCP. The Southern Subregion HCP addresses conservation issues from a coordinated, integrated perspective rather than a piecemeal project-by-project approach and will achieve more San Diego fairy shrimp conservation than we would achieve through multiple site-by-site, project-by-project, section 7 consultations involving consideration of critical habitat. This regional HCP provides for the proactive monitoring and management of conserved lands (as previously described), which will remove or reduce known threats to the San Diego fairy shrimp or its habitat. Conservation and management of San Diego fairy shrimp habitat is essential to survival and recovery of this species. Such conservation needs are typically not addressed through the application of the statutory prohibition on adverse modification or destruction of critical habitat. The Southern Subregion HCP provides as much or more benefit than a consultation for critical habitat designation conducted under the standards required by the Ninth Circuit in the *Gifford Pinchot* decision. Furthermore educational benefits that may be derived from a critical habitat designation are low and largely redundant to the educational benefits achieved through significant public, State, and local government input during the development and ongoing implementation of this HCP. We have developed close partnerships with Orange County, Rancho Mission Viejo, and the Santa Margarita Water District through the development of the Southern Subregion HCP, a plan that incorporates appropriate protections and management for vernal pool habitat areas, and their constituent PCEs, essential for the conservation of this species. Those protections are consistent with statutory mandates under section 7 of the Act to avoid adverse modification or destruction of critical habitat, and go beyond that prohibition by including active management and protection of essential habitat areas. By excluding these lands from designation, we are eliminating an essentially redundant layer of regulatory review for projects covered by the HCP and helping to preserve our ongoing partnerships with the permittees and to encourage new partnerships with other landowners and jurisdictions. Those partnerships, and the landscape level, multiple-species conservation planning efforts they promote, are critical for the conservation of the San Diego fairy shrimp.

We have reviewed and evaluated the exclusion of approximately 140 ac (57 ha) of lands within the Southern Subregion HCP area from the designation of final critical habitat. We have determined that the regulatory benefit of designating lands in subunits 1D and 1E is low because essential San Diego fairy shrimp habitat within the plan area is assured of conservation and management under the HCP. The educational and recovery benefits of critical habitat designation are also minor and have largely been achieved through development and public review of the HCP. The minor benefits of critical habitat designation are outweighed by the significant partnership benefits summarized above that will result from exclusion of the lands from the final rule. As discussed above, the Southern Subregion HCP will provide for significant preservation and management of habitat for the San Diego fairy shrimp and will help reach the recovery goals for this species.

Exclusion Will Not Result in Extinction of the Species

We do not believe that the exclusion of 140 ac (57 ha) from the final designation of critical habitat for the San Diego fairy shrimp will result in the extinction of the species because the Southern Subregion HCP provides for the protection and management in perpetuity of essential habitat, including its PCEs, for the San Diego fairy shrimp within subunits 1D and 1E. In addition, because the 140 ac (57 ha) we have excluded from critical habitat are occupied by San Diego fairy shrimp, future consultations under section 7 of the Act that involve these lands will occur even in the absence of their designation as critical habitat. Application of jeopardy standard of section 7 of the Act provides assurances that the species will not go extinct.

The San Diego County Multiple Species Conservation Program (MSCP)

In southwestern San Diego County, the MSCP planning area encompasses more than 582,000 ac (236,000 ha) in the southwestern portion of the county and includes the County of San Diego, City of San Diego, 10 other city jurisdictions, and several independent special districts. Under the broad umbrella of the MSCP, each participating jurisdiction prepares a subarea plan that complements the goals of the MSCP. We consult under section 7 of the Act on each subarea plan and associated permit to ensure the issuance of the associated incidental take permits under section 10 of the Act are not likely to jeopardize or adversely modify or destroy the designated critical habitat of any covered species. We also review the subarea plans under section 10 of the Act to ensure they meet the criteria for issuance of an incidental take permit and are consistent with the terms and goals of the MSCP.

The MSCP provides for the assembly and establishment of approximately 171,000 ac (69,200 ha) of preserve areas to provide conservation benefits for 85 federally listed and sensitive species, including the San Diego fairy shrimp, over the permit term. The MSCP provides for avoidance of impacts to vernal pool habitat for the San Diego fairy shrimp within and outside of existing and targeted reserve areas. In addition, the incidental take permits issued under this plan do not allow for the take of San Diego fairy shrimp in

natural vernal pool habitat. The individual subarea plans also commit each jurisdiction to monitor and adaptively manage vernal pool species and their associated habitat.

City of San Diego and County of San Diego Subarea plans Under the MSCP

The objectives of the City and the County's subarea plans applicable to the San Diego fairy shrimp and its essential vernal pool habitat are to: (1) Implement a no-net-loss-of-wetlands standard to satisfy State and Federal wetland goals and policies; (2) include measures to maximize habitat diversity within conserved habitat areas, including conservation of unique habitats and habitat features; (3) conserve spatially representative examples of habitat types ranked as having high and very high biological value by the MSCP; (4) create significant blocks of habitat to reduce edge effects and maximize the ratio of surface area to the perimeter of conserved habitats; (5) provide incentives for development in the least sensitive habitat areas; (6) provide for the conservation of key regional populations of the covered species, and representation of sensitive habitats and their geographic subassociations in biologically functioning units; and (7) conserve large interconnected blocks of habitat that contribute to the preservation of wide-ranging species. These measures are intended to conserve the San Diego fairy shrimp and its habitat by protecting vernal pool basins (PCE 1) and the associated vernal pool watershed necessary for the vernal pool ecosystem to function (PCE 2) and connections between vernal pool habitat and other open-space preserve areas.

To protect vernal pool habitat, the City and County of San Diego subarea plans erequire that: (1) Development be configured in a manner that minimizes impacts to sensitive biological resources (Service 1997, p. 10; Service 1998b, p. 7), in order to reduce any impact to San Diego fairy shrimp habitat through protection of the vernal pool basin (PCE 1) and associated vernal pool soils (PCE 3); (2) unavoidable impacts to vernal pools associated with reasonable use or essential public facilities be minimized and mitigated to achieve no-net-loss of function and value; and (3) a sufficient amount of watershed be avoided as necessary for the continuing viability of vernal pools (PCE 2) (Service 1997, pp. 43–44; Service 1998b, p. 67).

In the 1997 final rule listing this species as endangered (62 FR 4925, February 3, 1997), we identified habitat destruction and fragmentation from urban development and agricultural conversion, alterations of vernal pool hydrology, off-road vehicle activity, and livestock grazing as primary threats to the species. As described above, these subarea plans under the MSCP are designed to preserve and manage essential San Diego fairy shrimp habitat and its PCEs within each subarea.

The incidental take permits issued to the City and County of San Diego under the MSCP limit take of San Diego fairy shrimp to areas outside of jurisdictional waters of the United States, as that term was understood under the Clean Water Act at the time these permits were issued and prior the 2001 U.S. Supreme Court's *SWANCC* decision. The subarea plans and permits anticipated that individual consultations under section 7 of the Act with the ACOE would occur for all individual projects impacting vernal pool habitat of the San Diego fairy shrimp pursuant to section 404 of the Clean Water Act. In addition, we assumed these actions would be required to comply with the Environmental Protection Agency Clean Water Act, 404(b)(1) guidelines and the Federal policy of ''no net loss of wetland function and values.'' In light of the intervening *SWANCC* decision, these individual reviews may not occur. Further, the U.S. District Court for the Southern District of California on October 13, 2006, (*Southwest Center for Biological Diversity* v. *Bartel*, CV 98–2234) (referred to here as the *Bartel* decision) concluded, in part, that the approach adopted in the City of San Diego's MSCP subarea plan to evaluate individual project impacts on vernal pool species, including the San Diego fairy shrimp, had been effectively eliminated by the *SWANCC* decision and that the remaining protections contained in the City's subarea plan do not adequately protect the San Diego fairy shrimp and the other vernal pool species. The court enjoined the City of San Diego's incidental take permit with respect to ongoing and future land use activities that affect vernal pool habitat. The district court ruling does not apply to other HCPs, including other MSCP subarea plans, and does not address the adequacy of these other plans to protect the San Diego fairy shrimp.

In light of the *SWANCC* and *Bartel* decisions, we have reanalyzed lands covered by the City and County subarea plans to determine whether lands essential to the conservation of the San Diego fairy shrimp are assured of conservation and management consistent with the original objectives and goals of the MSCP and subarea plans.

Approximately 1,805 ac (730 ha) of habitat essential to the conservation of the San Diego fairy shrimp are within the boundaries of the City of San Diego's subarea plan. Of these 1,805 ac (730 ha), approximately 420 ac (170 ha) have been dedicated to the City of San Diego's preserve and 1,385 ac (561 ha) have yet to be fully conserved (HabiTrak database 2007). In light of the *SWANCC* and *Bartel* decisions, the conservation of essential habitat in the City of San Diego is uncertain. Conversely, approximately 224 ac (90 ha) of habitat essential to the conservation of the San Diego fairy shrimp are within the boundaries of the County of San Diego's subarea plan. Of these 224 ac (90 ha), approximately 157 ac (63 ha) have been dedicated to the County of San Diego's preserve and 67 ac (27 ha) have yet to be fully conserved (HabiTrak database 2007); however, as we describe below, these lands are reasonably assured of conservation. Because we are not assured of the conservation of most of the habitat essential to the conservation of the San Diego fairy shrimp within the City of San Diego's subarea plan, we have determined that essential habitat covered by this subarea plan should be designated as critical habitat.

While the potential regulatory, educational and recovery benefits of designating essential habitat within the City's subarea plan are low for the reasons stated in Benefits of Designating Critical Habitat and Conservation Partnerships on Non-Federal Lands sections above, and in particular, because of the uncertainty regarding a future Federal nexus for section 7 consultation involving such lands, the partnership benefits of excluding essential habitat within the subarea plan area are also low. As discussed above under Benefits of Excluding Lands within HCPs and Other Approved Management Plans, a primary reason for excluding lands covered by HCPs from designation is to preserve our partnerships with local jurisdictions and private landowners in order to achieve a higher level of protection and management for listed species than would otherwise occur through regulation under Section 7 of the Act. However, given the concerns raised by the *Bartel* decision about the adequacy of the City's plan to protect vernal pool habitat and uncertainty about future of the plan with regard to the San Diego fairy shrimp, it is not clear that the conservation measures provided under the City's current plan will benefit the San Diego fairy shrimp more than the designation of essential habitat within the City. Because we do not believe that the benefits of excluding essential habitat covered by the City's subarea plan outweigh the benefits of including

such lands as critical habitat, we have included the lands in the final designation. We remain committed to working with the City of San Diego and other stakeholders to strengthen the protections for the San Diego fairy shrimp and its essential habitat provided in the City's subarea plan.

In contrast to lands covered by the City of San Diego's subarea plan, all of the lands slated for conservation of the San Diego fairy shrimp under the County of San Diego's subarea plan have already been permanently conserved and managed or are assured of conservation and management through other specific conservation plans. Of the 224 ac (90 ha) of habitat essential to the conservation of the San Diego fairy shrimp occurring within the boundary of the County of San Diego's subarea plan, 157 ac (63 ha) of land have already been dedicated to the County of San Diego preserve. An additional 62 ac (25 ha) of land will be conserved under the Otay Ranch Phase 2 Resource Management Plan (Otay Ranch 2002) (Otay Ranch Plan)T). The remaining 5 ac (2 ha) of essential vernal pool habitat is targeted for conservation as part of the County's future proposed amendment to the County's MSCP subarea plan to add the Quino checkerspot butterfly (*Euphydryas editha quino*) as a covered species. In sum, all essential vernal pool habitat identified for conservation under the County's subarea plan has been conserved and managed or is reasonably assured of conservation and management.

The Otay Ranch Plan is an approved General Development Plan that was developed to conserve sensitive biological resources on Otay Ranch while allowing compatible residential and commercial development. This plan includes land in the City of San Diego, the City of Chula Vista, and the County of San Diego. The areas covered under this plan in the County of San Diego, which will be conserved, have been added to the County of San Diego's subarea plan preserve, thus conservation of these areas is assured. The lands within in the Otay Ranch Plan are essential to the long-term conservation of several species in southern San Diego County, and include 80 ac (32 ha) of essential habitat for the San Diego fairy shrimp in the County of San Diego. While 62 ac (25 ha) of these 80 ac (32 ha) of essential habitat have not been dedicated to the MSCP preserve and are not yet managed under the Otay Ranch Plan, ongoing measures are in place to protect all San Diego fairy shrimp habitat and conserve the PCEs on those lands. All 80 ac (32 ha) of essential habitat is entirely within the area zoned by the County of San Diego as open space, which places restrictions on any development in this area. Furthermore, the essential habitat is fenced and has locked gates at access points, excluding any unauthorized off-road vehicle activity from the area. Other areas within the Otay Ranch have been conserved as expected and we believe a reasonable certainty exists that these 62 ac (25 ha) will be conserved as planned.

The Plan (Otay Ranch 2002, pp. 52–53, 112–130, 141–145) describes the following monitoring and management activities, which will benefit San Diego fairy shrimp within the Otay Ranch Preserve: (1) Focused surveys and population estimates specifically for San Diego fairy shrimp (pp. 141, 145); (2) management of vernal pool habitat as discussed in the ''Vernal Pool Preservation and Management Plan'' (pp. 112–130); (3) inhibition of additional degradation (through fencing, elimination of cattle grazing, and access control) (p. 121); (4) establishment of protocols for research and education (p. 121); (5) development of specific monitoring strategies for determining changes in flora and fauna of the pools (p. 121); (6) general enhancement activities (p. 121); and (7) removal and control of exotic species including the control of nonnative plants (p. 53).

The conservation or reasonably assured future conservation of the habitat that contains the features essential to the conservation of the San Diego fairy shrimp within the boundaries of the County of San Diego's subarea plan ensures that the San Diego fairy shrimp will be adequately protected and conserved under the County's subarea plan. Implementation of the County's subarea plan will adequately manage (as previously described) habitat and features essential to the conservation of the San Diego fairy shrimp. Therefore, we are reaffirming our exclusion of 224 ac (90 ha) of land covered by the County of San Diego subarea plan under the MSCP under section 4(b)(2) of the Act.

Benefits of Exclusion Outweigh the Benefits of Inclusion

As discussed under Benefits of Designating Critical Habitat above, we believe that the regulatory benefit of critical habitat is low when essential habitat is protected under an HCP or similar management plan such as the County of San Diego's MSCP Subarea Plan and the Otay Ranch Plan. The County's subarea plan and the Otay Ranch Plan address conservation issues from a coordinated, integrated perspective rather than a piece meal project-by-project approach and will achieve more San Diego fairy shrimp conservation than we would achieve through multiple site-by-site, project-by-project, section 7 consultations involving consideration of critical habitat. The subarea plan and Otay Ranch Plan provide for the proactive monitoring and management of conserved lands (as previously described), which will remove or reduce known threats to the San Diego fairy shrimp and its habitat. Conservation and management of San Diego fairy shrimp habitat is essential to survival and recovery of this species. Such conservation needs are often not addressed through the application of the statutory prohibition on adverse modification or destruction of critical habitat. The County's MSCP subarea plan and the Otay Ranch Plan provide as much or more benefit than a consultation for critical habitat designation conducted under the standards required by the Ninth Circuit in the *Gifford Pinchot* decision. Further, the educational benefits that may be derived from a critical habitat designation are low and largely redundant to the educational benefits achieved through significant public, State, and local government input during the development of the County's subarea plan. The Otay Ranch Plan was also reviewed by the public and sections of the plan have been adopted by the San Diego County Board of Supervisors.

We have developed close partnerships with the County, CDFG and private landowners and other stakeholders through the development of the County's subarea plan and the Otay Ranch Plan, plans that incorporate appropriate protections and management for vernal pool habitat areas, and their constituent PCEs, essential for the conservation of the San Diego fairy shrimp. Those protections are consistent with statutory mandates under section 7 of the Act to avoid adverse modification or destruction of critical habitat, and go beyond that prohibition by including active management and protection of essential habitat areas. By excluding these lands from designation, we are eliminating an essentially redundant layer of regulatory review for projects covered by the County's subarea plan and helping to preserve our ongoing partnerships with the County and other stakeholders and to encourage new partnerships with other landowners and jurisdictions. Those partnerships, and the landscape level, multiple-species conservation planning efforts they promote, are

critical for the conservation of the San Diego fairy shrimp.

We have reviewed and evaluated the exclusion of approximately 224 ac (90 ha) of lands within the County of San Diego's MSCP subarea plan area from the designation of final critical habitat. We have determined that the regulatory benefit of designating those lands in subunits 5A, 5B and 5H that are covered by the County's subarea plan is low because the essential San Diego fairy shrimp habitat within the plan area is already protected and managed or assured of protection and management under the subarea plan and Otay Ranch Plan. The educational and recovery benefits of critical habitat designation are also minor and have largely been achieved through development and public review of the subarea plan. We conclude that the minor benefits of critical habitat designation are outweighed by the significant partnership benefits summarized above that will result from exclusion of the lands from the final rule.

We, therefore, reaffirm the exclusion of essential habitat covered by the County of San Diego subarea plan under the MSCP under 4(b)(2) of the Act. As discussed above, the County's subarea plan under the MSCP will provide for significant preservation and management of habitat features essential to the conservation of the San Diego fairy shrimp and will help reach the recovery goals for this species.

