

**DEPARTMENT OF THE INTERIOR****Fish and Wildlife Service****50 CFR Part 17**

[FWS-R8-ES-2009-0073]  
[92210-1117-0000-B4]

RIN 1018-AW54

**Endangered and Threatened Wildlife and Plants; Proposed Revised Critical Habitat for *Brodiaea filifolia* (thread-leaved brodiaea)**

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Proposed rule.

**SUMMARY:** We, the U.S. Fish and Wildlife Service (Service), propose to revise designated critical habitat for *Brodiaea filifolia* (thread-leaved brodiaea) under the Endangered Species Act of 1973, as amended (Act).

Approximately 3,786 acres (ac) (1,532 hectares (ha)) of habitat fall within the boundaries of the proposed revised critical habitat designation, which is located in Los Angeles, San Bernardino, Riverside, Orange, and San Diego Counties in southern California.

**DATES:** We will accept comments received or postmarked from all interested parties on or before February 8, 2010. We must receive requests for public hearings, in writing, at the address shown in the **FOR FURTHER INFORMATION CONTACT** section by January 22, 2010.

**ADDRESSES:** You may submit comments by one of the following methods:

- Federal eRulemaking Portal: <http://www.regulations.gov>. Follow the instructions for submitting comments to Docket No. FWS-R8-ES-2009-0073.

- U.S. mail or hand-delivery: Public Comments Processing, Attn: FWS-R8-ES-2009-0073; Division of Policy and Directives Management; U.S. Fish and Wildlife Service; 4401 N. Fairfax Drive, Suite 222; Arlington, VA 22203.

We will not accept e-mail or faxes. We will post all comments on <http://www.regulations.gov>. This generally means that we will post any personal information you provide us (see the **Public Comments** section below for more information).

**FOR FURTHER INFORMATION CONTACT:** For general information on the proposed designation, contact Jim Bartel, Field Supervisor, U.S. Fish and Wildlife Service, Carlsbad Fish and Wildlife Office, 6010 Hidden Valley Road, Suite 101, Carlsbad, CA 92011; telephone (760) 431-9440; facsimile (760) 431-5901. If you use a telecommunications device for the deaf (TDD), call the

Federal Information Relay Service (FIRS) at (800) 877-8339.

**SUPPLEMENTARY INFORMATION:****Public Comments**

We intend that any final action resulting from this proposed rule will be based on the best scientific and commercial data available and be as accurate and as effective as possible. Therefore, we request comments or information from the public, other concerned government agencies, the scientific community, industry, or other interested party concerning this proposed rule. We particularly seek comments concerning:

(1) The reasons why we should or should not revise the designation of habitat as "critical habitat" under section 4 of the Endangered Species Act of 1973, as amended (Act; 16 U.S.C. 1531 *et seq.*), including whether there are threats to the species from human activity, the degree of which can be expected to increase due to the designation, and whether that increase in threat outweighs the benefit of designation such that the designation of critical habitat is not prudent.

(2) Specific information on:

- Areas that provide habitat for *Brodiaea filifolia* that we did not discuss in this proposed revised critical habitat rule,

- Areas within the geographical area occupied by the species at the time of listing containing the features essential to the conservation of *B. filifolia* that we should include in the designation and why,

- Areas outside the geographical area occupied by the species at the time of listing that are essential for the conservation of the species and why, and

- Any areas identified in this proposed revised critical habitat rule that should not be proposed as critical habitat and why.

(3) Land-use designations and current or planned activities in the areas proposed as critical habitat, and their possible impacts on proposed critical habitat.

(4) Comments or information that may assist us in identifying or clarifying the primary constituent elements (PCEs).

(5) How the proposed revised critical habitat boundaries could be refined to more closely circumscribe the areas meeting the definition of critical habitat.

(6) Any probable economic, national security, or other relevant impacts of designating any area that may be included in the final designation. We are particularly interested in any impacts on small entities or families, and the benefits of including or

excluding areas that exhibit these impacts.

(7) Whether lands in any specific subunits being proposed as critical habitat should be considered for exclusion under section 4(b)(2) of the Act by the Secretary, and whether the benefits of potentially excluding any particular area outweigh the benefits of including that area as critical habitat.

(8) The Secretary's consideration to exercise his discretion under section 4(b)(2) of the Act to exclude lands proposed in Subunits 11a, 11b, 11c, 11d, 11e, 11f, 11g, and 11h that are within the area addressed by the Western Riverside County Multiple Species Habitat Conservation Plan (Western Riverside County MSHCP), and whether such exclusion is appropriate and why.

(9) The Secretary's consideration to exercise his discretion under section 4(b)(2) of the Act to exclude lands proposed in Subunits 4b, 4c, and 4g that are within the area addressed by the Orange County Southern Subregion Habitat Conservation Plan (Orange County Southern Subregion HCP), and whether such exclusion is appropriate and why.

(10) The Secretary's consideration to exercise his discretion under section 4(b)(2) of the Act to exclude lands proposed in Subunits 7a, 7b, 7c, and 7d that are within the area addressed by the City of Carlsbad's Habitat Management Plan (Carlsbad HMP) under the Northwestern San Diego County Multiple Species Conservation Plan (MHCSP), and whether such exclusion is appropriate and why.

(11) The Secretary's consideration to exercise his discretion under section 4(b)(2) of the Act to exclude lands proposed in Unit 12 that are within the area addressed by the County of San Diego Subarea Plan and the City of San Diego Subarea Plan under the San Diego Multiple Species Conservation Plan (MSCP), and whether such exclusion is appropriate and why.

(12) Special management considerations or protection that the physical and biological features essential to the conservation of the species may require.

(13) Information on any quantifiable economic costs or benefits of the proposed revised designation of critical habitat.

(14) Information on the currently predicted effects of climate change on *Brodiaea filifolia* and its habitat.

(15) Whether we could improve or modify our approach to designating critical habitat in any way to provide for greater public participation and

understanding, or to better accommodate concerns and comments.

Our final determination concerning critical habitat for *Brodiaea filifolia* will take into consideration all written comments and any additional information we receive during the comment period. These comments are included in the public record for this rulemaking and we will fully consider them in the preparation of our final determination. On the basis of public comments, we may, during the development of our final determination, find that areas within the proposed designation do not meet the definition of critical habitat, that some modifications to the described boundaries are appropriate, or that areas may or may not be appropriate for exclusion under section 4(b)(2) of the Act.

You may submit your comments and materials concerning this proposed rule by one of the methods listed in the **ADDRESSES** section. We will not consider comments sent by e-mail or fax or to an address not listed in the **ADDRESSES** section.

If you submit a comment via <http://www.regulations.gov>, your entire comment—including your personal identifying information—will be posted on the Web site. If you submit a hardcopy comment that includes personal identifying information, you may request at the top of your document that we withhold this information from public review. However, we cannot guarantee that we will be able to do so.

Comments and materials we receive, as well as supporting documentation we used in preparing this proposed rule, will be available for public inspection on <http://www.regulations.gov>, or by appointment, during normal business hours, at the U.S. Fish and Wildlife Service, Carlsbad Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT**).

### Background

It is our intent to discuss only those topics directly relevant to the proposed revision of critical habitat for *Brodiaea filifolia*. This proposed rule incorporates new information on family placement (biological taxonomic classification) and the distribution of *B. filifolia* that we did not discuss in the 2005 final critical habitat designation for this plant. No new information pertaining to the species' life history, ecology, or habitat was received following the 2005 final critical habitat designation. A summary of topics that are relevant to this proposed revised critical habitat is provided below. For more information on *B. filifolia*, refer to the final listing

rule published in the **Federal Register** on October 13, 1998 (63 FR 54975), and the designation of critical habitat for *B. filifolia* published in the **Federal Register** on December 13, 2005 (70 FR 73820). Additionally, more information on this species can be found in the five-year review for *B. filifolia* signed on August 13, 2009, which is available on our Web site at: <http://www.fws.gov/Carlsbad>.

### Species Description

*Brodiaea filifolia* is a perennial herb with dark-brown, fibrous-coated corms (underground, bulb-like storage stem). Corms function similarly to bulbs such that they store water and nutrients during the dormant season (Smith 1997, p. 28). The flower stalks (scapes) are 8 to 16 inches (in) (20 to 40 centimeters (cm)) tall. The leaves are basal, narrow, and shorter than the stalk, and the flowers are arranged in a loose umbel (all flowers are attached to the stalk at the same place and then radiate outward). Violet flowers start as tubes and then break into six spreading perianth (collective term for sepals and petals) segments that are 0.4 to 0.5 in (9 to 12 millimeters (mm)) long. The broad and notched anthers are 0.1 to 0.2 in (3 to 5 mm) long, and the fruit is a capsule (Munz 1974, pp. 877–878; Keator 1993, pp. 1180, 1182; 63 FR 54975, p. 54976). *Brodiaea filifolia* can be distinguished from other species of *Brodiaea* that occur within its range (*B. orcuttii* (Orcutt's brodiaea), *B. jolonensis* (Mesa brodiaea), *B. santarosae* (Santa Rosa basalt brodiaea), and *B. terrestris* ssp. *kernensis* (dwarf brodiaea)) by its narrow, pointed staminodia (characteristic sterile stamens), short filament (flower part attaching the fertile anthers to the perianth), spreading perianth segments (saucer-shaped flower), and a thin perianth tube, which is subsequently split by developing fruit (Niehaus 1971, p. 37; Munz 1974, pp. 877–878; Chester *et al.* 2007, pp. 191–196).

### Species Biology and Life History

The annual growth cycle of *Brodiaea filifolia* begins in fall when the first rains break the summer dormancy of the underground corm (Niehaus 1971, p. 4; Keator 1993, p. 1180). The leaves reach their full length during February and March (Niehaus 1971, p. 5). A solitary flower stalk grows from the corm in March or April and the flower period extends from late April to early June (CNPS 2001, p. 99; Niehaus 1971, pp. 7–9). In some years, only a few flowers bloom within an occurrence; during other years, several thousand flowers can be found in the larger occurrences.

In the summer months, the seed capsules of *Brodiaea filifolia* mature. The seeds are released and fall to the ground, either on the surface or into cracks in the soil. During fall and winter rains, the clay matrix hydrates, softens, and expands, which causes the cracks to close; following this soil hydration period, seedlings emerge with leaves and a specialized root. Seedlings of *B. filifolia* are equipped with a specialized, succulent contractile root that is lost by mature corms and facilitates the seasonal downward movement of the young plant (Niehaus 1971, p. 4). The contractile root swells with moisture in the wet season, creating space below the developing cormlet. As the soil dries, the contractile root dries and shrinks longitudinally, drawing the young cormlet downward in the soil. This process continues to a point at which the soil moisture is adequate to keep the contractile root from shrinking, resulting in the location of the corm in the appropriate soil horizon for survival. Cormlets produced annually from existing older corms also produce contractile roots that draw them laterally away from the parent corm (Niehaus 1971, p. 4).

*Brodiaea filifolia* reproduces vegetatively by producing “cormlets” that break off from the mature corms, and sexually by producing seeds (Niehaus 1971, p. 4). All species of *Brodiaea* examined to date are self-incompatible, meaning they are incapable of producing seeds with pollen from flowers on the same plant or from flowers of plants with the same allele (or different form of a gene) at the self-incompatibility gene locus/loci (Niehaus 1971, p. 27). Therefore, cross-pollination from plants of the same species but with different alleles at this locus is necessary for successful reproduction to occur (Niehaus 1971, p. 27). Upon maturity, three segments of the vertically oriented capsules split apart, revealing many small (0.08 to 0.10 in long; 2 to 2.5 mm long) black seeds (Munz 1974, p. 878). The seeds are then dispersed as wind rattles the capsules (Smith 1997, p. 29). Dispersal of seeds from an individual is likely localized, leading to patches of plants with the same self-incompatible alleles. This means that effective pollination for seed set requires the maintenance of pollinator habitat and dispersal corridors. The vegetative reproduction of small cormlets by the corm allows individual plants to reproduce vegetatively; however, sexual reproduction by seeds is necessary to continue the process of sexual selection and evolution. Active pollinators in and

around occurrences of *Brodiaea filifolia* assure that the flowers will be pollinated and that viable seeds will be produced. Therefore, supporting and maintaining pollinators and pollinator habitat is essential for the long-term conservation of *B. filifolia* (Niehaus 1971, p. 27).

#### Habitat

As described in the listing rule (October 13, 1998; 63 FR 54975, pp. 54976–54977), *Brodiaea filifolia* typically occurs on gentle hillsides, valleys, and floodplains within mesic (moderately moist), southern needlegrass grassland and alkali grassland plant communities that are associated with clay, loamy sand, or alkaline silty-clay soils (California Department of Fish and Game (CDFG) 1981, p. 3; Bramlet 1993, pp. 6–7). Sites occupied by this species are frequently intermixed with (or near) coastal sage scrub, chaparral, or vernal pool habitat (63 FR 54975, p. 54976).

We refined the description of suitable habitat in the 2005 final rule designating critical habitat for *Brodiaea filifolia* (70 FR 73820; December 13, 2005) in response to comments we received from peer reviewers. We stated that this species is usually found in herbaceous plant communities such as valley needlegrass grassland, valley sacaton grassland, nonnative grassland, alkali playa, southern interior basalt vernal pools, San Diego mesa hardpan vernal pools, and San Diego mesa claypan vernal pools (Holland 1986, pp. 34–37, 41, 44). *Brodiaea filifolia* also grows in open areas in shrub-dominated coastal sage scrub ecosystems (70 FR 73820, p. 73837). The herbaceous communities that *B. filifolia* is a part of occur in open areas on clay soils, soils with a clay subsurface, or clay lenses within loamy, silty loam, loamy sand, silty deposits with cobbles or alkaline soils, ranging in elevation from 100 feet (ft) (30 meters(m)) to 2,500 ft (765 m), depending on soil series. These soils facilitate the natural process of seed dispersal and germination, cormlet disposition or movement to an appropriate soil depth, and corm persistence through seedling and adult phases of flowering and fruit set (70 FR 73820, p. 73837).

