

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018-AT45

Endangered and Threatened Wildlife and Plants; Proposed Designation of Critical Habitat for the Riverside Fairy Shrimp (*Streptocephalus woottoni*)

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), propose to designate critical habitat for the federally endangered Riverside fairy shrimp (*Streptocephalus woottoni*) pursuant to the Endangered Species Act of 1973, as amended (Act). We propose to designate a total of approximately 5,795 acres (ac) (2,345 hectares (ha)) of critical habitat in Los Angeles, Orange, Riverside, San Diego, and Ventura Counties, California.

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

DATES: We will accept comments until May 27, 2004. Public hearing requests must be received no later than June 11, 2004. A second comment period will be opened upon the publication of the pending economic analysis.

ADDRESSES: If you wish to comment, you may submit your comments and materials concerning this proposal by any one of the following methods:

1. You may submit written comments and information to the Field Supervisor, Carlsbad Fish and Wildlife Office, U.S. Fish and Wildlife Service, 6010 Hidden Valley Road, Carlsbad, California 92009.

2. You may hand-deliver written comments and information to our Carlsbad Fish and Wildlife Office, at the above address, or fax your comments to 760/731-9618.

3. You may send your comments by electronic mail (e-mail) to fw1rvfs@r1.fws.gov. For directions on how to submit electronic filing of comments, see the "Public Comments Solicited" section below.

All comments and materials received, as well as supporting documentation used in preparation of this proposed rule, will be available for public inspection, by appointment, during normal business hours at the above address.

FOR FURTHER INFORMATION CONTACT: Field Supervisor, Carlsbad Fish and Wildlife Service (telephone 760/431-9440; facsimile 760/431-9618).

SUPPLEMENTARY INFORMATION:**Public Comments Solicited**

It is our intent that any final action resulting from this proposal will be as accurate as possible. Therefore, we solicit comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, or any other interested party concerning this proposed rule. Maps of essential habitat not included in the proposed critical habitat are available for viewing by appointment during regular business hours at the Carlsbad Fish and Wildlife Office (see **ADDRESSES** section) or on the Internet at <http://carlsbad.fws.gov>. On the basis of public comment, during the development of the final rule we may find that areas proposed are not essential, are appropriate for exclusion under section 4(b)(2), or are not appropriate for exclusion, and in all of these cases, this information would be incorporated into the final designation. We particularly seek comments concerning:

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

- (2) Specific information on the amount and distribution of Riverside fairy shrimp and its habitat, and which habitat or habitat components are essential to the conservation of this species and why;

- (3) Land use designations and current or planned activities in or adjacent to the areas proposed and their possible impacts on proposed critical habitat;

- (4) Any foreseeable economic or other potential impacts resulting from the proposed designation, in particular, any impacts on small entities;

- (5) Some of the lands we have identified as essential for the conservation of the Riverside fairy shrimp are not being proposed as critical habitat. The following areas essential to the conservation of the Riverside fairy shrimp are not being proposed as critical habitat: Lands on Marine Corps Air Station Miramar (MCAS, Miramar); "mission-critical" training areas on Marine Corps Base, Camp Pendleton (Camp Pendleton); areas within San Diego Multiple Species Conservation Program (MSCP) and the Orange County Central-Coastal Natural Communities Conservation Program

(NCCP); and areas in the Draft Western Riverside Multiple Species Habitat Conservation Plan (MSHCP). These areas have been excluded because we believe the benefit of excluding these areas outweighs the benefit of including them. We specifically solicit comment on the inclusion or exclusion of such areas and: (a) Whether these areas are essential; (b) whether these areas warrant exclusion; and (c) the basis for not designating these areas as critical habitat (section 4(b)(2) of the Act);

- (6) We request information from the Department of Defense to assist the Secretary of the Interior in evaluating critical habitat on lands administered by or under the control of the Department of Defense, specifically information regarding impacts to national security associated with proposed designation of critical habitat; and

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

If you wish to comment, you may submit your comments and materials concerning this proposal by any one of several methods (see **ADDRESSES** section). Please submit electronic comments in ASCII file format and avoid the use of special characters or any form of encryption. Please also include "Attn: RIN 1018-AT45" in your e-mail subject header and your name and return address in the body of your message. If you do not receive a confirmation from the system that we have received your internet message, contact us directly by calling our Carlsbad Fish and Wildlife Office at phone number 760-431-9440. Please note that the e-mail address "fw1rvfs@r1.fws.gov" will be closed out at the termination of the public comment period.

Our practice is to make comments, including names and home addresses of respondents, available for public review. Individual respondents may request that we withhold their home address from the rulemaking record, which we will honor to the extent allowable by law. There also may be circumstances in which we would withhold from the rulemaking record a respondent's identity, as allowable by law. If you wish us to withhold your name and/or address, you must state this prominently at the beginning of your comment. However, we will not consider anonymous comments. We will make all submissions from organizations or businesses, and from individuals identifying themselves as

representatives or officials of organizations or businesses, available for public inspection in their entirety. Comments and materials received will be available for public inspection, by appointment, during normal business hours at the above address.

Background

Designation of Critical Habitat Provides Little Additional Protection to Species

In 30 years of implementing the Act, the Service has found that the designation of statutory critical habitat provides little additional protection to most listed species, while consuming significant amounts of conservation resources. The Service's present system for designating critical habitat is driven by litigation rather than biology, limits our ability to fully evaluate the science involved, consumes enormous agency resources, and imposes huge social and economic costs. The Service believes that additional agency discretion would allow our focus to return to those actions that provide the greatest benefit to the species most in need of protection.

Role of Critical Habitat in Actual Practice of Administering and Implementing the Act

While attention to and protection of habitat is paramount to successful conservation actions, we have consistently found that, in most circumstances, the designation of critical habitat is of little additional value for most listed species, yet it consumes large amounts of conservation resources. Sidle (1987) stated, "Because the ESA [Act] can protect species with and without critical habitat designation, critical habitat designation may be redundant to the other consultation requirements of section 7."

Currently, only 445, or 36 percent of the 1244 listed species in the U.S. under the jurisdiction of the Service, have designated critical habitat (Service 2004). We address the habitat needs of all 1244 listed species through conservation mechanisms such as listing, section 7 consultations, the Section 4 recovery planning process, the Section 9 protective prohibitions of unauthorized take, Section 6 funding to the States, and the Section 10 incidental take permit process. The Service believes that it is these measures that may make the difference between extinction and survival for many species.

Procedural and Resource Difficulties in Designating Critical Habitat

We have been inundated with lawsuits regarding critical habitat designation, and we face a growing number of lawsuits challenging critical habitat determinations once they are made. These lawsuits have subjected the Service to an ever-increasing series of court orders and court-approved settlement agreements, compliance with which now consumes nearly the entire listing program budget. This leaves the Service with little ability to prioritize its activities to direct scarce listing resources to the listing program actions with the most biologically urgent species conservation needs.

The consequence of the critical habitat litigation activity is that limited listing funds are used to defend active lawsuits and to comply with the growing number of adverse court orders. As a result, the Service's own proposals to undertake conservation actions based on biological priorities are significantly delayed.

The accelerated schedules of court ordered designations have left the Service with almost no ability to provide for additional public participation beyond those minimally required by the Administrative Procedures Act (APA), the Act, and the Service's implementing regulations, or to take additional time for review of comments and information to ensure the rule has addressed all the pertinent issues before making decisions on listing and critical habitat proposals, due to the risks associated with noncompliance with judicially imposed. This in turn fosters a second round of litigation in which those who will suffer adverse impacts from these decisions challenge them. The cycle of litigation appears endless, is very expensive, and in the final analysis provides little additional protection to listed species.

The costs resulting from the designation include legal costs, the cost of preparation and publication of the designation, the analysis of the economic effects and the cost of requesting and responding to public comment, and in some cases the costs of compliance with National Environmental Policy Act (NEPA), all are part of the cost of critical habitat designation. These costs result in minimal benefits to the species that is not already afforded by the protections of the Act enumerated earlier, and they directly reduce the funds available for direct and tangible conservation actions.

Please see the prior final rule designating critical habitat for the Riverside fairy shrimp (66 FR 29384;

May 30, 2001), which was subsequently vacated, and the Recovery Plan for the Vernal Pools of Southern California (Service 1998) for a general discussion of the biology of this species and vernal pools ecosystems.

Status and Distribution

Prior to the discovery of the Santa Rosa Plateau fairy shrimp and new findings of Riverside fairy shrimp, the Riverside fairy shrimp was believed to have the most restricted distribution of endemic California fairy shrimp (Eng *et al.* 1990, Simovich and Fugate 1992). The range of this species is still among the most limited and includes Ventura, Los Angeles, Orange, San Diego, and Riverside Counties in southern California, and Bajamar in Baja California, Mexico (Brown *et al.* 1993; Service 1998). With the exception of the Riverside County populations, and the population at Cruzan Mesa in Los Angeles County, all populations are within approximately 15 miles (mi) (24 kilometers (km)) of the coast. The U.S. populations of Riverside fairy shrimp range over a north-south distance of approximately 125 mi (200 km).

The known populations of Riverside fairy shrimp can be categorized into core population areas and isolated populations. The core population areas are defined by multiple pools or pool complexes containing Riverside fairy shrimp that are within close proximity (approximately 5 mi (8 km)) of other occupied pools and pool complexes. Isolated populations are defined by single pools or pool complexes known to contain Riverside fairy shrimp that are separated from other known locations by greater than 10 mi (16 km). There are four core population areas and seven isolated populations. The core population areas are located in the Orange County Foothills, Western Riverside County, the southern coastal portion of Camp Pendleton in San Diego County, and Otay Mesa in San Diego County. Isolated populations are found near the City of Moorpark in Ventura County, near the City of Santa Clarita on Cruzan Mesa and at Los Angeles International Airport in Los Angeles County, at March Air Reserve Base (ARB) and near the City of Banning in Riverside County, and in the City of Carlsbad and on Marine Corps Air Station (MCAS) Miramar in San Diego County.

In Ventura County, Riverside fairy shrimp occur within a single large pool in a grassland area at Carlsberg Ranch. Recently, urban development adjacent to this pool appears to have affected the pool's hydrology (Rick Farris, U.S. Fish

and Wildlife Service, personal communication 2003).

In Los Angeles County, the species occurs at the Los Angeles International Airport and Cruzan Mesa. Habitat at the Los Angeles International Airport has been impacted by occasional scraping and draining of pooling areas; however, viable Riverside fairy shrimp cysts persist (U.S. Federal Aviation Administration *et al.* 2003). At Cruzan Mesa, upland vegetation associated with the two occupied pools may have recently been removed, which could result in siltation of these pools (Rick Farris, U.S. Fish and Wildlife Service, personal communication 2003). In the Spring of 2003, a limited number of fairy shrimp cysts likely to be Riverside fairy shrimp were found at Madrona Marsh in the City of Torrance; however, these cysts have not yet been identified conclusively to the species level. Ongoing work is being done in the area to determine if there is a population of Riverside fairy shrimp at Madrona Marsh.

Vernal pools occupied by Riverside fairy shrimp in Orange County occur at the former MCAS El Toro, Edison Viejo Conservation Bank, Saddleback Meadows, O'Neill Regional Park, Live Oak Plaza, Tijeras Creek, Chiquita Ridge, and Radio Tower Road. The Orange County populations of the species occur primarily within vernal pools formed by depressions in slumping earth or impounded ephemeral streams (Riefner and Pryor 1996). Many of these pools have been affected by grazing and urban development (Service 2001). These vernal pool complexes form a chain of pools along the Orange County Foothills. At the south end of this chain is a pool located on the agricultural lease land of Camp Pendleton, and at the north end is the pool on the former MCAS, El Toro.

In Riverside County, there are seven naturally occurring populations, one created population, and a proposed creation of habitat for Riverside fairy shrimp, all of which are located within the planning area for the Western Riverside County MSHCP. The naturally occurring locations are the Banning Pool, the vernal pools on March ARB, the Australia Pool in the Lake Elsinore Back Basin, the Schlinger Pool, the Clayton Ranch Pools (slated for relocation in Fiscal Year 2004–2005), the Scott Road Pool, and the Skunk Hollow Pool and the Field Pool. An artificial vernal pool complex has been created at Johnson Ranch to offset the impacts to a population of Riverside fairy shrimp by the Redhawk Development. Another artificial vernal

pool creation is planned on the Clayton Ranch project to offset the taking of Riverside fairy shrimp in the Clayton Ranch Pool mentioned above. Riverside County populations represent the most inland extent of the species' range (Eriksen and Belk 1999). The type locality for the species was located within Riverside County, but has since been extirpated (Eriksen 1988). There were also two pools known to contain Riverside fairy shrimp on, or near, Tribal lands of Pechanga Band of Luiseno Indians, however, the current status of these pools is unknown.

In San Diego County, there are vernal pools that contain Riverside fairy shrimp in the coastal regions of the County. In north coastal San Diego County, the Riverside fairy shrimp occurs in vernal pools on Camp Pendleton and in a pool in the City of Carlsbad. On Camp Pendleton, the Riverside fairy shrimp locations are concentrated in the south coastal section of the base near Interstate 5 (Recon 2001) and a single slump pool, mentioned above, on the northern portion of the base on land leased to the State of California (Michael Brandman Associates 1998). The pools on Camp Pendleton near Interstate 5 occur in an area used for training exercises (Moeur 1998). The pool complex containing Riverside fairy shrimp in Carlsbad is conserved, but it is surrounded by urban development. In central San Diego County, there is a single occupied pool on MCAS, Miramar east of Interstate 15. In southern San Diego County, the species occurs in several pool complexes on Otay Mesa near the U.S./Mexico border. There has been significant work done to restore and enhance vernal pools for listed species, including the Riverside fairy shrimp, at three sites on Otay Mesa; The Cal Terraces site, Otay High School site, and the Arnie's Point site. Other occupied pools on Otay Mesa are threatened by off-road vehicle activity and urban development (Bauder and McMillan 1998; The Environmental Trust 2003).

The Riverside fairy shrimp faces threats throughout its range. These threats can be divided into three major categories: (1) Direct destruction of vernal pools and vernal pool habitat as a result of construction, vehicle traffic, domestic animal grazing, dumping, and deep plowing; (2) indirect threats which degrade or destroy vernal pools and vernal pool habitat over time including altered hydrology (e.g., damming or draining), invasion of alien species, habitat fragmentation, and associated deleterious effects resulting from adjoining urban land uses; and (3) long-term threats including the effect of

isolation on genetic diversity and locally adapted genotypes, air and water pollution, climatic variations, and changes in nutrient availability (Bauder 1986; Service 1993).

Previous Federal Actions

Please see the prior final rule designating critical habitat for the Riverside fairy shrimp for a description of previous Federal actions through May 2001 (66 FR 29384; May 30, 2001). For the reasons outlined in that rule, we have determined that the designation of critical habitat for the Riverside fairy shrimp is prudent.

On November 6, 2001, the Building Industry Legal Defense Foundation, Foothill/Eastern Transportation Corridor Agency, National Association of Home Builders, California Building Industry Association, and Building Industry Association of San Diego County filed a lawsuit in the United States District Court for the District of Columbia challenging the designation of Riverside fairy shrimp critical habitat and alleging errors in our promulgation of the final rule. On March 13, 2002, the Court granted the request of the Center for Biological Diversity, Inc. and Defenders of Wildlife, Inc. to intervene as defendants in the case. We requested a voluntary remand, and on October 30, 2002, the Court vacated the designation and ordered the Service to publish a new final rule with respect to the designation of critical habitat for the Riverside fairy shrimp (*Building Industry Legal Defense Foundation, et al., v. Gale Norton, Secretary of the Interior, et al., and Center for Biological Diversity, Inc. and Defenders of Wildlife, Inc.* Civil Action No. 01–2311 (JDB) (U.S. District Court, District of Columbia)).

Critical Habitat

Please see the prior final rule designating critical habitat for the Riverside fairy shrimp for a general discussion on sections 3, 4, and 7 of the Act and our policy in relation to critical habitat (66 FR 29384; May 30, 2001).

Criteria for Defining Essential Habitat

The Recovery Plan for Vernal Pools of Southern California (Recovery Plan) (Service 1998) outlines areas essential to the conservation of six species, including the Riverside fairy shrimp. The Recovery Plan details the steps that are necessary to stabilize the decline of these species and steps necessary to recover these species to the point where protection under the Act is no longer required. These steps are essential for the conservation of the Riverside fairy shrimp.