Exclusion Will Not Result in Extinction of the Species

We do not believe that the exclusion of 224 ac (90 ha) from the final designation of critical habitat for the San Diego fairy shrimp will result in the extinction of the species because the County of San Diego subarea plan under the MSCP provides for the protection and management in perpetuity of essential habitat, including its PCEs, for the San Diego fairy shrimp within subunits 5A, 5B, and 5H, as discussed above. In addition, because the 224 ac (90 ha) we have excluded from critical habitat are occupied by San Diego fairy shrimp, future consultations under section 7 of the Act that involve these lands will occur even in the absence of their designation as critical habitat. Application of jeopardy standard of section 7 of the Act provides assurances that the species will not go extinct.

Management Plans—Exclusions Under Section 4(b)(2) of the Act

The Irvine Ranch in Orange County

In the 2003 proposed rule to revise critical habitat, approximately 25 ac (10 ha) with The Irvine Ranch (previously identified as the North Ranch Planning Policy Area) were proposed for designation. In preparing this revised final designation, we reanalyzed our proposal to designate these lands as critical habitat and determined that the area has a very limited watershed and that only 4 ac (2 ha) of this area contained the PCEs essential to the conservation of the San Diego fairy shrimp. After further review of the conservation actions that are being implemented and additional measures being planned, we excluded these 4 ac (2 ha) from the revised final designation because the benefits of exclusion outweigh the benefits of including the lands in critical habitat.

The Irvine Ranch supports one vernal pool containing San Diego fairy shrimp. In contrast to all other vernal pools where San Diego fairy shrimp are found, this particular pool occurs in a rock basin. This rock pool, discovered in 2001, does not appear to have undergone any negative impacts.

In 1992, the Irvine Company initiated a partnership with the Nature Conservancy to develop and implement a stewardship plan for 35,000 ac (14,164 ha) of what is presently called The Irvine Ranch to address compatible public access, habitat management and restoration (TNC 2007). An additional 11,000 ac (4,452 ha) was donated by the Irvine Company in 2001. In 2005, all 50,000 ac (20,234 ha) of The Irvine Ranch were placed under the responsibility of the Irvine Ranch Conservancy, a non-profit organization that was created specifically by the Irvine Company to protect the lands within The Irvine Ranch (Irvine Ranch 2007a), with a financial commitment of $50 million to help protect, restore and enhance the resources of these lands (Irvine Ranch 2007b). As noted above, the 4 ac (2 ha) of essential San Diego fairy shrimp habitat is included among the lands managed by the Irvine Ranch Conservancy.

The mission of the Irvine Ranch Conservancy is to help protect, restore and enhance the natural resources of The Irvine Ranch in perpetuity and to encourage the creation of new and diverse opportunities for public enjoyment and education (IRC 2007a). The Conservancy's stewardship responsibilities include (1) strategies for habitat protection, restoration and public access in a manner that ensures the long-term well-being of the native habitat and wildlife; (2) hands-on field work to maintain trails, restore habitat, and remove invasive weeds; (3) ongoing biological monitoring to assess the health of native plants and wildlife; and (4) recruitment, training, and use of volunteers to serve as naturalist-guides for public hikes, mountain-bike rides and horse rides, and to assist with other activities (IRC 2007b). The Irvine Ranch Conservancy is currently working on a conservation plan for the Irvine Ranch wildlands which will formalize their conservation vision, strategy, and approach for all the wildlands they directly manage, including the 4 ac (2 ha) of essential San Diego fairy shrimp habitat (Olson 2007).

Benefits of Exclusion Outweigh Benefits of Inclusion

In 2003, when we proposed designating this vernal pool as critical habitat we had incomplete information about the extent to which the area would be managed for the conservation of the species. Since that time we have obtained additional information regarding the Irvine Ranch Conservancy's management strategy for the Irvine Ranch including actions to conserve the San Diego fairy shrimp at the rock pool (Harmsworth and Associates 2007, p. 8; Olson 2007, p. 1). The lands are protected by a conservation easement and secured from public access, and their permanent management plan is fully funded by way of the endowment for the conservation of the Irvine Ranch discussed above. Specific conservation actions that benefit the San Diego fairy shrimp at this location include the exclusion of cattle from this area and the limitations placed on human access to this area. The sole focus of onsite management is to avoid any activity that would negatively impact the pool. Thus, the regulatory benefits of designating this area as critical habitat are minimal. The educational and recovery benefits of designation are also small and are largely addressed through the Irvine Ranch Conservancy's ongoing environmental education programs to promote public understanding and appreciation of the natural resources on the Irvine Ranch, summarized above.

By excluding these lands from critical habitat designation, we are eliminating an essentially redundant layer of regulatory review for conservation projects that may be undertaken to restore habitat surrounding the vernal pool (e.g., removal of non-native, invasive plants) and furthering our partnership with the Irvine Ranch Conservancy in preserving the whole of The Irvine Ranch for future generations. We have reviewed and evaluated the exclusion of 4 ac (2 ha) of lands within the Irvine Ranch from the designation of final critical habitat. We have determined that the regulatory benefit of

designating those lands in subunit 1A is low because the essential San Diego fairy shrimp habitat within the subunit is already permanently protected and assured of management by the Irvine Ranch Conservancy. The educational and recovery benefits of critical habitat designation are also minor and have largely been achieved through the Irvine Ranch Conservancy's on-going environmental education programs for the Irvine Ranch. We conclude that the minor benefits of critical habitat designation are outweighed by the significant partnership benefits identified in this section and under Benefits of Excluding Lands within HCPs and Other Approved Management Plans that will result from exclusion of the lands from the final rule.

Exclusion Will Not Result in Extinction of the Species

We do not believe that the exclusion of the 4 ac (2 ha) of land within The Irvine Ranch from the revised final designation of critical habitat will result in the extinction of the San Diego fairy shrimp because management of The Irvine Ranch by the Irvine Ranch Conservancy provides protection of all the PCEs for the species within proposed subunit 1A. In addition, because the 4 ac (2 ha) we have excluded from critical habitat are occupied by San Diego fairy shrimp, future consultations under section 7 of the Act that involve these lands will occur even in the absence of their designation as critical habitat. Application of jeopardy standard of section 7 of the Act provides assurances that the species will not go extinct.

Fairview Park Master Plan in the City of Costa Mesa

Approximately 62 ac (25 ha) of Fairview Park were designated as critical habitat in October 2000 (65 FR 63438). In the 2003 proposed rule to revise critical habitat, we estimated that approximately 74 ac (30 ha) of the 208-ac (83-ha) Fairview Park contained features essential to the conservation of the species. After reanalyzing our 2003 proposal for this subunit, we determined that, in fact, only 43 ac (17 ha) of land within Fairview Park support the features essential to the conservation of the San Diego fairy shrimp.

Based on our review of conservation actions being undertaken by the City of Costa Mesa to benefit the San Diego fairy shrimp and its essential habitat we excluded these lands from the revised final designation because the benefits of exclusion outweigh the benefits of including them in critical habitat.

The 208-acre (83-ha) Fairview Park is adjacent to the Talbot Nature Preserve, part of the conserved open space in the Orange County Central-Coastal NCCP/HCP. As described below the Master Plan for Fairview Park provides for habitat restoration and management consistent with and complementary to the Orange County Central-Coastal NCCP/HCP. Fairview Park supports seven vernal pool basins covering approximately 3 ac (1 ha), with the largest pool covering about 2 ac (1 ha). Of the seven identified pools in Fairview Park, three are known to be occupied by the San Diego fairy shrimp (City of Costa Mesa 2001, p. C–43). The vernal pools have been impacted to some extent by pedestrian traffic, bicycles, and mowing. Additionally, the largest vernal pool was previously impacted by the deposition of fill material, including asphalt and concrete (City of Costa Mesa 2001, pp. 7–14).

The Master Plan for restoration of Fairview Park and its long-term management was developed in 1998 and revised in 2001. The Master Plan guides all natural habitat restoration actions as well as passive and active public uses. Actions in the Master Plan that benefit the San Diego fairy shrimp include, but are not limited to: (1) Development of a formalized trail system to avoid sensitive areas to the extent feasible; (2) installation of educational signage and observation platforms in the vernal pool restoration area; (3) installation of fencing to protect the vernal pools; and (4) cessation of mowing within the vernal pools or, if necessary, mowing only late in the season after annual forbs and grasses have set seed (City of Costa Mesa 2001, p. C–46).

Implementation of the Master Plan, including the vernal pool restoration, has been funded since 1994 using a variety of sources, including $88,000 from the Segerstrom Company (City of Costa Mesa 2003) and annual budget allocations from the City totaling approximately $250,000. In 2007, a grant for $250,000 was awarded by the California Department of Parks and Recreation with a match of $250,000 from the City of Costa Mesa to implement a trail plan for Fairview Park. Actions to restore the vernal pools are planned and implemented by a qualified biologist holding a valid section 10(a)(1)(A) permit from the Service.

Benefits of Exclusion Outweigh Benefits of Inclusion

We have reviewed and evaluated the proposed designation of essential habitat in Fairview Park and have determined that the benefits of excluding critical habitat on 43 ac (17 ha) of land in Fairview Park outweigh the benefits of designating these lands as critical habitat.

Critical habitat was designated on these lands in October 2000 because of the importance of these vernal pools in the conservation of the San Diego fairy shrimp. At the time of the 2000 final critical habitat rule, implementation of the Master Plan for Fairview Park was in its early stages. Since that time, the City of Costa Mesa and management of Fairview Park have consistently demonstrated their commitment to fund and implement the Master Plan for the benefit of the San Diego fairy shrimp and other native species that inhabit the area, thus ensuring the PCEs identified as essential to the conservation of the San Diego fairy shrimp will be maintained over the long-term. Thus, the regulatory benefits of designating this area as critical habitat are minimal. The educational and recovery benefits of designation are also small and are largely addressed through the Fairview Park Master Plan's inclusion of measures to promote public education and awareness of the park's sensitive vernal pool habitat.

By excluding these lands from critical habitat designation, we are eliminating an essentially redundant layer of regulatory review for conservation projects that may be undertaken to restore habitat surrounding the vernal pool habitat (e.g., removal of non-native, invasive plants) and furthering our partnership with the City of Costa Mesa and Fairview Park management to preserve and protect essential vernal pool habitat in the park. Excluding Fairview Park from the revised final designation sends a clear signal to the City of Costa Mesa that the Service actively recognizes and supports the City's sustained commitment to restore and protect the vernal pools at the park. The Service expects to continue working in partnership with the City of Costa Mesa to implement the Master Plan and, potentially, to include these lands as part of the reserve system under the Central-Coastal NCCP/HCP.

We have reviewed and evaluated the exclusion of 43 ac (17 ha) of lands within Fairview Park from the designation of final critical habitat. We have determined that the regulatory benefit of designating those lands in subunit 1B1B is low because the essential San Diego fairy shrimp habitat within this subunit is protected and assured of appropriate management under the Fairview Park Master Plan. The educational and recovery benefits of critical habitat designation are also minor and are largely met through the

public education measures included in the Master Plan and the City's on-going efforts to educate the public about the sensitive natural resources in Fairview Park. We conclude that the minor benefits of critical habitat designation are outweighed by the significant partnership benefits identified in this section and under Benefits of Excluding Lands within HCPs and Other Approved Management Plans that will result from exclusion of the lands from this this final rule.

Exclusion Will Not Result in the Extinction of the Species

We do not believe that the exclusion of 43 ac (17 ha) of land at Fairview Park from the revised final critical habitat designation will result in the extinction of the San Diego fairy shrimp because the Master Plan provides for active restoration of what have been degraded vernal pools, thereby, enhancing the PCEs for the species. In addition, because the 43 ac (17 ha) we have excluded from critical habitat are occupied by San Diego fairy shrimp, future consultations under section 7 of the Act that involve these lands will occur even in the absence of their designation as critical habitat. Application of jeopardy standard of section 7 of the Act provides assurances that the species will not go extinct.

Department of Homeland Security (DHS) Lands (Arnie's Point, San Diego County)

In preparing this revised final designation, we revisited the status of lands owned by the Department of Homeland Security (DHS) (formerly known as Immigration and Naturalization Service (INS)) in subunits 5D and 5F. Within the 2003 proposed subunits 5D and 5F, we removed 174 ac (71 ha) of habitat from this final designation because these lands no longer support the PCEs for the San Diego fairy shrimp. A portion of the land removed is owned by the DHS and is located along the U.S./Mexico border. As a result all DHS–owned land in subunit 5D was removed because it does not contain the PCEs; however, 29 ac (12 ha) remained in subunit 5F. We excluded the remaining DHS lands (29 ac (12 ha)) in subunit 5F under section 4(b)(2) of the Act as a result of national security considerations, as described below.

Section 102 of the Illegal Immigration Reform and Immigrant Responsibility Act of 1996 (IIRIRA), Public Law 104–208 (8 U.S.C. 1103 note 2000), was enacted as part of the Omnibus Consolidated Appropriations Act of 1997, and addressed construction of the 14-Mile Border Fence. Among the provisions of section 102 is the authority granted to the Attorney General of the United States (AG) to waive the provisions of the Act and of NEPA ''to ensure the expeditious construction of barriers and roads * * *'' (PL 104–208, 1996; Sec. 102 (c)). Although DHS was within its authority to request the AG grant a waiver from complying with the Act, it did consult with the Service on impacts associated with the proposed fence project, including the preparation of documents to fulfill its NEPA obligations. In our biological opinion for the project we described vernal pool habitat within subunit 5F as ''poor'' (Service, 2002, p. 14). A small amount of habitat for the San Diego fairy shrimp was lost as part of the border fence construction; however, the impacts were offset with the restoration of the vernal pools on Arnie's Point (Service 2002; Service 2003). Conservation measures undertaken by the ACOE and INS included the installation of a chain link fence along the inside edge of an existing perimeter road to prevent vehicles from driving into the restoration area; preparation of a restoration plan for the vernal pools; and the restoration and management of the vernal pools on Arnie's Point. The INS committed to preserve in perpetuity INS-owned (now DHS-owned) land outside the project footprint within Arnie's Point, Spring Canyon, and Wruck Canyon through a transfer of deed and title to a cooperating entity to the MSCP (Service 2002; p. 7).

In 2002, the Homeland Security Act (AHSA) transferred the authority to take such actions as necessary to construct the 14-Mile Border Fence to the Secretary of the DHS. In 2005, the Secretary of the DHS, under the authority granted under the HSA and section 102 of the IIRIRA as amended by the REAL ID Act of 2005 (P.L. 109–13), made a determination to waive all ''federal, state, or other laws, regulations or legal requirements of, deriving from, or related to the subject of, * * * The National Environmental Policy Act, the Endangered Species Act * * *.'' (70 FR 55623). In light of this determination (effective on September 22, 2005), there is no longer a requirement for DHS to consult with the Service on actions that may impact federally listed species, including the San Diego fairy shrimp or their designated critical habitat, if those actions are related to the construction or maintenance or operations of the 14-Mile Border Fence.

Benefits of Exclusion Outweigh Benefits of Inclusion

We believe that the regulatory benefit of critical habitat is non-existent in this case. Although designating critical habitat in subunit 5F would reflect our determination that these lands are essential to the conservation of the San Diego fairy shrimp, there is no regulatory requirement for the DHS or any other Federal agency directly involved with the construction and maintenance of the 14-Mile Border Fence project to consult with us regarding impacts to the species or its designated critical habitat.

Furthermore, any educational or recovery benefits from designation of lands at Arnie's point would be minor. Both the DHS and the ACOE are already aware of the presence of the San Diego fairy shrimp and its essential habitat in these areas as they have previously consulted with us on impacts to the species arising from construction of the project.

In contrast to the lack of regulatory, educational and recovery benefits of designation, exclusion of these lands from critical habitat will further the national security purposes of the IIRIRA and the 14-Mile Border Fence Project. Through enactment of the IIRIRA and HSA, Congress expressed their intent that construction of the 14-Mile Border Fence Project should not be delayed or impeded by the statutory requirements of the Endangered Species Act by granting the Secretary of the Department of Homeland Security the authority to waive those requirements. We conclude that national security benefits of excluding 29 ac (12 ha) of land in subunit 5F from critical habitat outweigh any potential regulatory, educational or recovery benefits that would accrue from designation.

Exclusion Will Not Result in Extinction of the Species

The impacts associated with the 14-Mile Border Fence project on the San Diego fairy shrimp were analyzed and we found that the conservation and restoration of the vernal pools at Arnie's Point offset these impacts. The vernal pools at Arnie's Point will now be managed for the long-term conservation of the San Diego fairy shrimp. Therefore, we do not believe that the exclusion of 29 ac (12 ha) of land in subunit 5F will result in the extinction of the San Diego fairy shrimp.

Economics

Section 4(b)(2) of the Act requires us to designate critical habitat on the basis of the best scientific information

available and to consider the economic impact on national security and other relevant impacts of designating a particular area as critical habitat. We may exclude areas from critical habitat upon a determination that the benefits of such exclusions outweigh the benefits of specifying such areas as critical habitat. We cannot exclude such areas from critical habitat when such exclusion will result in the extinction of the species concerned.

Following the publication of the proposed critical habitat designation, we conducted an economic analysis to estimate the potential economic effect of the designation. The draft economic analysis (DEA) was made available for public review on April 8, 2004 (69 FR 18516). We accepted comments on the draft analysis until May 10, 2004. On April 3, 2007, we published a notice in the **Federal Register** (72 FR 15857) announcing the reopening of the public comment period for the 2003 proposed rule to revise critical habitat (68 FR 19888; April 22, 2003) for the San Diego fairy shrimp and on the DEA. We accepted comments and information until May 3, 2007.