#### Spatial Distribution and Historical Range

The historical range of *Brodiaea filifolia* extends from the foothills of the San Gabriel Mountains in the City of Glendora (Los Angeles County), east to Arrowhead Hot Springs in the western foothills of the San Bernardino Mountains (San Bernardino County),

and south through eastern Orange and western Riverside Counties to Rancho Santa Fe in central coastal San Diego County, California (California Natural Diversity Database (CNDDB) 2007).

At the time of listing in 1998, 46 historical occurrences of *Brodiaea filifolia* were reported (63 FR 54975, p. 54977). Nine of these occurrences, most from San Diego County, were considered extirpated, leaving 37 occurrences presumed extant at the time of listing. Eight documented extant occurrences were not accounted for in the final listing rule because we lacked specific data on these occurrences. In our 2009 5-year review of *B. filifolia*, we reassessed the occurrence data on this species. Due to the discovery of new occurrences, regrouping of occurrences, and the extirpation of 3 occurrences after listing, we concluded in the 5-year review that there are now 68 extant (or presumed extant) occurrences of *B. filifolia*. Most importantly to our reassessment of this species were 23 additional occurrences detected within the known range of the species following the 1998 listing. The identification of these new occurrences was a result of surveys conducted in locations that had not been surveyed prior to 1998. These 23 occurrences are located in the following areas: (1) Four occurrences are in Orange County at Trampas Canyon, Middle Gabino, East Talega, and Prima Deshecha landfill; (2) ten occurrences are in San Diego County on Marine Corps Base Camp Pendleton (MCB Camp Pendleton); (3) seven occurrences are in San Diego County (outside of MCB Camp Pendleton) in the City of Oceanside (Arbor Creek, Vista Pacific, Buena Vista Creek Preserve), City of Carlsbad (Calavera Village H, Carlsbad Oaks), City of San Marcos (Oleander site), and at Artesian Trails near 4S Ranch; and (4) two occurrences are in Riverside County along the San Jacinto River at the intersection of San Jacinto Avenue and Dawson Road, and on the Santa Rosa Plateau at Corona Cala Camino.

For the purpose of this proposed revised critical habitat, we consider the areas where *Brodiaea filifolia* has been found since listing to be within the geographical area occupied by the species at the time of listing (1998). As with many species, greater efforts to conduct surveys may result in a greater number of known occurrences being identified (Ferren *et al.* 1995). The 23 new occurrences are all in relative proximity and in similar habitats to occurrences that were known at the time of listing. Additionally, *B. filifolia* is thought to have limited dispersal capabilities and is limited to specific

habitat types making it unlikely that new occurrences are frequently established. Most of the new occurrences found since listing have population sizes of more than 1,000 plants, indicating that they were not recently established since it would take several years for an occurrence from a limited number of dispersing seeds to reach a population of this size. Therefore, we believe that all known occurrences of *B. filifolia* are within the geographical area occupied at the time this species was listed under the Act. Furthermore, additional translocated occurrences (occurrences moved from one location to another) are also within the geographical area occupied by the species at the time of listing.

#### Abundance

The size of each *Brodiaea filifolia* population is often measured by counting numbers of standing flower stalks. Because many *B. filifolia* corms do not produce flowering stalks each year, this method of counting may result in a number of vegetative plants and corms going undetected in surveys (Taylor and Burkhart 1992, pp. 1-7; Morey 1995, p. 2; Vinje 2008, pers. comm.). For this reason, any number of individuals observed at a site should be considered an estimate of the minimum number of plants present. We consider these estimates useful in comparing the relative abundance of *B. filifolia* at various sites across the species' range because these numbers provide an approximate measure of the size of the occurrence.

Some researchers have conducted studies to provide data on the ratio of flowering stalks to the actual number of individual *Brodiaea filifolia* plants that may be present at a site. A field study at the Santa Rosa Plateau Ecological Reserve revealed an 8:1 ratio of non-flowering corms to flowering plants (12.5 percent flowered) (Morey 1995, p. 2). At a residential development site in the City of Carlsbad, only 20 plants (0.25 percent) flowered, where 8,000 corms were later located (Taylor and Burkhart 1992, pp. 1-7). In 2007—a dry year—Vinje (2008, pers. comm.) reported that 14,373 vegetative *B. filifolia* plants were counted within three research plots at the Rancho La Costa occurrence in Carlsbad, but none of the plants flowered (Vinje 2008, pers. comm.). Even in a wet year, only 2 to 26 percent of the plants within the plots at Rancho La Costa flowered (Vinje 2008, pers. comm.). In this proposed revised critical habitat, we are using the number of flowering stalks at each site (i.e., the maximum recorded number) as a relative measure of the occurrence's

size rather than an absolute measure of the occurrence size. In that context, the existing plant count data is useful in comparing the relative size of different occurrences to one another.

To date, no systematic surveys of all known occurrences of *Brodiaea filifolia* have been conducted. There is little consistent range-wide information about abundance or population trends in *B. filifolia*. Current estimates suggest that the majority of *B. filifolia* occurrences contain 2,000 or fewer individuals (Service 2009, pp. 8–13). The areas containing the largest occurrences (3,000 or more) are at the following locations: San Dimas in Los Angeles County; Santa Rosa Plateau Ecological Reserve, San Jacinto Wildlife Area, Case Road, and Railroad Canyon in Riverside County; Aliso and Wood Canyon Wilderness Park, and Cristianitos Canyon in Orange County; and Upham, Oleander/San Marcos Elementary, Rancho Carrillo, Letterbox Canyon, Rancho La Costa, and Taylor/Darwin in San Diego County.

*Taxonomy and Family Placement – Movement of Brodiaea From Liliaceae (Lily Family) to Themidaceae (Cluster Lily Family)*

The name and description of *Brodiaea filifolia* have not changed since listing under the Act. However, as described below, the family in which the plant is placed has changed from Liliaceae (lily family) to Themidaceae (cluster lily family). Additionally, plants that were previously identified as hybrids and not pure *B. filifolia* have now been described as a new species, *B. santarosae*. Pires (2007, p. 1) and Preston (2007, pers. comm.) intend to include *Brodiaea santarosae* as a separate species in their treatment of the genus *Brodiaea* for the revision of the Jepson Manual that is in progress; this is based on their assessment of Chester *et al.* (2007, pp. 187–198). The following text describes movement of the genus *Brodiaea* from Liliaceae to Themidaceae.

When we listed *Brodiaea filifolia* as a threatened species on October 13, 1998 (63 FR 54975), it was considered part of a large and broadly defined family known as Liliaceae. *Brodiaea* and several other genera including *Bloomeria*, *Dichelostemma*, *Triteleia*, and *Allium* historically were placed in the Amaryllidaceae (amaryllis family) or the Liliaceae based on perceived importance of characters related to the position of the ovary or the inflorescence type. Salisbury (1866) recognized a group of several genera that includes taxa now named *Brodiaea* as a family, which was distinct from

*Allium* and other genera in the Liliaceae, and subsequently named the new family Themidaceae (Salisbury 1866, pp. 84–87). Recent molecular and anatomical studies support recognition of Salisbury's Themidaceae family. First, Fay and Chase (1996, pp. 441–451) present evidence that several genera, including *Triteleia*, *Brodiaea*, *Bloomeria*, and *Dichelostemma*, form a distinct group for which the earliest name available for this group at the family rank is Themidaceae. Second, genera in the Themidaceae share a common ancestor (the included members are termed monophyletic) that is supported by phylogenetic analyses of morphological data and plastid DNA sequences (Pires *et al.* 2001, pp. 601–626; Pires and Sytsma 2002, pp. 1342–1359). Genetic and morphological analysis of members of the Themidaceae, as described by Salisbury and other related groups, support the placement of the genus *Brodiaea* into the Themidaceae (Pires *et al.* 2001, pp. 610–626).

*Brodiaea* is retained in the family Liliaceae in the recent Flora of North America (Pires 2002, p. 321); however, the author of the family description (Utech 2002, p. 52) includes a table that lists *Brodiaea* as a member of the Themidaceae and states that the available evidence strongly supports dismemberment of the Liliaceae. The family Themidaceae, including *Brodiaea*, will be recognized as a family separate from Liliaceae in the upcoming revision of the Jepson Manual (Pires 2007, p. 1; Preston 2007, pers. comm.). We have reviewed this material and we are in agreement with the change from Liliaceae to Themidaceae. As part of this rule, we propose to amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations to reflect the transfer of *B. filifolia* from Liliaceae to Themidaceae. This transfer does not alter the definition or distribution of *B. filifolia*.

**Previous Federal Actions**

We published our final designation of critical habitat for *Brodiaea filifolia* on December 13, 2005 (70 FR 73820). The Center for Biological Diversity filed a complaint in the U.S. District Court for the Southern District of California on December 19, 2007, challenging our designation of critical habitat for *B. filifolia* and *Navarretia fossalis* (*Center for Biological Diversity v. United States Fish and Wildlife, et al.*, Case No. 07–CV–02379–W–NLS). In a settlement agreement dated July 25, 2008, we agreed to reconsider the critical habitat designation for *B. filifolia*. The settlement stipulated that the Service

shall submit a proposed revised critical habitat designation for *B. filifolia* to the **Federal Register** by December 1, 2009, and submit a final revised critical habitat designation to the **Federal Register** by December 1, 2010.

**Critical Habitat**

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

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

(a) essential to the conservation of the species and

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

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

Conservation, as defined under section 3 of the Act, means the use of all methods and procedures that are necessary to bring any endangered or threatened species to the point at which the measures provided under the Act are no longer necessary. Such methods and procedures include, but are not limited to, all activities associated with scientific resources management, such as research, census, law enforcement, habitat acquisition and maintenance, propagation, live trapping, transplantation, and, in the extraordinary case where population pressures within a given ecosystem cannot otherwise be relieved, may include regulated taking.

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

of a destruction or adverse modification finding, the Federal action agency's and the applicant's obligation is not to restore or recover the species, but to implement reasonable and prudent alternatives to avoid destruction or adverse modification of critical habitat.

For inclusion in a critical habitat designation, the habitat within the geographical area occupied by the species at the time of listing must contain physical and biological features that are essential to the conservation of the species, and be included only if those features may require special management considerations or protection. Critical habitat designations identify, to the extent known using the best scientific and commercial data available, habitat areas supporting the essential physical or biological features that provide essential life cycle needs of the species; that is, areas on which are found the primary constituent elements (PCEs) laid out in the appropriate quantity and spatial arrangement essential to the conservation of the species. Under the Act and regulations at 50 CFR 424.12, we can designate critical habitat in areas outside the geographical area occupied by the species at the time it is listed only when we determine that those areas are essential for the conservation of the species and that designation limited to the species' present range would be inadequate to ensure the conservation of the species.

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

When we are determining which areas should be designated as critical habitat, our primary source of information is generally the information developed during the listing process for the species. Additional information sources may include the recovery plan for the species, articles in peer-reviewed

journals, conservation plans developed by States and counties, scientific status surveys and studies, biological assessments, or other unpublished materials and expert opinion or personal knowledge.

Habitat is often dynamic, and species may move from one area to another over time. In particular, we recognize that climate change may cause changes in the arrangement of occupied habitat patches. Current climate change predictions for terrestrial areas in the Northern Hemisphere indicate warmer air temperatures, more intense precipitation events, and increased summer continental drying (Field *et al.* 1999, pp. 1-3; Hayhoe *et al.* 2004, p. 12422; Cayan *et al.* 2005, p. 6; Intergovernmental Panel on Climate Change 2007, p. 11; Cayan *et al.* 2009, p. xi). Additionally, the southwestern region of the country is predicted to become drier and hotter overall (Hayhoe *et al.* 2004, p. 12424; Seager *et al.* 2007, p. 1181). Climate change may also affect the duration and frequency of drought and these climatic changes may become even more dramatic and intense (Graham 1997). Documentation of climate-related changes that have already occurred in California (Croke *et al.* 1998, pp. 2128, 2130; Brashears *et al.* 2005, p. 15144), and future drought predictions for California (e.g., Field *et al.* 1999, pp. 8-10; Lenihien *et al.* 2003, p. 1667; Hayhoe *et al.* 2004, p. 12422; Brashears *et al.* 2005, p. 15144; Seager *et al.* 2007, p. 1181) and North America (IPCC 2007, p. 9) indicate prolonged drought and other climate-related changes will continue in the foreseeable future.

We anticipate these changes will affect *Brodiaea filifolia* habitat and occurrences. For example, if the amount and timing of precipitation or the average temperature increases in southern California, the following four changes may affect the long-term viability of *B. filifolia* occurrences in their current habitat configuration: (1) Drier conditions may result in a lower percent germination and smaller population sizes; (2) a shift in the timing of the annual rainfall may favor nonnative species that impact the quality of habitat for this species; (3) warmer temperatures may affect the timing of pollinator life-cycles causing pollinators to become out-of-sync with timing of flowering *B. filifolia*; and (4) drier conditions may result in increased fire frequency, making the ecosystems in which *B. filifolia* currently grows more vulnerable to the threats of subsequent erosion and nonnative/native plant invasion.