The Recovery Plan uses Management Areas to define regional conservation needs. We have used these same Management Areas to assist us in identifying specific areas essential to the conservation of the species. The Recovery Plan identified vernal pool complexes essential for the conservation of the Riverside fairy shrimp. Following the publication of the Recovery Plan, additional populations essential to the conservation of the Riverside fairy shrimp have been located.

The Riverside fairy shrimp has a narrow geographic distribution. Within its range, the species has specialized habitat requirements. The Riverside fairy shrimp requires vernal pools or ephemeral ponds that pool for several months of each year but also have a dry period. These pools do not naturally occur in great abundance, and in recent years, this type of wetland has been degraded and lost to off-road vehicles, grazing, farming, and development.

In this critical habitat proposal we have identified areas that are essential to the conservation of Riverside fairy shrimp. Both core and isolated populations are essential for conservation of a species of limited numbers and distribution (Gilpin and Soulé 1986; Lesica and Allendorf 1995; Lande 1999). We have determined that all of the known locations of Riverside fairy shrimp are essential to the conservation of the species. There are four areas with core population areas of Riverside fairy shrimp occurrences. These areas are defined by complexes of vernal pools or ephemeral ponds that are within 5 mi (8 km) of one another. These occurrences are essential as source populations for this species.

In addition to the core population areas, there are seven outlying or isolated occurrences of the Riverside fairy shrimp. These occurrences may represent unique populations of the Riverside fairy shrimp. Each of these isolated occurrences is greater than 10 mi (16 km) from the other known Riverside fairy shrimp locations. These populations may have genetic characteristics that will allow the species to adapt to changing environmental conditions and give the species an opportunity to colonize or re-colonize potential habitat, therefore, they are essential to the overall long-term conservation of the species (*i.e.*, they may be genetically different from more centrally located populations) (Gilpin and Soulé 1986; Lesica and Allendorf 1995). The specific essential habitat is explained in greater detail below in the Unit Descriptions.

Primary Constituent Elements

In accordance with section 3(5)(A)(i) of the Act and regulations at 50 CFR 424.12, in determining which areas to designate as critical habitat, we consider those physical and biological features (primary constituent elements) that are essential to the conservation of the species, and that may require special management considerations or protection. These features are used for all listed species and include, but are not limited to: space for individual and population growth and for normal behavior; food, water, or other nutritional or physiological requirements; cover or shelter; sites for breeding and reproduction; and habitats that are protected from disturbance or are representative of the historic and geographical and ecological distributions of a species.

The specific biological and physical features, otherwise referred to as the primary constituent elements, which comprise Riverside fairy shrimp habitat are based on specific components that provide for the essential biological components of the species as described below.

Space for Individual and Population Growth, and for Normal Behavior

Riverside fairy shrimp are found in vernal pools and ephemeral wetlands that range in size and quality. Some pools, such as the smaller pools on Marine Corps Base, Camp Pendleton, have a surface area of only 300–500 square feet (approximately 30 to 50 square meters) when filled. Other pools that support Riverside fairy shrimp are large when compared to the majority of southern California's vernal pools. For example, the vernal pool at Skunk Hollow has a surface area of approximately 33 ac (13 ha). Further, the associated watersheds of the vernal pools that support Riverside fairy shrimp vary significantly in size. The watershed associated with smaller pools in southern California may only be on the order of a few acres, whereas the watershed associated with the Skunk Hollow pool in western Riverside County is greater than 125 ac (50 ha).

Vernal pools generally occur in complexes. Vernal pool complexes are defined by two or more ephemeral or vernal pools in a larger watershed basin with adjacent upland habitat that together form a matrix of physical and ecological processes. To maintain high-quality vernal pool ecosystems, all components of the matrix must be available and functioning (Service 1998). Most of the remaining pools that support the Riverside fairy shrimp are

no longer in a pristine or undisturbed state, yet these pools and the associated matrix of upland habitat continue to provide essential biological and physical features necessary for the conservation of this species. In many of these areas it will be possible to improve the conditions for Riverside fairy shrimp; however, irreversible actions that alter the hydrology of vernal pool ecosystems or infringe on the pool basins threaten the survival of this species.

Water and Physiological Requirements

Temperature, water chemistry, and length of time vernal pools are inundated with water are important factors that effect and potentially limit the distribution of the Riverside fairy shrimp. The water in the pools that support Riverside fairy shrimp typically has low total dissolved solids and alkalinity (means of 77 and 65 milligrams per liter (mg/l) or parts per million (ppm), respectively), corroborated by pH at neutral or just below (6.4–7.1) (Eng *et al.* 1990; Gonzalez *et al.* 1996; Eriksen and Belk 1999). Riverside fairy shrimp have been shown to tightly regulate their internal body chemistry for pool environments that have low salinity and low alkalinity (Gonzalez *et al.* 1996). In a laboratory experiment, Riverside fairy shrimp had difficulty regulating their body chemistry in conditions with concentrations of Sodium ion (Na⁺) greater than 60 millimoles per liter (mmol/l) (1,380 mg/l) and did not survive in conditions with concentrations higher than 100 mmol/l (2,300 mg/l) (Gonzalez *et al.* 1996). These same experiments also found that Riverside fairy shrimp could not survive in laboratory environments where external alkalinity was higher than 800 to 1,000 mg/l HCO₃⁻. Riverside fairy shrimp is found in water temperatures ranging between 50 and 77 degrees Fahrenheit (10 and 25 degrees Celsius) (Hathaway and Simovich 1996). Water within pools supporting fairy shrimp may be clear, but more commonly it is moderately turbid (Eriksen and Belk 1999).

Sites for Breeding, Reproduction and Rearing of Offspring

The Riverside fairy shrimp is restricted to a small subset of long-lasting vernal pools and ephemeral wetlands in southern California because this animal takes approximately two months to mature and reproduce (Hathaway and Simovich 1996). In contrast, the San Diego fairy shrimp, another federally endangered fairy shrimp species found in southern

California, can mature and reproduce in less than one month. Most vernal pools in southern California do not pool for a sufficient amount of time to support the Riverside fairy shrimp. Pools that contain Riverside fairy shrimp usually accumulate water to a depth greater than 10 in (25 cm) and some pools that support this species fill to a depth of 5 to 10 feet (1.5 to 3 meters). In the years that Riverside fairy shrimp successfully reproduce, pools fill for 2 to 3 months and some pools have been reported to stay filled for up to 7 months. Riverside fairy shrimp can survive as cysts for multiple years; therefore, it is not necessary for ideal conditions to exist every year for this species to persist.

Vernal pool ecosystems are highly variable in the length of time pools remain filled, and the Riverside fairy shrimp has adapted to these conditions. One indication that Riverside fairy shrimp have adapted to a system where the conditions needed for success occur infrequently is the low percentage of total cysts that hatch each time a pool fills with water. Since only small percentages of Riverside fairy shrimp cysts hatch in any given year, if the pool dries before the species is able to mature and reproduce, there are still many more cysts left in the soil (cyst bank) that may hatch the next time the pool fills (Simovich and Hathaway 1997). Allowing conditions within the above physical parameters to occur on a naturally cyclic basis is essential to the conservation of the Riverside fairy shrimp. Following reproduction, newly produced cysts either fall to the bottom of the pool or are carried in the brood sac of the female until the pool dries or the female dies and sinks to the bottom of the pool (Eriksen and Belk 1999).

Disturbance, Protection, and the Historical Geographical Distributions

The majority of sites currently supporting the Riverside fairy shrimp have experienced disturbance, some more recently than others and some to a greater extent than others. The pools that support Riverside fairy shrimp are generally found in flat or moderately sloping areas. Many of the pools are in grassland habitats. As a consequence, these areas have been vulnerable to agriculture, cattle grazing, and off-road vehicle activity. For example, many of the pools that currently support Riverside fairy shrimp have been artificially deepened in the past by ranchers to provide water for stock animals (Hathaway and Simovich 1996). This species has only been studied since the late 1980s; therefore, the extent of its historical distribution is not well understood. Current estimates suggest

that 90 to 97 percent of vernal pool habitat has been lost in southern California (Mattoni and Longcore 1997; Bauder and McMillan 1998; Keeler-Wolf *et al.* 1998; Service 1998). The conservation and subsequent protection of the few remaining occurrences of Riverside fairy shrimp are essential for its conservation (Service 1998). In some places where the Riverside fairy shrimp is found, such as on the Los Angeles coastal prairie, there were historically larger complexes of vernal pools that no longer exist (Mattoni and Longcore 1997). In other places, like Riverside County, there are multiple locations where the Riverside fairy shrimp may still be found. Because Riverside County has not yet been developed and fragmented to the same extent as Los Angeles County, the Service believes that new occurrences of the Riverside fairy shrimp may still be located in Riverside County.

Pursuant to our regulations, we are required to identify the known physical and biological features, *i.e.*, primary constituent elements, essential to the conservation of the Riverside fairy shrimp, together with a description of any critical habitat that is proposed. In identifying the primary constituent elements, we used the best available scientific and commercial data available. The primary constituent elements determined essential to the conservation of Riverside fairy shrimp are:

1. Small to large pools or pool complexes that have the appropriate temperature, water chemistry, and length of time of inundation with water necessary for Riverside fairy shrimp incubation and reproduction, as well as dry periods necessary to provide the conditions to maintain a dormant and viable cyst bank. Specifically, the conditions necessary to allow for successful reproduction of Riverside fairy shrimp fall within the following ranges:

- a. Moderate to deep depths ranging from 10 in (25 cm) to 5 to 10 ft (1.5 to 3 m);

- b. Ponding inundation that lasts for a minimum length of 2 months and a maximum length of 5 to 8 months, *i.e.*, a sufficient wet period in winter and spring months to allow the Riverside fairy shrimp to hatch, mature, and reproduce, followed by a dry period prior to the next winter and spring rains;

- c. Water temperature that falls within the range of 50 and 77 degrees Fahrenheit (10 and 25 degrees Celsius); and

- d. Water chemistry with low total dissolved solids and alkalinity (means

of 77 and 65 parts per million, respectively), corroborated by pH within a range of 6.4–7.1.

2. Associated watersheds that provide water to fill the pools in the winter and spring months. The size of the associated watershed varies greatly and cannot be generalized and has been assessed on a case-by-case basis. Factors that affect the size of the watershed include surface and underground hydrology, the topography of the area surrounding the pool or pools, the vegetative coverage, and the soil substrate in the area. Watershed sizes designated vary from a few acres to greater than 100 ac (40 ha).

3. Any soil type with a clay component and/or an impermeable surface or subsurface layer known to support vernal pool habitat.

The matrix of vernal pools/ephemeral wetlands, the associated watershed, upland habitats, and underlying soil substrates form hydrological and ecologically functional units. These features and the lands that they represent are essential to the conservation of the Riverside fairy shrimp. All lands identified as essential and proposed as critical habitat contain one or more of the primary constituent elements for the Riverside fairy shrimp.

Special Management Considerations or Protection

As we undertake the process of designating critical habitat for a species, we first evaluate lands defined by those physical and biological features essential to the conservation of the species for inclusion in the designation pursuant to section 3(5)(A) of the Act. Secondly, we then evaluate lands defined by those features to assess whether they may require special management considerations or protection. As discussed throughout this proposed rule, our previous final designation of critical habitat for the Riverside fairy shrimp (66 FR 29384, May 30, 2001) and in our final recovery plan for the species (Service 1998), the Riverside fairy shrimp and its habitat are threatened by a multitude of factors. Threats to those features that define essential habitat (primary constituent elements) are caused by changes in the hydrology of the vernal pools and their associated watersheds; disturbance to the flora, fauna, and soil in and around the vernal pools; and the invasion of exotic plant and animal species into the vernal pool basin. Habitat loss continues to be the greatest threat to Riverside fairy shrimp. It is essential for the survival of this species to protect those features that define the remaining essential habitat, through purchase or

special management plans, from irreversible threats and habitat conversion.

Changes in hydrology which affect vernal pools or pool complexes are caused by activities that alter the topography or change historical water flow patterns in the watershed. Even slight alterations of the hydrology can change the ponding duration of a pool, which in turn can make the habitat unsuitable for Riverside fairy shrimp. Activities that impact the hydrology include but are not limited to road building, grading and earth moving, impounding natural water flows, and draining of the pool(s). Impacts to the hydrology of vernal pools can be managed through avoidance of such activities in and around the pools and the associated watershed.

Disturbance to the flora, fauna, and soil in and around vernal pools that contain Riverside fairy shrimp can impact the long term sustainability of ecosystems used by Riverside fairy shrimp. Physical disturbances to pools are caused by off-road vehicle traffic, military training activities, agricultural activities, and cattle grazing. These impacts can be ameliorated by educating landowners and managers about the location and value of these resources and requesting that they protect these resources.

Invasive exotic plant and animal species impact Riverside fairy shrimp directly and indirectly. Bullfrogs and African clawed frogs have been reported from some of the pools where Riverside fairy shrimp is found. These exotic amphibians may eat Riverside fairy shrimp. Exotic plant species, such as brass-buttons (*Cotula coronopifolia*) and Pacific bentgrass (*Agrostis avenaceae*), compete with native vernal plant species. Conflicts with exotic species can be managed by removal techniques that do not negatively impact the native species in the vernal pools.

Threats to the features that define habitat essential to the conservation of the Riverside fairy shrimp should be assessed for each site. Sites should be protected from activities that negatively alter or destroy vernal pools. An appropriate management and monitoring plan should address these threats. A potential strategy with appropriate guidelines for the conservation of Riverside fairy shrimp has been elaborated in the Recovery Plan for Vernal Pools of Southern California (Service 1998). As such, we believe that within each area proposed for designation as critical habitat the physical and biological features essential for the conservation of the Riverside fairy shrimp may require

some level of management and/or protection to address the current and future threats to the Riverside fairy shrimp and habitat essential to its conservation to ensure the overall recovery of the species.

Methods

In determining areas that are essential to conserve the Riverside fairy shrimp, we used the best scientific and commercial data available. These included data from research and survey observations published in peer-reviewed articles, recovery criteria outlined in the Recovery Plan (Service 1998), regional Geographic Information System (GIS) vegetation, soil, and species coverages (including layers for Ventura, Los Angeles, Orange, Riverside, and San Diego Counties), data compiled in the California Natural Diversity Database (CNDDB), data collected on MCAS, Miramar, and Camp Pendleton, information, data and analysis used to develop regional Habitat Conservation Plans (HCPs), and data collected from reports submitted by biologists holding section 10(a)(1)(A) recovery permits. In addition, information provided in comments on the proposed designation and draft economic analysis will be evaluated and considered in the development of the final designation for Riverside fairy shrimp.

As stated earlier, Riverside fairy shrimp occur in ephemeral pools and ponds that may not be present throughout a given year or from year to year. Proposed critical habitat includes a mosaic of vernal pools, ponds, and depressions currently supporting Riverside fairy shrimp and vernal pool vegetation. The proposed critical habitat also includes the upland areas surrounding these ephemeral wetlands that constitute the microwatersheds for the pools. Vernal pool topography is such that the vernal pool fills directly from rain fall or in other cases the topography is such that the pool forms through the subsurface or overland waterflow from the surrounding watershed. Two specific areas have been included in this critical habitat proposal that occur within the geographical area occupied by the species, but have not had focused surveys for Riverside fairy shrimp conducted in them. One of these areas is in Ventura County at a pool referred to as Southeast Tierra Rejada pool; the other is in Riverside County on Santa Rosa Plateau. Both of these locations are essential to the conservation of the Riverside fairy shrimp because they contain the primary constituent elements and occur in areas where the known occurrences

of Riverside fairy shrimp are extremely limited. Vernal pools at these locations retain water for sufficient amounts of time to allow for the reproduction of Riverside fairy shrimp. These pools also have rare plants that are associated with known locations of Riverside fairy shrimp. The preservation of both of these areas will provide habitat essential to the conservation of Riverside fairy shrimp, and the persistence of healthy populations of Riverside fairy shrimp in these areas is identified in Vernal Pool Recovery Plan.