The primary purpose of the DEA is to estimate the potential economic impacts associated with the designation of critical habitat for the San Diego fairy shrimp. This information is intended to assist the Secretary in making decisions about whether the benefits of excluding particular areas from the designation outweigh the benefits of including those areas in the designation. This economic analysis considers the economic efficiency effects that may result from the designation, including habitat protections that may be co-extensive with the listing of the species. It also addresses distribution of impacts, including an assessment of the potential effects on small entities and the energy industry. This information can be used by the Secretary to assess whether the effects of the designation might unduly burden a particular group or economic sector.

This draft 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 DEA examined activities taking place both within and adjacent to the areas ''considered, but not proposed'' and the areas formally proposed for critical habitat designation (68 FR 19888, April 22, 2003). It estimates impacts based on activities that are ''reasonably foreseeable'' including, but not limited to, activities that are currently authorized, permitted, or funded, or for which proposed plans are currently available to the public. Accordingly, the analysis bases estimates on activities that are likely to occur within a 20-year time frame, from when the proposed rule became available to the public (68 FR 19888, April 22, 2003). The 20-year time frame was chosen for the analysis because, as the time horizon for an economic analysis is expanded, the assumptions on which the projected number of projects and cost impacts associated with those projects are based become increasingly speculative.

Due to the amount of time that elapsed between the publication of the DEA and the publication of this final rule, we developed an addendum to the DEA to investigate how the potential economic effects may have changed since the DEA was made available to the public (69 FR 18516, April 8, 2004). The addendum does not recreate the analysis provided in the DEA or recalculate all the results; rather it is designed to assess the primary implications of the changes that have taken place since the publication of the DEA. The addendum recognizes that the DEA was based on 2002 dollars and also calculates costs in 2002 dollars to enable direct comparison with the draft analysis. The DEA estimated $53,042,532 in economic costs associated with the conservation of the San Diego fairy shrimp over the next 20 years or approximately $5.2 million annually. Most of the impact results from private land development avoiding areas containing vernal pool soils and topography. At the time the DEA was conducted, we looked at the total cost of listing and critical habitat without attributing which costs were related specifically to the designation of critical habitat (incremental impacts). The addendum estimates that 44 percent or $23,140,688 of the cost is attributable to the critical habitat designation because Federal action agencies already routinely initiate consultations with the Service for projects that potentially affect San Diego fairy shrimp and its vernal pool habitat; however, the critical habitat designation may provide new information about the extent or range of linked watershed areas, resulting in consultations or project modifications that may not have occurred in the absence of critical habitat designation. The final addendum further estimates that future evaluations of destruction or adverse modification of critical habitat under section 7 of the Act in accordance with the statutory standard recognized by the *Gifford Pinchot* decision could have either negligible impacts or could increase the economic impacts reported in the draft analysis if additional conservation above that provided under the existing regulatory baseline is required to ensure that the affected critical habitat unit would remain functional (or retain the current ability for the PCEs to be functionally established) to serve its intended conservation role for the species. However, the addendum states that the implications of this relatively recent court decision are difficult to quantify at this time. The addendum estimates that the total cost attributable to the critical habitat designation ($23,140,688) could be $5,228,000 higher based on updated market data, but could be $324,484 lower based on the decision not to relocate the San Diego International Airport, a cost that was factored in to the DEA. The addendum assumes that the baseline regulatory context within the City of San Diego would not change in the aftermath of the recent *Bartel* district court decision enjoining the City's incidental take permit for the San Diego fairy shrimp. Any prediction about possible economic effects of the court's decision on the baseline regulatory context for the San Diego fairy shrimp within the City would be speculative because the future of the City's subarea plan and conservation efforts with regard to the San Diego fairy shrimp are currently unknown. On a cost per unit basis, the largest portion of forecast costs is expected to occur in Unit 3, the San Diego, Inland Valley. The DEA estimated $37,462,742 in economic costs for this unit and the addendum estimates that $16,365,476 of the cost is attributable to the critical habitat designation. Unit 3, the San Diego, Inland Valley has a higher portion of forecast costs because this area is not covered by an HCP and therefore has no baseline regulatory context for the San Diego fairy shrimp, meaning that there are no local or state laws that would restrict the development of these lands for the San Diego fairy shrimp if this species was not federally listed. These costs are attributable to lost commercial and industrial development potential. We do not find the economic costs to be disproportionate because similar costs

are potentially occurring in other areas included in critical habitat, but have not been calculated due to existing HCPs or regulations that are in place which conserve the San Diego fairy shrimp and its habitat. Therefore we have not considered these areas for exclusion based on the economic analysis.

A copy of the DEA, associated addendum, and with supporting documents are included in our supporting record and may be obtained by contacting U.S. Fish and Wildlife Service, Carlsbad Fish and Wildlife Office (see **ADDRESSES** section) or for downloading from the Internet at *http://www.fws.gov/carlsbad*.

Required Determinations

Regulatory Planning and Review

In accordance with Executive Order (E.O.) 12866, this document is a significant rule in that it may raise novel legal and policy issues. Based on the DEA looking at all conservation related effects, $53,042,532 in economic costs are estimated over the next 20 years or approximately $5.2 million annually. Based on the addendum to the DEA, $23,140,688 is estimated to be attributable to the critical habitat designation. The addendum states that the total cost attributable to the critical habitat designation could be $5,228,000 higher based on updated market data or could be $324,484 lower based on the decision not to relocate the San Diego International Airport, a cost that was factored in to the DEA. From an evaluation of our DEA and addendum we have determined that the critical habitat designation will not have an annual effect on the economy of $100 million or more or affect the economy in a material way. Due to the tight timeline for publication in the **Federal Register**, the Office of Management and Budget (OMB) has not formally reviewed this rule.

Further, E.O. 12866 directs Federal agencies promulgating regulations to evaluate regulatory alternatives (OMB 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 promulgating 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. As such, 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) (as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996), whenever an agency is required to publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effect of the rule on small entities (i.e., small businesses, small organizations, and small government jurisdictions). However, no regulatory flexibility analysis is required if the head of an agency certifies the rule will not have a significant economic impact on a substantial number of small entities. The SBREFA amended the RFA to require Federal agencies to provide a statement of factual basis for certifying that the rule will not have a significant economic impact on a substantial number of small entities. The SBREFA amended the RFA to require Federal agencies to provide a certification statement of the factual basis for certifying that the rule will not have a significant economic impact on a substantial number of small entities.

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., housing development, grazing, oil and gas production, timber harvesting). 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 San Diego fairy shrimp. 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.

Small businesses in the land development and real estate industry and small governments are likely to be affected by the rule. According to the DEA, three small businesses in the land development and real estate industry are likely to be affected annually, representing less than 1 percent of the total number of small businesses in the industry for the study area. These affected small businesses are likely to experience an impact of 17 percent on their annual revenues as a result of the vernal pool critical habitat designation.

The DEA encompassed both those areas ''considered, but not proposed'' and the areas formally proposed for critical habitat designation. We anticipate the economic impacts to be less than those discussed in the DEA because the area we are designating is smaller than the area analyzed in the DEA. For the small governments in the study area, about 8 percent of the total number of small governments in the study area may be affected by this action. Affected small governments are likely to experience impacts that range from 1 to 5 percent of the median revenue of small governments in the study area. However, for a small government to experience more than 1 percent impact to its annual revenues, the project must be funded and completed in a year. Transportation infrastructure projects will typically span 3 to 10 years, suggesting that most of the small governments in this analysis will experience closer to a 1 percent impact to their annual revenues.

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

Second, if we find that a proposed action is not likely to jeopardize the continued existence of a listed animal or plant species or adversely modify its critical habitat, we may identify discretionary conservation recommendations designed to minimize or avoid the adverse effects of a proposed action on listed species or critical habitat, help implement recovery plans, or develop information that could contribute to the recovery of the species.

Based on our experience with consultations under section 7 of the Act for all listed species, virtually all projects—including those that, in their initial proposed form, would result in jeopardy or adverse modification determinations in section 7 consultations—can be implemented successfully with, at most, the adoption of reasonable and prudent alternatives. These measures, by definition, must be economically feasible and within the scope of authority of the Federal agency involved in the consultation. We can only describe the general kinds of actions that may be identified in future reasonable and prudent alternatives. These are based on our understanding of the needs of the species and the threats it faces, as described in the final listing rule and this critical habitat designation. Within the final critical habitat units, the types of Federal actions or authorized activities that we have identified as potential concerns are:

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

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

(3) Road construction and maintenance and right-of-way designation by Federal Highway Administration (FHWA);

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

(5) Hazard mitigation and post-disaster repairs funded by the FEMA; and

(6) Land development or other activities funded or permitted by the EPA, U.S. Department of Energy, or any other Federal agency.

Federal involvement, and thus section 7 consultations, would be limited to a subset of the area designated. The most likely Federal involvement could include Army Corps of Engineers permits, permits we may issue under section 10(a)(1)(B) of the Act, and FHWA funding for road improvements.

Further, it is likely that a developer or other project proponent could modify a project or take measures to protect San Diego fairy shrimp. The kinds of actions that may be included if future reasonable and prudent alternatives become necessary include conservation set-asides, management of competing nonnative species, restoration of degraded habitat, and regular monitoring. These are based on our understanding of the needs of the species and the threats it faces, as described in the final listing rule and proposed critical habitat designation. These measures are not likely to result in a significant economic impact to project proponents.

In summary, we have considered whether this final designation of critical habitat for the San Diego fairy shrimp would result in a significant economic impact on a substantial number of small entities. Only three small real estate and development businesses, or less than 1 percent of the total businesses in the industry, are likely to be affected annually by the final designation. Only 1 small government, or 8 percent of the small governments within designated critical habitat, is likely to be affected by the final designation and economic impacts are estimated to be only approximately 1 percent of annual revenues. Therefore, we certify that the designation of critical habitat for the San Diego fairy shrimp will not result in a significant impact on a substantial number of small business entities. Please see the ''Economic Analysis'' section above, the DEA, and the final addendum for a more detailed discussion of potential economic impacts. 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.

Executive Order 13211

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 of Energy Effects when undertaking certain actions. While this final rule to designate critical habitat for San Diego fairy shrimp is a significant regulatory action under E.O. 12866 in that it may raise novel legal and policy issues, we do not expect it to significantly affect energy supplies, distribution, or use. The DEA concluded that no project modifications are anticipated to occur in any energy producing industries from the implementation of this rule. Furthermore, no additional energy use is likely to be required as a result of designation of critical habitat for the San Diego fairy shrimp. Based on information from Federal agencies involved in the construction of new energy production facilities or the maintenance of energy facilities, there is no expected impact on energy producing industries over the next 20 years (Economic and Planning Systems, Inc. 2004, p. 76). Because of the minimal impact of this designation we conclude that 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 [T]ribal 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 [T]ribal 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 onto State governments.

(b) Based on our DEA and final addendum, for the small governments in the study area, less than one unique small government is likely to be affected annually or about eight percent of the total number of small governments in the study area. Affected small governments are likely to experience impacts that fall in the range of one percent to five percent of the median revenue of small governments in the study area. However, for a small government to experience more than one percent impact to its annual revenues, the project must be funded and completed in a year. Transportation infrastructure projects will typically span anywhere from 3 to 10 years, suggesting that most of the small governments in the analysis will experience closer to a one percent impact to their annual revenues from San Diego fairy shrimp critical habitat designation. Therefore, we do not believe that this rule will significantly or uniquely affect small governments because it will not produce a Federal mandate of $100 million or greater in any year, that is, it is not a ''significant regulatory action'' under the Unfunded Mandates Reform Act. The designation of critical habitat imposes no obligations on State or local governments. As such, a Small Government Agency Plan is not required.

Takings

In accordance with E.O. 12630 (Government Actions and Interference with Constitutionally Protected Private Property Rights), we have analyzed the potential takings implications of designating critical habitat for San Diego fairy shrimp in a takings implications assessment. The takings implications assessment concludes that this designation of critical habitat for San Diego fairy shrimp does not pose significant takings implications for lands within or affected by the designation.

Federalism

In accordance with E.O. 13132 (Federalism), this rule does not have significant Federalism effects. A Federalism assessment is not required. In keeping with Department of the Interior and Department of Commerce policy, we requested information from, and coordinated development of, critical habitat designation with appropriate State resource agencies in California. We received comments from California Department of Fish and Game (CDFG); 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 because the areas that contain the features essential to the conservation of the species are more clearly defined, and the primary constituent elements of the habitat necessary 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 local governments in long-range planning (rather than having them wait for case-by-case section 7 consultations to occur).

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 have designated critical habitat in accordance with the provisions of the Act. This revised final rule uses standard property descriptions and identifies the primary constituent elements within the designated areas to

assist the public in understanding the habitat needs of the San Diego fairy shrimp.

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) (42 U.S.C. 4321 et seq.)

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 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), Executive Order 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. We have determined that there are no Tribal lands occupied at the time of listing that contain the features essential for the conservation, and no Tribal lands that are unoccupied areas that are essential for the conservation of the San Diego fairy shrimp. Therefore, critical habitat for the San Diego fairy shrimp has not been designated on Tribal lands.

References Cited

A complete list of all references cited in this rulemaking is available upon request from the Field Supervisor, Carlsbad Fish and Wildlife Office (see **ADDRESSES**).

Author(s)

The primary author of this package is the staff of the Carlsbad 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(h), revise the entry for ''San Diego Fairy Shrimp (*Branchinecta sandiegonensis*)'' to read as follows:

§ 17.95 Critical habitat—fish and wildlife.

* * * * *

(h) Crustaceans

* * * * *

San Diego Fairy Shrimp (*Branchinecta sandiegonensis*)

(1) Critical habitat units are depicted for Orange and San Diego counties, California, on the maps below.

(2) The primary constituent elements of critical habitat for the San Diego fairy shrimp are:

(i) Vernal pools with shallow to moderate depths (2 in (5 cm) to 12 in (30 cm)) that hold water for sufficient lengths of time (7 to 60 days) necessary for incubation, maturation, and reproduction of the San Diego fairy shrimp, in all but the driest years;

(ii) Topographic features characterized by mounds and swales and depressions within a matrix of surrounding uplands that result in complexes of continuously, or intermittently, flowing surface water in the swales connecting the pools described in paragraph (2)(i) of this entry, providing for dispersal and promoting hydroperiods of adequate length in the pools (i.e., the vernal pool watershed); and

(iii) Flat to gently sloping topography, and any soil type with a clay component and/or an impermeable surface or subsurface layer known to support vernal pool habitat (including Carlsbad, Chesterton, Diablo, Huerhuero, Linne, Olivenhain, Placentia, Redding, and Stockpen soils).

(3) Critical habitat does not include manmade structures (such as buildings, aqueducts, runways, roads, and other paved areas) and the land on which they are located existing within the legal boundaries on the effective date of this rule.

(4) Critical habitat map units. Data layers defining map units were created using a base of U.S. Geological Survey 7.5′ quadrangle maps, and the critical habitat units were then mapped using UTM coordinates.

(5) Note: Index map (Map 1) follows:

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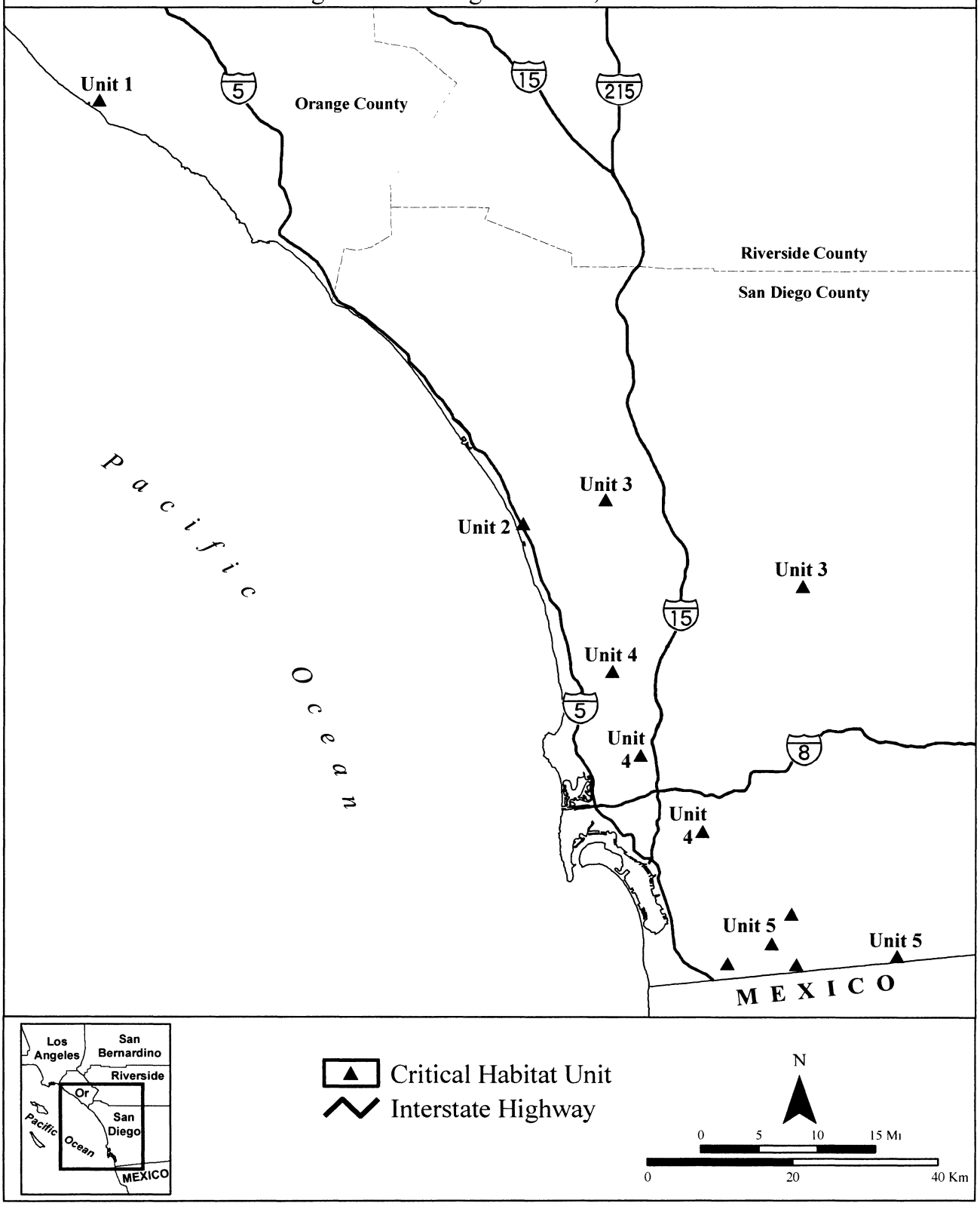
Map 1. Index Map
Critical Habitat for San Diego fairy shrimp (Branchinecta sandiegonensis)
Orange and San Diego Counties, California