At this time, we are unable to identify the specific ways that climate change will impact *Brodiaea filifolia*, therefore, we are unable to determine what additional areas, if any, may be appropriate to include in the proposed revised critical habitat for this species. We specifically request information from the public on the currently predicted effects of climate change on *B. filifolia* and its habitat. Additionally, we recognize that critical habitat designated at a particular point in time may not include all of the habitat areas that we may later determine are necessary for the recovery of the species. For these reasons, a critical habitat designation does not signal that habitat outside the designated area is unimportant or may not promote the recovery of the species.

Areas that support occurrences, but are outside the critical habitat designation, will continue to be subject to conservation actions we and other Federal agencies implement under section 7(a)(1) of the Act. They are also subject to the regulatory protections afforded by the section 7(a)(2) jeopardy standard, as determined on the basis of the best available scientific information at the time of the agency action. Federally funded or permitted projects affecting listed species outside their designated critical habitat areas may still result in jeopardy findings in some cases. Similarly, critical habitat designations made on the basis of the best available information at the time of designation will not control the direction and substance of future recovery plans, habitat conservation plans (HCPs), or other species conservation planning efforts if new information available to these planning efforts calls for a different outcome.

#### Methods

As required by section 4(b) of the Act, we used the best scientific and commercial data available in determining which areas within the geographic area occupied by the species at the time of listing contain the features essential to the conservation of *Brodiaea filifolia*, and which areas outside the geographical area occupied at the time of listing are essential for the conservation of *B. filifolia*. We reviewed the 2005 final critical habitat designation for *B. filifolia* (70 FR 73820), information from state, Federal, and local government agencies, and information from academia and private organizations that collected scientific data on the species. We also used the information provided in the 5-year review for *B. filifolia* (Service 2009, pp. 1-47). Other information we used for this proposed revised critical habitat

includes: CNDDDB (CNDDDB 2009, pp. 1–73); data and information included in reports submitted during consultations under section 7 of the Act; information contained in analyses for individual and regional HCPs where *B. filifolia* is a covered species; data collected on MCB Camp Pendleton; data collected from reports submitted by researchers holding recovery permits under section 10(a)(1)(A) of the Act; information received from local species experts; published and unpublished papers, reports, academic theses, or surveys; Geographic Information System (GIS) data (such as species occurrence data, soil data, land use, topography, aerial imagery, and ownership maps); and correspondence to the Service from recognized experts. We are not currently proposing any areas as critical habitat that are outside the geographical area occupied by the species at the time of listing because we have determined that we can conserve this species by including in critical habitat a subset of areas that were occupied at the time of listing (28 of 68 occurrences known to be occupied are proposed as critical habitat).

#### Physical and Biological Features

In accordance with section 3(5)(A)(i) and 4(b)(1)(A) of the Act and regulations at 50 CFR 424.12(b), in determining which areas within the geographical area occupied at the time of listing to propose as revised critical habitat, we consider those physical and biological features that are essential to the conservation of the species and which may require special management considerations or protection. We consider the essential physical and biological features to be the PCEs laid out in the appropriate quantity and spatial arrangement essential to the conservation of the species. The PCEs include, but are not limited to:

- (1) Space for individual and population growth and for normal behavior;
- (2) Food, water, air, light, minerals, or other nutritional or physiological requirements;
- (3) Cover or shelter;
- (4) Sites for breeding, reproduction, and rearing (or development) of offspring; and
- (5) Habitats that are protected from disturbance or are representative of the historical, geographical, and ecological distributions of a species.

We derive the PCEs required for *Brodiaea filifolia* from its biological needs. The areas included in our proposed revised critical habitat for *B. filifolia* contain the appropriate soils and associated vegetation at suitable

elevations, and adjacent areas necessary to maintain associated physical processes such as a suitable hydrological regime. The areas provide suitable habitat, water, minerals, and other physiological needs for reproduction and growth of *B. filifolia*, as well as habitat that supports pollinators of *B. filifolia*. The PCEs and the resulting physical and biological features essential to the conservation of *B. filifolia* are derived from studies of this species' habitat, ecology, and life history as described in the **Background** section of this proposed rule, and the previous critical habitat rule (70 FR 73820; December 13, 2005), and in the final listing rule (63 FR 54975; October 13, 1998).

#### Space for Individual and Population Growth, and for Normal Behavior

Habitats that provide space for growth and persistence of *Brodiaea filifolia* include areas: (1) With combinations of appropriate elevation and clay or clay-associated soils, on mesas or low to moderate slopes that support open native or annual grasslands within open coastal sage scrub or coastal sage scrub-chaparral communities; (2) in floodplains or in association with vernal pool or playa complexes that support various grassland or scrub communities; (3) on soils derived from olivine basalt lava flows on mesas and slopes that support vernal pools within grassland, oak woodland, or savannah communities; or (4) on sandy loam soils derived from basalt and granodiorite parent material with deposits of cobbles and boulders supporting intermittent seeps, and open marsh communities. Despite the wide range of habitats where *B. filifolia* occurs, this species occupies a specific niche of habitat that is moderately wet to occasionally wet.

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

All members of the genus *Brodiaea* require full sun and many tend to occur on only one or a few soil series (Niehaus 1971, pp. 26-27). *Brodiaea filifolia* occurs on several formally named soil series, but these are all primarily clay soils with varying amounts of sand and silt. In this proposed rule, we listed all the mapped soils that overlap with the distribution of *B. filifolia*. Sometimes clay soils occur as inclusions within other soil series, as such, we have named those other soil series in this rule. Another reason that there are many differently named soil series is because this species occurs in five counties, each of which has uniquely named soils. Despite the diversity in named soil

series, *B. filifolia* is a clay soils endemic and always occurs on soils with a clay component.

In San Diego, Orange, and Los Angeles Counties, occurrences of *Brodiaea filifolia* are highly correlated with specific clay soil series such as, but not limited to: Alo, Altamont, Auld, and Diablo or clay lens inclusions in a matrix of loamy soils such as Fallbrook, Huerhuero, and Las Flores series (63 FR 54975, p. 54978; CNDDDB 2009, pp. 1-76; Service GIS data 2009). These soils generally occur on mesas and hillsides with gentle to moderate slopes, or in association with vernal pools. These soils are generally vegetated with open native or nonnative grassland, open coastal sage scrub, or open coastal sage scrub-chaparral communities. In San Bernardino County, the species is associated with Etsel family–Rock outcrop–Springdale and Tujunga–Urban land–Hanford soils (Service GIS data 2009). These soils are generally vegetated with open native and nonnative grasslands, open coastal sage scrub, or open coastal sage scrub-chaparral communities.

In western Riverside County, the species is often found on alkaline silty-clay soil series such as, but not limited to, Domino, Grangeville, Waukena, and Willows underlain by a clay subsoil or caliche (a hardened gray deposit of calcium carbonate). These soils generally occur in low-lying areas and floodplains or are associated with vernal pool or playa complexes. These soils are generally vegetated with open native and nonnative grasslands, alkali grassland, or alkali scrub communities. Also in western Riverside County, the species is found on clay loam soils underlain by heavy clays derived from basalt lava flows (i.e., Murrieta series on the Santa Rosa Plateau) (Bramlet 1993, p. 1; CNDDDB 2009, pp. 1-76; Service GIS data 2009). These soils generally occur on mesas and gentle to moderate slopes or are associated with basalt vernal pools. These soils are vegetated with open native or nonnative grasslands or oak woodland savannah communities.

In some areas in northern San Diego County and southwestern Riverside County, the species is found on sandy loam soils derived from basalt and granodiorite parent materials; deposits of gravel, cobble, and boulders; or hydrologically fractured, weathered granite in intermittent streams and seeps. These soils and deposits are generally vegetated by open riparian and freshwater marsh communities associated with intermittent drainages, floodplains, and seeps. Throughout *B. filifolia*'s range these soils facilitate the natural process of seed dispersal and

germination, cormlet disposition or movement to an appropriate soil depth, and corm persistence through seedling and adult phases of flowering and fruit set described earlier.

#### Habitats That Are Protected From Disturbance or Are Representative of the Historical, Geographical, and Ecological Distributions of the Species

The conservation of *Brodiaea filifolia* is dependent on several factors including, but not limited to, maintenance of areas of sufficient size and configuration to sustain natural ecosystem components, functions, and processes (such as full sun exposure, natural fire and hydrologic regimes, adequate biotic balance to prevent excessive herbivory); protection of existing substrate continuity and structure, connectivity among groups of plants within geographic proximity to facilitate gene flow among the sites through pollinator activity and seed dispersal; and sufficient adjacent suitable habitat for vegetative reproduction and population expansion.

A natural, generally intact surface and subsurface soil structure, not permanently altered by anthropogenic land use activities (such as deep, repetitive discing, or grading), and associated physical processes such as a hydrological regime is necessary to provide water, minerals, and other physiological needs for *Brodiaea filifolia*. A natural hydrological regime includes seasonal hydration followed by drying out of the substrate to promote growth of plants and new corms for the following season. These conditions are also necessary for the normal development of seedlings and young vegetative cormlets.

#### Habitat for Pollinators of *Brodiaea filifolia*

Cross-pollination is essential for the survival and recovery of *Brodiaea filifolia* because this species is self-incompatible and it cannot sexually reproduce without the aid of insect pollinators. A variety of insects are known to cross-pollinate *Brodiaea* species, including Tumbling Flower Beetles (Mordellidae, Coleoptera) and Sweat Bees (Halictidae, Hymenoptera; Niehaus 1971, p. 27). Bell and Rey (1991, p. 3) report that native bees observed pollinating *B. filifolia* on the Santa Rosa Plateau in Riverside County include *Bombus californicus* (Apidae, Hymenoptera), *Hoplitis* sp. (Megachilidae, Hymenoptera), *Osmia* sp. (Megachilidae, Hymenoptera), and an unidentified Anthophorid (digger-bee). Anthophoridae and Halictidae are important pollinators of *Brodiaea*

*filifolia*, as shown at a study site in Orange County (Glenn Lukos Associates 2004, p. 3). Supporting and maintaining pollinators and pollinator habitat is essential for the conservation of *B. filifolia* because this species cannot set viable seed without cross-pollination.

Of primary concern to the conservation of *Brodiaea filifolia* are solitary bees (such as sweat bees (*Hoplitis* sp. and *Osmia* sp.)) because these are the pollinators that have the most specific habitat requirements (such as nesting requirements) and are impacted by fragmentation and reduced diversity of natural habitats at a small scale (Gathmann and Tschardt 2002, p. 757; Steffan-Dewenter 2003, p. 1041; Shepherd 2009, pers. comm.). Due to the focused foraging habits of solitary bees we believe that these insects may be the most important to the successful reproduction of *B. filifolia*. To sustain an active pollinator community for *B. filifolia*, alternative pollen or food source plants may be necessary for the persistence of these insects when *B. filifolia* is not in flower. It is also necessary for nest sites for pollinators to be located within flying distance of *B. filifolia* occurrences.

*Bombus* spp. (bumblebees) may also be important to the pollination of *Brodiaea filifolia*, however, these insects may be able to travel greater distances and cross fragmented landscapes to pollinate *B. filifolia*. In a study of experimental isolation and pollen dispersal of *Delphinium nuttallianum* (Nuttall's larkspur), Schulke and Waser (2001, pp. 242–243) report that adequate pollen loads were dispersed by bumblebees within control populations and in isolated experimental “populations” from 164 to 1,312 feet (ft) (50 to 400 meters (m)) distant from the control populations. One of several pollinator taxa effective at 1,312 ft (400 m) was *Bombus californicus* (Schulke and Waser 2001, pp. 240–243), which was also one of four bee species observed pollinating *Brodiaea filifolia* by Bell and Rey (1991, p. 2). Studies by Steffan-Dewenter and Tschardt (2000, p. 293) demonstrated that it is possible for bees to forage as far as 4,920 ft (1,500 m) from a colony, and at least one study suggests that bumblebees may forage many kilometers away (Sudgen 1985, p. 308). Bumblebees may be effective at transferring pollen between occurrences of *B. filifolia* because they are larger and have been found pollinating plants at distances of 1,312 to 4,920 ft (400 to 1500 m). However, the visits and focused effort of bumblebees may be less frequent than ground-nesting bees.

Ground-nesting solitary bees appear to have limited dispersal and flight

abilities (Thorp and Leong 1995, p. 7). Studies have shown that as areas are fragmented by development, remaining habitat areas have reduced pollinator diversity (Steffan-Dewenter 2003, p. 1041). If pollinators are eliminated from an occurrence, *Brodiaea filifolia* will no longer be able to reproduce sexually. Of the native bees that have been observed pollinating *B. filifolia*, solitary ground-nesting bees are the most sensitive to habitat disturbance and the most likely to be lost from an area. Sweat bees (family Halictidae), *Hoplitis* (family Megachilidae), and *Osmia* (mason bees, family Megachilidae), fly approximately 900 to 1,500 ft (274 to 457 m), 600 to 900 ft (183 to 274 m), and 600 to 1,800 ft (183 to 549 m), respectively (Shepherd 2009, pers. comm.). *Bombus californicus* (family Apidae) and Digger bees (family Apidae) fly further, generally more than over 2,640 ft (804 m) (Shepherd 2009, pers. comm.). These flight distances are important in determining what habitat associated with *Brodiaea filifolia* occurrences provides habitat for this species' pollinators. Conserving habitat where these pollinators nest and forage will sustain an active pollinator community and provide for the cross-pollination of *B. filifolia*.