After all the information about the known occurrences of Riverside fairy shrimp was compiled, we created maps indicating the essential habitat associated with each of the occurrences. We used the information outlined above to aid in this task. The essential habitat was mapped using GIS and refined using topographical and aerial map coverages. To accomplish this, we first identified and mapped vernal pool basins and ephemeral wetlands supporting the Riverside fairy shrimp that contained the primary constituent elements for the species. Next, based on topographic features such as ridges, mima mounds, and elevational gradients or slopes, the essential watershed associated with the vernal pool basins and ephemeral wetlands that also contained the primary constituent elements for the Riverside fairy shrimp were then mapped. The combined extent of these mapped areas was defined as the essential habitat for the Riverside fairy shrimp. Whenever possible, areas not containing the primary constituent elements, such as developed areas or open water, were not included in the boundaries of proposed critical habitat. However, our smallest unit of mapping is a 100-meter square, so it was not always possible to avoid these areas.

After creating a GIS coverage of the essential areas, we described the boundaries of the essential areas using a 100-meter grid to establish Universal Transverse Mercator (UTM) North American Datum 27 (NAD 27). The areas were then analyzed with respect to sections 4(a)(3), and 4(b)(2) of the Act, and any applicable and appropriate exclusions were made. The remaining essential areas are the proposed critical habitat. The essential areas, an elaboration on exclusions, and the specific areas proposed for critical habitat are described below. The proposed designation of critical habitat is presented as six different habitat units.

Relationship to Section 4(b)(2) of the Act

Section 4(b)(2) of the Act states that critical habitat shall be designated, and revised, on the basis of the best available scientific data available after taking into consideration the economic impact, the effect on national security, and any other relevant impact of specifying any particular area as critical habitat. An area may be excluded from critical habitat if we determine, following an analysis, that the benefits of such exclusion outweigh the benefits of specifying a particular area as critical habitat, unless the failure to designate such area as critical habitat will result in the extinction of the species. Consequently, we may exclude an area from designated critical habitat based on economic impacts, the effect on national security, or other relevant impacts such as preservation of conservation partnerships, if we determine that the benefits of excluding an area from critical habitat outweigh the benefits of including the area in critical habitat, provided the action of excluding the area will not result in the extinction of the species.

In our critical habitat designations, we have used the provisions outlined in section 4(b)(2) of the Act to evaluate those specific areas that are proposed for designation as critical habitat and those areas which are subsequently finalized (*i.e.*, designated). We have applied the provisions of this section of the Act to lands essential to the conservation of the subject species to evaluate them and either exclude them from final critical habitat or not include them in proposed critical habitat. Lands which we have either excluded from or

not included in critical habitat based on those provisions include those covered by: (1) Legally operative HCPs that cover the species and provide assurances that the conservation measures for the species will be implemented and effective; (2) draft HCPs that cover the species, have undergone public review and comment, and provide assurances that the conservation measures for the species will be implemented and effective (*i.e.*, pending HCPs); (3) Tribal conservation plans that cover the species and provide assurances that the conservation measures for the species will be implemented and effective; (4) State conservation plans that provide assurances that the conservation measures for the species will be implemented and effective; and (5) Service National Wildlife Refuge System Comprehensive Conservation Plans that provide assurances that the conservation measures for the species will be implemented and effective.

Relationship of Critical Habitat to Approved Habitat Conservation Plans Regional HCPs

As described above, section 4(b)(2) of the Act requires us to consider other relevant impacts, in addition to economic and national security impacts, when designating critical habitat. Section 10(a)(1)(B) of the Act authorizes us to issue permits for the take of listed wildlife species incidental to otherwise lawful activities. Development of an HCP is a prerequisite for the issuance of an incidental take permit pursuant to section 10(a)(1)(B) of the Act. An incidental take permit application must be supported by an HCP that identifies conservation measures that the

permittee agrees to implement for the species to minimize and mitigate the impacts of the permitted incidental take.

HCPs vary in size and may provide for incidental take coverage and conservation management for one or many federally listed species. Additionally, more than one applicant may participate in the development and implementation of an HCP. Some areas occupied by the Riverside fairy shrimp involve complex HCPs that address multiple species, cover large areas, and have many participating permittees. Large regional HCPs expand upon the basic requirements set forth in section 10(a)(1)(B) of the Act because they reflect a voluntary, cooperative approach to large-scale habitat and species conservation planning. Many of the large regional HCPs in southern California have been, or are being, developed to provide for the conservation of numerous federally listed species and unlisted sensitive species and the habitat that provides for their biological needs. These HCPs address impacts in a planning area and create a preserve design within the planning area. Over time, areas in the planning area are developed according to the HCP, and the area within the preserve is acquired, managed, and monitored. These HCPs are designed to implement conservation actions to address future projects that are anticipated to occur within the planning area of the HCP, in order to reduce delays in the permitting process. The amount of land in the planning area and preserves for the HCPs in the vicinity of known Riverside fairy shrimp occurrences are presented in Table 1.

TABLE 1.—HABITAT CONSERVATION PLANS (HCPs) AREAS WITHIN THE GENERAL AREA OF THE PROPOSED CRITICAL HABITAT

HCP	Planning area	Preserve area
San Diego Multiple Species Conservation Program (MSCP)	582,000 ac (236,000 ha)	171,000 ac (69,573 ha)
Central-Coastal Orange County NCCP/HCP	208,713 ac (84,463 ha)	38,738 ac (15,677 ha)
Proposed Northwestern San Diego Multiple Habitat Conservation Program (MHCP)	111,908 ac (45,287 ha)	19,928 ac (8,064 ha)
Proposed Southern Subregion NCCP/HCP Orange County	128,000 ac (51,800 ha)	14,000 ac (5,666 ha)
Proposed Western Riverside Multiple Species Habitat Conservation Plan (MSHCP)	1.3 million ac (530,000 ha)	153,000 ac (61,919 ha)

In the case of approved regional HCPs (*e.g.*, those sponsored by cities, counties or other local jurisdictions) that provide for incidental take coverage for the Riverside fairy shrimp, a primary goal is to provide for the protection and management of habitat essential for the conservation of the species while directing development to nonessential areas. The regional HCP development

process provides an opportunity for more intensive data collection and analysis regarding the use of particular habitat areas by the Riverside fairy shrimp. The process also enables us to construct a system habitat that provides for the biological needs and long-term conservation of the species. Completed HCPs and their accompanying Implementing

Agreements (IA) contain management measures and protections for identified preserve areas that protect, restore, and enhance the value of these lands as habitat for the Riverside fairy shrimp. These measures include explicit standards to minimize any impacts to the covered species and its habitat. In general, HCPs are designed to ensure that the value of the conservation lands

are maintained, expanded, and improved for the species that they cover.

In approving these HCPs, the Service has provided assurances to permit holders that once the protection and management required under the plans are in place and for as long as the permit holders are fulfilling their obligations under the plans, no additional mitigation in the form of land or financial compensation will be required of the permit holders and, in some cases, specified third parties. Similar assurances will be extended to future permit holders in accordance with the Service's HCP Assurance ("No Surprises") rule codified at 50 CFR 17.22(b)(5) and (6) and 17.32(b)(5) and (6).

Portions of two proposed critical habitat units (Units 2 and 5) warrant exclusion from the proposed designation of critical habitat under section 4(b)(2) of the Act based on the special management considerations and protections afforded the Riverside fairy shrimp habitat through approved and legally operative HCPs or NCCP/HCPs. We believe that in most instances, the benefits of excluding legally operative HCPs from the proposed critical habitat designations will outweigh the benefits of including them. The following represents our rationale for excluding portions of Units 2 and 5 from the proposed critical habitat.

A single subunit of Unit 2 is excluded from proposed critical habitat because it is within the Central-Coastal NCCP/HCP in Orange County. The Central-Coastal NCCP/HCP in Orange County was developed in cooperation with numerous local and State jurisdictions and agencies and participating landowners, including the cities of Anaheim, Costa Mesa, Irvine, Orange, San Juan Capistrano; Southern California Edison; Transportation Corridor Agencies; The Irvine Company; California Department of Parks and Recreation; Metropolitan Water District of Southern California; and the County of Orange. Approved in 1996, the Central-Coastal NCCP/HCP provides for the establishment of approximately 38,738 ac (15,677 ha) of reserve lands for 39 Federal- or State-listed and unlisted sensitive species within the 208,713 ac (84,463 ha) planning area. We issued an incidental take permit under section 10(a)(1)(B) of the Act that provides conditional incidental take authorization for the Riverside fairy shrimp for all areas within the Central-Coastal Subregion except the North Ranch Policy Plan area.

Portions of Unit 5 are excluded from proposed critical habitat because they

are within the San Diego MSCP in southwestern San Diego County. The San Diego MSCP effort encompasses more than 582,000 ac (236,000 ha) and reflects the cooperative efforts of the local jurisdictions, the State, the building industry, and environmentalists. The San Diego MSCP provides for the establishment over the permit term of approximately 171,000 ac (69,573 ha) of preserve areas to provide conservation benefits for 85 federally listed and sensitive species. The San Diego MSCP and its approved subarea plans provide measures to conserve known Riverside fairy shrimp populations on Otay Mesa. In addition, surveys for Riverside fairy shrimp are required in suitable habitat (*i.e.*, vernal pools, ephemeral wetlands, and seasonally ponded areas). These lands are to be permanently maintained and managed for the benefit of the Riverside fairy shrimp and other covered species; however, "take" of Riverside fairy shrimp is not included in the MSCP 10(a)(1)(B) permit. The eastern portion of Otay Mesa includes Major and Minor Amendment Areas. These areas require a special permitting process; therefore, we included them in this critical habitat proposal.

There are currently several other regional NCCP/HCP efforts under way in southern California that have not yet been completed but which, upon approval, will provide conservation benefits to the Riverside fairy shrimp (see Table 1). Lands within these HCPs, which are in various stages of formulation, are not excluded from consideration for proposed critical habitat. The Multiple Habitat Conservation Program (MHCP) in northwestern San Diego County encompasses approximately 112,000 ac (45,324 ha) within the study area. Currently, seven cities are participating in the development of the MHCP. Coverage for the Riverside fairy shrimp has not yet been determined for this plan and, therefore, we propose critical habitat within the planning area. In addition, the majority of vernal pool habitat supporting Riverside fairy shrimp in the planning area is located on land owned by the North County Transit District. The proposed Southern Subregion NCCP/HCP in Orange County encompasses approximately 128,000 ac (51,799 ha) in its planning area. Jurisdictions and private landowners within the study area include the cities of Rancho Santa Margarita, Mission Viejo, San Juan Capistrano, San Clemente, and Rancho Mission Viejo. The Riverside fairy shrimp is being proposed as one of the species covered

under this plan. The early versions of this plan convey the importance of conservation of all known occurrences of the Riverside fairy shrimp. The Western Riverside MSHCP is addressed in a separate discussion because the plan is in its final stages of completion.

(1) Benefits of Inclusion

The principal benefit of any designated critical habitat is that federally funded or authorized activities in such habitat may require consultation under section 7 of the Act. Such consultation would ensure that adequate protection is provided to avoid adverse modification of critical habitat. Where HCPs are in place, our experience indicates that this benefit is small or nonexistent. Currently approved and permitted HCPs and NCCP/HCPs are designed to ensure the long-term survival of covered species within the plan area. In an approved HCP or NCCP/HCP, lands that we ordinarily would define as critical habitat for covered species will normally be protected in reserves and other conservation lands by the terms of the HCP or NCCP/HCP and its Implementing Agreement (IA). These HCPs or NCCP/HCPs and IAs include management measures and protections for conservation lands designed to protect, restore, and enhance their value as habitat for covered species and thus provide benefits to the species well in excess of those that would result from a critical habitat designation.

(2) Benefits of Exclusion

The benefits of excluding lands within HCPs from critical habitat designation include carrying out the assurances provided by the Service to landowners, communities, and counties in return for their voluntary adoption of the HCP, including relieving them of the additional regulatory burden that might be imposed by critical habitat. Many HCPs, particularly large regional HCPs, take many years to develop and, upon completion, become regional conservation plans that are consistent with the recovery objectives for listed species that are covered within the plan area. Additionally, many of these HCPs provide conservation benefits to unlisted, sensitive species. Imposing an additional regulatory review after an HCP is completed solely as a result of the designation of critical habitat may undermine conservation efforts and partnerships in many areas. In fact, it could result in the loss of species' benefits if participants abandon the voluntary HCP process because it may result in an additional regulatory burden requiring more of them than of

other parties who have not voluntarily participated in species conservation. Designation of critical habitat within the boundaries of approved HCPs it is likely to be viewed as a disincentive to those entities currently developing HCPs or contemplating them in the future.

A related benefit of excluding lands within HCPs from critical habitat designation is the unhindered, continued ability to seek new partnerships with future HCP 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. If lands within HCP plan areas are designated as critical habitat, it would likely have a negative effect on our ability to establish new partnerships to develop HCPs. By preemptively excluding these lands, we preserve our current partnerships and encourage additional conservation actions in the future.

Furthermore, an HCP or NCCP/HCP application must itself be consulted upon. While this consultation will not look specifically at the issue of adverse modification to critical habitat, unless critical habitat has already been designated within the proposed plan area, it will determine if the HCP jeopardizes the species in the plan area. In addition, Federal actions not covered by the HCP in areas occupied by listed species would still require consultation under section 7 of the Act. HCPs and NCCP/HCPs typically provide for greater conservation benefits to a covered species than section 7 consultations because HCPs and NCCP/HCPs assure the long-term protection and management of a covered species and its habitat, and funding for such management through the standards found in the 5 Point Policy for HCPs (64 FR 35242) and the HCP "No Surprises" regulation (63 FR 8859). Such assurances are typically not provided by section 7 consultations which, in accordance with the provisions of the Act, are limited to requiring that the specific action being consulted upon not jeopardize the continued existence of the species. Thus, a consultation typically does not accord the lands it covers the extensive benefits an HCP or NCCP/HCP provides. The development and implementation of HCPs or NCCP/HCPs provide other important conservation benefits, including the development of biological information to guide the conservation efforts and assist in species conservation, and the creation of innovative solutions to conserve species while allowing for development.

(3) Benefits of Exclusion Outweigh the Benefits of Inclusion

We have reviewed and evaluated HCPs and NCCP/HCPs currently approved and implemented within the areas being proposed as critical habitat for the Riverside fairy shrimp. Based on this evaluation, we find that the benefits of exclusion outweigh the benefits of proposing portions of Units 2 and 6 as critical habitat.

The San Diego MSCP in southwestern San Diego County and the Central-Coastal NCCP/HCP in Orange County include the Riverside fairy shrimp as a covered species. These HCP and NCCP/HCPs provide protection for the Riverside fairy shrimp and its associated habitat in perpetuity, although, in the San Diego MSCP, "take" of the Riverside fairy shrimp is handled through separate Section 7 consultations or HCP. The exclusion of these lands from critical habitat will help preserve the partnerships that we have developed with the local jurisdiction and project proponent in the development of the HCP and NCCP/HCP. The educational benefits of critical habitat, including informing the public of areas that are essential for the long-term survival and conservation of the species, is still accomplished from material provided on our website and through public notice and comment procedures required to establish an HCP or NCCP/HCP. The public has also been informed through the public participation that occurs in the development of many regional HCPs or NCCP/HCPs. For these reasons, we believe that proposing critical habitat has little benefit in areas covered by HCPs, provided that the HCP or NCCP/HCP specifically and adequately covers the species for which critical habitat is being proposed. We do not believe that this exclusion would result in the extinction of the species because the essential habitat within these two HCPs will ostensibly be conserved.

Relationship of Critical Habitat to the Draft Western Riverside Multiple Species Habitat Conservation Plan (MSHCP)

The Draft Western Riverside Multiple Species Habitat Conservation Plan (MSHCP) has been in development from 1993 to the present. Participants in this HCP include 14 cities; the County of Riverside, including the Riverside County Flood Control and Water Conservation Agency, Riverside County Transportation Commission, Riverside County Parks and Open Space District, Riverside County Waste Department; the California Department of Parks and

Recreation; and the California Department of Transportation. The Western Riverside MSHCP is also being proposed as a subregional plan under the State's NCCP and is being developed in cooperation with the California Department of Fish and Game. Within the 1,260,000 ac (510,000 ha) planning area of the MSHCP, approximately 153,000 ac (62,000 ha) of diverse habitats are proposed for sole conservation uses. The proposed conservation of 153,000 ac (62,000 ha) will complement other existing natural and open space areas (e.g., State Parks, Forest Service, and County Park Lands).

The County of Riverside and the participating jurisdictions have signaled their sustained support for the Western Riverside MSHCP as evidenced by the November 5, 2002, passage of a local bond measure to fund the acquisition of land in support of the MSHCP. On November 15, 2002, a Notice of Availability of a Draft Environmental Impact Report (EIS/EIR) and Receipt of an Application for an Incidental Take Permit was published in the **Federal Register** (67 FR 69236). Public comment on these documents was accepted until January 14, 2003. Subsequently, on June 17, 2003, the County of Riverside Board of Supervisors voted unanimously to support the completion of the Western Riverside MSHCP.