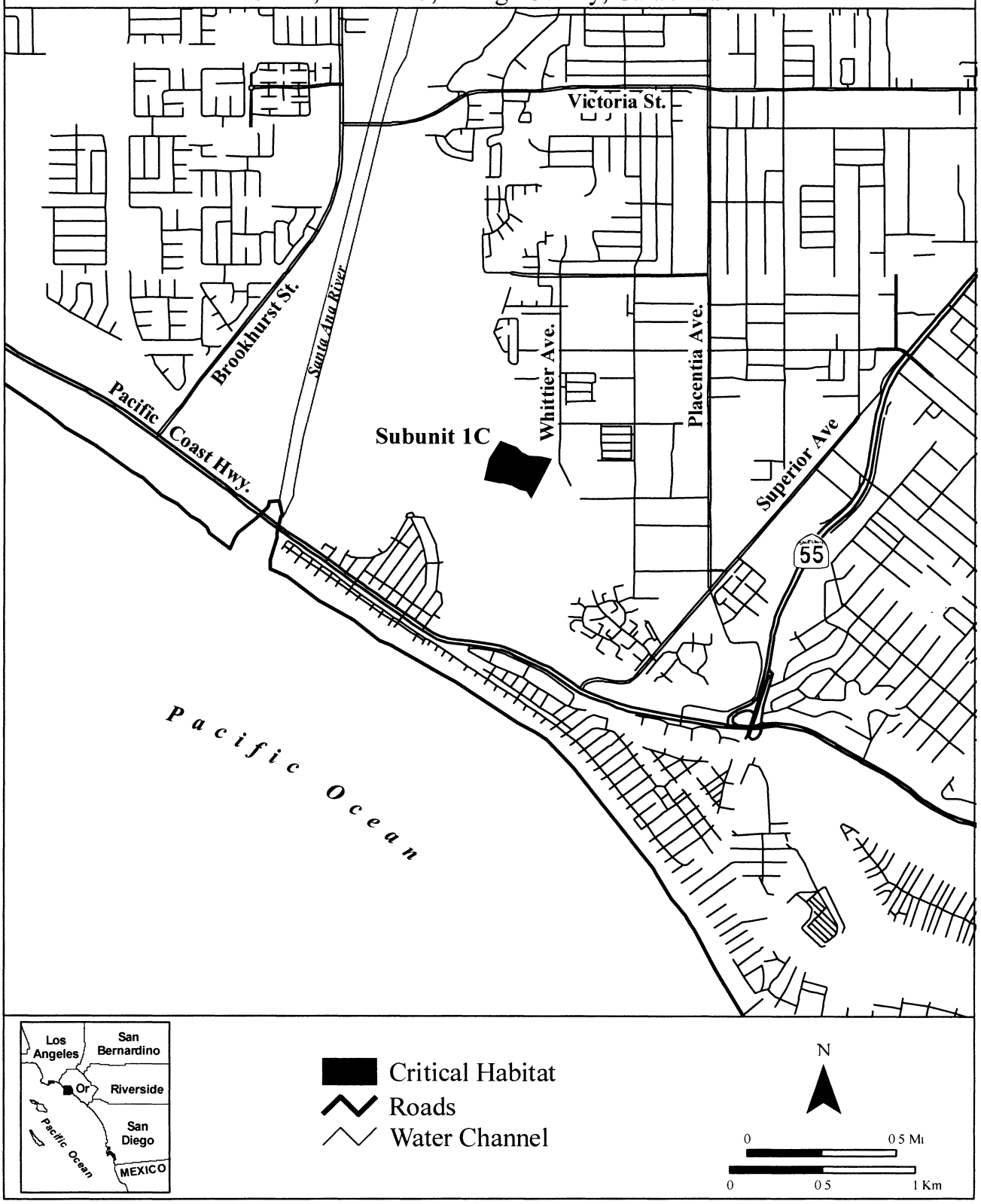
031627

(6) Unit 1: Orange County, California. From USGS 1:24, 000 quadrangle map Newport Beach.

(i) Subunit 1C. Land bounded by the following UTM NAD27 coordinates (E,N): 412805, 3721810; 412694, 3721593; 412668, 3721631; 412633, 3721638; 412589, 3721661; 412539, 3721674; 412521, 3721676; 412436, 3721693; 412465, 3721807; 412524, 3721907; 412616, 3721871; 412643, 3721844; 412677, 3721827; 412744, 3721820; 412805, 3721810.

(ii) Note: Map of Unit 1, Subunit 1C (Map 2) follows:

Map 2.
Critical Habitat for San Diego fairy shrimp (Branchinecta sandiegonensis)
Unit 1, Subunit C, Orange County, California



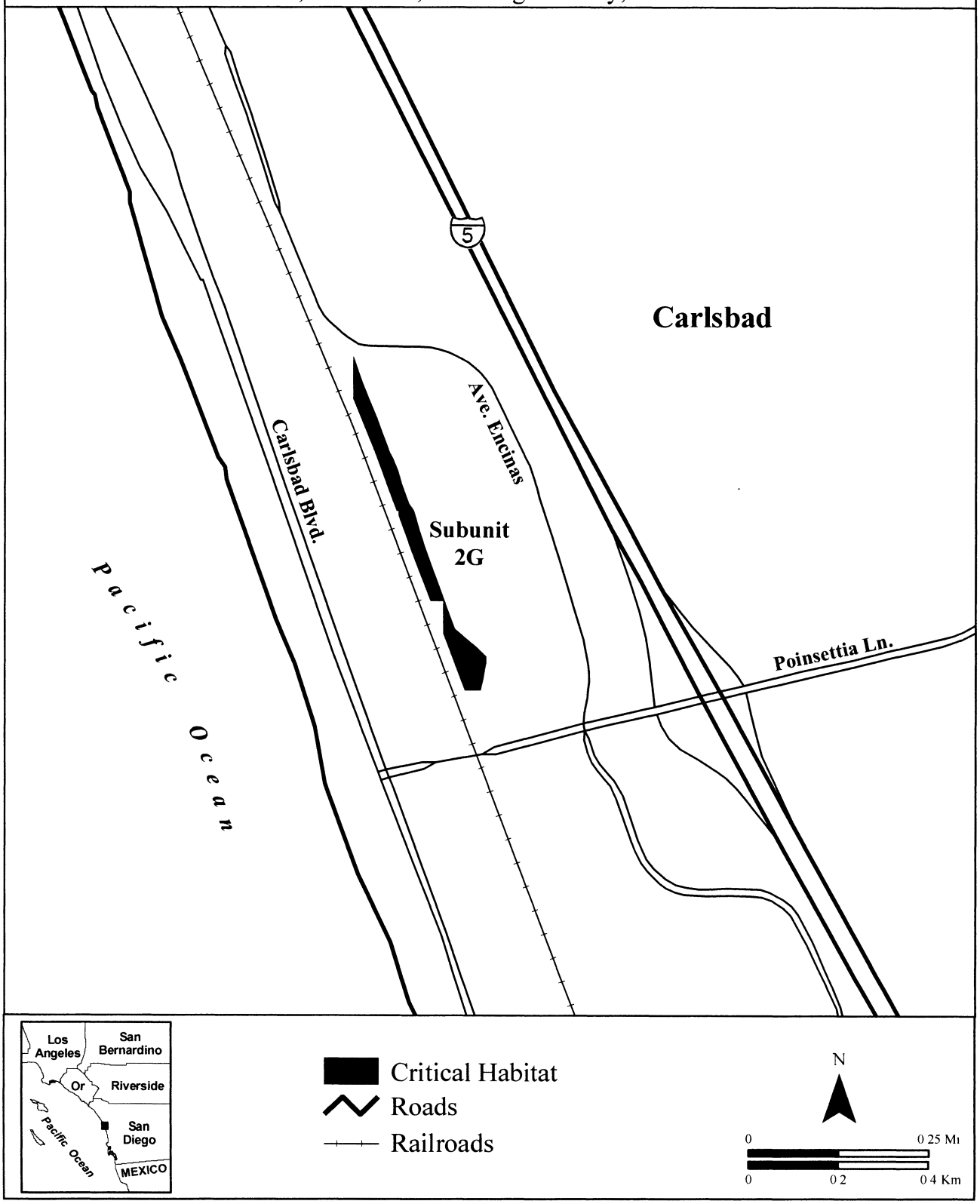
031629

(7) Unit 2: San Diego County, California. From USGS 1:24, 000 quadrangle map Encinitas.

(i) Subunit 2G. Land bounded by the following UTM NAD27 coordinates (E,N): 470300, 3663348; 470301, 3663346; 470323, 3663284; 470356, 3663198; 470366, 3663172; 470382, 3663133; 470388, 3663119; 470399, 3663092; 470399, 3663092; 470408, 3663065; 470418, 3663034; 470424, 3663019; 470434, 3663002; 470442, 3662980; 470447, 3662960; 470459, 3662925; 470476, 3662876; 470527, 3662739; 470531, 3662733; 470573, 3662699; 470596, 3662675; 470596, 3662661; 470590, 3662625; 470584, 3662600; 470568, 3662600; 470548, 3662600; 470500, 3662727; 470500, 3662779; 470500, 3662800; 470492, 3662800; 470472, 3662800; 470430, 3662912; 470400, 3662991; 470400, 3663000; 470397, 3663000; 470343, 3663144; 470300, 3663252; 470300, 3663328; 470300, 3663330.

(ii) Note: Map of Unit 2, Subunit 2G (Map 3) follows:

Map 3.
Critical Habitat for San Diego fairy shrimp (Branchinecta sandiegonensis)
Unit 2, Subunit G, San Diego County, California



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(8) Unit 3: San Diego County, California. From USGS 1:24, 000 quadrangle maps San Marcos, San Pasqual, and Ramona.

(i) Subunit 3A. Land bounded by the following UTM NAD27 coordinates (E,N): 482519, 3667481; 482522, 3667490; 482746, 3667403; 482743, 3667398; 482702, 3667300; 482600, 3667300; 482600, 3667232; 482556, 3667127; 482419, 3667185; 482436, 3667237; 482433, 3667249; 482361, 3667282; 482404, 3667370; 482467, 3667341; 482489, 3667400; 482500, 3667400; 482500, 3667430.

(ii) Subunit 3C. Land bounded by the following UTM NAD27 coordinates (E,N): 482054, 3666630; 481931, 3666341; 481800, 3666394; 481800, 3666400; 481786, 3666400; 481600, 3666476; 481600, 3666500; 481542, 3666500; 481586, 3666600; 481600, 3666600; 481600, 3666631; 481672, 3666793. Land bounded by the following UTM NAD27 coordinates (E,N): 481457, 3666290; 481750, 3666164; 481792, 3666269; 481822, 3666258; 481888, 3666230; 481888, 3666188; 481900, 3666135; 481900, 3666128; 481900, 3666100; 481908, 3666100; 481910, 3666093; 481926, 3666044; 481938, 3666006; 481954, 3665952; 481953, 3665951; 481872, 3665932; 481893, 3665863; 481726, 3665813; 481717, 3665831; 481700, 3665878; 481700, 3665900; 481692, 3665900; 481662, 3665987; 481637, 3666057; 481623, 3666077; 481600, 3666087; 481600, 3666100; 481572, 3666100; 481571, 3666100; 481406, 3666174; 481444, 3666261; 481455, 3666286.

(iii) Subunit 3D. Land bounded by the following UTM NAD27 coordinates (E,N): 482905, 3666600; 482943, 3666600; 482951, 3666576; 482878, 3666400; 482844, 3666400; 482800, 3666539; 482800, 3666566.

(iv) Subunit 3E.1. Land bounded by the following UTM NAD27 coordinates (E,N): 505832, 3655634; 505833, 3655626; 505920, 3655402; 506333, 3654967; 506504, 3655015; 506619, 3655015; 506795, 3655157; 507417, 3654906; 507417, 3654593; 507713, 3654398; 507614, 3654262; 506880, 3654385; 506410, 3654601; 505906, 3654692; 505398, 3655020; 505000, 3655164; 505000, 3655250; 505000, 3655500; 505000, 3655532; 505068, 3655630; 505199, 3655620; 505259, 3655600; 505403, 3655674; 505514, 3655610; 505534, 3655573; 505660, 3655633; 505665, 3655636; 505665, 3655636; 505692, 3655667; 505811, 3655671; 505832, 3655634; 505832, 3655634.

(v) Subunit 3E.2. Land bounded by the following UTM NAD27 coordinates (E,N): 509149, 3655266; 509295, 3655337; 509429, 3655206; 509321, 3655061; 509275, 3655000; 509250, 3655000; 509250, 3654973; 509174, 3654924; 509203, 3654625; 508642, 3654684; 508347, 3654484; 508311, 3654514; 508344, 3654563; 508583, 3654776; 508577, 3654914; 508488, 3654973; 508013, 3654934; 508029, 3655012; 507918, 3655209; 507485, 3655284; 507301, 3655340; 507261, 3655424; 507203, 3655544; 508301, 3655340; 508379, 3655228; 508429, 3655157; 508444, 3655152; 508646, 3655084; 508760, 3655311; 509003, 3655196; 509131, 3655258.

(vi) Subunit 3E.3. Land bounded by the following UTM NAD27 coordinates (E,N): 510101, 3654200; 510140, 3654178; 510198, 3654185; 510244, 3654214; 510292, 3654240; 510317, 3654246; 510342, 3654205; 510330, 3654166; 510323, 3654121; 510325, 3654076; 510321, 3654007; 510314, 3654000; 510300, 3654000; 510300, 3653984; 510250, 3653938; 510250, 3653938; 510210, 3653900; 510200, 3653900; 510152, 3653953; 510148, 3653968; 510158, 3654004; 510110, 3654061; 510023, 3654160; 510062, 3654196; 510098, 3654200; 510100, 3654200; 510100, 3654200. Land bounded by the following UTM NAD27 coordinates (E,N): 511334, 3655370; 511340, 3655365; 511345, 3655353; 511397, 3655274; 511404, 3655265; 511416, 3655273; 511460, 3655300; 511473, 3655300; 511500, 3655262; 511500, 3655250; 511500, 3655218; 511500, 3655214; 511331, 3655102; 511310, 3655088; 511300, 3655099; 511300, 3655100; 511299, 3655100; 511292, 3655107; 511250, 3655150; 511208, 3655192; 511200, 3655200; 511200, 3655265; 511250, 3655310; 511299, 3655354; 511333, 3655371.

(vii) Subunit 3E.4. Land bounded by the following UTM NAD27 coordinates (E,N): 512552, 3654788; 512561, 3654778; 512553, 3654759; 512542, 3654734; 512535, 3654677; 512533, 3654565; 512532, 3654547; 512531, 3654515; 512530, 3654422; 512485, 3654420; 512487, 3654359; 512313, 3654385; 512139, 3654363; 511954, 3654363; 511937, 3654353; 511935, 3654350; 511874, 3654257; 511806, 3654242; 511802, 3654342; 511873, 3654405; 511946, 3654429; 511947, 3654432; 511948, 3654430; 512095, 3654525; 512106, 3654533; 512441, 3654750; 512442, 3654750; 512443, 3654750; 512500, 3654787; 512500, 3654785; 512517, 3654799; 512532, 3654810; 512533, 3654809.