In our review of the data on pollinators of *Brodiaea filifolia* in the 2005 critical habitat rule, we determined that an 820-ft (250-m) area around each occurrence identified in the critical habitat would provide adequate space to support *B. filifolia*'s pollinators. In the 2005 critical habitat rule, we based the 820-ft (250-m) distance on a conservative estimate for the mean routine flight distance for bees. This distance represents an estimate of flight distance for pollinators that fly an average of less than 1,800 ft (549 m) (i.e., the maximum distance observed by known pollinators of *B. filifolia* except *Bombus californicus*). Research supports this distance, as studies looking at areas with a radius of 820 ft (250 m) have found that solitary bees forage at this scale and that if fragmentation occurs at this scale the presence of solitary bees will decrease (Steffan-Dewenter *et al.* 2002, pp. 1027–1029; Shepherd 2009, pers. comm.). Insects that travel greater distances than 1,800 ft (549 m) on average may also find habitat within 820 ft (250 m) of *Brodiaea filifolia* occurrences. It is also possible that insects flying greater than 1,800 ft (549 m) are flying in from greater distances (*Bombus californicus* and *Anthophora*) and are living in habitats that are not directly connected with areas supporting *Brodiaea filifolia*.

Delineating a pollinator use area larger than 820 ft (250 m) around *B. filifolia* would capture habitat that may not directly contribute to the survival or recovery of *B. filifolia*. Including habitat out from the mapped occurrences of *B. filifolia* up to 820 ft (250m) in the PCEs is necessary to support pollinator activity in critical habitat, support the sexual reproduction of *B. filifolia*, and provide for gene flow, pollen dispersal, and seed dispersal.

#### Primary Constituent Elements for *Brodiaea filifolia*

Pursuant to the Act and its implementing regulations, when considering the designation of critical habitat, we must focus on the primary constituent elements within the geographical area occupied by *Brodiaea filifolia* at the time of listing that are essential to the conservation of the species and may require special management considerations or protection. The essential physical and biological features are those PCEs laid out in an appropriate quantity and spatial arrangement determined to be essential to the conservation of the species. All areas proposed as revised critical habitat for *B. filifolia* are currently occupied, are within the geographical area occupied by the species at the time of listing, and contain sufficient PCEs to support at least one life-history function (see the “Spatial Distribution and Historical Range” section of this rule).

Based on our current knowledge of the life history, biology, and ecology of *Brodiaea filifolia*, and the requirements of the habitat to sustain the life-history traits of the species, we determined that the PCEs specific to *B. filifolia* are:

(1) PCE 1—Appropriate soil series at a range of elevations and in a variety of plant communities, specifically:

(A) Clay soil series of various origins (such as Alo, Altamont, Auld, or Diablo), clay lenses found as unmapped inclusions in other soils series, or loamy soils series underlain by a clay subsoil (such as Fallbrook, Huerhuero, or Las Flores) occurring between the elevations of 100 and 2,500 ft (30 and 762 m).

(B) Soils (such as Cieneba-rock outcrop complex and Ramona family-Typic Xerothents soils) altered by hydrothermal activity occurring between the elevations of 1,000 and 2,500 ft (305 and 762 m).

(C) Silty loam soil series underlain by a clay subsoil or caliche that are generally poorly drained, moderately to strongly alkaline, granitic in origin (such as Domino, Grangeville, Traver, Waukena, or Willows) occurring

between the elevations of 600 and 1,800 ft (183 and 549 m).

(D) Clay loam soil series (such as Murrieta) underlain by heavy clay loams or clays derived from olivine basalt lava flows occurring between the elevations of 1,700 and 2,500 ft (518 and 762 m).

(E) Sandy loam soils derived from basalt and granodiorite parent materials; deposits of gravel, cobble, and boulders; or hydrologically fractured, weathered granite in intermittent streams and seeps occurring between 1,800 and 2,500 ft (549 and 762 m).

(2) PCE 2—Areas with a natural, generally intact surface and subsurface soil structure, not permanently altered by anthropogenic land use activities (such as deep, repetitive discing, or grading), extending out up to 820 ft (250 m) from mapped occurrences of *Brodiaea filifolia*.

This proposed revision to the critical habitat designation is designed for the conservation of those areas containing PCEs necessary to support the species' life-history traits. All units/subunits of the proposed critical habitat contain one of the specific soil components identified in PCE 1 and have natural, generally intact surface and subsurface soil structure and support habitat for pollinators as identified in PCE 2. These two factors are sufficient to support life-history traits of *Brodiaea filifolia* in the units/subunits we propose as critical habitat. In general, we propose units/subunits based on the presence of the PCEs in the appropriate quantity and spatial arrangement essential to the conservation of the species. In the case of this designation, all of the units/subunits contain both of the PCEs.

#### Special Management Considerations or Protection

When designating critical habitat within the geographical area occupied by the species at the time of listing, we assess whether the physical and biological features essential to the conservation of the species may require special management considerations or protection. In all units/subunits, special management considerations or protection of the essential features may be required to provide for the growth, reproduction, and sustained function of the habitat on which *Brodiaea filifolia* depends.

The lands proposed as critical habitat represent our best assessment of the habitat that meets the definition of critical habitat for *Brodiaea filifolia* at this time. The essential physical or biological features within the areas proposed as critical habitat may require some level of management to address current and future threats to *B. filifolia*,

including the direct and indirect effects of habitat loss and degradation from urban development; the introduction of nonnative invasive plant species; recreational activities; discing and mowing for agricultural practices or fuel modification for fire management; and dumping of manure and sewage sludge.

Loss and degradation of habitat from development was cited in the final listing rule as a primary cause for the decline of *Brodiaea filifolia*. Most of the populations of this species are located in San Diego, Orange, and Riverside Counties. These counties have had (and continue to have) increasing human populations and attendant housing pressure. Natural areas in these counties are frequently near or bounded by urbanized areas. Urban development removes the plant community components and associated clay soils identified in the PCEs, which eliminates or fragments the populations of *B. filifolia*. Grading, discing, and scraping areas in the preparation of areas for urbanization also directly alters the soil surface as well as subsurface soil layers to the degree that they will no longer support plant community types and pollinators associated with *B. filifolia* (PCE 2).

Nonnative invasive plant species may alter the vegetation composition or physical structure identified in the PCEs to an extent that the area does not support *Brodiaea filifolia* or the plant community that it inhabits. Additionally, invasive species may compete with *B. filifolia* for space and resources by depleting water that would otherwise be available to *B. filifolia*.

Unauthorized recreational activities may impact the vegetation composition and soil structure that supports *Brodiaea filifolia* to an extent that the area will no longer have intact soil surfaces or the plant communities identified in the PCEs. Off-highway vehicle (OHV) activity is an example of this type of activity.

Some methods of mowing or discing for agricultural purposes or fuel modification for fire management may preclude the full and natural development of *Brodiaea filifolia* by adversely affecting the PCEs. Mowing may preclude the successful reproduction of the plant, or alter the associated vegetation needed for pollinator activity (PCE 2). Dumping of sewage sludge can cover plants as well as the soils they need. Additionally, this practice can alter the chemistry of the substrate and lead to alterations in the vegetation supported at the site (PCE 1).

In summary, we find that the areas we are proposing as revised critical habitat contain the features essential to the

conservation of *Brodiaea filifolia*, and that these features may require special management considerations or protection. Special management considerations or protection may be required to eliminate, or reduce to negligible level, the threats affecting each unit/subunit and to preserve and maintain the essential features that the proposed critical habitat units/subunits provide to *B. filifolia*. Additional discussions of threats facing individual sites are provided in the individual unit/subunit descriptions.

The designation of critical habitat does not imply that lands outside of critical habitat may not play an important role in the conservation of *Brodiaea filifolia*. In the future, and with changed circumstances, these lands may become essential to the conservation of *B. filifolia*. Activities with a Federal nexus that may affect areas outside of critical habitat, such as development, agricultural activities, and road construction, are still subject to review under section 7 of the Act if they may affect *B. filifolia* because Federal agencies must consider both effects to the plant and effects to critical habitat independently. The prohibitions of section 9 of the Act applicable to *B. filifolia* under 50 CFR 17.71 (e.g., the prohibition against reducing or destroying listed plants on Federal lands) also continue to apply both inside and outside of designated critical habitat.

#### Criteria Used To Identify Critical Habitat

We have determined that all areas we are proposing to designate as revised critical habitat are within the geographical area occupied by *Brodiaea filifolia* at the time of listing (see the "Spatial Distribution and Historical Range" section for more information), and are currently occupied. We considered the areas outside the geographical area occupied by the species at the time of listing, but are not proposing to designate any areas outside the geographical area occupied by *B. filifolia* at the time of listing because we determined that a subset of occupied lands within the species' historical range are adequate to ensure the conservation of *B. filifolia*. Occupied areas exist throughout this species' historical range, and through the conservation of a subset of occupied habitats (35 of 68 extant occurrences, see Table 1), we will be able to stabilize and conserve *B. filifolia* throughout its current and historical range. All units/subunits proposed as critical habitat contain both PCEs in the appropriate

quantity and spatial arrangement essential to the conservation of this species and support multiple life-history traits for *B. filifolia*.

As required by section 4(b)(1)(A) of the Act, we use the best scientific and commercial data available in determining areas that contain the features that are essential to the conservation of *Brodiaea filifolia*. The "Methods" section summarizes the data used for this proposed revised critical habitat. This proposed rule reflects the best available scientific and commercial information and thus differs from our 2005 final critical habitat rule.

This section provides details of the process we used to delineate critical habitat. This proposed rule reflects a progression of conservation efforts for *Brodiaea filifolia*. This progression is based largely on the past analysis of the areas identified as meeting the definition of critical habitat for *B. filifolia* as identified in the 2004 proposed critical habitat rule and the 2005 final critical habitat designation, and new information we obtained on the species' distribution since listing. In some areas that were analyzed in 2005, we have new distribution information that resulted in adding areas to the 2005 critical habitat designation. There are also some areas identified as meeting the definition of critical habitat in the 2005 critical habitat that we did not include in this revision of critical habitat because we determined based on a review of the best available information that they do not meet the definition of critical habitat. The specific differences from the 2005 designation of critical habitat are summarized in the **Summary of Changes From Previously Designated Critical Habitat** section of this rule.

Species and plant communities that are protected across their ranges are expected to have lower likelihoods of extinction (Soule and Simberloff 1986, p. 35; Scott *et al.* 2001, pp. 1297–1300). Genetic variation generally results from the effects of population isolation and adaptation to locally distinct environments (Lesica and Allendorf 1995, pp. 754–757; Fraser 2000, pp. 49–51; Hamrick and Godt 1996, pp. 291–295). We sought to include the range of ecological conditions in which *Brodiaea filifolia* is found to preserve the genetic variation that may reflect adaptation to local environmental conditions, as documented in other plant species (such as in Hamrick and Godt 1996, pp. 299–301; or Millar and Libby 1991, pp. 150, 152–155). A suite of locations that possess unique ecological characteristics will represent more of the environmental variability under

which *B. filifolia* has evolved. Protecting these areas will promote the adaptation of the species to different environmental conditions and contribute to species recovery.

We also determined that habitat for pollinators is essential to the survival and recovery of this species because *Brodiaea filifolia* is self-incompatible (genetically similar individuals are not able to produce viable seeds). Sexual reproduction, facilitated through pollination, is necessary for the long-term conservation of this species.

All critical habitat discussed in this proposed revision of critical habitat is occupied by the species at the subunit level meaning that each subunit contains at least one known occurrence of *Brodiaea filifolia*. The essential features in each subunit are necessary for the conservation of the occurrence within the subunit, and the subunit contributes to the overall conservation of the species. Occupied areas were determined from survey data and element occurrence data in the CNDDDB (CNDDDB 2009, pp. 1–76). Using GIS data in the areas identified as occupied by this species as a guide, we identified the areas that contain the physical and biological features essential to the conservation of *B. filifolia*.

To map the areas that meet the definition of critical habitat, we identified areas that contain the PCEs in the quantity and spatial distribution essential to the conservation of this species using the following criteria: (1) Areas supporting occurrences on rare or unique habitat within the species' range; (2) areas supporting the largest known occurrences of *B. filifolia*; or (3) areas supporting stable occurrences of *B. filifolia* that are likely to be persistent. These criteria are explained in greater detail below and a summary of our analysis of all current and past areas supporting *Brodiaea filifolia* is presented in Table 1.

We have determined that 35 of the 68 extant occurrences meet the definition of critical habitat; of these 35 occurrences, 7 occur on MCB Camp Pendleton and are exempt from critical habitat under section 4(a)(3) of the Act, and 28 occurrences are proposed as critical habitat. Areas containing the PCEs and that meet at least one of the above criteria are considered to contain the physical and biological features essential to the conservation of the species and, therefore, meet the definition of critical habitat. Included in PCE 2 are areas up to 820 ft (250 m) from mapped occurrences of *B. filifolia* to provide adequate space to support the habitat and alternate food sources needed for pollinators of *B. filifolia*. The

820-ft (250-m) distance for determining the pollinator use area is based on a conservative estimate for the mean routine flight distance for ground-nesting solitary bees that pollinate *B. filifolia*. This distance is not meant to

capture all habitat that is potentially used by pollinators, but it is meant to capture a sufficient area to allow for pollinators to nest, feed, and reproduce in habitat that is adjacent and connected to the areas where *B. filifolia* grows (see

"Habitat for Pollinators of *Brodiaea filifolia*" section for a more detailed explanation of pollinator requirements and our derivation of the 820-ft (250-m) distance for determining the pollinator use area).