Conservation actions within Western Riverside MSHCP planning area will be implemented to promote the long-term conservation of the Riverside fairy shrimp. Although the MSHCP is not yet completed and implemented, significant progress has been achieved in the development of this HCP, including the circulation of the final EIS/EIR, the solicitation of public review and comment, and intra-Service section 7 consultation has been initiated for the issuance of incidental take permit for those species identified for coverage within the draft plan. We are proposing to exclude portions of essential habitat in Riverside County from proposed critical habitat pursuant to section 4(b)(2) of the Act because they are within the planning area boundary for the proposed Western Riverside MSHCP. We are proposing portions of Unit 3 on Federal lands within the planning area boundary of the Western Riverside MSHCP as critical habitat because the activities of Federal agencies are not covered under a section 10(a)(1)(B) permit. Our analysis for excluding portions of Units 3 from proposed critical habitat has been outlined below.

(1) Benefits of Inclusion

As stated previously, the benefits of designating critical habitat on lands within the boundaries of approved HCPs are small. The principal benefit of designating critical habitat is that federally authorized or funded activities that may affect a species' critical habitat would require consultation with us under section 7 of the Act which can prevent adverse modification or destruction of the habitat, but cannot compel positive management or restoration of the habitat for the benefit of the species. In the case of the proposed Western Riverside MSHCP, we must evaluate the impact of the plan on the species for which the participants are seeking incidental take permits, pursuant to section 7 of the Act.

(2) Benefits of Exclusion

Where HCPs are in place, the HCPs and their Implementing Agreements (IAs) include management measures and protections designed to protect, restore, monitor, manage, and enhance the habitat to benefit the conservation of the species. This includes actions for the Riverside fairy shrimp. The Western Riverside MSHCP seeks to accomplish these goals for the Riverside fairy shrimp through the implementation of species-specific conservation objectives. Excluding lands within Unit 3 from the proposed critical habitat will provide several benefits, as follows: (1) exclusion of the lands from the final designation will allow us to continue working with the participants in a spirit of cooperation and partnership; (2) other jurisdictions, private landowners, and other entities will see the benefit of working cooperatively with us to develop HCPs, which will provide the basis for future opportunities to conserve species and their essential habitat.

(3) Benefits of Exclusion Outweigh the Benefits of Inclusion

We believe the analysis conducted to evaluate the benefits of excluding HCPs from critical habitat versus the benefits of including these lands, which was previously discussed for the exclusion of approved HCPs, is applicable and appropriate for the exclusion of HCPs that are in the final permit decision phase, such as the Western Riverside MSHCP. In the event that the Service does not grant coverage for this species under the Western Riverside MSHCP, we will include the areas essential to the conservation of the Riverside fairy shrimp in Unit 3 in the final designation of Critical Habitat. The exclusion of the

essential habitat in the Western Riverside MSHCP will not result in the extinction of the Riverside fairy shrimp because measures included within the MSHCP protect and manage areas of long-term conservation value for the Riverside fairy shrimp.

Relationship to Department of Defense Lands

The Sikes Act Improvements Act of 1997 (Sikes Act) requires each military installation that includes land and water suitable for the conservation and management of natural resources to complete, by November 17, 2001, an Integrated Natural Resources Management Plan (INRMP). An INRMP integrates implementation of the military mission of the installation with stewardship of the natural resources found there. Each INRMP includes an assessment of the ecological needs on the installation, including needs to provide for the conservation of listed species; a statement of goals and priorities; a detailed description of management actions to be implemented to provide for these ecological needs; and a monitoring and adaptive management plan. We consult with the military on the development and implementation of INRMPs for installations with listed species.

Section 318 of the Fiscal Year 2004 National Defense Authorization Act (Pub. L. 108-136) amended section 4(a)(3) of the Act to address the relationship of INRMPs to critical habitat. MCAS Miramar has an INRMP in place that provides a benefit for the Riverside fairy shrimp. Camp Pendleton has an INRMP in place that provides a framework for managing natural resources. MCAS El Toro is no longer owned by the Department of Defense and March Air Reserve Base (March ARB) has not yet completed an INRMP. Lands essential to the conservation of the Riverside fairy shrimp on those installations are proposed as critical habitat.

Marine Corps Air Station Miramar

MCAS Miramar completed a final INRMP in May 2000 that provides a benefit to the Riverside fairy shrimp. The INRMP is legally operative and is being implemented. The INRMP identifies sensitive natural resources on the installation and discusses the management and conservation of these areas. MCAS Miramar has identified management areas with different resource conservation requirements and management concerns, and identifies them with five separate levels that correspond to their sensitivity. The majority of vernal pools and habitats

that support vernal pool species, including the single known occurrence of Riverside fairy shrimp, are located in "Level I Management Areas (MAs)." Preventing damage to vernal pool resources is the highest conservation priority in Management Areas with the "Level I" designation. The conservation of vernal pools in this MA is achieved through education of base personnel, proactive measures to avoid accidental impacts, and maintenance of an updated inventory of vernal pool basins and the associated vernal pool watersheds.

Since the completion of MCAS Miramar's INRMP, the Service has received reports on Miramar's vernal pool monitoring and restoration program and correspondence detailing the installation's expenditures on the objectives outlined in its INRMP. MCAS Miramar continues to monitor and manage its vernal pool resources; programs include a study in progress on the effects of fire on vernal pool resources, vernal pool mapping and species surveys, and a study of Pacific bentgrass (*Agrostis avenaceae*), an invasive exotic grass found in some vernal pools on the base. During a recent visit to the Riverside fairy shrimp site at MCAS Miramar, natural resources staff indicated that the station has no plans for changes in land use or future developments that would affect the site (D. Boyer, personal communication 2003b). We believe this INRMP benefits this species. The pooling area on MCAS Miramar which supports Riverside fairy shrimp is considered essential for the conservation of this species. This occurrence is included in the Recovery Plan for the Vernal Pools of Southern California with the San Diego County Central Coastal Management Area. In accordance with the amended section 4(a)(3) of the Act, these lands that are essential to the conservation of the Riverside fairy shrimp on MCAS Miramar have not been included in the proposed designation of critical habitat for the species.

Marine Corps Base Camp Pendleton

Under 4(b)(2) of the Act, we have considered the effect of a critical habitat designation on national security. We are, therefore, not proposing critical habitat on "mission-critical" training areas on Camp Pendleton. In this proposal we refer areas designated as training areas on maps created by MCB, Camp Pendleton as "mission-critical" training areas. Camp Pendleton operates an amphibious training base that promotes the combat readiness of military forces and is the only west coast Marine Corps facility where amphibious operations can be combined

with air, sea, and ground assault training activities year-round. Currently, the Marine Corps has no alternative installation available for the types of training that occur on Camp Pendleton.

The Marine Corps consults with us under section 7 of the Act for activities that may affect federally threatened or endangered species on Camp Pendleton. On March 30, 2000, at the request of the Marine Corps, we initiated a formal consultation regarding their activities on upland areas of Camp Pendleton. The consultation covers approximately 150,000 ac (60,703 ha) of land within the upland areas of Camp Pendleton, including combat readiness operations, air operations, vehicle operations, facility maintenance and operations, fire management, recreation activities, and housing. The upland consultation that addresses vernal pool habitat, the Riverside fairy shrimp, and other species is not yet complete. We are currently working cooperatively with Camp Pendleton to facilitate the completion of this upland consultation.

In order to continue its critical training mission pending completion of the consultation, the Marine Corps has implemented measures it believes will avoid jeopardy to the continued existence of the Riverside fairy shrimp and other listed species within the uplands area and comply with section 7(d) of the Act. In particular, the Marine Corps is implementing a set of "programmatic instructions" to avoid adverse effects to the Riverside fairy shrimp.

Critical habitat is being proposed for the Riverside fairy shrimp on some areas of Camp Pendleton that are not considered "mission-critical" training areas or are leased to the State of California. Areas proposed as critical habitat for the Riverside fairy shrimp on Camp Pendleton meet the definition of critical habitat in that they contain those primary constituent elements that are essential to the conservation of the species and that may require special management or protection. Based upon our examination of whether Camp Pendleton's INRMP addresses the species, the lands not leased to the State of California may be excluded in the final rule under the section 4(a)(3) of the Act, as amended by provisions referenced above.

(1) Benefits of Inclusion

The primary benefit of proposing critical habitat is to identify lands essential to the conservation of the

species which, if critical habitat was designated, would require consultation with us to ensure activities would not adversely modify critical habitat or jeopardize the continued existence of the species. We are already in formal consultation with the Marine Corps on its upland activities to ensure that current and proposed actions will not jeopardize the species' continued existence. Therefore, we do not believe that designation of "mission-critical" training areas on Camp Pendleton as critical habitat will appreciably benefit the Riverside fairy shrimp beyond the protection already afforded the species under the Act. Exclusion of these lands will not result in the extinction of the species because the conservation of the Riverside fairy shrimp populations will be addressed through our uplands consultation. The lands involved in this consultation are "mission-critical" training areas, and essential populations of the Riverside fairy shrimp occupy them.

(2) Benefits of Exclusion

In contrast to the absence of an appreciable benefit resulting from designation of Camp Pendleton training areas as critical habitat, there are substantial benefits to excluding these areas from critical habitat. Essential habitat for the Riverside fairy shrimp that occurs within "mission-critical" training areas on Camp Pendleton is occupied by the species, and, as stated above, consultations to ensure activities do not jeopardize the species' existence have been completed or are in progress. If essential habitat that occurs within "mission-critical" training areas is proposed as critical habitat, the Marine Corps would be required to determine if activities would adversely modify or destroy proposed critical habitat, and, if such a determination was made, the Marine Corps would be compelled to conference with us pursuant to the requirements of section 7 of the Act. Additionally, if proposed critical habitat within training areas is included in a final designation, the Marine Corps would likely be compelled to review consultations already completed or in progress to determine if activities may affect designated critical habitat. If a "may affect" determination were to be made, the Marine Corps would be further obligated to initiate or reinstate consultations with us. The Marine Corps would likely feel an increased burden of responsibility to make these determinations, and the potential for

them to be obligated to conduct conferences or to reinstate consultations with us may delay the timely implementation of "mission-critical" training activities (Hanlon, Edward Jr., Major General Commanding, U.S. Marine Corps Base, Camp Pendleton letter to Ken Berg, Field Supervisor, Carlsbad Fish and Wildlife Office, April 7, 2000). In addition, should consultation result in a destruction or adverse modification finding, the Corps might be unable to conduct their training in a timely fashion.

(3) Benefits of Exclusion Outweigh the Benefits of Inclusion

We consider specific lands that provide benefits to the Riverside fairy shrimp essential for its conservation. For those areas that are proposed as critical habitat that are not considered "mission-critical" training areas or are leased to the State of California, we will complete the balancing analysis under section 4(b)(2) in the final rule. We have considered these lands and excluded the lands in "mission-critical" training areas on Camp Pendleton from proposed critical habitat. We are soliciting public review and comment on our decision to consider, but not propose critical habitat for the Riverside fairy shrimp on "mission-critical" training areas of Camp Pendleton, based on section 4(b)(2) of the Act. Maps delineating habitat for the Riverside fairy shrimp, overlaid with "mission-critical" training areas on Camp Pendleton, are available for public review and comment at the Carlsbad Fish and Wildlife Office (see ADDRESSES section) or on the Internet at <http://carlsbad.fws.gov>. These maps are provided to allow the public the opportunity to adequately comment on these exclusions.

Critical Habitat Designation

The proposed critical habitat includes Riverside fairy shrimp habitat throughout the species' range in the United States (*i.e.*, Ventura, Los Angeles, Orange, Riverside and San Diego Counties, California). Areas proposed as critical habitat are under Federal, State, local, and private ownership. The approximate area of proposed critical habitat by county and land ownership is shown in Table 2. Certain lands that are considered essential to the Riverside fairy shrimp have been excluded from critical habitat based on our 4(b)(2) analysis; the exclusions are summarized in Table 3.

TABLE 2.—APPROXIMATE PROPOSED CRITICAL HABITAT AREA (HA (AC)) BY COUNTY AND LAND OWNERSHIP. ESTIMATES REFLECT THE TOTAL AREA WITHIN CRITICAL HABITAT UNIT BOUNDARIES

County	Federal*	Local/State	Private	Total
Los Angeles	0 ac (0 ha)	0 ac (0 ha)	638 (258 ha)	638 ac (258 ha)
Orange	1 ac (0 ha)	326 ac (132 ha)	2,156 ac (873 ha)	2,483 ac (1,005 ha)
Riverside	146 ac	0 ac (0 ha)	0 ac (0 ha)	146 ac
San Diego	939 ac (380 ha)	107 ac (43 ha)	971 ac (393 ha)	2,017 ac (816 ha)
Ventura	0	45 ac (18 ha)	466 ac (189 ha)	511 ac (207 ha)
Total	1,086 ac (439 ha)	478 ac (193 ha)	4,231 ac (1,713 ha)	5,795 ac (2,345 ha)

*Federal lands include Department of Defense, U.S. Forest Service, and other Federal land.

TABLE 3.—APPROXIMATE PROPOSED CRITICAL HABITAT AREA (AC (HA)), ESSENTIAL AREA, AND EXCLUDED AREA

Area determined to be essential to the conservation of the Riverside fairy shrimp	18,330 ac (7,418 ha)
Area not included pursuant to section 4(a)(3) of the Act due to an INRMP that benefits Riverside fairy shrimp (MCAS, Miramar).	113 ac (46 ha)
Area excluded pursuant to section 4(b)(2) of the Act: Completed and pending HCPs (San Diego MSCP, Orange County Central-Coastal NCCP/HCP and Western Riverside County MSHCP).	9,414 ac (3,810 ha)
Area excluded pursuant to section 4(b)(2) of the Act: "Mission-critical" Department of Defense lands (Camp Pendleton).	3,008 ac (1,217 ha)
Proposed Critical Habitat	5,795 ac (2,345 ha)

Lands proposed as critical habitat are divided into six Units, which are based on the Management Areas identified in the Recovery Plan (Service 1998). The Units are generally based on geographical location of the vernal pools, soil types, associated watersheds, and local variation of topographic position (*i.e.*, coastal mesas, inland valley). Descriptions of each unit and the reasons for designating it as critical habitat are presented below.

Map Unit 1: Transverse Range Critical Habitat Unit, Ventura and Los Angeles Counties, California (1,045 ac (423 ha))

The proposed Transverse Range Unit includes the vernal pools at Cruzan Mesa, Los Angeles County, and vernal pools near the city of Moorpark in Ventura County. These vernal pools represent the northern limit of occupied habitat for the Riverside fairy shrimp and are some of the last remaining vernal pools in Los Angeles and Ventura Counties known to support this species. The areas that are proposed for designation of critical habitat in Unit 1 contain the primary constituent elements described above relating to the pooling basins, watersheds, underlying soil substrate and topography. The majority of the land in this unit provides the essential watershed primary constituent element that contributes to the pooling basins that support the Riverside fairy shrimp.

There are two subunits of critical habitat near the city of Moorpark in Ventura County. The northernmost of these two subunits is located on what was formerly the Carlsberg Ranch.

Development has occurred adjacent to this vernal pool, which is now protected from future development. The other subunit in Ventura County is located a short distance to the south of the Carlsberg Ranch pool. This subunit has not been surveyed for Riverside fairy shrimp; however, it is considered essential due to biotic and abiotic conditions that indicate it is highly likely it provides habitat for Riverside fairy shrimp. This area is currently in private ownership and we are unaware of any plans to develop this site. The subunit in Los Angeles County is located on Cruzan Mesa near the city of Santa Clarita. It is within an area that is being proposed by Los Angeles County as a Significant Ecological Unit in its General Plan. These pools are isolated from the other occurrences of Riverside fairy shrimp, and the Ventura population is isolated from the population at Cruzan Mesa. The preservation and management of these vernal pools are essential for the conservation the populations of Riverside fairy shrimp in the Transverse Range Management Area described by the Recovery Plan.