(viii) Note: Map of Unit 3, Subunits 3A, 3C, and 3D (Map 4) follows:

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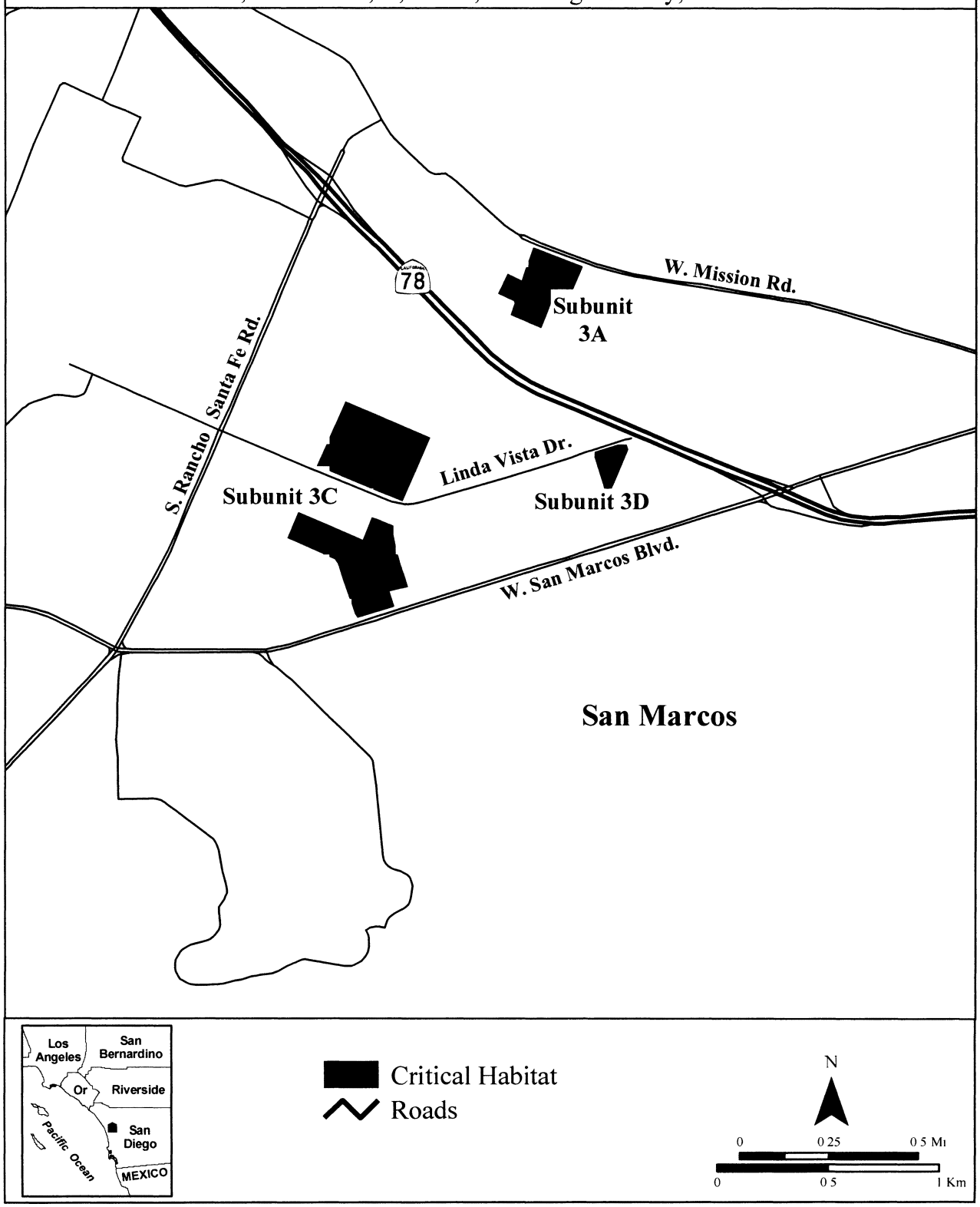
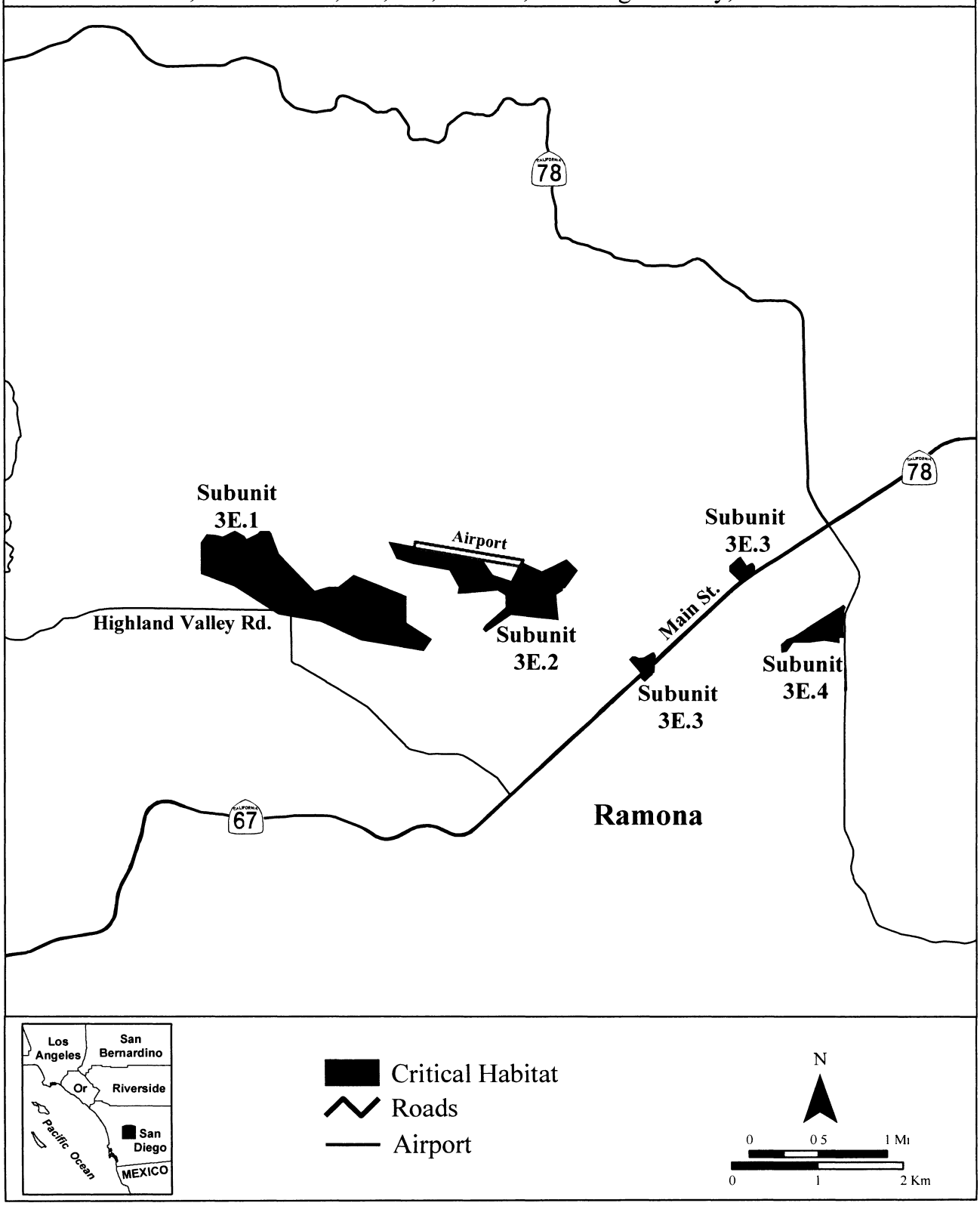
Map 4.
Critical Habitat for San Diego fairy shrimp (Branchinecta sandiegonensis)
Unit 3, Subunits A, C, and D, San Diego County, California



(ix) Note: Map of Unit 3, Subunits 3E.1, 3E.2, 3E.3, and 3E.4 (Map 5) follows:

Map 5.
Critical Habitat for San Diego fairy shrimp (Branchinecta sandiegonensis)
Unit 3, Subunits E.1, E.2, E.3, and E.4, San Diego County, California



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(9) *Unit 4:* San Diego County, California. From USGS 1:24, 000 quadrangle maps Del Mar, La Jolla, and La Mesa.

(i) Subunit 4A/B. Land bounded by the following UTM NAD27 coordinates (E,N): 485317, 3645035; 485298, 3645039; 485274, 3645039; 485259, 3645035; 485245, 3645032; 485244, 3645032; 485241, 3645032; 485226, 3645028; 485213, 3645026; 485209, 3645025; 485187, 3645020; 485173, 3645017; 485153, 3645012; 485139, 3645009; 485128, 3645009; 485114, 3645012; 485101, 3645018; 485090, 3645027; 485078, 3645035; 485065, 3645043; 485052, 3645052; 485033, 3645066; 485019, 3645074; 485009, 3645081; 485001, 3645086; 484987, 3645095; 484971, 3645103; 484957, 3645107; 484940, 3645108; 484923, 3645108; 484912, 3645106; 484901, 3645102; 484897, 3645098; 484890, 3645093; 484886, 3645088; 484884, 3645085; 484883, 3645077; 484886, 3645067; 484890, 3645055; 484899, 3645041; 484906, 3645034; 484915, 3645027; 484921, 3645018; 484929, 3645005; 484935, 3644996; 484943, 3644981; 484947, 3644970; 484947, 3644958; 484945, 3644947; 484939, 3644936; 484933, 3644928; 484925, 3644922; 484916, 3644917; 484904, 3644916; 484891, 3644921; 484873, 3644929; 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(ii) Subunit 4C. Land bounded by the following UTM NAD27 coordinates (E,N): 490395, 3629279; 490395, 3629231; 490396, 3629048; 490358, 3628917; 490295, 3628700; 490293, 3628636; 490280, 3628634; 490111, 3628613; 490000, 3628601; 489913, 3628573; 489739, 3628518; 489724, 3628567; 489718, 3628588; 489705, 3628631; 489842, 3628715; 489893, 3628747; 489985, 3628789; 490101, 3628795; 490203, 3628901; 490202, 3628998; 490304, 3629099; 490306, 3629152; 490301, 3629236; 490299, 3629280; 490342, 3629279; 490364, 3629279.

(iii) Subunit 4D. Land bounded by the following UTM NAD27 coordinates (E,N): 494410, 3622458; 494410, 3622458; 494415, 3622443; 494429, 3622410; 494425, 3622393; 494409, 3622376; 494394, 3622372; 494374, 3622371; 494341, 3622377; 494327, 3622361; 494325, 3622291; 494300, 3622294; 494300, 3622300; 494250, 3622300; 494226, 3622303; 494227, 3622331; 494234, 3622339; 494242, 3622347; 494240, 3622360; 494228, 3622373; 494210, 3622384; 494200, 3622392; 494200, 3622400; 494192, 3622400; 494186, 3622411; 494180, 3622431; 494100, 3622428; 494102, 3622400; 494100, 3622400; 494100, 3622392; 494093, 3622379; 494071, 3622370; 494044, 3622367; 494024, 3622370; 494006, 3622381; 494000, 3622388; 494000, 3622400; 493991, 3622400; 493979, 3622418; 493969, 3622437; 493839, 3622432; 493839, 3622463; 493839, 3622466; 493839, 3622467; 493839, 3622468; 493867, 3622468; 494023, 3622470; 494092, 3622471; 494099, 3622471; 494417, 3622476; 494417, 3622475; 494417, 3622475. Land bounded by the following UTM NAD27 coordinates (E,N): 494403, 3622266; 494430, 3622258; 494439, 3622241; 494444, 3622219; 494433, 3622200; 494400, 3622200; 494400, 3622136; 494399, 3622134; 494389, 3622114; 494300, 3622115; 494300, 3622151; 494308, 3622175; 494300, 3622214; 494300, 3622265.

(iv) Subunit 4E. Land bounded by the following UTM NAD27 coordinates (E,N): 479564, 3643663; 479567, 3643643; 479569, 3643624; 479569, 3643612; 479569, 3643604; 479565, 3643579; 479562, 3643558; 479558, 3643541; 479555, 3643523; 479552, 3643502; 479550, 3643476; 479551, 3643456; 479560, 3643436; 479574, 3643422; 479580, 3643414; 479580, 3643414; 479590, 3643399; 479596, 3643380; 479600, 3643346; 479600, 3643346; 479600, 3643346; 479596, 3643219; 479596, 3643164; 479605, 3643123; 479608, 3643108; 479611, 3643082; 479612, 3643060; 479610, 3643042; 479611, 3643020; 479606, 3643005; 479602, 3642994; 479597, 3642980; 479594, 3642970; 479593, 3642966; 479590, 3642954; 479589, 3642951; 479582, 3642943; 479575, 3642938; 479567, 3642936; 479565, 3642937; 479564, 3642936; 479541, 3642932; 479537, 3642904; 479500, 3642905; 479500, 3643000; 479400, 3643000; 479400, 3643055; 479400, 3643061; 479400, 3643100; 479386, 3643100; 479377, 3643100; 479308, 3643100; 479308, 3643103; 479252, 3643201; 479259, 3643248; 479330, 3643265; 479376, 3643287; 479381, 3643289; 479403, 3643300; 479415, 3643362; 479424, 3643410; 479428, 3643412; 479432, 3643426; 479443, 3643437; 479443, 3643437; 479490, 3643487; 479502, 3643499; 479503, 3643651; 479504, 3643652; 479511, 3643660; 479524, 3643673; 479548, 3643698; 479553, 3643685; 479556, 3643684; 479559, 3643677; 479561, 3643673.

(v) Subunit 4F. Land bounded by the following UTM NAD27 coordinates (E,N): 479996, 3643593; 479997, 3643543; 479997, 3643513; 479913, 3643503; 479900, 3643503; 479900, 3643577; 479900, 3643683; 479998, 3643682.

(vi) Subunit 4G. Land bounded by the following UTM NAD27 coordinates (E,N): 484021, 3642526; 484021, 3642515; 484019, 3642503; 484019, 3642503; 484015, 3642495; 484008, 3642489; 484005, 3642487; 483999, 3642483; 483988, 3642477; 483978, 3642473; 483969, 3642470; 483965, 3642469; 483952, 3642466; 483943, 3642465; 483931, 3642465; 483921, 3642466; 483909, 3642470; 483898, 3642470; 483891, 3642472; 483881, 3642475; 483862, 3642479; 483847, 3642484; 483832, 3642490; 483823, 3642494; 483823, 3642494; 483814, 3642497; 483795, 3642503; 483778, 3642505; 483756, 3642504; 483742, 3642499; 483727, 3642491; 483712, 3642484; 483696, 3642476; 483682,

3642473; 483669, 3642475; 483662, 3642480; 483659, 3642490; 483659, 3642502; 483664, 3642514; 483682, 3642533; 483690, 3642536; 483703, 3642538; 483721, 3642540; 483740, 3642541; 483760, 3642541; 483777, 3642538; 483788, 3642540; 483790, 3642540; 483805, 3642537; 483826, 3642531; 483846, 3642527; 483865, 3642528; 483880, 3642532; 483882, 3642532; 483898, 3642540; 483912, 3642548; 483927, 3642557; 483943, 3642565; 483955, 3642571; 483968, 3642573; 483978, 3642570; 483988, 3642566; 484001, 3642560; 484008, 3642553; 484016, 3642542; 484020, 3642535.

(vii) Subunit 4H. Land bounded by the following UTM NAD27 coordinates (E,N): 483842, 3642261; 483853, 3642265; 483867, 3642269; 483879, 3642272; 483892, 3642272; 483905, 3642274; 483912, 3642274; 483917, 3642275; 483933, 3642275; 483948, 3642277; 483964, 3642279; 483976, 3642280; 483993, 3642281; 484005, 3642281; 484013, 3642279; 484023, 3642276; 484028, 3642270; 484030, 3642263; 484030, 3642255; 484029, 3642248; 484025, 3642241; 484020, 3642233; 484014, 3642224; 484002, 3642214; 483985, 3642202; 483972, 3642193; 483953, 3642177; 483939, 3642167; 483933, 3642159; 483933, 3642146; 483939, 3642132; 483948, 3642118; 483954, 3642108; 483955, 3642106; 483955, 3642105; 483934, 3642094; 483873, 3642068; 483839, 3642059; 483835, 3642058; 483834, 3642058; 483819, 3642055; 483809, 3642053; 483796, 3642052; 483747, 3642050; 483677, 3642050; 483628, 3642051; 483601, 3642056; 483596, 3642059; 483549, 3642079; 483543, 3642082; 483549, 3642088; 483558, 3642093; 483570, 3642095; 483580, 3642095; 483589, 3642094; 483597, 3642092; 483606, 3642090; 483607, 3642090; 483607, 3642090; 483635, 3642088; 483682, 3642088; 483719, 3642094; 483754, 3642105; 483783, 3642129; 483796, 3642147; 483797, 3642148; 483803, 3642165; 483806, 3642181; 483810, 3642198; 483814, 3642219; 483818, 3642238; 483823, 3642249; 483824, 3642251; 483832, 3642258; 483841, 3642261.

(viii) Subunit 4I. Land bounded by the following UTM NAD27 coordinates (E,N): 485100, 3641415; 485231, 3641411; 485237, 3641411; 485445, 3641409; 485450, 3641409; 485450, 3641400; 485444, 3641310; 485444, 3641310; 485438, 3641220; 485369, 3641214; 485290, 3641219; 485258, 3641235; 485211, 3641234; 485143, 3641234; 485111, 3641262; 485101, 3641270; 485069, 3641328; 485056, 3641340; 485041, 3641355; 485022, 3641356; 485015, 3641375; 485004, 3641397; 485000, 3641419; 485019, 3641424; 485035, 3641417; 485036, 3641417; 485039, 3641417.

(ix) Subunit 4J. Land bounded by the following UTM NAD27 coordinates (E,N): 485600, 3639788; 485601, 3639788; 485612, 3639787; 485615, 3639782; 485615, 3639781; 485609, 3639777; 485604, 3639774; 485600, 3639771; 485595, 3639769; 485578, 3639758; 485558, 3639749; 485534, 3639741; 485503, 3639730; 485490, 3639724; 485478, 3639714; 485466, 3639709; 485445, 3639701; 485441, 3639700; 485417, 3639692; 485400, 3639687; 485385, 3639682; 485363, 3639673; 485322, 3639658; 485308, 3639654; 485285, 3639648; 485267, 3639644; 485247, 3639637; 485195, 3639619; 485173, 3639614; 485170, 3639614; 485153, 3639615; 485139, 3639618; 485125, 3639622; 485114, 3639632; 485106, 3639643; 485100, 3639655; 485097, 3639660; 485095, 3639672; 485099, 3639680; 485100, 3639681; 485102, 3639685; 485107, 3639693; 485112, 3639703; 485114, 3639705; 485123, 3639716; 485131, 3639722; 485136, 3639730; 485134, 3639744; 485125, 3639756; 485115, 3639770; 485104, 3639781; 485104, 3639787; 485105, 3639787; 485104, 3639797; 485600, 3639797.