TABLE 1. SUMMARY OF CRITERIA ANALYSIS OF ALL RECORDED LOCATIONS OF *Brodiaea filifolia*.

"Occurrence number" and "Location Description" are taken from the 5-year review completed in 2009 where more information about each occurrence can be found. Extirpated occurrences were not given an "Occurrence number" in the 5-year review.

Occurrence number in 5-year review	Location Description	CNDDDB <sup>1</sup> Element Occurrence Number (EO)	Criterion 1: Unique or rare habitat	Criterion 2: Largest occurrences	Criterion 3: Stable and persistent occurrence	Critical Habitat Unit/Subunit
Los Angeles County, California						
1	Glendora	20	X	—	X	1a
2	San Dimas/Gordon Highlands	40	X	X	—	1b
San Bernardino County, California						
3	Arrowhead Hot Springs	7	X	—	X	2
4	Waterman Canyon	8	—	—	—	N/A
Riverside County, California						
5	San Jacinto Wildlife Area	43 27	X	—	X	11a
6 <sup>2</sup>	San Jacinto Ave/Dawson Rd	65	X	—	—	11b
7	Case Road	2	X	X	—	11c
x	Goetz Road	1	—	—	—	extirpated
8	Railroad Canyon	25	—	X	—	11d
9	Upper Salt Creek (Stowe Pool)	26	X	—	—	11e
10	Santa Rosa Plateau - Tenaja Rd.	3	—	—	—	<i>B. santarosae</i>
11	Santa Rosa Plateau - North of Tenaja Rd.	31	X	—	—	11h
12	Santa Rosa Plateau - South of Tenaja Rd.	30	X	—	—	11g
13	Santa Rosa Plateau - Mesa de Colorado	5	—	—	—	N/A
14	East of Tenaja Guard Station	29	—	—	—	N/A
15	Redonda Mesa	52	—	—	—	N/A
16 <sup>2</sup>	Corona Cala Camino	N/A	—	—	—	N/A
Orange County, California						
17	Edison Viejo	55	—	—	—	N/A
18	Aliso and Woods Canyon Wilderness Park	56	X	X	—	3
19	Cañada Gobernadora /Chiquadora Ridge	64	—	—	X	4c
20 <sup>2</sup>	Trampas Canyon	N/A	—	—	—	N/A
21 <sup>2</sup>	Middle Gabino	N/A	—	—	—	N/A

TABLE 1. SUMMARY OF CRITERIA ANALYSIS OF ALL RECORDED LOCATIONS OF *Brodiaea filifolia*.—Continued

"Occurrence number" and "Location Description" are taken from the 5-year review completed in 2009 where more information about each occurrence can be found. Extirpated occurrences were not given an "Occurrence number" in the 5-year review.

Occurrence number in 5-year review	Location Description	CNDDDB <sup>1</sup> Element Occurrence Number (EO)	Criterion 1: Unique or rare habitat	Criterion 2: Largest occurrences	Criterion 3: Stable and persistent occurrence	Critical Habitat Unit/Subunit
22	Cristianitos Canyon Cristianitos Canyon/ Lower Gabino Canyon	N/A 62	X	X	—	4g
23 <sup>2</sup>	East Talega/Blind Canyon	N/A	—	—	—	N/A
24	Casper's Wilderness Park	24	—	—	X	4b
25	Arroyo Trabuco Golf Course/ Lower Arroyo Trabuco	N/A	—	—	—	N/A
x <sup>2</sup>	Prima Deshecha <sup>4</sup>	61	—	—	—	extirpated
26	Talega/Segunda Deshecha <sup>3</sup>	57	—	—	—	N/A
27	Forster Ranch <sup>3</sup>	58 59 60	—	—	—	N/A
28	Cristianitos Canyon South	63	—	—	—	N/A
San Diego County, California						
29	Miller Mountain	37	—	—	—	<i>B. santarosae</i>
	Devil Canyon	39	X	—	X	5b
30	Tributary off of Talega Canyon	N/A	—	—	—	N/A
31 <sup>2</sup>	Cristianitos Canyon Pendleton	N/A	—	—	X	exempt
32 <sup>2</sup>	San Mateo Creek	N/A	—	—	—	N/A
33	Bravo One	45	—	—	X	exempt
34 <sup>1</sup>	Bravo Two North	N/A	—	—	—	N/A
35	Bravo Two South	N/A	—	—	X	exempt
36	Alpha One/Bravo Three	44	—	—	—	N/A
37 <sup>2</sup>	Basilone/San Mateo Junction	N/A	—	—	X	exempt
38	Camp Horno	46 47 48 49	—	X	—	exempt
39	Southeast of Horno Summit	50	—	—	—	N/A
40 <sup>1</sup>	Top of Las Pulgas Canyon/ Roblar Rd	N/A	—	—	—	N/A
41 <sup>2</sup>	Top of Aliso Canyon/Roblar Rd	N/A	—	—	—	N/A
42	Basilone/Roblar Junction	51	—	—	—	N/A
43	East of I-5/South of Las Flores Creek	67 68	—	—	—	N/A
44 <sup>2</sup>	Pilgrim Creek	N/A	—	—	X	exempt
45	Pueblitos Canyon	N/A	—	—	—	N/A
46 <sup>2</sup>	West of Whelan Lake	N/A	—	—	—	N/A
47 <sup>2</sup>	South of French Creek	N/A	—	—	—	N/A

TABLE 1. SUMMARY OF CRITERIA ANALYSIS OF ALL RECORDED LOCATIONS OF *Brodiaea filifolia*.—Continued

“Occurrence number” and “Location Description” are taken from the 5-year review completed in 2009 where more information about each occurrence can be found. Extirpated occurrences were not given an “Occurrence number” in the 5-year review.

Occurrence number in 5-year review	Location Description	CNDDDB <sup>1</sup> Element Occurrence Number (EO)	Criterion 1: Unique or rare habitat	Criterion 2: Largest occurrences	Criterion 3: Stable and persistent occurrence	Critical Habitat Unit/ Subunit
48 <sup>2</sup>	South White Beach	N/A	—	—	X	exempt
49	Taylor <sup>3</sup> Undeveloped parcel between Darwin properties Darwin Knolls and Darwin Glen	41	—	X	—	6d
50 <sup>2</sup>	Arbor Creek/Colucci	N/A	X	—	X	6e
51	Mission View/Sierra Ridge	53	—	—	X	6c
52	Mesa Drive, SDG&E Substation		—	—	X	6b
53	Eternal Hills/Alta Creek Cornerstone Community Church /Oceanside Blvd & El Camino Real	N/A	—	—	X	6a
54 <sup>2</sup>	Vista Pacific	N/A	—	—	—	N/A
55 <sup>2</sup>	Buena Vista Creek preserve	N/A	—	—	—	N/A
56	Calavera Heights Mitigation Site	N/A	—	—	—	N/A
57	Calavera Hills Village H	23	—	—	X	7c
58 <sup>2</sup>	Calavera Hills Village X		—	—	—	N/A
59	Letterbox Canyon - Taylor Made <sup>3</sup>	N/A	—	X	—	7a
	Letterbox Canyon - Salk/Fox-Miller <sup>3</sup>	N/A				
	Letterbox Canyon - Newton Business Center	16				
x	North of Carlsbad dragstrip	14	—	—	—	extirpated
60 <sup>2</sup>	Carlsbad Oaks	N/A	—	—	—	N/A
61	Rancho Carrillo	22	—	X	—	7b
	Rancho Santa Fe Rd North		—	—	—	N/A
62	Rancho La Costa	33 34	—	X	—	7d
63	La Costa Town Square	N/A	—	—	—	N/A
	Park View West/La Costa Ave & Rancho Santa Fe Rd <sup>4</sup>	21	—	—	—	extirpated
64	Poinsettia	N/A	—	—	—	N/A
x	Shelley Property/Olivenhein & Rancho Santa Fe Rd junction	32	—	—	—	extirpated
x	Calle Tres Vistas	54	—	—	—	extirpated
x	Vista	15	—	—	—	extirpated
x	Brengle Terrace	18	—	—	—	extirpated

TABLE 1. SUMMARY OF CRITERIA ANALYSIS OF ALL RECORDED LOCATIONS OF *Brodiaea filifolia*.—Continued

“Occurrence number” and “Location Description” are taken from the 5-year review completed in 2009 where more information about each occurrence can be found. Extirpated occurrences were not given an “Occurrence number” in the 5-year review.

Occurrence number in 5-year review	Location Description	CNDDDB <sup>1</sup> Element Occurrence Number (EO)	Criterion 1: Unique or rare habitat	Criterion 2: Largest occurrences	Criterion 3: Stable and persistent occurrence	Critical Habitat Unit/ Subunit
x	Vista, east of South Melrose Ave <sup>4</sup>	17	—	—	—	extirpated
x	North of Carlsbad dragstrip	13	—	—	—	extirpated
x	SSE of Buena, near Mission Rd & RR tracks	12	—	—	—	extirpated
65	Rancho Santalina <sup>3</sup>	11	—	X	—	8b
	Loma Alta					
	New Millennium					
	Las Posas Road Extension Project <sup>4</sup>		—	—	—	extirpated
66	Grand Avenue/Las Posas Rd pools <sup>3</sup>	36	X	X	—	8d
	Upham/Pacific St/ Superior Ready Mix	10				
67 <sup>2</sup>	Oleander/San Marcos Elementary <sup>3</sup>	N/A	—	X	—	8f
68 <sup>2</sup>	Artesian Trails	70	—	—	X	12
		66				
x	4S Ranch <sup>4</sup>	N/A	—	—	—	extirpated

<sup>1</sup> California Department of Fish and Game, Natural Diversity Database

<sup>2</sup> New occurrence since listing, but determined to be occupied at the time of listing

<sup>3</sup> Partially translocated (some plants currently exist at the original location)

<sup>4</sup> Completely translocated (no plants currently exist at the original location)

We identified habitat containing the features essential to the conservation of *Brodiaea filifolia* by using data from the following GIS databases: (1) Species occurrence information in Los Angeles, San Bernardino, Orange, Riverside, and San Diego Counties from the CNDDDB and from survey reports; (2) vegetation data layers from Orange, Riverside, and San Diego Counties and vegetation data layers from the U.S. Forest Service’s Cleveland National Forest for Los Angeles and San Bernardino Counties; and (3) Natural Resources Conservation Service’s Soil Survey Geographic Database (SSURGO) soil data layers for Orange, Riverside, and San Diego Counties, and State Soil Geographic Database (STATSGO) soil data layers for Los Angeles and San Bernardino Counties.

#### Criteria Used

If occurrences and habitat areas met one or more of the following criteria, they are proposed as critical habitat in this revised critical habitat designation.

(1) The first criterion is any area that supports an occurrence in rare or unique habitat within the species’ range. We evaluated all occurrences of *Brodiaea filifolia* under this criterion, regardless of occurrence size. We identified four main factors that constitute rare or unique habitat for *B. filifolia*:

(a) Occurrences in habitat types that are uncommon such as grassland habitat that occurs intermixed with chaparral, grassland habitat that is associated with vernal pools, or large areas of native grassland;

(b) occurrences on uncommon soil types such as clay soils that are altered by hydrothermal activity;

(c) occurrences that grow along ephemeral drainages in seep-type habitats; and

(d) occurrences that grow in gravel, cobbles, and small boulder substrate.

These four unique situations differ from the majority of occurrences of this species, which are found on clay soils intermixed with coastal sage scrub

habitat. The conservation of *Brodiaea filifolia* occurring in these rare or unique situations will preserve the diversity of habitats where this species is found.

(2) The second criterion is any area that supports one of the largest known populations of *Brodiaea filifolia*. Occurrences of this species range from just a few plants to several thousand plants, while the majority of the known occurrences are under 3,000 plants (see the **Background** section for a discussion on how occurrences of *B. filifolia* are grouped and counted). However, there are 13 occurrences that stand out as the largest, each having greater than 3,000 plants. Occurrences supporting large numbers of plants (3,000 or more) are noted in Table 1 and are found in the following areas:

(a) Los Angeles County, Subunit 1b-San Dimas;

(b) Riverside County, Subunit 11a-San Jacinto Wildlife Area, Subunit 11c-Case Road, Subunit 11d-Railroad Canyon, Subunit, and 11f-Santa Rosa Plateau — Mesa de Colorado;

(c) Orange County, Unit 3-Aliso and Wood Canyon Wilderness Park, and Subunit 4g-Cristianitos Canyon; and

(d) San Diego County, Subunit 6d-Taylor/Darwin, Subunit 7a-Letterbox Canyon, Subunit 7b-Rancho Carrillo, Subunit 7d-Rancho La Costa, Subunit 8d-Upham, and Subunit 8f-Oleander/San Marcos Elementary (See Table 1).

These large occurrences are present in habitat areas that contain the features essential to the conservation of this species. These areas generally represent large contiguous blocks of intact habitat. The conservation of these large populations will increase the resilience of the species across its range and contribute to the overall recovery of this species.

(3) The third criterion is any area that supports an occurrence considered to be stable and persistent. We consider occurrences that have between 850 and 3,000 flowering stems that have been observed in multiple years to be stable and persistent because we expect these occurrences to have a sufficient amount of corms to sustain the occurrence for a number of years if the habitat remains unaltered. These areas contribute to the conservation of *Brodiaea filifolia* because they provide resilience for the species by minimizing the effects on the species from the loss of any single occurrence, and the conservation of these areas helps to maintain the diversity of habitat where this species occurs. The conservation of these areas allows *B. filifolia* to maintain its current geographic distribution. The conservation of stable and persistent occurrences throughout the species' range helps to maintain connectivity between occurrences that are in proximity to one another and maintain potential gene flow. This is particularly important for *B. filifolia* because this species relies on outcrossing for successful reproduction.