The occurrences of Riverside fairy shrimp in northern Los Angeles County and in Ventura County represent isolated occurrences at the northern most extent of the range of the Riverside fairy shrimp. Conservation biologists have demonstrated that populations at the edge of a species' distribution can be important sources of genetic variation and represent the best opportunity for colonization or re-colonization of unoccupied vernal pools and, thus,

long-term conservation (Gilpin and Soulé 1986; Lande 1999). These outlying populations may be genetically divergent from populations in the center of the range and, therefore, may have genetic characteristics that would allow adaptation in the face of environmental change. Such characteristics may not be present in other parts of the species' range (Lesica and Allendorf 1995).

Map Unit 2: Los Angeles Basin-Orange Management Area, Los Angeles and Orange Counties, California. (3,180 ac (1,287 ha))

The Los Angeles Basin-Orange Management Area encompasses two distinct regions where Riverside fairy shrimp are known to occur: coastal Los Angeles County; and the foothills of Orange County. Along the Los Angeles County coast, there are two Riverside fairy shrimp locations: Los Angeles International Airport and Madrona Marsh. In the past, vernal pools in coastal Los Angeles had a much greater distribution (Mattoni and Longcore 1997). The other region in this Unit includes vernal pools that occur along a north-south band in the Orange County Foothills. The areas that are proposed for designation of critical habitat in Unit 2 contain the primary constituent elements described above relating to the pooling basins, watersheds, underlying soil substrate and topography. The majority of the land in this unit provides the essential watershed primary constituent element that contributes to the pooling basins that support the Riverside fairy shrimp.

The Los Angeles Coastal Prairie Unit includes an approximately 198 ac (80 ha) area at the Los Angeles International Airport. This landscape historically included the federally endangered California Orcutt grass (*Orcuttia californica*) and San Diego button-celery (*Eryngium aristulatum* var. *parishii*). This unit also supports versatile fairy shrimp (*Branchinecta lindahl*) and western spadefoot toad (*Scaphiopus hammondi*). Riverside fairy shrimp cysts were first collected east of Pershing Drive in 1997. Considering the extensive habitat once available, populations of Riverside fairy shrimp in this region were likely robust and formed the core population between the limited Cruzan Mesa and Carlsberg Ranch pools (Unit 1) at the northern end of the range of the species, and the pool groups in central and southern Orange County. Conservation of a population of the Riverside fairy shrimp in the coastal region of Los Angeles County is essential to the conservation of the species. This area is essential because it represents the remnants of a large historical vernal pool complex in the Los Angeles Basin. It is likely that this and other isolated populations of Riverside fairy shrimp have unique genetic differences that will contribute to the long-term survival of this species. Research on the San Diego fairy shrimp has shown that geographically distinct populations are genetically distinct as well (Bohonak 2003). The preservation of genetic diversity can also provide insight into the evolutionary history of a species that can be helpful for its future preservation.

This Unit also includes the vernal pools and vernal pool-like ephemeral ponds located along the Orange County Foothills. These pools are found at the Marine Corps Air Station El Toro, Edison Viejo Conservation Bank, Saddleback Meadows, O'Neill Regional Park, east of Tijeras Creek at the intersection of Antonio Parkway and the FTC-north segment, Chiquita Ridge, and Radio Tower Road. These vernal pools are the last remaining vernal pools in Orange County known to support this species (58 FR 41384). These pools represent a unique type of vernal pool habitat much different from the traditional mima mound vernal pool complexes. They are also different from coastal pools at Camp Pendleton and the inland pools of Riverside County. The Orange County vernal pool habitat and essential associated watershed represent the majority of Riverside fairy shrimp habitat within the Los Angeles Basin-Orange Management Area discussed in the Recovery Plan.

The Edison Viejo Conservation Bank is considered essential, but excluded from critical habitat because it is within the Central-Coastal NCCP/HCP. The ephemeral pond on MCAS El Toro is within the boundary of the Central-Coastal HCP planning area. However, because coverage for the Riverside fairy shrimp is not provided on these lands, we are proposing this area as critical habitat. All of the other occurrences of Riverside fairy shrimp mentioned above are included in this Unit.

Map Unit 3: Western Riverside County Critical Habitat Unit, Riverside County, California (146 ac (58 ha))

The Western Riverside County Unit includes vernal pools and ephemeral wetlands that provide essential habitat for the Riverside fairy shrimp. The areas that are proposed for designation of critical habitat in Unit 3 contain the primary constituent elements described above relating to the pooling basins, watersheds, underlying soil substrate and topography. The majority of the pools discussed in this Unit description are excluded from the proposed designation of critical habitat. With the exception of the vernal pools on the Santa Rosa Plateau, all of the areas in this unit are known to be occupied. The pools on Santa Rosa Plateau support vegetation associated with Riverside fairy shrimp (Lathrop and Thorne 1983); however, additional surveys are needed to determine the presence of the Riverside fairy shrimp. This Unit encompasses vernal pools in the general vicinity of the Back Basin of Lake Elsinore, Murrieta, Temecula, Banning, March ARB, and Santa Rosa Plateau. These populations represent the eastern limit of occupied habitat. The pools in Western Riverside County represent a unique type of pool. These pools occur in an inland valley, rather than on a mesa or on the coast. These pools also have much larger watersheds and likely contain unique genetic diversity essential to the long-term conservation of the species. This Unit supports the federally endangered California Orcutt grass (*Orcuttia californica*) and vernal pool fairy shrimp (*Branchinecta lynchi*). Preservation and management of these pools will contribute to the conservation of the Riverside fairy shrimp.

Specifically, this Unit contains the following vernal pools: March ARB pools, Banning pools, the Australia pool, the Clayton Ranch pools, the Johnson Ranch pools, the Scott pool, the Schleuniger Pool, Skunk Hollow and the Field pool, and the pools on Santa Rosa Plateau. The majority of the land in this unit provides the essential watershed primary constituent element

that contributes to the pooling basins that support the Riverside fairy shrimp. We have excluded the majority of pools in this Unit from proposed critical habitat designation because they are encompassed in the planning area of the Draft Western Riverside MSHCP. The areas that we are proposing for critical habitat are the two vernal pools on March ARB.

Map Unit 4: North San Diego County Critical Habitat Unit, San Diego County, California (397 ac (161 ha))

The North San Diego County Unit includes vernal pools at Camp Pendleton and one pool complex within the City of Carlsbad. The areas that are proposed for designation of critical habitat in Unit 4 contain the primary constituent elements described above relating to the pooling basins, watersheds, underlying soil substrate and topography. The majority of the land in this unit provides the essential watershed primary constituent element that contributes to the pooling basins that support the Riverside fairy shrimp.

This Unit encompasses "mission-critical" training areas within Camp Pendleton at Los Pulgas Creek in the Oscar Two Training Area and on Upper Stuart Mesa in the Oscar One Training Area, and non-training areas within Camp Pendleton, including lands at the Cocklebur Sensitive Area and lands leased to the State of California that are included within San Onofre State Park and lands along San Mateo Creek. The Recovery Plan includes these pool complexes within the San Diego North Coastal Mesas Management Area. Based on the recent amendments to section 4(a)(3) of the Act, we request specific information from the Department of Defense regarding Camp Pendleton's INRMP and conservation of the Riverside fairy shrimp to assist the Secretary of the Interior in determining if the INRMP provides a benefit to Riverside fairy shrimp. We propose to include the subunits that encompass essential habitat in the Cocklebur Sensitive Area on Camp Pendleton; this area is not known to be a "mission-critical" training area. The essential habitat within "mission-critical" training areas is excluded, but considered essential for the conservation of the species.

Within the jurisdiction of the City of Carlsbad, one vernal pool complex is located at the Poinsettia Lane train station. This complex is associated with a remnant of coastal terrace habitat and is essential for the conservation of the species in northern San Diego County. This pool is one of the last remaining

coastal occurrences of Riverside fairy shrimp that is not on military land.

Map Unit 5: South San Diego County Critical Habitat Unit, San Diego County, California (1,121 ac (453 ha))

The South San Diego Management Area identified in the Recovery Plan contains several vernal pools essential to the conservation of Riverside fairy shrimp. The areas that are proposed for designation of critical habitat in Unit 3 contain the primary constituent elements described above relating to the pooling basins, watersheds, underlying soil substrate and topography. The majority of the land in this unit provides the essential watershed primary constituent element that contributes to the pooling basins that support the Riverside fairy shrimp. This region represents a core area for the species. Pools in this area are threatened by off-road vehicle activity and development. The majority of pools in this area are part of San Diego's MSCP. This plan details a policy of "no-net-loss" for vernal pools. There is currently an effort to develop a management plan for vernal pools within the MSCP which will provide further conservation benefit to the Riverside fairy shrimp. Specifically, the Recovery Plan identifies the following vernal pool complexes as essential: J2, 5, 7, 11–21, 23–30. In addition, the Riverside fairy shrimp has recently been located at complex J3, the building site for Saint Jerome's Church, and on east Otoy Mesa near the International Border with Mexico. Of these essential locations, only the vernal pools and their watersheds that occur on lands not protected by the MSCP are proposed as critical habitat. The subunits for this region include the J15 complex or Arnie's Point, the watershed for the J29 complex on federally managed land, and the watershed, vernal pools, and ephemeral ponds that occur on east Otoy Mesa that are in the Major and Minor Amendment Areas of the MSCP.

Effects of Critical Habitat Designation

Section 7 Consultation

The regulatory effects of a critical habitat designation under the Act are triggered through the provisions of section 7, which applies only to activities conducted, authorized, or funded by a Federal agency (Federal actions). Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR 402. Individuals, organizations, States, local governments, and other non-Federal entities are not affected by the designation of critical habitat unless

their actions occur on Federal lands, require Federal authorization, or involve Federal funding.

Section 7(a)(2) of the Act requires Federal agencies, including us, to insure that their actions are not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. This requirement is met through section 7 consultation under the Act. Our regulations define "jeopardize the continued existence of" as to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species (50 CFR 402.02). "Destruction or adverse modification of designated critical habitat" is defined as a direct or indirect alteration that appreciably diminishes the value of the critical habitat for both the survival and recovery of the species (50 CFR 402.02). Such alterations include, but are not limited to, adverse changes to the physical or biological features, *i.e.*, the primary constituent elements, that were the basis for determining the habitat to be critical. However, in a March 15, 2001, decision of the United States Court of Appeals for the Fifth Circuit (*Sierra Club v. U.S. Fish and Wildlife Service et al.*, 245 F.3d 434), the Court found our definition of destruction or adverse modification to be invalid. In response to this decision, we are reviewing the regulatory definition of adverse modification in relation to the conservation of the species.

Section 7(a)(4) requires Federal agencies to confer with us on any action that is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed critical habitat. Conference reports provide conservation recommendations to assist the agency in eliminating conflicts that may be caused by the proposed action. The conservation recommendations in a conference report are advisory.

We may issue a formal conference report, if requested by the Federal action agency. Formal conference reports include an opinion that is prepared according to 50 CFR 402.14, as if critical habitat were designated. We may adopt the formal conference report as the biological opinion when 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) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of such a species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency (action agency) must enter into consultation with us. Through this consultation, the action agency would ensure that the permitted actions do not destroy or adversely modify critical habitat.

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

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

Federal activities that may affect vernal pool crustaceans or vernal pool plants or their critical habitat will require consultation under section 7. Activities on private, State, or county lands, or lands under local jurisdictions requiring a permit from a Federal agency, such as Federal Highway Administration or Federal Emergency Management Act funding, or a permit from the Corps under section 404 of the Clean Water Act, will continue to be

subject to the section 7 consultation process. Federal actions not affecting listed species or critical habitat, and actions on non-Federal lands that are not federally funded, authorized, or permitted, do not require section 7 consultation.

Section 4(b)(8) of the Act requires us to evaluate briefly and describe, in any proposed or final regulation that designates critical habitat, those activities involving a Federal action that may adversely modify such habitat or that may be affected by such designation. We note that such activities may also jeopardize the continued existence of the species.

Activities that, when carried out, funded, or authorized by a Federal agency may directly or indirectly destroy or adversely modify critical habitat for Riverside fairy shrimp include, but are not limited to:

(1) Any activity, including the regulation of activities by the Corps of Engineers under section 404 of the Clean Water Act or activities carried out by or licensed by the Environmental Protection Agency (EPA), that could alter the watershed, water quality or water quantity to an extent that water quality becomes unsuitable to support Riverside fairy shrimp, or any activity that significantly affects the natural hydrologic function of the vernal pool system and/or ephemeral pond or depression;

(2) Road construction and maintenance, right-of-way designation, and regulation of agricultural activities, or any activity funded or carried out by the Department of Transportation or Department of Agriculture that results in discharge of dredged or fill material, excavation, or mechanized land clearing of ephemeral and/or vernal pool basins;

(3) Airport construction, improvement, or maintenance activities funded or authorized by the Federal Aviation Administration;

(4) Sale or exchange of lands by a Federal agency to a non-Federal entity;

(5) Licensing of construction of communication sites by the Federal Communications Commission;

(6) Funding of construction or development activities by the U.S. Department of Housing and Urban Development;

(7) Military training and maneuvers on DOD lands;

(8) Funding and implementation of disaster relief projects by the FEMA and the Natural Resource Conservation Service's Emergency Watershed Program, including erosion control, flood control, and stream bank repair to reduce the risk of loss of property; and

(9) Promulgation and implementation of a land use plan by a Federal agency such as the Bureau of Land Management, U.S. Forest Service, or DOD that may alter management practices for critical habitat.

If you have questions regarding whether specific activities may constitute adverse modification of critical habitat in California, contact the Field Supervisor, Carlsbad Fish and Wildlife Office (see **ADDRESSES** section). Requests for copies of the regulations on listed plants and wildlife, and inquiries about prohibitions and permits may be addressed to the U.S. Fish and Wildlife Service, Branch of Endangered Species, 911 NE 11th Ave, Portland, OR 97232 (telephone 503/231-2063; facsimile 503/231-6243).

Economic Analysis

Section 4(b)(2) of the Act requires us to designate critical habitat on the basis of the best scientific and commercial data available, and to consider the economic, 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.

An analysis of the economic impacts of proposing critical habitat for Riverside fairy shrimp is being prepared. We will announce the availability of the draft economic analysis as soon as it is completed, at which time we will seek public review and comment. When published, copies of the draft economic analysis will be available for downloading from the Internet at <http://carlsbad.fws.gov>, by contacting the Carlsbad Fish and Wildlife Office directly (see **ADDRESSES** section).

Peer Review

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

conclusions regarding the proposed designation of critical habitat.

We will consider all comments and information received during the public comment periods on this proposed rule during the preparation of a final rulemaking. Accordingly, the decision may differ from this proposal.

Public Hearings

The Act provides for one or more public hearings on this proposal, if requested. Requests for public hearings must be made in writing no later than 45 days following the publication of this proposal in the **Federal Register**. We will schedule public hearings on this proposal, if any are requested, and will announce the dates, times, and locations of those hearings in the **Federal Register** and local newspapers at least 15 days prior to the first hearing.

Clarity of the Rule

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

Send a copy of any comments on how we could make this proposed rule easier to understand to: Office of Regulatory Affairs, Department of the Interior, Room 7229, 1849 C Street, NW., Washington, DC 20240.

Required Determinations

Regulatory Planning and Review

In accordance with Executive Order 12866, this document is a significant rule in that it may raise novel legal and policy issues, but it is not anticipated to have an annual effect on the economy of \$100 million or more or affect the economy in a material way. As such, the Office of Management and Budget (OMB) has reviewed this rule. The Service is preparing a draft economic analysis of this proposed action. The Service will use this analysis to meet the requirement of section 4(b)(2) of the Act to determine the economic consequences of designating the specific

areas as critical habitat and possibly excluding any area from critical habitat if it is determined that the benefits of such exclusion outweigh the benefits of specifying such areas as part of the critical habitat, unless failure to designate such area as critical habitat will lead to the extinction of the Riverside fairy shrimp. This analysis will also be used to determine compliance with Executive Order 12866, Regulatory Flexibility Act, Small Business Regulatory Enforcement Fairness Act, and Executive Order 12630.

This analysis will be made available for public review and comment. Copies may be obtained from the Carlsbad Fish and Wildlife Office's Internet Web site at <http://carlsbad.fws.gov> or by contacting the Carlsbad Fish and Wildlife Office directly (see ADDRESSES section).

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

Under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*, as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996), whenever an agency is required to publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the 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.