(x) Subunit 4K. Land bounded by the following UTM NAD27 coordinates (E,N): 486900, 3633200; 486911, 3633200; 486913, 3633170; 486914, 3633158; 486917, 3633125; 486934, 3632893; 486937, 3632893; 486941, 3632892; 486943, 3632892; 486942, 3632891; 486940, 3632890; 486995, 3632852; 486996, 3632831; 486996, 3632805; 486971, 3632804; 486964, 3632804; 486964, 3632819; 486948, 3632822; 486941, 3632873; 486939, 3632873; 486916, 3632876; 486915, 3632877; 486915, 3632877; 486909, 3632877; 486903, 3632877; 486900, 3632877; 486895, 3632877; 486859, 3632877; 486791, 3632884; 486731, 3632895; 486720, 3632900; 486693, 3632912; 486682, 3632917; 486674, 3632921; 486668, 3632923; 486627, 3632941; 486618, 3632944; 486596, 3632950; 486580, 3632937; 486579, 3632937; 486400, 3632968; 486192, 3633005; 486136, 3633015; 486136, 3633015; 486135, 3633139; 486200, 3633155; 486220, 3633160; 486220, 3633161; 486331, 3633188; 486332, 3633188; 486332, 3633189; 486381, 3633201; 486402, 3633206; 486482, 3633225; 486603, 3633253; 486689, 3633272; 486690, 3633272; 486700, 3633274; 486771, 3633284; 486775, 3633284; 486786, 3633284; 486900, 3633299.

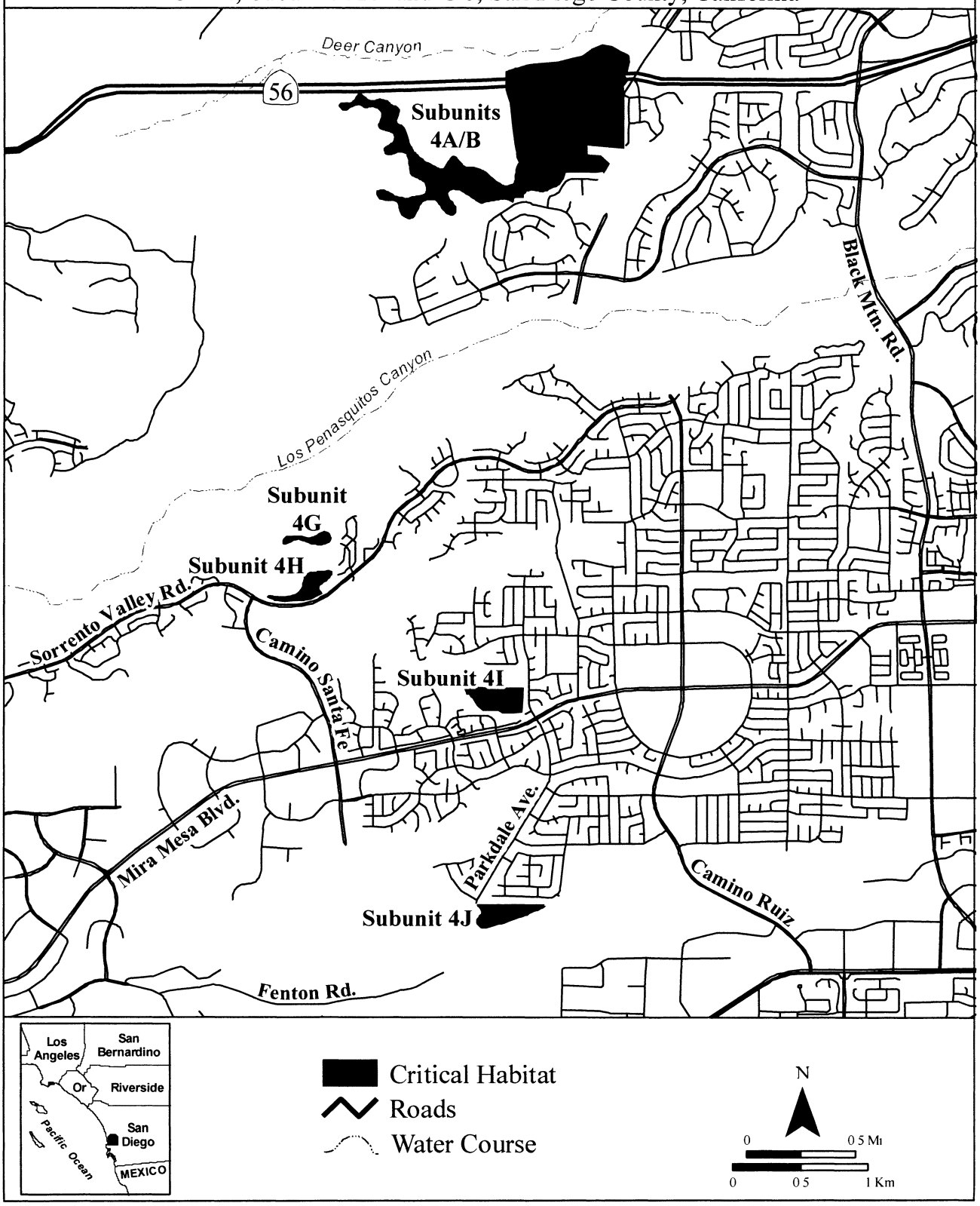
(xi) Subunit 4L. Land bounded by the following UTM NAD27 coordinates (E,N): 487340, 3633277; 487340, 3633277; 487361, 3633261; 487346, 3633241; 487346, 3633241; 487346, 3633241; 487298, 3633197; 487280, 3633208; 487280, 3633208; 487280, 3633209; 487268, 3633218; 487200, 3633269; 487196, 3633272; 487160, 3633234; 487100, 3633264; 487073, 3633277; 487065, 3633300; 487062, 3633309; 487053, 3633340; 487147, 3633365; 487147, 3633366; 487152, 3633366; 487204, 3633380.

(xii) Subunit 4M. Land bounded by the following UTM NAD27 coordinates (E,N): 487669, 3631049; 487669, 3631036; 487667, 3630972; 487660, 3630780; 487672, 3630772; 487816, 3630687; 487818, 3630675; 487828, 3630556; 487829, 3630556; 488292, 3630338; 488292, 3630320; 488294, 3630143; 488295, 3630029; 488260, 3630028; 488195, 3630027; 488076, 3630043; 487879, 3630039; 487830, 3630081; 487805, 3630102; 487714, 3630177; 487798, 3630210; 487829, 3630273; 487830, 3630336; 487830, 3630388; 487516, 3630559; 487501, 3630568; 487340, 3630655; 487335, 3630674; 487313, 3630766; 487384, 3630777; 487428, 3630783; 487503, 3630920; 487508, 3631141; 487677, 3631228; 487672, 3631125; 487670, 3631078.

(xiii) Note: Map of Unit 4, Subunits 4A/B, 4G, 4H, 4I, and 4J (Map 6) follows:

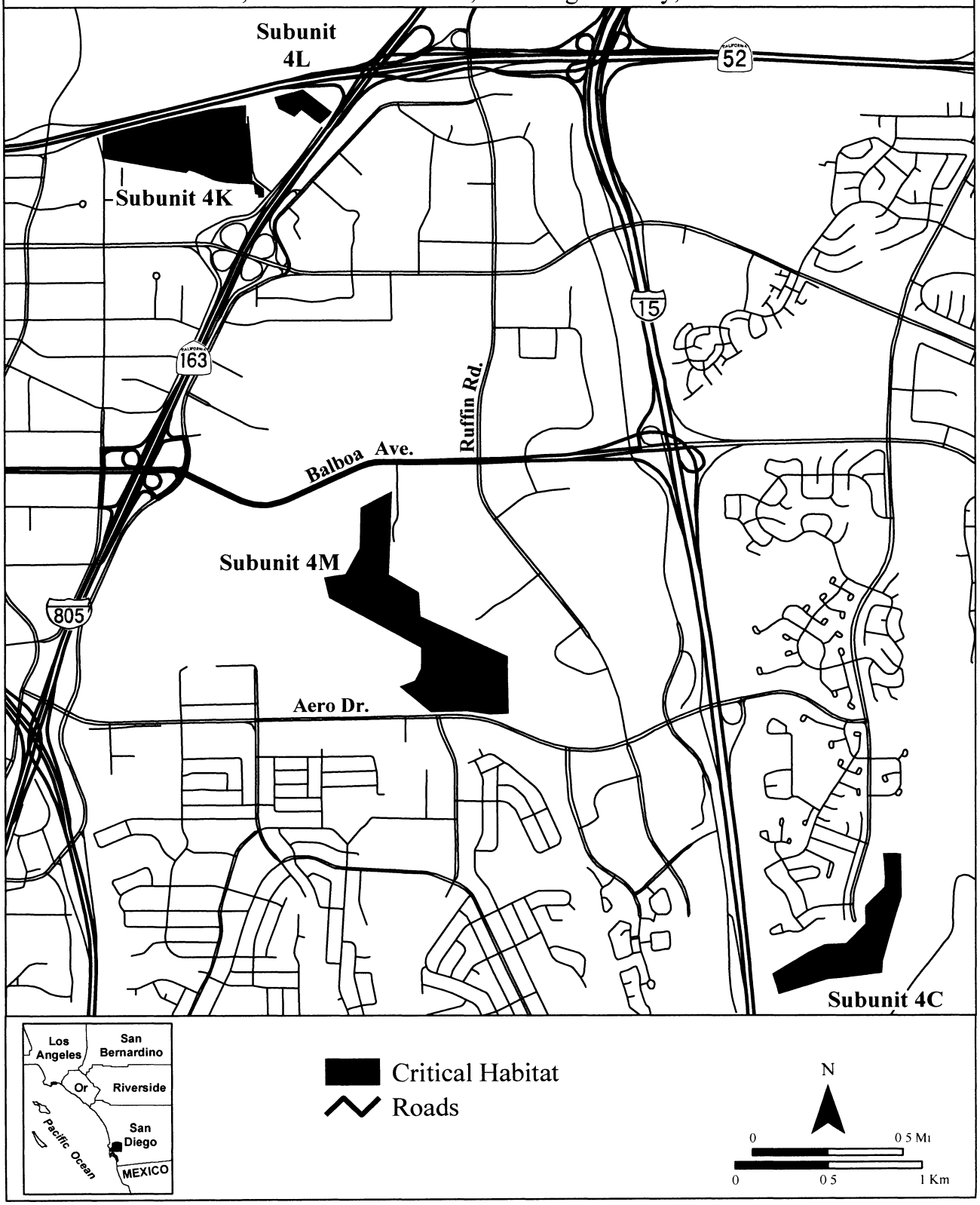
BILLING CODE 4310–55–P

Map 6.
Critical Habitat for San Diego fairy shrimp (Branchinecta sandiegonensis)
Unit 4, Subunits A/B and G-J, San Diego County, California



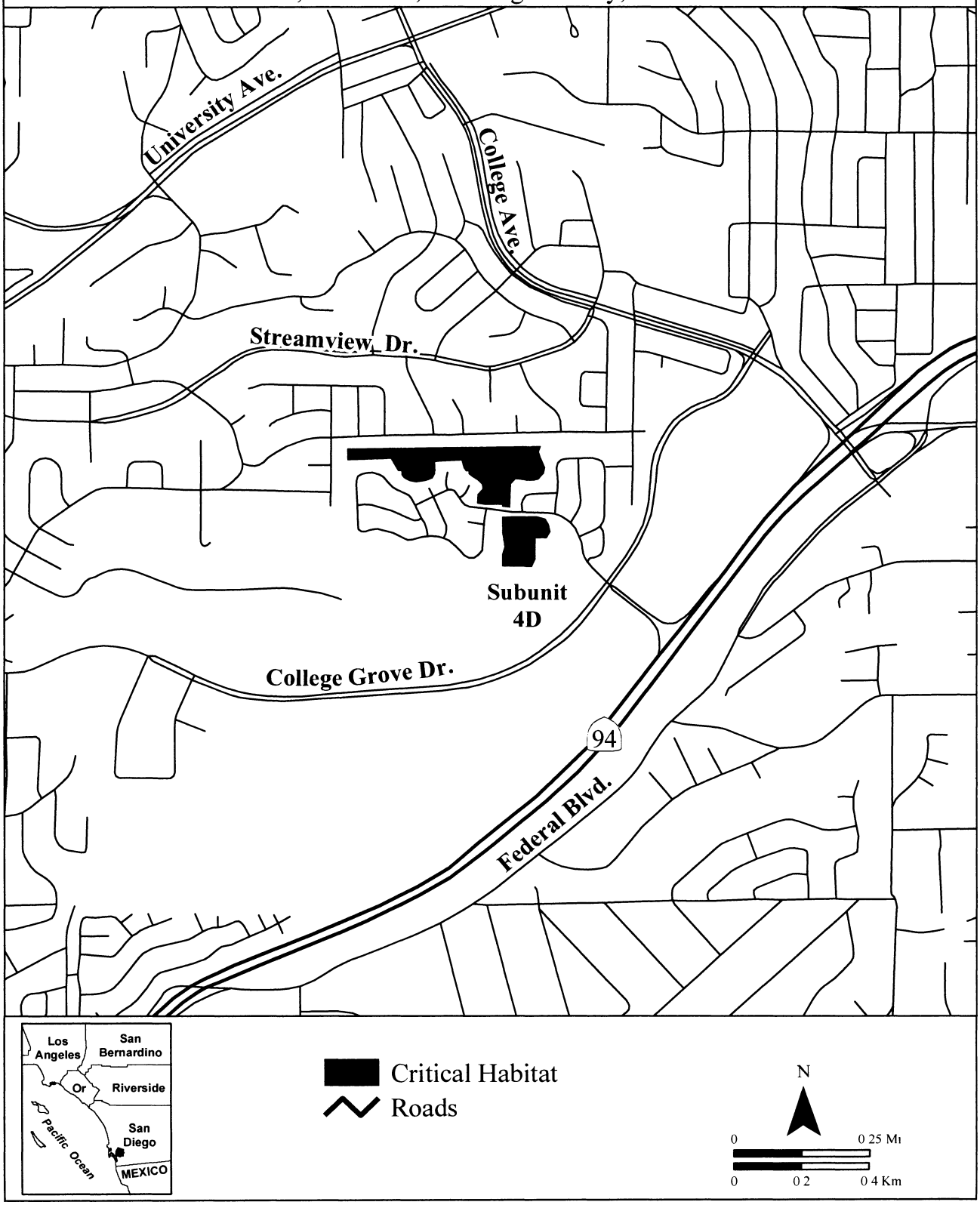
(xiv) Note: Map of Unit 4, Subunits 4C, 4K, 4L and 4M (Map 7) follows:

Map 7.
Critical Habitat for San Diego fairy shrimp (Branchinecta sandiegonensis)
Unit 4, Subunits C and K-M, San Diego County, California



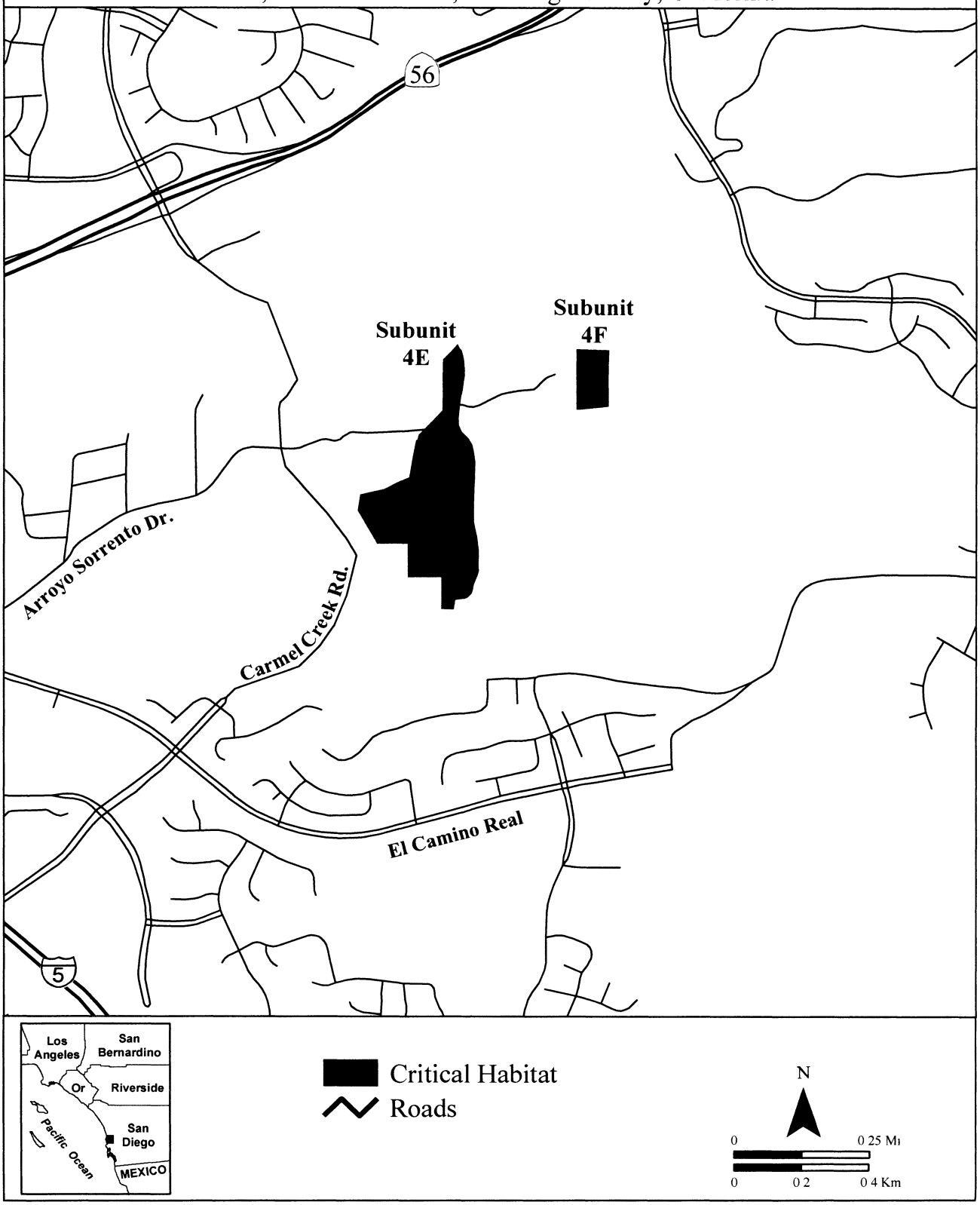
(xv) Note: Map of Unit 4, Subunit 4D (Map 8) follows:

Map 8.
Critical Habitat for San Diego fairy shrimp (Branchinecta sandiegonensis)
Unit 4, Subunit D, San Diego County, California



(xvi) Note: Map of Unit 4, Subunits 4E and 4F (Map 9) follows:

Map 9.
Critical Habitat for San Diego fairy shrimp (Branchinecta sandiegonensis)
Unit 4, Subunits E and F, San Diego County, California



BILLING CODE 4310–55–C

(10) Unit 5: San Diego County, California. From USGS 1:24, 000 quadrangle maps Imperial Beach, Jamul Mountains, Otay Mesa, and Otay Mountain.