To determine which areas met this criterion, we identified occurrences with counts of between 850 and 3,000 flowering stalks that had been observed in multiple years. Additionally, we looked at all occurrences with fewer than 850 flowering stalks to determine if any of these exhibited the same persistence and stability characteristics to provide similar conservation value as the other identified occurrences with greater than 850 flowering stalks (since the counts for an occurrence vary from year to year). We found that one occurrence with fewer than 850 flowering stalks (at the Arbor Creek/Colucci site) exhibited characteristics of a stable, persistent occurrence (i.e., consistent size not substantially different than 850 flowering stalks);

therefore, this occurrence fulfills the ecological role of sites we are interested in identifying through this criterion, even though the high count at this site is 620 flowering stalks.

Of the 68 occurrences of *Brodiaea filifolia* that we identified as being extant in our 5-year review for this species, 35 occurrences meet one or more of the three criteria outlined above. Seven of these 35 occurrences are exempt from critical habitat under section 4(a)(3) of the Act (see “**Exemptions Under Section 4(a)(3) of the Act**”), the remaining 28 occurrences are proposed as revised critical habitat. Thirteen occurrences, of the 28 proposed occurrences, fit into one of the four reasons that areas meet the “rare or unique habitat” criterion; 13 occurrences meet the “largest occurrences” criterion; and 11 occurrences meet the “stable and persistent occurrences” criterion. These occurrences represent the historical range of the species and are adequate to provide for this species' conservation. Occurrences not identified in this process may still be important to the conservation of this species, but without the conservation of the occurrences identified through this process, the recovery effort for this species may be impaired.

#### *Other Factors Involved With Delineating Critical Habitat*

Following the identification of 35 occurrences of the 68 extant occurrences that met one of the 3 criteria listed above, we mapped the area that contained the PCEs at each occurrence including the areas out up to 820 ft (250 m) of mapped occurrences of *Brodiaea filifolia* to provide adequate space to support the habitat and alternate food sources needed for pollinators of *B. filifolia* (see “*Habitat for Pollinators of Brodiaea filifolia*” section).

Areas that did not provide habitat for *Brodiaea filifolia* or potential pollinators were removed from the 820-ft (250-m) zone of mapped occurrences of *B. filifolia*, such as areas that were developed or severely altered by grading. Our mapping methodology captures the PCEs in the appropriate quantity and spatial arrangement essential to the conservation of the species, and encompasses the range of environmental variability for this species. Although a genetic analysis of *B. filifolia* has not been conducted, these criteria likely capture the full breadth of important habitat types and are expected to protect the genetic variability of this species. The resulting 35 areas constitute the areas we have determined contain the physical and

biological features essential to the conservation of *B. filifolia* and meet the definition of critical habitat. Seven of the 35 areas are on MCB Camp Pendleton and are exempt from this proposed revised rule under section 4(a)(3) of the Act; the other 28 areas were mapped as the proposed revised critical habitat for *B. filifolia*, and are described in this document.

When determining the proposed revised critical habitat boundaries, we made every effort to map precisely only the areas that contain the PCEs and provide for the conservation of *Brodiaea filifolia*. However, we cannot guarantee that every fraction of proposed revised critical habitat contains the PCEs due to the mapping scale that we use to draft critical habitat boundaries.

Additionally, we made every attempt to avoid including developed areas such as lands underlying buildings, pavement, and other structures because such lands lack PCEs for *B. filifolia*. The scale of the maps we prepared under the parameters for publication within the Code of Federal Regulations may not reflect the exclusion of such developed lands. Any such lands inadvertently left inside critical habitat boundaries shown on the maps of this proposed revised critical habitat are excluded by text in this rule and are not proposed for critical habitat designation. Therefore, Federal actions involving these lands would not trigger section 7 consultation with respect to critical habitat and the requirement of no adverse modification, unless the specific actions may affect adjacent critical habitat.

#### **Summary of Changes From Previously Designated Critical Habitat**

The areas identified in this rule constitute a proposed revision from the areas we designated as critical habitat for *Brodiaea filifolia* on December 13, 2005 (70 FR 73820). In cases where we have new information or information that was not available for the previous designation, we made changes to the critical habitat for *B. filifolia* to ensure that this rule reflects the best scientific data available. We made changes to the PCEs and our criteria used to identify critical habitat. We incorporated information related to the taxonomy of the species including the change in plant family for *B. filifolia*. We redefined the boundaries of each subunit proposed as critical habitat to more accurately reflect the areas that include the features that are essential to the conservation of *B. filifolia*, and we analyzed new distribution data that has become available to us following the 2005 designation. The Secretary is also considering whether to exercise his

discretion to exclude specific areas from the final designation under section 4(b)(2) of the Act, including reconsidering areas excluded in the prior designation, and we are seeking public comment (see **Public Comments** section of this rule). Table 2 shows the progression of each subunit of critical

habitat from the 2004 proposed critical habitat to this proposed revised critical habitat. Table 3 includes name changes that we made for some of the subunits where the old names were ambiguous or do not reflect the current name used to refer to these areas; although the names of these units changed, the locations

have not changed. Following Tables 2 and 3, we provide a detailed description of each change made in this proposed revised rule and point to new information that precipitated the change.

**TABLE 2. SIZE AND EVALUATION OF UNITS AND SUBUNITS FOR *Brodiaea filifolia* IN 2004 PROPOSED CRITICAL HABITAT (PCH)**

2005 final critical habitat (fCH), and 2009 proposed revised critical habitat (prCH), and a comparison of the area considered to meet the definition of critical habitat between the 2005 fCH and 2009 prCH.

Unit/Subunit Number and Name	2004 pCH	2005 fCH	2009 prCH	Change from fCH to prCH
Unit 1: Los Angeles County				
1a. Glendora	96 ac (39 ha)	96 ac (39 ha)	67 ac (27 ha)	(-) 29 ac (12 ha)
1b. San Dimas	198 ac (80 ha)	198 ac (80 ha)	138 ac (56 ha)	(-) 60 ac (24 ha)
Unit 2: San Bernardino County				
2. Arrowhead Hot Springs	89 ac (36 ha)	Not designated, wrong location	61 ac (25 ha)	(+) 61 ac (25 ha)
Unit 3: Central Orange County				
3. Aliso Canyon	151 ac (61ha)	Not designated, did not meet the definition of critical habitat	113 ac (46 ha)	(+) 113 ac (46 ha)
Unit 4: Southern Orange County				
4a. Arroyo Trabuco	74 ac (30 ha)	Not designated, did not meet the definition of critical habitat	N/A	no change
4b. Caspers Wilderness Park	259 ac (105 ha)	259 ac (105 ha); Excluded under section 4(b)(2)	205 ac (83 ha)	(-) 54 ac (22 ha)
4c. Cañada Gobernadora/ Chiquita Ridgeline	311 ac (126 ha)	311 ac (126 ha); Excluded under section 4(b)(2)	133 ac (54 ha)	(-) 178 ac (72 ha)
4d. Prima Deschecha	119 ac (48 ha)	Not designated, did not meet the definition of critical habitat	N/A	no change
4e. Forster Ranch	96 ac (39 ha)	Not designated, did not meet the definition of critical habitat	N/A	no change
4f. Talega/Segunda Deshecha	190 ac (77 ha)	Not designated, did not meet the definition of critical habitat	N/A	no change
4g. Cristianitos Canyon	588 ac (238 ha)	588 ac (238 ha); Excluded under section 4(b)(2)	587 ac (238 ha)	(-) 1 ac (0.4 ha)
4h. Cristianitos Canyon South	72 ac (29 ha)	Not designated, did not meet the definition of critical habitat	N/A	no change
4i. Blind Canyon	151 ac (61 ha)	Not designated, did not meet the definition of critical habitat	N/A	no change
Unit 5: Northern San Diego County				
5a. Miller Mountain	1,263 ac (511 ha)	Not designated, mostly hybrid plants	Not proposed, only <i>Brodiaea santarosae</i> present	no change

TABLE 2. SIZE AND EVALUATION OF UNITS AND SUBUNITS FOR *Brodiaea filifolia* IN 2004 PROPOSED CRITICAL HABITAT (PCH)—Continued

2005 final critical habitat (fCH), and 2009 proposed revised critical habitat (prCH), and a comparison of the area considered to meet the definition of critical habitat between the 2005 fCH and 2009 prCH.

Unit/Subunit Number and Name	2004 pCH	2005 fCH	2009 prCH	Change from fCH to prCH
5b. Devil Canyon	264 ac (107ha)	249 ac (101 ha)	274 ac (111 ha)	(+) 25 ac (10 ha)
Unit 6: Oceanside				
6a. Alta Creek	49 ac (20 ha)	Not designated, did not meet the definition of critical habitat	72 ac (29 ha)	(+) 72 ac (29 ha)
6b. Mesa Drive	5 ac (2 ha)	5 ac (2 ha); Excluded under section 4(b)(2)	17 ac (7 ha)	(+) 12 ac (5 ha)
6c. Oceanside East/ Mission Avenue	64 ac (26 ha)	Not designated, did not meet the definition of critical habitat	12 ac (5 ha)	(+) 12 ac (5 ha)
6d. Taylor/Darwin	80 ac (32 ha)	36 ac (15 ha); Excluded under section 4(b)(2)	35 ac (14 ha)	(-) 45 ac (18 ha)
6e. Arbor Creek	N/A	N/A	94 ac (38 ha)	(+) 94 ac (38 ha)
Unit 7: Carlsbad				
7a. Fox-Miller (Letterbox Canyon)	93 ac (38 ha)	93 ac (38 ha); Excluded under section 4(b)(2)	57 ac (23 ha)	(-) 36 ac (15 ha)
7b. Rancho Carrillo	32 ac (13 ha); Excluded under section 4(b)(2)	Not designated, did not meet the definition of critical habitat	37 ac (15 ha)	(+) 37 ac (15 ha)
7c. Calvera Hills	84 ac (34 ha); Excluded under section 4(b)(2)	84 ac (34 ha); Excluded under section 4(b)(2)	71 ac (29 ha)	(-) 13 ac (5 ha)
7d. Villages of La Costa (Rancho La Costa)	208 ac (84 ha); Excluded under section 4(b)(2)	208 ac (84 ha); Excluded under section 4(b)(2)	98 ac (40 ha)	(-) 110 ac (45 ha)
Carlsbad Oaks	113 ac (46 ha); Excluded under section 4(b)(2)	113 ac (46 ha); Excluded under section 4(b)(2)	Not proposed, does not meet the definition of critical habitat	(-) 113 ac (46 ha)
Carlsbad Highlands	70 ac (29 ha); Excluded under section 4(b)(2)	70 ac (29 ha); Excluded under section 4(b)(2)	Not proposed, does not meet the definition of critical habitat	(-) 70 ac (29 ha)
Poinsettia	54 ac (22 ha); Excluded under section 4(b)(2)	54 ac (22 ha); Excluded under section 4(b)(2)	Not proposed, does not meet the definition of critical habitat	(-) 54 ac (22 ha)
Unit 8: San Marcos and Vista				
8a. Rancho Santa Fe Road North	86 ac (35 ha)	Not designated, did not meet the definition of critical habitat	N/A	no change
8b. Rancho Santalina/ Loma Alta	82 ac (33 ha)	Not included under section 3(5)(a)	47 ac (19 ha)	(+) 47 ac (19 ha)
8c. Grand Avenue	10 ac (4 ha)	Not designated, did not meet the definition of critical habitat	N/A	no change
8d. Upham	117 ac (47 ha)	54 ac (22 ha)	54 ac (22 ha)	no change
8e. Linda Vista	20 ac (8 ha)	Not designated, did not meet the definition of critical habitat	N/A	no change
8f. Oleander/San Marcos Elementary	N/A	N/A	7 ac (3 ha)	(+) 7 ac (3 ha)

TABLE 2. SIZE AND EVALUATION OF UNITS AND SUBUNITS FOR *Brodiaea filifolia* IN 2004 PROPOSED CRITICAL HABITAT (PCH)—Continued

2005 final critical habitat (fCH), and 2009 proposed revised critical habitat (prCH), and a comparison of the area considered to meet the definition of critical habitat between the 2005 fCH and 2009 prCH.