According to the Small Business Administration (SBA), small entities include small organizations, such as independent nonprofit organizations, and small governmental jurisdictions, including school boards and city and town governments that serve fewer than 50,000 residents, as well as small businesses (13 CFR 121.201). Small businesses include manufacturing and mining concerns with fewer than 500 employees, wholesale trade entities with fewer than 100 employees, retail and service businesses with less than \$5 million in annual sales, general and heavy construction businesses with less than \$27.5 million in annual business, special trade contractors doing less than \$11.5 million in annual business, and agricultural businesses with annual sales less than \$750,000. To determine if potential economic impacts to these small entities are significant, we considered the types of activities that might trigger regulatory impacts under

this proposed rule as well as 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 proposed rule would affect a substantial number of small entities, we considered the number of small entities affected within particular types of economic activities (*e.g.*, housing development, oil and gas production, timber harvesting *etc.*). We considered each industry individually to determine if certification is appropriate. In estimating the numbers of small entities potentially affected, we also considered whether their activities have any Federal involvement; some kinds of activities are unlikely to have any Federal involvement and so will not be affected by the designation of critical habitat. Designation of critical habitat only affects activities conducted, funded, permitted or authorized by Federal agencies; non-Federal activities are not affected by the designation.

If this critical habitat designation is made final, Federal agencies must consult with us if their activities may affect designated critical habitat. Consultations to avoid the destruction or adverse modification of critical habitat would be incorporated into the existing consultation process. In areas where occupancy by Riverside fairy shrimp is unknown, the designation of critical habitat could trigger additional review of Federal agencies pursuant to section 7 of the Act and may result in additional requirements on Federal activities to avoid destruction or adverse modification of critical habitat. There is one area proposed as critical habitat for the Riverside fairy shrimp that is within the geographical area occupied by the species for which the occupancy by the species has not been determined. The area is on private land, but we have not received any information indicating the area is anticipated to be developed. Only those activities involving a Federal agency that may affect designated critical habitat would require consultation with us. In reviewing the activities in this area, we have no information indicating future activities on those areas would involve permitting, authorization or funding by a Federal agency.

We also reviewed 10 formal consultations involving this species that were conducted since its listing under the Act in 1993, including one consultation conducted in 2001 when critical habitat for the Riverside fairy shrimp was previously designated and in place. These formal consultations, which all involved Federal actions,

included five construction projects, vegetation management activities, airport construction and improvement, military training, and road construction. These 10 consultations resulted in non-jeopardy biological opinions, including a determination of no adverse modification of critical habitat for the consultation completed during the time when critical habitat for the species was previously designated and in place.

In reviewing these past formal consultations and the activities they involved in the context of the proposed critical habitat, we do not believe the outcomes would have been different in areas designated as critical habitat.

In summary, we have considered whether this proposed rule would result in a significant economic impact on a substantial number of small entities, and we have concluded that it would not. We have no indication that the types of activities we review under section 7 of the Act will change significantly in the future.

Therefore, we are certifying that this proposed designation of critical habitat is not expected to have a significant adverse impact on a substantial number of small entities, and an initial regulatory flexibility analysis is not required.

The preceding discussion is based on information regarding potential economic impacts that is currently available to us. This assessment of economic effect may be modified prior to publication of a final rule, based on a review of the draft economic analysis currently being prepared pursuant to section 4(b)(2) of the Act, Executive Order 12866, and public comments received during the public comment period. This analysis is for the purposes of compliance with the Regulatory Flexibility Act and does not reflect our position on the type of economic analysis required by *New Mexico Cattle Growers Assn. v. U.S. Fish & Wildlife Service* 248 F. 3d 1277 (10th Cir. 2001).

Executive Order 13211

On May 18, 2001, the President issued an Executive Order 13211 (E.O. 13211) 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. This proposed rule is considered a significant regulatory action under E.O. 12866 due to it potentially raising novel legal and policy issues, but it is not expected to significantly affect energy supplies, distribution, or use. Therefore, this action is not a significant 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), the Service makes 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, tribal governments, or the private sector and includes both "Federal intergovernmental mandates" and "Federal private sector mandates." These terms are defined in 2 U.S.C. 658(5)–(7). "Federal intergovernmental mandate" includes a regulation that "would impose an enforceable duty upon State, local, or tribal governments" with two exceptions. It excludes "a condition of federal assistance." It also excludes "a duty arising from participation in a voluntary Federal program," unless the regulation "relates to a then-existing Federal program under which \$500,000,000 or more is provided annually to State, local, and tribal governments under entitlement authority," if the provision would "increase the stringency of conditions of assistance" or "place caps upon, or otherwise decrease, the Federal Government's responsibility to provide funding" and the State, local, or tribal governments "lack authority" to adjust accordingly. (At the time of enactment, these entitlement programs were: Medicaid; AFDC work programs; Child Nutrition; Food Stamps; Social Services Block Grants; Vocational Rehabilitation State Grants; Foster Care, Adoption Assistance, and Independent Living; Family Support Welfare Services; and Child Support Enforcement.) "Federal private sector mandate" includes a regulation that "would impose an enforceable duty upon the private sector, except (i) a condition of Federal assistance; or (ii) a duty arising from participation in a voluntary Federal program."

The designation of critical habitat does not impose a legally binding duty on non-Federal government entities or private parties. Under the Act, the only regulatory effect is that Federal agencies must ensure that their actions do not destroy or adversely modify critical habitat under section 7. While non-Federal entities who receive Federal funding, assistance, permits or otherwise require approval or authorization from a Federal agency for an action may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of

critical habitat rests squarely on the Federal agency. Furthermore, to the extent that non-Federal entities are indirectly impacted because they receive Federal assistance or participate in a voluntary Federal aid program, the Unfunded Mandates Reform Act would not apply; nor would critical habitat shift the costs of the large entitlement programs listed above on to State governments.

(b) We do not believe that this rule will significantly or uniquely affect small governments. As such, Small Government Agency Plan is not required. We will, however, further evaluate this issue as we conduct our economic analysis and as appropriate, review and revise this assessment as warranted.

Takings

In accordance with Executive Order 12630 ("Government Actions and Interference with Constitutionally Protected Private Property Rights"), we have analyzed the potential takings implications of proposing critical habitat for Riverside fairy shrimp. Critical habitat designation does not affect actions of the landowners which do not require federal funding or permits, nor preclude development of HCPs and the issuance of incidental take permits to permit actions which do require federal funding or permits to go forward. This takings assessment concludes that this proposed rule does not pose significant takings implications.

Federalism

In accordance with Executive Order 13132, this proposed rule does not have significant Federalism effects. A Federalism assessment is not required. In keeping with Department of the Interior and Department of Commerce policy, we requested information from, and coordinated development of, this critical habitat proposal with appropriate State resource agencies in California. We will continue to coordinate any future designation of critical habitat for the Riverside fairy shrimp with the appropriate State agencies. The designation of critical habitat in areas currently occupied by the Riverside fairy shrimp imposes no additional restrictions to those currently in place and, therefore, has little incremental impact on State and local governments and their activities. The designation may have some benefit to these governments in that the areas essential to the conservation of the species are more clearly defined, and the primary constituent elements of the habitat necessary to the survival of the

species are specifically identified. While making this definition and identification does not alter where and what federally sponsored activities may occur, it may assist these local governments in long-range planning (rather than waiting for case-by-case section 7 consultations to occur).

Civil Justice Reform

In accordance with Executive Order 12988, the Department of the Interior's Office of the Solicitor has determined that this rule does not unduly burden the judicial system and does meet the requirements of sections 3(a) and 3(b)(2) of the Order. We have proposed critical habitat in accordance with the provisions of the Act. The rule uses the Universal Transverse Mercator coordinate system, which is identifiable on common topographic maps, as the standard unit description and identifies the primary constituent elements within the proposed areas to assist the public in understanding the habitat needs of the Riverside fairy shrimp.

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

This rule does not contain any information collection requirements for which OMB approval under the Paperwork Reduction Act is required. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number.

National Environmental Policy Act

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

Government to Government Relationship With Tribes

In accordance with the President's memorandum of April 29, 1994, "Government-to-Government Relations with Native American Tribal Governments" (59 FR 22951); Executive Order 13175 (November 9, 2000; 65 FR 67249); and DOI's manual at 512 DM 2, we readily acknowledge our responsibility to communicate meaningfully with federally recognized Tribes on a government-to-government basis.

Historical records indicate that there were two vernal pools on or near Tribal lands of Pechanga Band of Luiseño Indians that contained Riverside fairy shrimp (Eriksen 1988). After reviewing aerial photographs of the area and meeting with the Tribe's Environmental Coordinator in March 2004, we were unable to confirm these occurrences. It is possible that through additional survey work that these occurrences may be relocated, however, at this time we do not know if the Riverside fairy shrimp occurs on Tribal lands of Pechanga Band of Luiseño Indians. Based on the best scientific data available, we do not believe that there are any lands essential to the conservation of the Riverside fairy shrimp on Tribal lands. As such, we are

not including any Tribal lands in proposed critical habitat for the Riverside fairy shrimp.

References Cited

A complete list of all references cited herein, as well as others, is available upon request from the Carlsbad Fish and Wildlife Office (see **ADDRESSES** section).

Authors

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

List of Subjects in 50 CFR Part 17

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

Proposed Regulation Promulgation

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

PART 17—[AMENDED]

1. The authority citation for part 17 continues to read as follows: Authority: 16 U.S.C. 1361–1407; 16 U.S.C. 1531–1544; 16 U.S.C. 4201–4245; Pub. L. 99–625, 100 Stat. 3500; unless otherwise noted.

2. In § 17.11(h) revise the entry for “Fairy shrimp, Riverside” under “CRUSTACEANS” to read as follows:

17.11 Endangered and threatened wildlife.

* * * * *

(h) * * *

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
* * *	* * *	*	*	*	*		*
CRUSTACEANS							
* * *	* * *	*	*	*	*		*
Fairy shrimp, Riverside.	<i>Streptocephalus woottoni</i> .	U.S.A. (CA)	Entire	E	512	17.95(h)	NA
* * *	* * *	*	*	*	*		*

3. Amend § 17.95 (h) by revising critical habitat for the Riverside fairy shrimp (*Streptocephalus woottoni*) to read as follows:

17.95 Critical habitat—fish and wildlife.

* * * * *

(h) Crustaceans.

* * * * *

Riverside Fairy Shrimp (*Streptocephalus woottoni*)

(1) Critical habitat units are depicted for Los Angeles, Orange, Riverside, San Diego, and Ventura Counties, California, on the maps below.

(2) Critical habitat includes vernal pools, vernal pool complexes, and ephemeral ponds and depressions and their associated watersheds and hydrologic regime indicated on the maps below and in the legal descriptions.

(3) Within these areas, the primary constituent elements for the Riverside fairy shrimp are those habitat components that are essential for the primary biological needs of foraging, sheltering, reproduction, and dispersal. The primary constituent elements are found in those areas that support vernal pools or other ephemeral ponds and depressions, and their associated

watersheds. The primary constituent elements determined essential to the conservation of Riverside fairy shrimp are:

(i) Small to large pools or pool complexes that have the appropriate temperature, water chemistry, and length, of time inundation with water necessary for Riverside fairy shrimp incubation and reproduction, as well as dry periods necessary to provide the conditions to maintain a dormant and viable cyst bank. Specifically, the conditions necessary to allow for successful reproduction of Riverside fairy shrimp fall within the following ranges:

(A) Moderate to deep depths ranging from 10 in (25 cm) to 5 to 10 ft (1.5 to 3 m);

(B) Ponding inundation that lasts for a minimum length of 2 months and a maximum length of 5 to 8 months, *i.e.*, a sufficient wet period in winter and spring months to allow the Riverside fairy shrimp to hatch, mature, and reproduce, followed by a dry period prior to the next winter and spring rains;

(C) Water temperature that falls within the range of 50 and 77 degrees Fahrenheit (10 and 25 degrees Celsius); and

(D) Water chemistry with low total dissolved solids and alkalinity (means of 77 and 65 parts per million, respectively), corroborated by pH within a range of 6.4–7.1.

(ii) Associated watersheds that provide water to fill the pools in the winter and spring months. The size of the associated watershed varies greatly and cannot be generalized and has been assessed on a case-by-case basis. Factors that affect the size of the watershed include surface and underground hydrology, the topography of the area surrounding the pool or pools, the vegetative coverage, and the soil substrate in the area. Watershed sizes designated vary from a few acres (hectares) to greater than 100 ac (40 ha).

(iii) Soil type with a clay component and/or an impermeable surface or subsurface layer known to support vernal pool habitat.

(4) The matrix of vernal pools/ephemeral wetlands, the associated watershed, upland habitats, and underlying soil substrates form hydrological and ecologically functional units. These features and the lands that they represent are essential to the conservation of the Riverside fairy shrimp. All lands identified as essential and proposed as critical habitat contain

one or more of the primary constituent elements for the Riverside fairy shrimp.

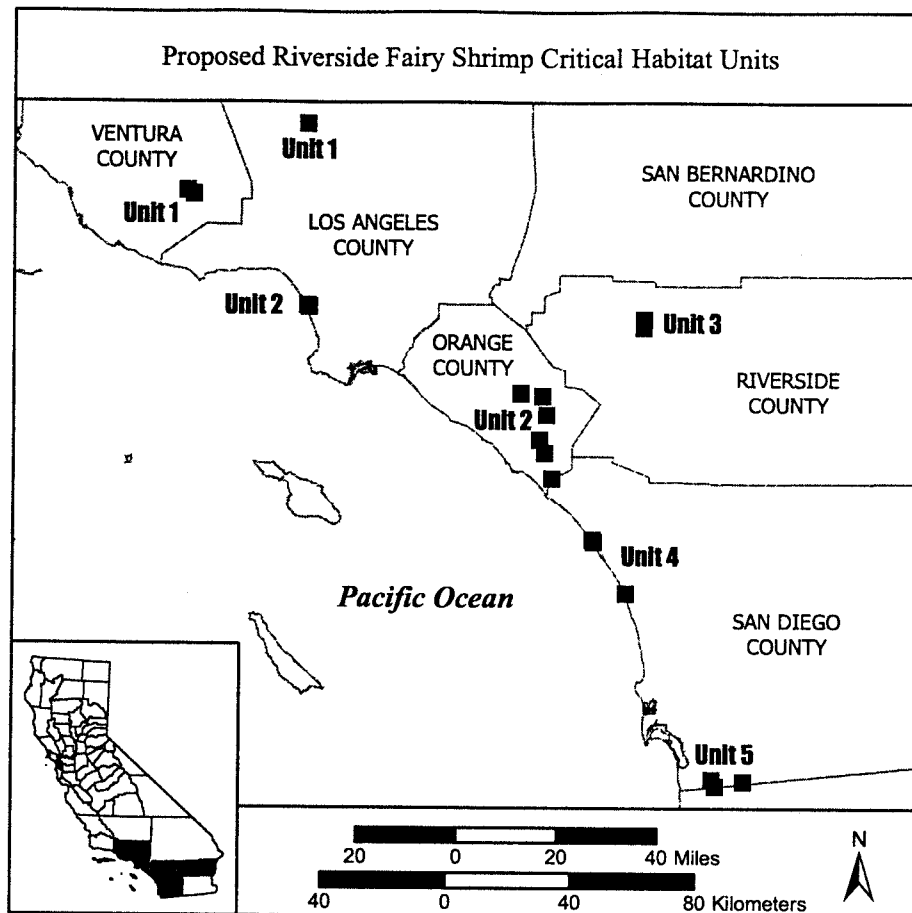
(5) The minimum mapping unit for this designation does not exclude all developed areas, such as buildings, roads, aqueducts, railroads, airports, other paved areas, lawns, and other

lands unlikely to contain the primary constituent elements. However, these areas are not critical habitat and have been excluded from this proposed rule. Federal actions limited to these areas would not trigger a section 7

consultation, unless they affect the species and/or the primary constituent elements in adjacent critical habitat.

(6) Index map of critical habitat units for the Riverside fairy shrimp follows:

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(7) Map Unit 1: Transverse Range, Los Angeles and Ventura County, California. From USGS 1:24,000 quadrangle maps Mint Canyon, Thousand Oaks, and Simi Valley West.

(i) Unit 1a: Lands bounded by the following UTM NAD27 coordinates (E,N): 329000, 3793300; 329500, 3793300; 329500, 3792700; 329000, 3792700; 329000, 3793300.