(i) Subunit 5A. Land bounded by the following UTM NAD27 coordinates (E,N): 506870, 3606405; 506878, 3606405; 506888, 3606405; 506887, 3606404; 506881, 3606394; 506880, 3606392; 506879, 3606390; 506882, 3606388; 506874, 3606348; 506856, 3606282; 506837, 3606194; 506847, 3606090; 506880, 3606025; 506858, 3606009; 506843, 3605998; 506802, 3605981; 506795, 3605978; 506749, 3605974; 506739, 3605981; 506713, 3605998; 506692, 3606035; 506675, 3606077; 506660, 3606147; 506656, 3606157; 506647, 3606180; 506644, 3606186; 506636, 3606200; 506625, 3606220; 506593, 3606288; 506586, 3606303; 506555, 3606368; 506541, 3606400; 506539, 3606405; 506528, 3606429; 506522, 3606487; 506609, 3606517; 506609, 3606518; 506613, 3606522; 506620, 3606526; 506631, 3606530; 506657, 3606530; 506685, 3606523; 506688, 3606523; 506691, 3606524; 506702, 3606526; 506707, 3606529; 506719, 3606537; 506724, 3606543; 506728, 3606550; 506732, 3606567; 506733, 3606573; 506734, 3606582; 506753, 3606589; 506741, 3606620; 506742, 3606626; 506744, 3606633; 506745, 3606642; 506748, 3606650; 506754, 3606656; 506760, 3606661; 506766, 3606664; 506773, 3606667; 506780, 3606666; 506788, 3606665; 506793, 3606660; 506801, 3606654; 506806, 3606648; 506813, 3606638; 506819, 3606631; 506827, 3606625; 506837, 3606621; 506844, 3606619; 506846, 3606618; 506853, 3606616; 506857, 3606614; 506858, 3606461; 506858, 3606449; 506858, 3606449; 506858, 3606436; 506858, 3606427; 506858, 3606405; 506858, 3606405. Excluding land bounded by the following UTM NAD27 coordinates (E,N): 506704, 3606405; 506655, 3606405; 506655, 3606405; 506655, 3606400; 506656, 3606300; 506656, 3606200; 506656, 3606186; 506656, 3606186; 506706, 3606186; 506831, 3606187; 506831, 3606252; 506847, 3606275; 506858, 3606290; 506858, 3606290; 506858, 3606372; 506858, 3606392; 506858, 3606405. Land bounded by the following UTM NAD27 coordinates (E,N): 505791, 3606031; 505841, 3605966; 505884, 3605895; 505914, 3605830; 505935, 3605785; 505950, 3605753; 505951, 3605750; 505964, 3605715; 505973, 3605708; 505983, 3605665; 505863, 3605614; 505847, 3605635; 505834, 3605651; 505825, 3605658; 505797, 3605677; 505774, 3605686; 505774, 3605767; 505774, 3605767; 505774, 3605807; 505774, 3606046; 505774, 3606046.

(ii) Subunit 5B. Land bounded by the following UTM NAD27 coordinates (E,N): 504332, 3605189; 504347, 3605165; 504372, 3605163; 504405, 3605173; 504429, 3605160; 504432, 3605139; 504454, 3605119; 504474, 3605134; 504505, 3605127; 504533, 3605097; 504559, 3605077; 504597, 3605074; 504629, 3605076; 504630, 3604936; 504630, 3604918; 504629, 3604782; 504627, 3604782; 504627, 3604746; 504626, 3604744; 504627, 3604742; 504626, 3604631; 504603, 3604604; 504587, 3604590; 504573, 3604589; 503692, 3604599; 503641, 3604600; 503620, 3604621; 503508, 3604831; 503453, 3604971; 503470, 3604979; 503500, 3604973; 503517, 3604970; 503525, 3604977; 503534, 3604982; 503556, 3604994; 503626, 3604992; 503626, 3605008; 503626, 3605032; 503628, 3605033; 503628, 3605033; 503705, 3605099; 503742, 3605171; 503743, 3605172; 503754, 3605194. Land bounded by the following UTM NAD27 coordinates (E,N): 503241, 3604951; 503260, 3604945; 503260, 3604964; 503275, 3604981; 503314, 3604988; 503319, 3604989; 503389, 3604822; 503508, 3604612; 503537, 3604561; 503567, 3604506; 503620, 3604411; 503620, 3604400; 503619, 3604330; 503617, 3604074; 503617, 3603990; 503609, 3603990; 503569, 3603990; 503464, 3603991; 502923, 3603996; 502813, 3603997; 502813, 3603997; 502800, 3604601; 502800, 3604620; 502799, 3604653; 502800, 3604654; 502820, 3604686; 502830, 3604730; 502835, 3604781; 502836, 3604804; 502994, 3604803; 502991, 3604794; 503003, 3604742; 503041, 3604705; 503064, 3604692; 503074, 3604694; 503104, 3604726; 503111, 3604741; 503137, 3604801; 503208, 3604801; 503208, 3604953.

(iii) Subunit 5C. Land bounded by the following UTM NAD27 coordinates (E,N): 505948, 3603807; 505970, 3603764; 505991, 3603750; 506009, 3603736; 505983, 3603699; 505954, 3603652; 505908, 3603585; 505841, 3603550; 505808, 3603538; 505522, 3603537; 505458, 3603536; 505450, 3603546; 505435, 3603553; 505408, 3603570; 505401, 3603574; 505369, 3603601; 505358, 3603624; 505365, 3603650; 505375, 3603667; 505374, 3603667; 505390, 3603794; 505391, 3603794; 505416, 3603798; 505467, 3603821; 505484, 3603845; 505500, 3603876; 505487, 3603903; 505566, 3604008; 505566, 3604011; 505568, 3604010; 505578, 3604030; 505600, 3604057; 505623, 3604065; 505623, 3604065; 505622, 3604070; 505617, 3604088; 505625, 3604130; 505632, 3604141; 505633, 3604141; 505633, 3604141; 505641, 3604152; 505675, 3604184; 505720, 3604211; 505732, 3604218; 505732, 3604218; 505732, 3604218; 505785, 3604243; 505820, 3604252; 505844, 3604235; 505902, 3604197; 505948, 3604161; 505958, 3604137; 505958, 3604117; 505946, 3604091; 505926, 3604057; 505920, 3604041; 505929, 3604037; 505942, 3604028; 505949, 3604021; 505955, 3604011; 505961, 3603997; 505959, 3603982; 505951, 3603973; 505948, 3603966; 505942, 3603961; 505929, 3603951; 505914, 3603946; 505912, 3603945; 505912, 3603928; 505926, 3603866; 505936, 3603840.

(iv) Subunit 5D. Land bounded by the following UTM NAD27 coordinates (E,N): 509019, 3602417; 509019, 3602284; 509015, 3602132; 509048, 3602002; 509135, 3601973; 509203, 3602071; 509235, 3602133; 509236, 3602136; 509268, 3602255; 509270, 3602335; 509272, 3602407; 509308, 3602461; 509348, 3602490; 509438, 3602540; 509604, 3602573; 509727, 3602641; 509821, 3602670; 509926, 3602613; 510009, 3602537; 510009, 3602450; 509976, 3602327; 509915, 3602212; 509832, 3602096; 509727, 3601865; 509712, 3601746; 509692, 3601743; 509659, 3601737; 509628, 3601732; 509604, 3601726; 509576, 3601713; 509533, 3601697; 509504, 3601687; 509419, 3601669; 509357, 3601654; 509354, 3601654; 509315, 3601643; 509277, 3601623; 509010, 3601592; 508505, 3601541; 508494, 3601540; 508266, 3601517; 508266, 3601517; 508266, 3601517; 508265, 3601517; 507688, 3601459; 507688, 3601459; 507534, 3601443; 507508, 3601733; 507507, 3601736; 507509, 3601735; 507571, 3601753; 507517, 3601850; 507484, 3601937; 507560, 3601995; 507589, 3602056; 507582, 3602147; 507614, 3602241; 507654, 3602208; 507690, 3602147; 507719, 3602172; 507730, 3602248; 507737, 3602331; 507748, 3602410; 507787, 3602450; 507813, 3602403; 507860, 3602320; 507921, 3602190; 507983, 3602049; 508003, 3602033; 508113, 3601944; 508141, 3601999; 508161, 3602070; 508181, 3602147; 508217, 3602168; 508243, 3602118; 508279, 3602013; 508394, 3601901; 508524, 3601901; 508554, 3601918; 508651, 3601973; 508712, 3602061; 508719, 3602071; 508719, 3602165; 508719, 3602255; 508745, 3602302; 508795, 3602414; 508819, 3602464; 508839, 3602504; 508867, 3602504; 508887, 3602499; 508907, 3602494; 508936, 3602486; 509019, 3602425.

(v) Subunit 5F. Land bounded by the following UTM NAD27 coordinates (E,N): 500168, 3603213; 500175, 3603212; 500176, 3603212; 500176, 3603205; 500175, 3603200; 500174, 3603154; 500170, 3603022; 500168, 3602973; 500167, 3602921; 500166, 3602890; 500165, 3602890; 500150, 3602901; 500145, 3602889; 500144, 3602888; 500084, 3602881; 500029, 3602874; 500047, 3602855; 500052, 3602849; 500042, 3602844; 500028, 3602840; 500014, 3602839; 500000, 3602840; 499992, 3602842; 499987, 3602844; 499974, 3602850; 499969, 3602853; 499961, 3602857; 499950, 3602865; 499940, 3602875; 499933, 3602885; 499942, 3602885; 499947, 3602885; 499952, 3602885; 499956, 3602890; 499956, 3602971; 499956, 3602974; 499956, 3602992; 499956, 3603141; 499964, 3603142; 500014, 3603147; 500048, 3603151; 500046, 3603200; 500046, 3603215; 500046, 3603220; 500164, 3603213. Land bounded by the following UTM NAD27 coordinates (E,N): 499760, 3602958; 499763, 3602950; 499763, 3602887; 499792, 3602887; 499808, 3602860; 499825, 3602835; 499861, 3602824; 499904, 3602816; 499951, 3602808; 499986, 3602804; 500000, 3602800; 500003, 3602796; 500004, 3602796; 500018, 3602793; 500030, 3602787; 500042, 3602779; 500052, 3602769; 500060, 3602758; 500066, 3602745; 500069, 3602731; 500069, 3602728; 500070, 3602718; 500070, 3602716; 500076, 3602703; 500080, 3602689; 500081, 3602676; 500080, 3602662; 500076, 3602648; 500070, 3602636; 500062, 3602624; 500052, 3602614; 500041, 3602606; 500028, 3602600; 500026, 3602600; 500025, 3602597; 500019, 3602585; 500011, 3602573; 500001, 3602564; 500000, 3602563; 499990, 3602556; 499977, 3602550; 499965, 3602546; 499963, 3602527; 499972, 3602500; 499975, 3602477; 499969, 3602456; 499952, 3602435; 499929, 3602421; 499913, 3602434; 499909, 3602430; 499897, 3602422; 499895, 3602421; 499891, 3602411; 499891, 3602373; 499888, 3602336; 499887, 3602329; 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Land bounded by the following UTM NAD27 coordinates (E,N): 498628, 3602069; 498638, 3602063; 498692, 3602024; 498727, 3601981; 498745, 3601957; 498752, 3601948; 498759, 3601937; 498766, 3601929; 498767, 3601929; 498780, 3601925; 498793, 3601919; 498804, 3601911; 498814, 3601901; 498822, 3601890; 498828, 3601877; 498832, 3601864; 498832, 3601863; 498832, 3601855; 498868, 3601832; 498873, 3601829; 498923, 3601788; 498966, 3601760; 498973, 3601760; 499043, 3601753; 499149, 3601715; 499155, 3601713; 499221, 3601690; 499266, 3601661; 499266, 3601661; 499307, 3601634; 499343, 3601618; 499343, 3601618; 499325, 3601653; 499324, 3601659; 499324, 3601659; 499320, 3601682; 499346, 3601698; 499389, 3601697; 499424, 3601689; 499449, 3601704; 499483, 3601715; 499517, 3601715; 499532, 3601732; 499547, 3601770; 499559, 3601784; 499585, 3601800; 499608, 3601782; 499633, 3601747; 499659, 3601712; 499714, 3601684; 499763, 3601668; 499792, 3601630; 499824, 3601610; 499838, 3601603; 499848, 3601619; 499896, 3601624; 499940, 3601606; 499958, 3601597; 499984, 3601634; 500021,

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(vi) Subunit 5G. Land bounded by the following UTM NAD27 coordinates (E,N): 499163, 3604679; 499168, 3604677; 499169, 3604676; 499169, 3604671; 499174, 3604638; 499175, 3604631; 499177, 3604618; 499175, 3604601; 499173, 3604575; 499176, 3604567; 499190, 3604533; 499200, 3604524; 499227, 3604500; 499242, 3604487; 499250, 3604456; 499251, 3604452; 499286, 3604445; 499299, 3604469; 499543, 3604452; 499556, 3604416; 499565, 3604389; 499629, 3604368; 499699, 3604386; 499700, 3604385; 499744, 3604322; 499744, 3604300; 499745, 3604266; 499747, 3604175; 499748, 3604122; 499748, 3604122; 499749, 3604100; 499750, 3604061; 499739, 3604057; 499700, 3604042; 499648, 3604021; 499618, 3604022; 499549, 3604024; 499533, 3604008; 499525, 3604000; 499500, 3603974; 499440, 3603913; 499439, 3603900; 499431, 3603830; 499429, 3603817; 499404, 3603839; 499398, 3603849; 499369, 3603891; 499356, 3603915; 499337, 3603927; 499328, 3603924; 499305, 3603918; 499263, 3603904; 499237, 3603929; 499238, 3603972; 499247, 3604004; 499245, 3604008; 499242, 3604014; 499239, 3604020; 499237, 3604027; 499236, 3604034; 499235, 3604041; 499235, 3604048; 499236, 3604055; 499237, 3604058; 499228, 3604075; 499190, 3604094; 499200, 3604109; 499218, 3604140; 499258, 3604151; 499259, 3604151; 499270, 3604156; 499292, 3604156; 499325, 3604156; 499377, 3604142; 499427, 3604118; 499460, 3604091; 499487, 3604114; 499517, 3604142; 499557, 3604141; 499570, 3604141; 499593, 3604115; 499622, 3604098; 499646, 3604112; 499648, 3604135; 499644, 3604167; 499640, 3604175; 499620, 3604210; 499579, 3604252; 499575, 3604255; 499557, 3604274; 499551, 3604279; 499533, 3604297; 499474, 3604333; 499452, 3604342; 499412, 3604360; 499376, 3604370; 499328, 3604385; 499258, 3604401; 499240, 3604407; 499213, 3604414; 499162, 3604442; 499150, 3604454; 499138, 3604466; 499124, 3604500; 499124, 3604501; 499123, 3604508; 499118, 3604536; 499111, 3604581; 499110, 3604584; 499109, 3604607; 499108, 3604623; 499108, 3604623; 499107, 3604623; 499106, 3604640; 499103, 3604677; 499103, 3604682; 499120, 3604694; 499120, 3604695; 499121, 3604695. Land bounded by the following UTM NAD27 coordinates (E,N): 498823, 3603831; 498873, 3603865; 498928, 3603903; 498930, 3603895; 498938, 3603850; 498912, 3603794; 498870, 3603746; 498833, 3603700; 498795, 3603670; 498762, 3603651; 498719, 3603629; 498670, 3603600; 498663, 3603579; 498678, 3603566; 498669, 3603545; 498651, 3603535; 498622, 3603534; 498625, 3603525; 498634, 3603530; 498648, 3603533; 498661, 3603535; 498675, 3603533; 498689, 3603530; 498701, 3603524; 498713, 3603516; 498723, 3603506; 498731, 3603495; 498737, 3603482; 498740, 3603468; 498741, 3603463; 498747, 3603476; 498755, 3603484; 498773, 3603507; 498810, 3603545; 498859, 3603574; 498901, 3603605; 498943, 3603631; 498976, 3603632; 499011, 3603645; 499027, 3603658; 499026, 3603657; 499024, 3603656; 499010, 3603652; 498996, 3603651; 498983, 3603652; 498969, 3603656; 498960, 3603660; 498956, 3603662; 498945, 3603670; 498935, 3603680; 498927, 3603691; 498921, 3603704; 498918, 3603717; 498916, 3603731; 498916, 3603732; 498918, 3603745; 498921, 3603759; 498927, 3603771; 498935, 3603783; 498945, 3603792; 498956, 3603800; 498969, 3603806; 498983, 3603810; 498988, 3603810; 498996, 3603811; 499010, 3603810; 499024, 3603806; 499036, 3603800; 499048, 3603792; 499058, 3603783; 499066, 3603771; 499072, 3603759; 499075, 3603745; 499076, 3603731; 499075, 3603717; 499072, 3603704; 499066, 3603691; 499058, 3603680; 499056, 3603679; 499082, 3603687; 499082, 3603687; 499088, 3603650; 499088, 3603612; 499094, 3603574; 499107, 3603535; 499120, 3603511; 499139, 3603492; 499127, 3603448; 499102, 3603430; 499075, 3603416; 499056, 3603387; 499061, 3603365; 499101, 3603365; 499143, 3603379; 499174, 3603384; 499205, 3603385; 499211, 3603370; 499223, 3603341; 499229, 3603313; 499237, 3603306; 499241, 3603296; 499242, 3603293; 499246, 3603283; 499249, 3603265; 499248, 3603257; 499248, 3603254; 499247, 3603250; 499247, 3603249; 499244, 3603249; 499218, 3603250; 499214, 3603250; 499024, 3603257; 499021, 3603257; 499021, 3603258; 499023, 3603301; 499025, 3603366; 499026, 3603409; 499067, 3603488; 499062, 3603580;