Unit/Subunit Number and Name	2004 pCH	2005 fCH	2009 prCH	Change from fCH to prCH
Unit 9				
9. Double LL Ranch	57 ac (23 ha)	Not designated, did not meet the definition of critical habitat	N/A	no change
Unit 10				
10. Highland Valley	74 ac (30 ha)	Not designated, did not meet the definition of critical habitat	N/A	no change
Unit 11: Western Riverside County				
11a. San Jacinto Wildlife Area	512 ac (207 ha); Excluded under section 4(b)(2)	512 ac (207 ha); Excluded under section 4(b)(2)	401 ac (162 ha)	(-) 110 ac (45 ha)
11b. San Jacinto Avenue/Dawson Road	168 ac (68 ha); Excluded under section 4(b)(2)	168 ac (68 ha); Excluded under section 4(b)(2)	117 ac (47 ha)	(-) 51 ac (21 ha)
11c. Case Road	373 ac (151 ha); Excluded under section 4(b)(2)	373 ac (151 ha); Excluded under section 4(b)(2)	180 ac (73 ha)	(-) 193 ac (78 ha)
11d. Railroad Canyon	432 ac (175 ha); Excluded under section 4(b)(2)	432 ac (175 ha); Excluded under section 4(b)(2)	257 ac (104 ha)	(-) 175 ac (71 ha)
11e. Upper Salt Creek (Stowe Pool)	131 ac (53 ha); Excluded under section 4(b)(2)	131 ac (53 ha); Excluded under section 4(b)(2)	145 ac (59 ha)	(+) 14 ac (6 ha)
11f. Santa Rosa Plateau — Mesa de Colorado	519 ac (210 ha); Excluded under section 4(b)(2)	519 ac (210 ha); Excluded under section 4(b)(2)	234 ac (95 ha)	(-) 285 ac (115 ha)
Santa Rosa Plateau — Tenaja Rd.	304 ac (123 ha); Excluded under section 4(b)(2)	304 ac (123 ha); Excluded under section 4(b)(2)	Not proposed; only <i>Brodiaea santarosae</i> present	(-) 304 ac (123 ha)
11g. Santa Rosa Plateau — South of Tenaja Rd.	218 ac (88 ha); Excluded under section 4(b)(2)	218 ac (88 ha); Excluded under section 4(b)(2)	117 ac (47 ha)	(-) 101 ac (41 ha)
11h. Santa Rosa Plateau — North of Tenaja Rd.	111 ac (45 ha); Excluded under section 4(b)(2)	111 ac (45 ha); Excluded under section 4(b)(2)	44 ac (18 ha)	(-) 67 ac (27 ha)
East of Tenaja Guard Station	218 ac (88 ha); Excluded under section 4(b)(2)	218 ac (88 ha); Excluded under section 4(b)(2)	Not proposed, does not meet the definition of critical habitat	(-) 218 ac (88 ha)
N. End Redondo Mesa	77 ac (31 ha); Excluded under section 4(b)(2)	77 ac (31 ha); Excluded under section 4(b)(2)	Not proposed, does not meet the definition of critical habitat	(-) 77 ac (31 ha)
Corona (north)	74 ac (30 ha); Excluded under section 4(b)(2)	Not designated, did not meet the definition of critical habitat	N/A	no change
Corona (south)	67 ac (27 ha); Excluded under section 4(b)(2)	Not designated, did not meet the definition of critical habitat	N/A	no change
Moreno Valley	64 ac (26 ha); Excluded under section 4(b)(2)	Not designated, did not meet the definition of critical habitat	N/A	no change
Unit 12: Central San Diego County - Artesian Trails				
12. Artesian Trails	N/A	N/A	109 ac (44 ha)	(+) 109 ac (44 ha)

TABLE 2. SIZE AND EVALUATION OF UNITS AND SUBUNITS FOR *Brodiaea filifolia* IN 2004 PROPOSED CRITICAL HABITAT (PCH)—Continued

2005 final critical habitat (fCH), and 2009 proposed revised critical habitat (prCH), and a comparison of the area considered to meet the definition of critical habitat between the 2005 fCH and 2009 prCH.

Unit/Subunit Number and Name	2004 pCH	2005 fCH	2009 prCH	Change from fCH to prCH
<b>TOTAL FOR NON-MILITARY LANDS</b>	<b>8,486 ac (3,434 ha)</b>	<b>5,480 ac (2,218 ha)</b>	<b>3,786 ac (1,532 ha)</b>	<b>(-) 1,695 ac (686 ha)</b>
MCB Camp Pendleton				
Cristianitos Canyon Pendleton	N/A	N/A	190 ac (77 ha); 4(a)(3) exemption	(+) 190 ac (77 ha)
Bravo One	121 ac (41 ha); Excluded under section 4(b)(2)	121 ac (41 ha); 4(a)(3) exemption	143 ac (58 ha); 4(a)(3) exemption	(+) 22 ac (9 ha)
Bravo Two South	N/A	N/A	269 ac (109 ha); 4(a)(3) exemption	(+) 269 ac (109 ha)
Alpha One/Bravo Three	114 ac (46 ha); Excluded under section 4(b)(2)	114 ac (46 ha); 4(a)(3) exemption	Does not meet the definition of critical habitat	(-) 114 ac (46 ha)
Basilone/San Mateo Junction	N/A	N/A	163 ac (66 ha); 4(a)(3) exemption	(+) 163 ac (66 ha)
Camp Horno	452 ac (183 ha); Excluded under section 4(b)(2)	452 ac (183 ha); 4(a)(3) exemption	339 ac (137 ha); 4(a)(3) exemption	(-) 113 ac (46 ha)
SE Horno Summit	116 ac (47 ha); Excluded under section 4(b)(2)	116 ac (47 ha); 4(a)(3) exemption	Does not meet the definition of critical habitat	(-) 116 ac (47 ha)
Kilo One	114 ac (46 ha); Excluded under section 4(b)(2)	114 ac (46 ha); 4(a)(3) exemption	Does not meet the definition of critical habitat	(-) 114 ac (46 ha)
Pilgrim Creek	N/A	N/A	368 ac (149 ha); 4(a)(3) exemption	(+) 368 ac (149 ha)
South White Beach	N/A	N/A	59 ac (24 ha); 4(a)(3) exemption	(+) 59 ac (24 ha)
<b>TOTAL FOR MILITARY LANDS<sup>3</sup></b>	<b>917 ac (371 ha)</b>	<b>917 ac (371 ha); 4(a)(3) exemption</b>	<b>1,531 ac (620 ha)</b>	<b>(+) 614 ac (249 ha)</b>
<b>TOTAL AREA THAT MEETS (or MET) THE DEFINITION OF CRITICAL HABITAT</b>	<b>9,403 ac (3,805 ha)</b>	<b>6,397 ac (2,589 ha)</b>	<b>5,317 ac (2,152 ha)</b>	<b>(-) 1,080 ac (438 ha)</b>

<sup>1</sup>This table does not include all locations that are occupied by *Brodiaea filifolia*. It includes only those locations that have met the definition of critical habitat in this or one of the past proposed or final critical habitat rules for *B. filifolia*.

<sup>2</sup>Values in this table may not sum due to rounding.

<sup>3</sup>Military Lands are exempt from this rule under section 4(a)(3) of the Act.

TABLE 3. NAME CHANGES FROM PREVIOUS CRITICAL HABITAT TO THIS PROPOSED REVISED CRITICAL HABITAT.

Subunit number	Previous name	Current name	Reason for change
6c	Oceanside East/Mission Ave	Mission View/Sierra Ridge	Not the eastern most occurrence in Oceanside
7a	Fox-Miller	Letterbox Canyon	Includes more properties that just Fox-Miller
7c	Calavera Heights	Calavera Hills Village H	New name is more specific
11b	San Jacinto Floodplain	San Jacinto Avenue/Dawson Road	New name is more specific
11c	Case Road Area	Case Road	New name is more specific

(1) We refined the PCEs to more accurately define the physical and biological features that are essential to the conservation of *Brodiaea filifolia*. We added a new part under PCE 1 (PCE 1B) to more clearly define the soils where *B. filifolia* occurs in San Bernardino County. We added information to PCE 2 to indicate that land out up to 820 ft (250 m) from mapped occurrences contains the physical and biological features essential to the conservation of *B. filifolia* because that area provides habitat for insect species that pollinate *B. filifolia* and allow this species to sexually reproduce. This information was discussed in the 2005 final critical habitat; however, it was not specifically included in the PCEs.

(2) We revised the criteria used to identify critical habitat. We started by using the basic criteria used in the 2005 final critical habitat designation. However, in this proposed revised critical habitat we gathered new data available since the publication of the 2005 rule and reevaluated all of the *Brodiaea filifolia* data available to ensure that this proposed rule reflected the best available science. With the additional data and our reevaluation of the available data, some of our conclusions were different than those we made in the 2005 critical habitat designation. As a result, some areas identified as meeting the definition of critical habitat in the 2005 designation are not included in this proposed rule (such as areas on Santa Rosa Plateau that support *B. santarosae* instead of *B. filifolia* and areas in the City of Carlsbad that contain smaller occurrences of *B. filifolia* that did not meet any of our three criteria), and other areas were included in this proposed rule that were not identified as meeting the definition of critical habitat in the 2005 designation (such as areas in existence at the time of listing, but not evaluated or included due to lack of surveys for *B. filifolia*). We described the steps that we used to identify and delineate the areas that we are proposing as critical habitat in more detail compared to the 2005 critical habitat designation to ensure that the public better understands why the areas are being proposed as critical habitat.

(3) We improved our mapping methodology to more accurately define those areas that possess the physical and biological features essential to the conservation of the species and to more precisely draw critical habitat boundaries. This proposed revised rule identifies 1,695 (686 ha) considered to contain the features essential to the conservation of *Brodiaea filifolia* less

than we identified in the 2005 rule (this calculation does not include the changes made on military lands exempt under section 4(a)(3) of the Act, see Table 2). This reduction is primarily due to our attempt to better represent the areas that contain the physical and biological features essential to the conservation of *B. filifolia*. In the 2005 final rule, we used a 100-meter grid resolution to delineate critical habitat. In this proposed revised rule, we did not use the 100-meter grid mapping methodology. Instead we directly mapped the areas containing the PCEs. We believe the result is a more precise mapping of the proposed critical habitat. However, we acknowledge that there still may be some areas mapped as critical habitat that do not contain the PCEs due to mapping, data, and resource constraints.

(4) In the 2005 rule, we excluded subunits under section 4(b)(2) of the Act within the planning boundaries for: (a) The Orange County Southern Subregion HCP, (b) the draft City of Oceanside Subarea Plan and the City of Carlsbad's HMP under the MHCP, (c) the Villages of La Costa HCP, and (d) the Western Riverside County MSHCP (see Table 2 for the specific subunits excluded). In this proposed revised critical habitat rule, we identified several areas we are considering for exclusion under section 4(b)(2) of the Act, as follows: (a) The Orange County Southern Subregion HCP, (b) the City of Carlsbad's HMP under the MHCP (which includes the Villages of La Costa Habitat Conservation Plan), (c) the Western Riverside County MSHCP, and (d) the City and County of San Diego Subarea Plans under the MSCP (see the **Areas Considered for Exclusion Under Section 4(b)(2) of the Act** section). The Villages of La Costa HCP is included within (considered part of) the City of Carlsbad's HMP under the MHCP; therefore, all proposed critical habitat that overlaps with the Villages of La Costa HCP is being considered for exclusion under the City of Carlsbad's HMP. We are currently not considering the exclusion of critical habitat within the area covered by the draft City of Oceanside Subarea Plan (which was excluded previously). The exclusions in the final revised critical habitat designation could differ from the exclusions we made in the 2005 final critical habitat designation.

(5) New information resulted in additional areas being identified as meeting the definition of critical habitat for *Brodiaea filifolia*. First, we added two areas that are newly discovered to support occurrences of *B. filifolia*; however, we believe that these areas

were occupied at the time of listing (Subunit 8f and Unit 12). Second, we have new information on four areas containing substantial occurrences that were proposed as critical habitat in 2004 but not designated in the 2005 final rule because at that time the data did not indicate these areas were substantial occurrences (Unit 3 and Subunits 6a, 6c, and 7b). We now have information, mostly in the form of updated surveys, indicating that these areas contain substantial occurrences of *B. filifolia* and meet the definition of critical habitat (see Criteria 2 above under the "Criteria Used To Identify Critical Habitat" section). Third, we added two areas where the previously identified subunits were placed in the wrong locations and did not contain the actual occurrences of *B. filifolia* that they were intended to contain (Unit 2 and Subunit 11e); we have now identified and mapped the correct areas. Fourth, we added land to seven proposed subunits where new survey data indicated these lands contain the physical and biological features essential to the conservation of *B. filifolia* (Subunits 4g, 5b, 6a, 6b, 7a, 11a, and 11f).

(6) New information also resulted in the removal of areas previously identified as meeting the definition of critical habitat for *Brodiaea filifolia*. First, ten areas identified as meeting the definition of critical habitat in the 2004 proposed rule are not proposed in this revision of critical habitat. The best available scientific and commercial data indicates that these occurrences do not meet the criteria in this proposed rule to identify areas containing the essential physical and biological features (Carlsbad Oaks, Carlsbad Highlands, Poinsettia, East of Tenaja Guard Station, North end of Redondo Mesa, three areas on Marine Corps Base Camp Pendleton, Unit 9/Double LL Ranch, and Unit 10/Highland Valley). Second, we are not proposing two areas where the new species of *Brodiaea*, *B. santarosae*, was found and no *B. filifolia* was found (Santa Rosa Plateau — Tenaja Rd. and Subunit 5a/Miller Mountain). These areas were thought to contain both pure *B. filifolia* and hybrid *B. filifolia* in the past; however, current data indicates that these areas only contain *B. santarosae*. Third, in 14 proposed subunits we are not proposing specific areas that previously (in the 2005 rule) met the definition of critical habitat because these specific areas do not contain the physical and biological features essential to the conservation of *B. filifolia* (portions of Subunits 1a, 1b, 4b, 4c, 4g, 6c, 6d, 7c, 7d, 11a, 11b, 11c, 11d, and 11f). More information about

the units and subunits that contain the physical and biological features essential to the conservation of *B. filifolia* and are proposed as revised critical habitat are described in greater detail in the **Proposed Revised Critical Habitat Designation** section.