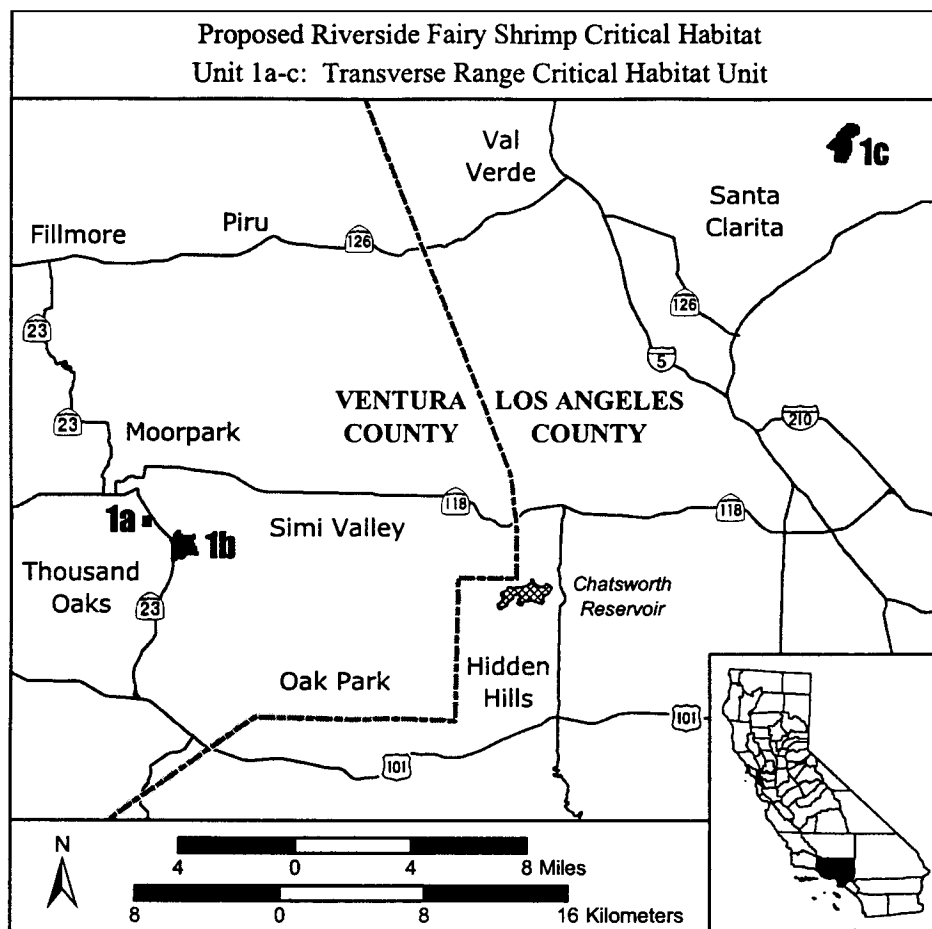
(ii) Unit 1b: lands bounded by the following UTM NAD27 coordinates (E,N): 330900, 3792500; 331100, 3792500; 331100, 3792300; 331200, 3792300; 331200, 3792200; 331800, 3792200; 331800, 3792300; 331900, 3792300; 331900, 3792000; 331800, 3792000; 331800, 3791800; 331900, 3791800; 331900, 3791600; 332000, 3791600; 332000, 3791300; 332100,

3791300; 332100, 3791100; 331400, 3791100; 331400, 3791000; 331300, 3791000; 331300, 3790900; 330900, 3790900; 330900, 3790800; 330600, 3790800; 330600, 3791900; 330500, 3791900; 330500, 3792000; 330600, 3792000; 330600, 3792100; 330700, 3792100; 330700, 3792300; 330800, 3792300; 330800, 3792400; 330900, 3792400; 330900, 3792500.

(iii) Unit 1c: Lands bounded by the following UTM NAD27 coordinates (E,N): 368000, 3815300; 368400, 3815300; 368400, 3815200; 368600, 3815200; 368600, 3815100; 368700, 3815100; 368700, 3814700; 368600, 3814700; 368600, 3814600; 368400, 3814600; 368400, 3814500; 368200, 3814500; 368200, 3814300; 368300, 3814300; 368300, 3813700; 368200,

3813700; 368200, 3813500; 368100, 3813500; 368100, 3813300; 368000, 3813300; 368000, 3813100; 367400, 3813100; 367400, 3813200; 367300, 3813200; 367300, 3813800; 367100, 3813800; 367100, 3813900; 366900, 3813900; 366900, 3814100; 367000, 3814100; 367000, 3814200; 367100, 3814200; 367100, 3814300; 367200, 3814300; 367200, 3814400; 367300, 3814400; 367300, 3814500; 367400, 3814500; 367400, 3814700; 367500, 3814700; 367500, 3814800; 367600, 3814800; 367600, 3814900; 367700, 3814900; 367700, 3815000; 367800, 3815000; 367800, 3815100; 367900, 3815100; 367900, 3815200; 368000, 3815200; 368000, 3815300.

(iv) Map of critical habitat unit 1a-c for the Riverside fairy shrimp follows:



(8) Map Unit 2: Los Angeles Basin-Orange Management Area, Los Angeles, Orange and San Diego County, California. From USGS 1:24,000 quadrangle maps Venice, El Toro, Santiago Peak, San Juan Capistrano, Canada Gobernadora, and San Clemente.

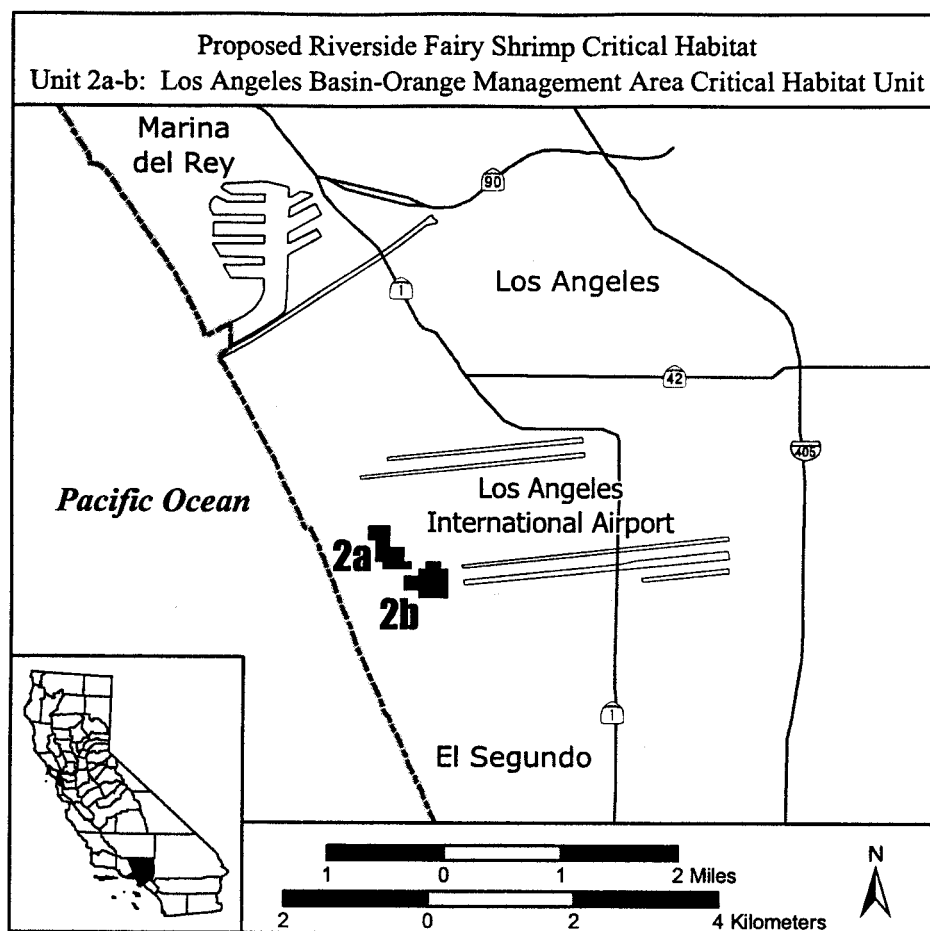
(i) Unit 2a: Lands bounded by the following UTM NAD27 coordinates

(E,N): 367600, 3756300; 367900, 3756300; 367900, 3756000; 368100, 3756000; 368100, 3755800; 368200, 3755800; 368200, 3755700; 367800, 3755700; 367800, 3755800; 367700, 3755800; 367700, 3756100; 367600, 3756100; 367600, 3756300.

(ii) Unit 2b: Lands bounded by the following UTM NAD27 coordinates (E,N): 368400, 3755800; 3688600,

3755800; 368600, 3755700; 368700, 3755700; 368700, 3755300; 368300, 3755300; 368300, 3755400; 368100, 3755400; 368100, 3755600; 368300, 3755600; 368300, 3755700, 368400, 3755700, 368400, 3755800.

(iii) Map of critical habitat unit 2a-b for the Riverside fairy shrimp follows:



(iv) Unit 2c: Lands bounded by the following UTM NAD27 coordinates (E,N): 437000, 3727400; 436900, 3727400; 436900, 3727300; 436800, 3727300; 436800, 3727200; 436700, 3727200; 436700, 3727100; 436300, 3727100; 436300, 3727200; 436200, 3727200; 436200, 3727300; 436100, 3727300; 436100, 3727500; 436000, 3727500; thence north to the Marine Corps Air Station (MCAS) El Toro boundary at UTM NAD27 x-coordinate 436000; thence northeast following the MCAS El Toro boundary to UTM NAD27 y-coordinate 3727900; thence east to UTM NAD27 coordinates 436300, 3727900; thence north to the MCAS El Toro boundary at UTM NAD27 x-coordinate 436300; thence northeast following the MCAS El Toro boundary to UTM NAD27 y-coordinate 3728000; thence east to the MCAS El Toro boundary at UTM NAD27 y-coordinate 3728000; thence southeast following the MCAS El Toro boundary to UTM NAD27 x-coordinate 436500; thence south to UTM NAD27 coordinates 436500, 3727900; thence east to the MCAS El Toro boundary at UTM NAD27 y-coordinate 3727900;

thence southeast following the MCAS El Toro boundary to UTM NAD27 x-coordinate 436600; thence south to UTM NAD27 coordinates 436600, 3727800; thence east to the MCAS El Toro boundary at UTM NAD27 y-coordinate 3727800; thence southeast following the MCAS El Toro boundary to UTM NAD27 x-coordinate 436700; thence south to UTM NAD27 coordinates 436700, 3727700; thence east to the MCAS El Toro boundary at UTM NAD27 y-coordinate 3727700; thence southeast following the MCAS El Toro boundary to UTM NAD27 x-coordinate 436800; thence south to UTM NAD27 coordinates 436800, 3727600; thence east to the MCAS El Toro boundary at UTM NAD27 y-coordinate 3727600; thence southeast following the MCAS El Toro boundary to UTM NAD27 x-coordinate 436900; thence south to UTM NAD27 coordinates 436900, 3727500; thence east to the MCAS El Toro boundary at UTM NAD27 y-coordinate 3727500; thence southeast following the MCAS El Toro boundary to UTM NAD27 x-coordinate 437000; thence south

returning to UTM NAD27 coordinates 437000, 3727400.

(v) Unit 2d: Lands bounded by the following UTM NAD27 coordinates (E,N): 443300, 3726300; 442700, 3726300; 442700, 3726400; 442400, 3726400; thence north to the Central Coastal NCCP (CCNCCP) boundary at UTM NAD27 x-coordinate 442400; thence northeast following the CCNCCP boundary to UTM NAD27 y-coordinate 3726500; thence east to UTM NAD27 coordinates 442500, 3726500; thence north to the CCNCCP at UTM NAD27 x-coordinate 442500; thence northeast following the CCNCCP to UTM NAD27 y-coordinate 3726900; thence east to UTM NAD27 coordinates 442900, 3726900; thence north to the CCNCCP boundary at UTM NAD27 x-coordinate 442900; thence northeast following the CCNCCP boundary to UTM NAD27 y-coordinate 3727400; thence east following UTM NAD27 coordinates 443800, 3727400; 443800, 3727300; 444000, 3727300; 444000, 3727200; 444100, 3727200; 444100, 3727100; 444200, 3727100; 444200, 3725900; 443900, 3725900; 443900, 3725700; 444100, 3725700; 444100, 3724500;

444000, 3724500; 444000, 3724400; 443600, 3724400; 443600, 3724700; 443700, 3724700; 443700, 3724800; 443400, 3724800; 443400, 3724900; 443300, 3724900; 443300, 3725400; 443400, 3725400; 443400, 3725700; 443200, 3725700; 443200, 3725800; 443100, 3725800; 443100, 3725900; 443000, 3725900; 443000, 3726000; 442900, 3726000; 442900, 3726200; 443300, 3726200; returning to UTM NAD27 coordinates 443300, 3726300, excluding lands bounded by the following UTM NAD27 coordinates 443400, 3726900; 443500, 3726900; 443500, 3726700; 443300, 3726700; 443300, 3726800; 443400, 3726800; 443400, 3726900 and excluding lands bounded by the following UTM NAD27 coordinates 443500, 3726600; 443600, 3726600; 443600, 3726500; 443700, 3726500; 443500, 3726400; 443500, 3726300; 443300, 3726300; 443300, 3726400; 443400, 3726400; 443400, 3726500; 443500, 3726500; 443500, 3726600.

(vi) Unit 2e: Lands bounded by the following UTM NAD27 coordinates (E,N): 444800, 3721200; 445300, 3721200; 445300, 3721100; 445400, 3721100; 445400, 3720900; 445300, 3720900; 445300, 3720600; 445200, 3720600; 445200, 3720300; 445100, 3720300; 445100, 3720200; 445000, 3720200; 445000, 3720100; 444900, 3720100; 444900, 3720000; 444800, 3720000; 444800, 3719900; 444700, 3719900; 444700, 3719800; 443900, 3719800; 443900, 3719900; 443800,

3719900; 443800, 3720000; 443900, 3720000; 443900, 3720100; 444000, 3720100; 444000, 3720300; 444100, 3720300; 444100, 3720400; 444200, 3720400; 444200, 3720600; 444300, 3720600; 444300, 3720700; 444400, 3720700; 444400, 3720900; 444500, 3720900; 444500, 3721000; 444600, 3721000; 444600, 3721100; 444800, 3721100; 444800, 3721200.

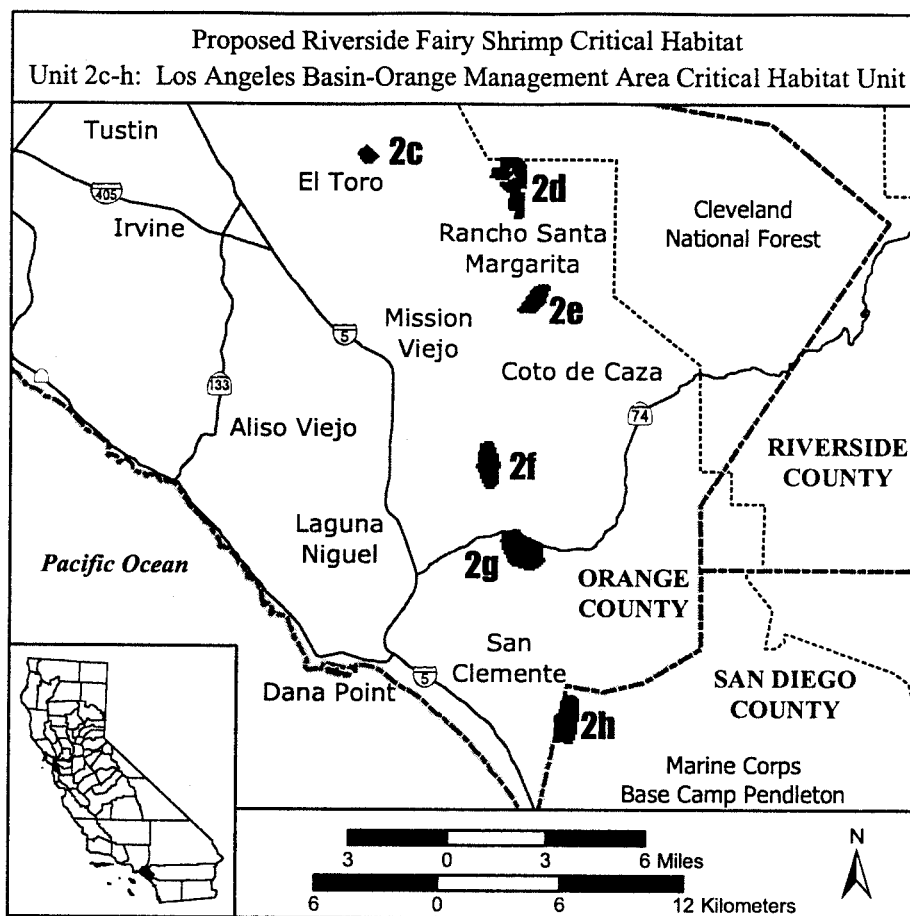
(vii) Unit 2f: Lands bounded by the following UTM NAD27 coordinates (E,N): 442200, 3713500; 442600, 3713500; 442600, 3713400; 442700, 3713400; 442700, 3713200; 442800, 3713200; 442800, 3712900; 442900, 3712900; 442900, 3712500; 443000, 3712500; 443000, 3712200; 442900, 3712200; 442900, 3711400; 442800, 3711400; 442800, 3711300; 442700, 3711300; 442700, 3711200; 442300, 3711200; 442300, 3711300; 442200, 3711300; 442200, 3711500; 442100, 3711500; 442100, 3711700; 442000, 3711700; 442000, 3712000; 441900, 3712000; 441900, 3712200; 441800, 3712200; 441800, 3712400; 441900, 3712400; 441900, 3713000; 442000, 3713000; 442000, 3713400; 442200, 3713400; 442200, 3713500.