499036, 3603611; 499033, 3603608; 499030, 3603605; 498978, 3603558; 498955, 3603537; 498939, 3603507; 498935, 3603498; 498891, 3603486; 498787, 3603476; 498783, 3603476; 498784, 3603469; 498796, 3603264; 498780, 3603265; 498746, 3603266; 498638, 3603269; 498631, 3603269; 498450, 3603275; 498389, 3603277; 498348, 3603279; 498341, 3603279; 498341, 3603310; 498341, 3603354; 498340, 3603460; 498340, 3603493; 498339, 3603675; 498466, 3603673; 498564, 3603672; 498745, 3603667; 498786, 3603788; 498788, 3603795; 498793, 3603800; 498800, 3603808; 498818, 3603827. Land bounded by the following UTM NAD27 coordinates (E,N): 499520, 3603710; 499537, 3603690; 499502, 3603686; 499500, 3603686; 499465, 3603682; 499465, 3603676; 499467, 3603527; 499468, 3603437; 499470, 3603335; 499470, 3603331; 499475, 3603330; 499515, 3603321; 499527, 3603292; 499528, 3603290; 499542, 3603257; 499546, 3603249; 499537, 3603249; 499468, 3603247; 499445, 3603247; 499443, 3603247; 499367, 3603246; 499358, 3603246; 499295, 3603248; 499267, 3603249; 499267, 3603249; 499267, 3603250; 499268, 3603254; 499276, 3603292; 499277, 3603296; 499285, 3603334; 499289, 3603354; 499297, 3603389; 499309, 3603417; 499330, 3603436; 499349, 3603447; 499351, 3603462; 499353, 3603474; 499347, 3603487; 499328, 3603492; 499281, 3603507; 499260, 3603569; 499265, 3603615; 499261, 3603624; 499258, 3603652; 499257, 3603663; 499255, 3603681; 499265, 3603698; 499283, 3603709; 499294, 3603710; 499300, 3603714; 499312, 3603709; 499313, 3603709; 499328, 3603706; 499332, 3603704; 499348, 3603695; 499382, 3603690; 499383, 3603690; 499430, 3603695; 499486, 3603704; 499497, 3603706.

(vii) Subunit 5H. Land bounded by the following UTM NAD27 coordinates (E,N): 507788, 3609712; 507858, 3609742; 507950, 3609771; 508044, 3609778; 508178, 3609744; 508218, 3609710; 508262, 3609710; 508280, 3609740; 508330, 3609757; 508397, 3609740; 508403, 3609790; 508604, 3609787; 508699, 3609699; 508787, 3609559; 508746, 3609407; 508557, 3609308; 508392, 3609308; 508090, 3609118; 507643, 3609056; 507269, 3609054; 507257, 3609091; 507269, 3609148; 507269, 3609191; 507290, 3609251; 507329, 3609280; 507389, 3609280; 507367, 3609319; 507310, 3609369; 507310, 3609419; 507338, 3609448; 507401, 3609470; 507382, 3609518; 507394, 3609547; 507391, 3609636; 507388, 3609713.

(viii) Subunit 5I. Land bounded by the following UTM NAD27 coordinates (E,N): 522790, 3603588; 522715, 3603505; 522712, 3603500; 522700, 3603500; 522700, 3603479; 522699, 3603478; 522663, 3603371; 522692, 3603132; 522639, 3603116; 522566, 3603131; 522529, 3603165; 522517, 3603225; 522514, 3603355; 522496, 3603446; 522488, 3603478; 522497, 3603494; 522563, 3603563; 522641, 3603627; 522720, 3603689; 522759, 3603708; 522791, 3603699; 522800, 3603685; 522800, 3603617.

(ix) Note: Map of Unit 5, Subunits 5A, 5B, 5C, 5D, and 5H (Map 10) follows:

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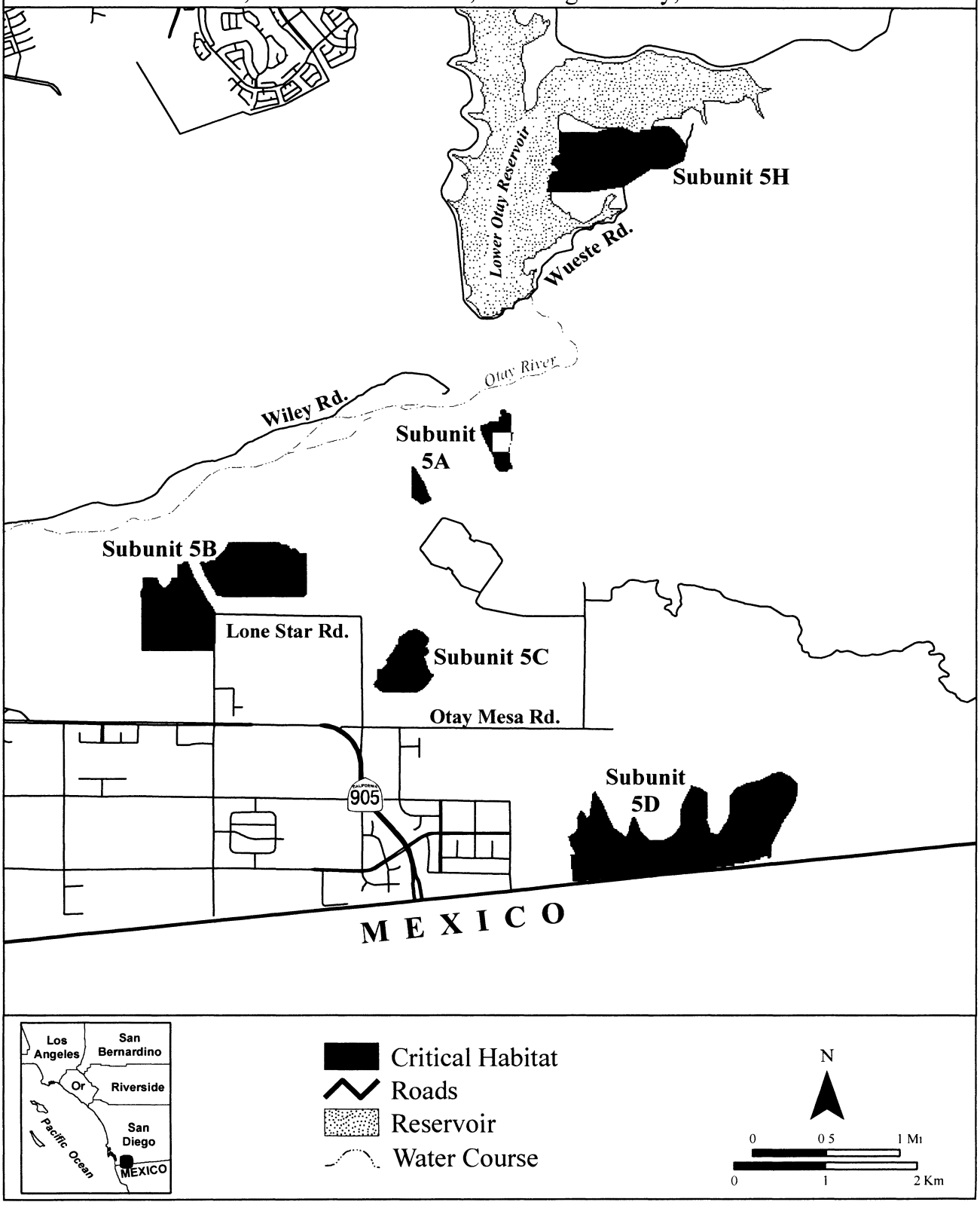
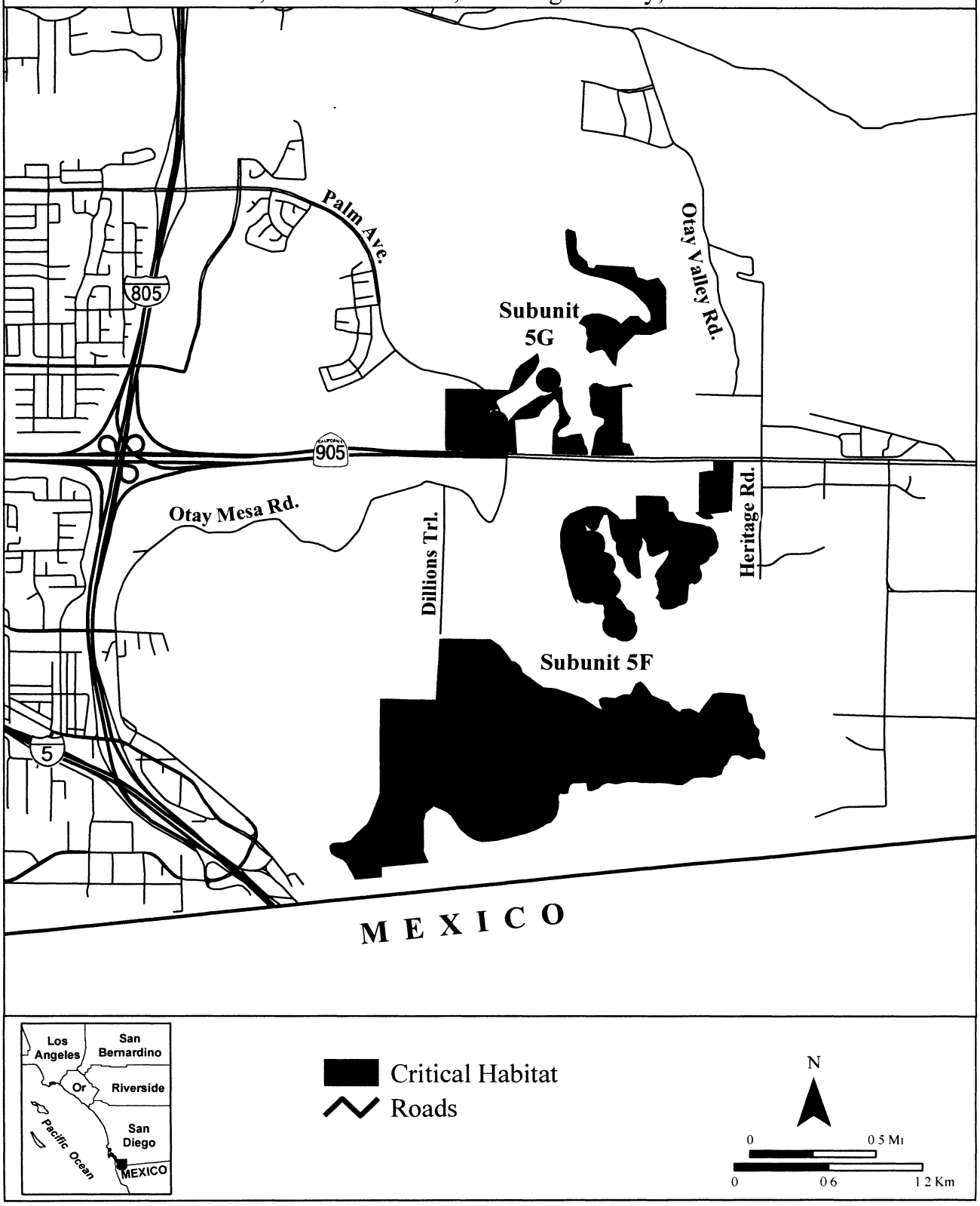
Map 10.
Critical Habitat for San Diego fairy shrimp (Branchinecta sandiegonensis)
Unit 5, Subunits A-D and H, San Diego County, California



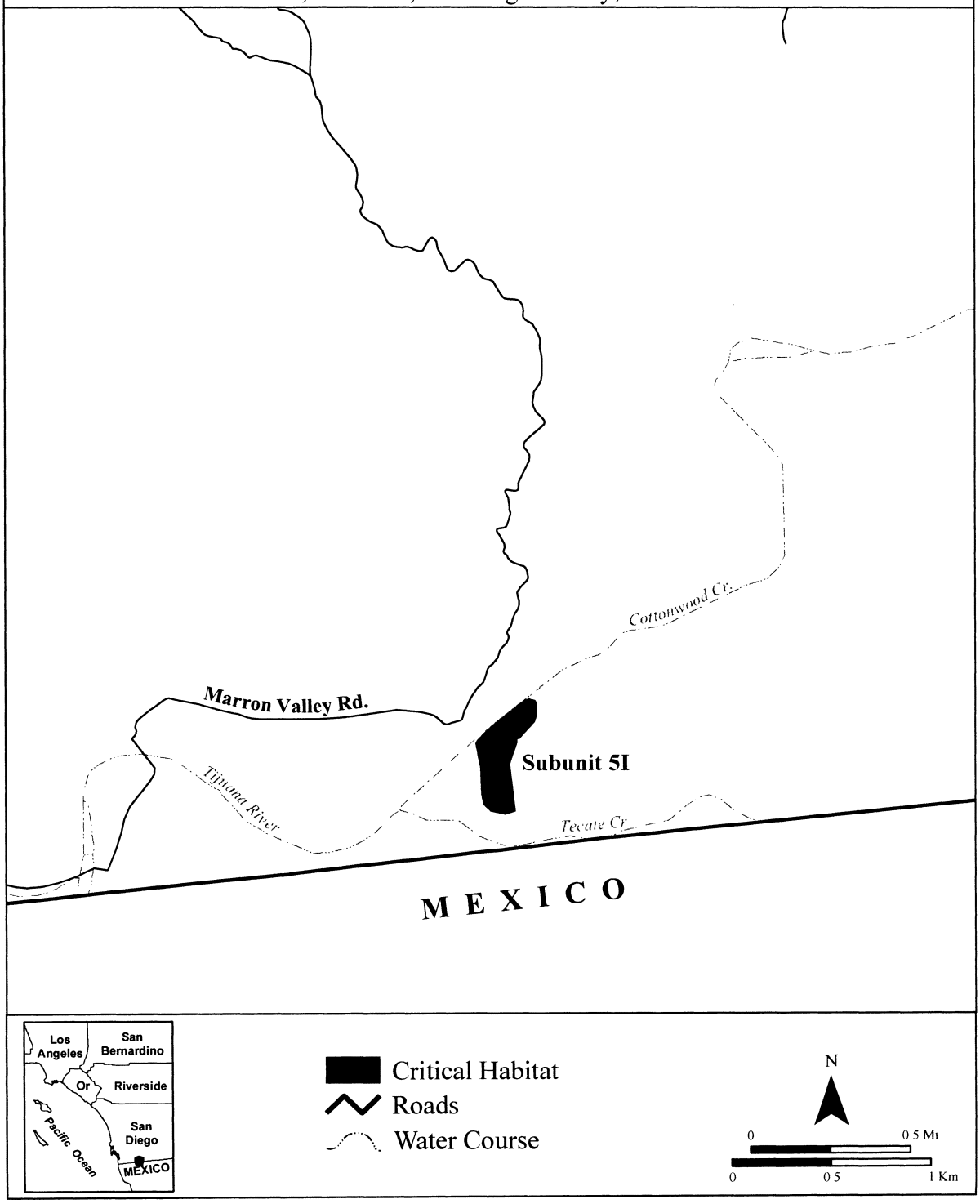
(x) Note: Map of Unit 5, Subunits 5F and 5G (Map 11) follows:

Map 11.
Critical Habitat for San Diego fairy shrimp (Branchinecta sandiegonensis)
Unit 5, Subunits F and G, San Diego County, California



(xi) Note: Map of Unit 5, Subunit 5I (Map 12) follows:

Map 12.
Critical Habitat for San Diego fairy shrimp (Branchinecta sandiegonensis)
Unit 5, Subunit I, San Diego County, California



* * * * *

Dated: November 30, 2007.

Mitch Butler,

Acting Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 07–5972 Filed 12–11–07; 8:45 am]

BILLING CODE 4310–55–C