(viii) Unit 2g: Lands bounded by the following UTM NAD27 coordinates (E,N): 443600, 3709200; 444000, 3709200; 444000, 3709000; 444100, 3709000; 444100, 3708900; 444300, 3708900; 444300, 3708800; 444500, 3708800; 444500, 3708700; 444700, 3708700; 444700, 3708600; 444900, 3708600; 444900, 3708500; 445000,

3708500; 445000, 3708400; 445100, 3708400; 445100, 3707800; 445200, 3707800; 445200, 3707600; 445100, 3707600; 445100, 3707500; 445000, 3707500; 445000, 3707400; 444900, 3707400; 444900, 3707300; 444700, 3707300; 444700, 3707200; 444200, 3707200; 444200, 3707300; 443900, 3707300; 443900, 3707400; 443600, 3707400; 443600, 3707500; 443500, 3707500; 443500, 3707600; 443400, 3707600; 443400, 3707800; 443300, 3707800; 443300, 3708000; 443200, 3708000; 443200, 3708200; 443100, 3708200; 443100, 3708600; 443000, 3708600; 443000, 3708700; 443100, 3708700; 443100, 3709100; 443600, 3709100; 443600, 3709200.

(ix) Unit 2h: Lands bounded by the following UTM NAD27 coordinates (E,N): 446300, 3701100; 446700, 3701100; 446700, 3701000; 446800, 3701000; 446800, 3700900; 446900, 3700900; 446900, 3699800; 446800, 3699800; 446800, 3699200; 446700, 3699200; 446700, 3698900; 446600, 3698900; 446600, 3698700; 446200, 3698700; 446200, 3698800; 445800, 3698800; 445800, 3698900; 445700, 3698900; 445700, 3700100; 445800, 3700100; 445800, 3700200; 445900, 3700200; 445900, 3700400; 446000, 3700400; 446000, 3700800; 446100, 3700800; 446100, 3700900; 446200, 3700900; 446200, 3701000; 446300, 3701000; 446300, 3701100.

(x) Map of critical habitat unit 2c-h for the Riverside fairy shrimp follows:



(9) Unit 3: Western Riverside County, Riverside County, California. From USGS 1:24,000 quadrangle map Riverside East.

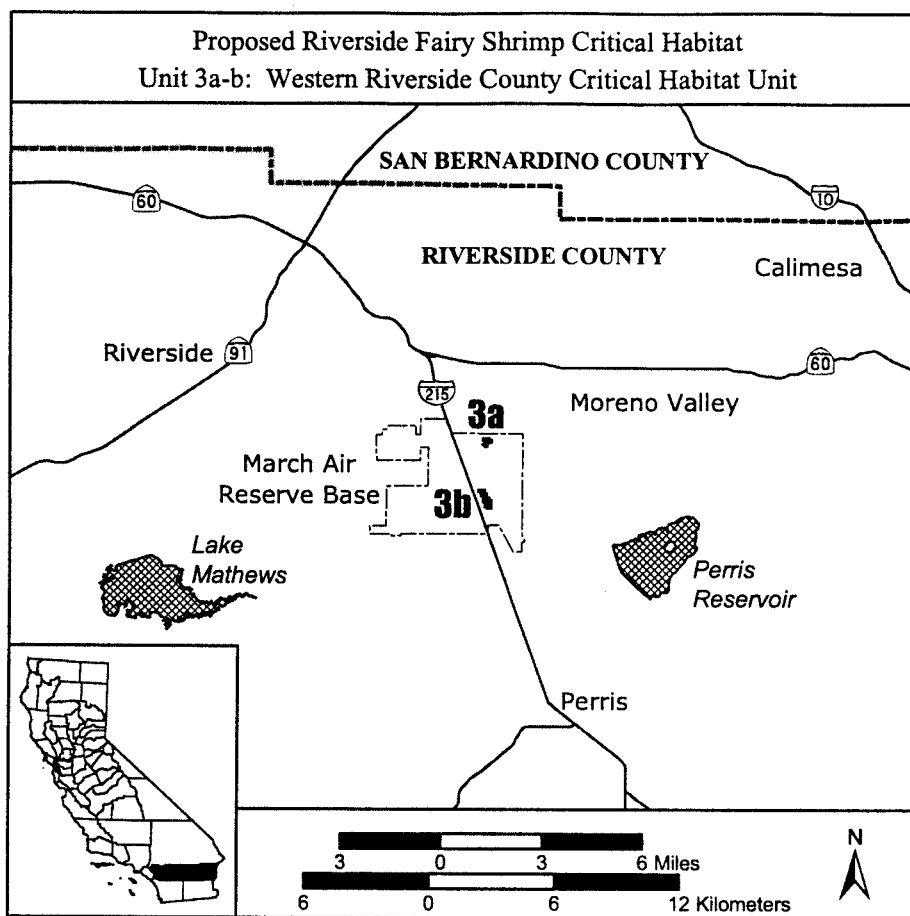
(i) Unit 3a: Lands bounded by the following UTM NAD27 coordinates (E,N): 475600, 3751900; 476000, 3751900; 476000, 3751800; 476100, 3751800; 476100, 3751600; 475900, 3751600; 475900, 3751400; 475700,

3751400; 475700, 3751500; 475600, 3751500; 475600, 3751600; 475700, 3751600; 475700, 3751700; 475600, 3751700; 475600, 3751900.

(ii) Unit 3b: Lands bounded by the following UTM NAD27 coordinates (E,N): 475400, 3749400; 475800, 3749400; 475800, 3749200; 475900, 3749200; 475900, 3749000; 476000, 3749000; 476000, 3748900; 476100,

3748900; 476100, 3748400; 475800, 3748400; 475800, 3748500; 475700, 3748500; 475700, 3748700; 475600, 3748700; 475600, 3749000; 475500, 3749000; 475500, 3749200; 475400, 3749200; 475400, 3749400.

(iii) Map of critical habitat unit 3a-b for the Riverside fairy shrimp follows:



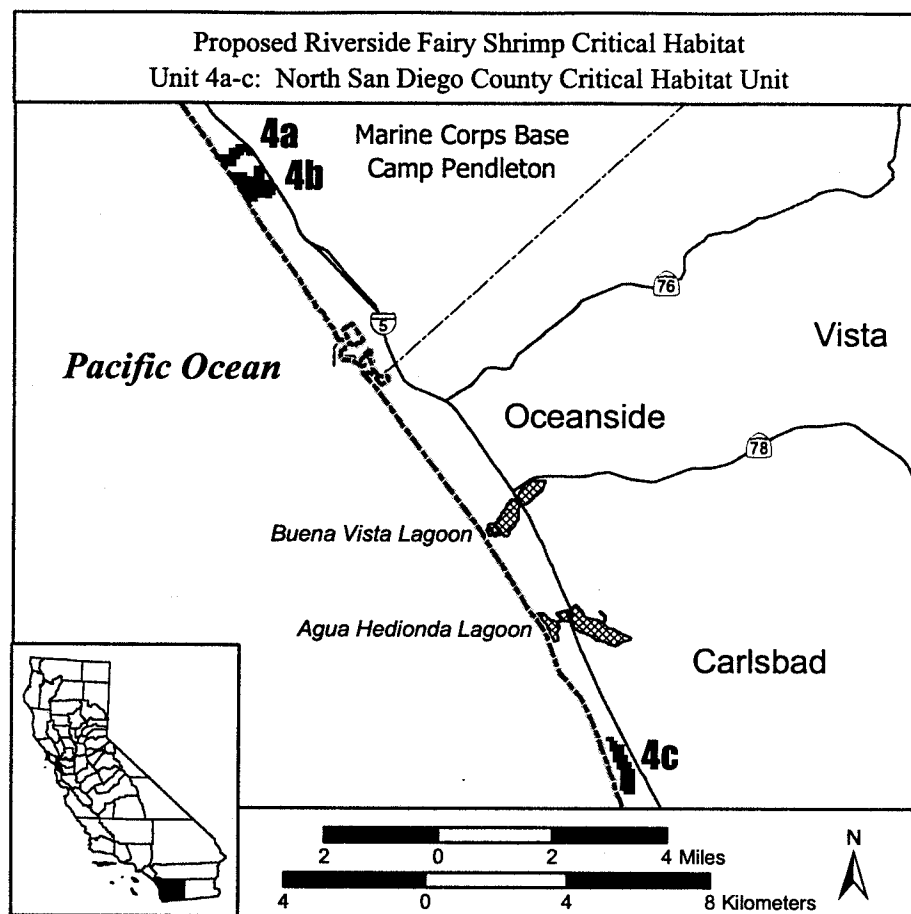
(10) Unit 4: North San Diego County, San Diego County, California. From USGS 1:24,000 quadrangle maps Las Pulgas Canyon and Encinitas.

(i) Unit 4a: Lands bounded by the following UTM NAD27 coordinates (E,N): 459500, 3680600; 459800, 3680600; 459800, 3680500; 459900, 3680500; 459900, 3680400; 460000, 3680400; 460000, 3680300; 459800, 3680300; 459800, 3680400; 459700, 3680400; 459700, 3680300; 459600, 3680300; 459600, 3680200; 459500, 3680200; 459500, 3680000; 459100, 3680000; 459100, 3680100; 459000, 3680100; 459000, 3680300; 459300, 3680300; 459300, 3680500; 459500, 3680500; 459500, 3680600, excluding the Pacific Ocean.

(ii) Unit 4b: Lands bounded by the following UTM NAD27 coordinates (E,N): 460000, 3680000; 460200, 3680000; 460200, 3679900; 460300, 3679900; 460300, 3679600; 460500, 3679600; 460500, 3679500; 460600, 3679500; 460600, 3679200; 460500, 3679200; 460500, 3679100; 460100, 3679100; 460100, 3679000; 459800, 3679000; 459800, 3679100; 459700, 3679100; 459700, 3679200; 459600, 3679200; 459600, 3679400; 459500, 3679400; 459500, 3679500; 459400, 3679500; 459300, 3679700; 459300, 3679800; 459800, 3679800; 459800, 3679700; 460000, 3679700; 460000, 3680000, excluding the Pacific Ocean.

(iii) Unit 4c: Lands bounded by the following UTM NAD27 coordinates (E,N): 470000, 3663800; 470200, 3663800; 470200, 3663700; 470300, 3663700; 470300, 3663600; 470500, 3663600; 470500, 3663300; 470600, 3663300; 470600, 3663100; 470700, 3663100; 470700, 3662900; 470800, 3662900; 470800, 3662200; 470500, 3662200; 470500, 3662300; 470400, 3662300; 470400, 3662900; 470300, 3662900; 470300, 3663100; 470200, 3663100; 470200, 3663400; 470100, 3663400; 470100, 3663700; 470000, 3663700; 470000, 3663800.

(iv) Map of critical habitat unit 4a-c for the Riverside fairy shrimp follows:



(11) Unit 5: South San Diego County, San Diego, California. From USGS 1:24,000 quadrangle maps Imperial Beach and Otay Mesa.

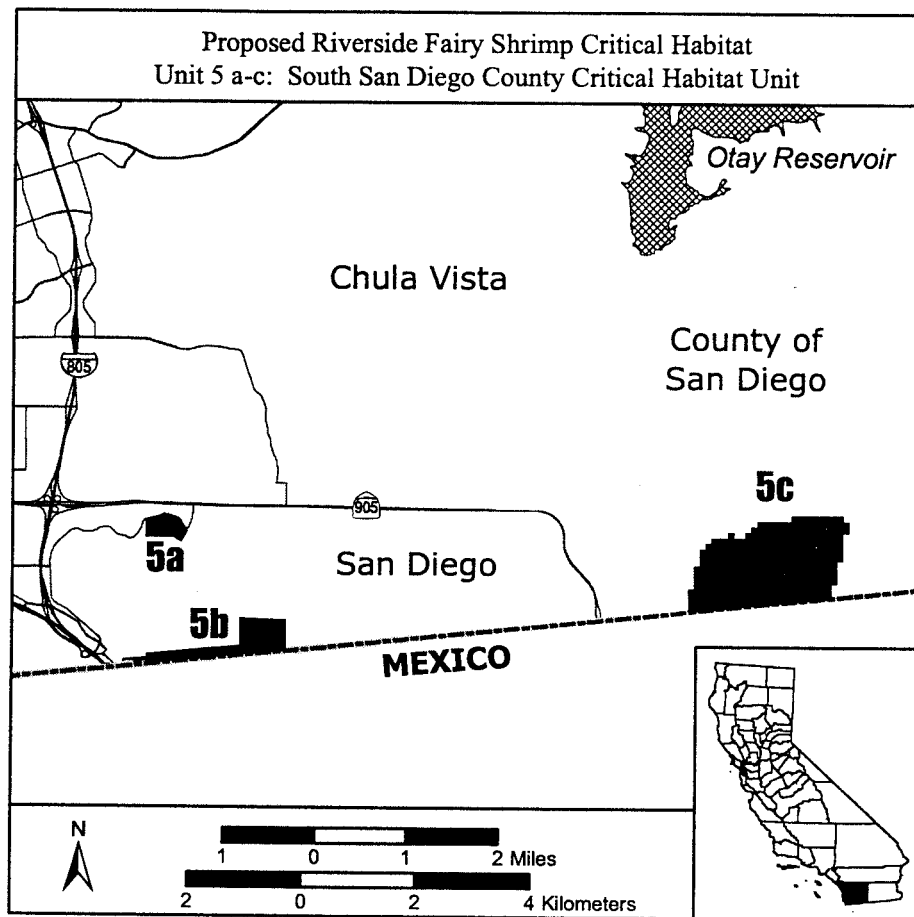
(i) Unit 5a: Sweetwater Union High School District lands on Otay Mesa and between UTM NAD27 x-coordinates 497800 and 498700.

(ii) Unit 5b: U.S. Federal Government lands on Otay Mesa and between UTM NAD27 x-coordinates 497500 and 500400.

(iii) Unit 5c: Beginning at the Mexico Border at UTM NAD27 y-coordinate 3601400, thence west and following UTM NAD27 coordinates 507400, 3601400; 507400, 3601800; 507500, 3601800; 507500, 3602200; 507600, 3602200; 507600, 3602500; 507700, 3602500; 507700, 3602600; 507800, 3602600; 507800, 3602700; 508100, 3602700; 508100, 3602800; 508200, 3602800; 508200, 3602700; 508400, 3602700; 508400, 3602800; 508500, 3602800; 508500, 3602900; 508600,

3602900; 508600, 3603000; 509200, 3603000; 509200, 3603100; 510100, 3603100; 510100, 3603000; 510200, 3603000; 510200, 3602800; 510100, 3602800; 510100, 3602300; 510000, 3602300; 510000, 3601900; 509900, 3601900; thence south to the U.S./Mexico border at UTM NAD27 x-coordinate 509900; thence west following the U.S./Mexico border; returning to the point of beginning.

(iv) Map of critical habitat unit 5a-c for the Riverside fairy shrimp follows:



Dated: April 15, 2004.

Craig Manson,

*Assistant Secretary for Fish and Wildlife and
Parks.*

[FR Doc. 04-9203 Filed 4-26-04; 8:45 am]

BILLING CODE 4310-55-C