#### Proposed Revised Critical Habitat Designation

We are proposing 3,786 ac (1,532 ha) in 10 units, subdivided into 28 subunits as revised critical habitat for *Brodiaea filifolia*. The unit numbers in this proposed rule correspond to those used in the 2004 proposed rule and the 2005 final rule; however, Units 9 and 10 are not proposed and Units 11 and 12 are new to this proposed rule. Unit 11 represents lands in Riverside County excluded from the 2005 designation of critical habitat and Unit 12 represents

the Artesian Trails area in San Diego County that is now included based on new data on occurrences in this area. To minimize confusion with the previous proposal and designation we are not using Unit numbers 9 and 10 in this rule (see Table 2 and **Summary of Changes From Previously Designated Critical Habitat** section).

The areas we describe below constitute our best assessment at this time of areas that meet the definition of critical habitat for *Brodiaea filifolia*. These areas constitute our best assessment of areas determined to be within the geographical area occupied at the time of listing that contain the physical and biological features essential to the conservation of *B. filifolia* that may require special management considerations or

protection. We are not proposing any areas outside the geographical area occupied by the species at the time of listing because we determined that the lands we are proposing as critical habitat are adequate to ensure conservation of *B. filifolia*. The lands proposed as revised critical habitat represent a subset of the total lands occupied by *B. filifolia*. Table 4 identifies the approximate area of each proposed critical habitat subunit by land ownership. These subunits, which generally correspond to the geographic area of the subunits delineated in the 2005 designation (see Table 2 for a detailed comparison of this proposed rule and the 2005 designation), if finalized, will replace the current critical habitat designation for *B. filifolia* in 50 CFR 17.96(a).

TABLE 4. AREA ESTIMATES IN ACRES (AC) AND HECTARES (HA), AND LAND OWNERSHIP FOR *Brodiaea filifolia* PROPOSED REVISED CRITICAL HABITAT.

Location	Ownership				Total Area <sup>2</sup>
	Federal	State Government	Local Government	Private	
Unit 1: Los Angeles County					
1a. Glendora	0 ac (0 ha)	0 ac (0 ha)	0 ac (0 ha)	67 ac (27 ha)	67 ac (27 ha)
1b. San Dimas	13 ac (5 ha)	0 ac (0 ha)	0 ac (0 ha)	125 ac (51 ha)	138 ac (56 ha)
Unit 2: San Bernardino County					
2. Arrowhead Hot Springs	0 ac (0 ha)	0 ac (0 ha)	0 ac (0 ha)	61 ac (25 ha)	61 ac (25 ha)
Unit 3: Central Orange County					
3. Aliso Canyon	0 ac (0 ha)	0 ac (0 ha)	113 ac (46 ha)	0 ac (0 ha)	113 ac (46 ha)
Unit 4: Southern Orange County					
4b. Caspers Wilderness Park	0 ac (0 ha)	0 ac (0 ha)	185 ac (75 ha)	20 ac (8 ha)	205 ac (83 ha)
4c. Cañada Gobernadora/Chiquita Ridgeline	0 ac (0 ha)	0 ac (0 ha)	0 ac (0 ha)	133 ac (54 ha)	133 ac (54 ha)
4g. Cristianitos Canyon	0 ac (0 ha)	0 ac (0 ha)	0 ac (0 ha)	587 ac (238 ha)	587 ac (238 ha)
Unit 5: Northern San Diego County					
5b. Devil Canyon	266 ac (108 ha)	0 ac (0 ha)	0 ac (0 ha)	8 ac (3 ha)	274 ac (111ha)
Unit 6: Oceanside					
6a. Alta Creek	0 ac (0 ha)	0 ac (0 ha)	0 ac (0 ha)	72 ac (29 ha)	72 ac (29 ha)
6b. Mesa Drive	0 ac (0 ha)	0 ac (0 ha)	0 ac (0 ha)	17 ac (7 ha)	17 ac (7 ha)
6c. Mission View/Sierra Ridge	0 ac (0 ha)	0 ac (0 ha)	0 ac (0 ha)	12 ac (5 ha)	12 ac (5 ha)
6d. Taylor/Darwin	0 ac (0 ha)	0 ac (0 ha)	0 ac (0 ha)	35 ac (14 ha)	35 ac (14 ha)
6e. Arbor Creek	0 ac (0 ha)	0 ac (0 ha)	0 ac (0 ha)	94 ac (38 ha)	94 ac (38 ha)

TABLE 4. AREA ESTIMATES IN ACRES (AC) AND HECTARES (HA), AND LAND OWNERSHIP FOR *Brodiaea filifolia* PROPOSED REVISED CRITICAL HABITAT.—Continued

Location	Ownership				Total Area <sup>2</sup>
	Federal	State Government	Local Government	Private	
Unit 7: Carlsbad					
7a. Letterbox Canyon	0 ac (0 ha)	0 ac (0 ha)	0 ac (0 ha)	57 ac (23 ha)	57 ac (23 ha)
7b. Rancho Carrillo	0 ac (0 ha)	0 ac (0 ha)	0 ac (0 ha)	37 ac (15 ha)	37 ac (15 ha)
7c. Calavera Hills Village H	0 ac (0 ha)	0 ac (0 ha)	0 ac (0 ha)	71 ac (29 ha)	71 ac (29 ha)
7d. Rancho La Costa	0 ac (0 ha)	0 ac (0 ha)	0 ac (0 ha)	98 ac (40 ha)	98 ac (40 ha)
Unit 8: San Marcos and Vista					
8b. Rancho Santalina/Loma Alta	0 ac (0 ha)	0 ac (0 ha)	0 ac (0 ha)	47 ac (19 ha)	47 ac (19 ha)
8d. Upham	0 ac (0 ha)	0 ac (0 ha)	0 ac (0 ha)	54 ac (22 ha)	54 ac (22 ha)
8f. Oleander/San Marcos	0 ac (0 ha)	0 ac (0 ha)	0 ac (0 ha)	7 ac (3 ha)	7 ac (3 ha)
Unit 9: Double LL Ranch - No longer proposed					
Unit 10: Highland Valley - No longer proposed					
Unit 11: Western Riverside County					
11a. San Jacinto Wildlife Area	0 ac (0 ha)	385 ac (156 ha)	0 ac (0 ha)	16 ac (6 ha)	401 ac (162 ha)
11b. San Jacinto Avenue/ Dawson Road	0 ac (0 ha)	0 ac (0 ha)	0 ac (0 ha)	117 ac (47 ha)	117 ac (47 ha)
11c. Case Road	0 ac (0 ha)	0 ac (0 ha)	0 ac (0 ha)	180 ac (73 ha)	180 ac (73 ha)
11d. Railroad Canyon	53 ac (21 ha)	0 ac (0 ha)	0 ac (0 ha)	205 ac (83 ha)	257 ac (104 ha)
11e. Upper Salt Creek (Stowe Pool)	0 ac (0 ha)	0 ac (0 ha)	0 ac (0 ha)	145 ac (59 ha)	145 ac (59 ha)
11f. Santa Rosa Plateau – Mesa de Colorado	0 ac (0 ha)	221 ac (89 ha)	5 ac (2 ha)	8 ac (3 ha)	234 ac (95 ha)
11g. Santa Rosa Plateau – South of Tenaja Road	0 ac (0 ha)	117 ac (47 ha)	0 ac (0 ha)	0 ac (0 ha)	117 ac (47 ha)
11h. Santa Rosa Plateau – North of Tenaja Road	0 ac (0 ha)	44 ac (18 ha)	0 ac (0 ha)	0 ac (0 ha)	44 ac (18 ha)
Unit 12: Central San Diego County - Artesian Trails					
12. Artesian Trails	0 ac (0 ha)	0 ac (0 ha)	0 ac (0 ha)	109 ac (44 ha)	109 ac (44 ha)
Total <sup>2</sup>	332 ac (134 ha)	766 ac (310 ha)	303 ac (123 ha)	2,385 ac (965 ha)	3,786 ac (1,532 ha)

<sup>1</sup> 1,531 ac (620 ha) of federally owned land on MCB Camp Pendleton is exempt from this critical habitat (see EXEMPTIONS UNDER SECTION 4(A)(3) OF THE ACT section).

<sup>2</sup> Values in this table may not sum due to rounding.

Presented below are brief descriptions of all subunits and reasons why they meet the definition of critical habitat for *Brodiaea filifolia*. The subunits are listed in order geographically north to south and west to east.

#### Unit 1: Los Angeles County

Unit 1 is located in Los Angeles County and consists of two subunits totaling 206 ac (83 ha). This unit

contains 13 ac (5 ha) of federally owned land and 192 ac (78 ha) of private land.

#### Subunit 1a: Glendora

Subunit 1a consists of 67 ac (27 ha) of private land in the City of Glendora,

in the foothills of the San Gabriel Mountains in Los Angeles County. Lands within this subunit contain Cieneba-Exchequer-Sobrante soils, a type of silty loam, and consist primarily of northern mixed chaparral and coastal sage scrub habitat. Subunit 1a contains the physical and biological features essential to the conservation of *Brodiaea filifolia* because it (1) contains the PCEs for *B. filifolia*, including sandy loam soils (PCE 1E) and areas with a natural, generally intact surface and subsurface soil structure that support *B. filifolia* and pollinator habitat (PCE 2); (2) supports a rare or unique occurrence, representing one of two occurrences located in the foothills of the San Gabriel Mountains part of the Transverse Ranges where the species was historically found; and (3) supports a stable, persistent occurrence. The site is owned and managed by the Glendora Community Conservancy (GCC). The GCC has expressed interest in creating a management plan for their land; however, the plan has not been completed at this time. The physical and biological features essential to the conservation of the species in this subunit may require special management considerations or protection to address threats from nonnative invasive plants. Please see the "Special Management Considerations or Protection" section of this proposed rule for a discussion of the threats to *B. filifolia* habitat and potential management considerations.

#### Subunit 1b: San Dimas

Subunit 1b consists of 13 ac (5 ha) Federal land (Angeles National Forest) and 125 ac (51 ha) of private land near the City of San Dimas in the foothills of the San Gabriel Mountains in Los Angeles County. Lands within this subunit contain Cieneba-Exchequer-Sobrante soils, a type of silty loam, and consist primarily of northern mixed chaparral and coastal sage scrub habitat. Subunit 1b contains the physical and biological features essential to the conservation of *Brodiaea filifolia* because it (1) contains the PCEs for *B. filifolia*, including sandy loam soils (PCE 1E) and areas with a natural, generally intact surface and subsurface soil structure that support *B. filifolia* and pollinator habitat (PCE 2); (2) supports a rare or unique occurrence, representing one of two occurrences located in the foothills of the San Gabriel Mountains part of the Transverse Ranges where the species was historically found; and (3) supports an occurrence of at least 6,000 individuals of *B. filifolia*, as documented in 1990 (CNDDDB 2009, p.

37). The physical and biological features essential to the conservation of the species in this subunit may require special management considerations or protection to address threats from urban development on private lands, including minimizing disturbance to the surface and subsurface structure. Please see the "Special Management Considerations or Protection" section of this proposed rule for a discussion of the threats to *B. filifolia* habitat and potential management considerations.

#### Unit 2: San Bernardino County – Arrowhead Hot Springs

Unit 2 is located in San Bernardino County and consists of 61 ac (25 ha) of private land at the southwestern base of the San Bernardino Mountains. This unit was not included in the 2005 final critical habitat designation but is included in this proposed rule based on new information related to the distribution of *Brodiaea filifolia*. Lands within this unit contain Cieneba-rock outcrop complex and Ramona family-Typic Xerothents soils altered by hydrothermal activity, some of which are considered alluvial, and consist primarily of coastal sage scrub habitat. Unit 2 contains the physical and biological features essential to the conservation of *B. filifolia* because it (1) contains the PCEs for *B. filifolia*, including soils altered by hydrothermal activity (PCE 1B) and areas with a natural, generally intact surface and subsurface soil structure that support *B. filifolia* and pollinator habitat (PCE 2); (2) supports a rare or unique occurrence, representing the only occurrence of this plant in the foothills of the San Bernardino Mountains part of the Transverse Ranges where the species was historically found, and representing the type locality for *B. filifolia* (Niehaus 1971, p. 57; CNDDDB 2009, p. 7); and (3) supports a stable, persistent occurrence. The physical and biological features essential to the conservation of the species in this subunit may require special management considerations or protection to address threats from nonnative invasive plants. Please see the "Special Management Considerations or Protection" section of this proposed rule for a discussion of the threats to *B. filifolia* habitat and potential management considerations.

#### Unit 3: Central Orange County – Aliso Canyon

Unit 3 is located in central Orange County and consists of 113 ac (46 ha) of local government land in Aliso and Wood Canyons Wilderness Park, in the City of Laguna Niguel, southwestern Orange County. This unit was not

included in the 2005 final critical habitat designation but is included in this proposed rule based on new information related to the distribution of *Brodiaea filifolia*. Lands within this unit contain clay loam or other types of loam and consist of annual and needlegrass grassland. Unit 3 contains the physical and biological features essential to the conservation of *B. filifolia* because it (1) contains the PCEs for *B. filifolia*, including loamy soils underlain by a clay subsoil (PCE 1A) and areas with a natural, generally intact surface and subsurface soil structure that support *B. filifolia* and pollinator habitat (PCE 2); and (2) supports an occurrence of at least 5,000 individuals of *B. filifolia*, as documented in 2001 (CNDDDB 2009, p. 51). Although this occurrence is protected from urban development as part of Aliso and Wood Canyons Wilderness Park, these lands are managed for recreational use and not specifically for the conservation of *B. filifolia*. The physical and biological features essential to the conservation of the species in this subunit may require special management considerations or protection to address threats from fuel management activities (annual mowing) and pipeline work. Please see the "Special Management Considerations or Protection" section of this proposed rule for a discussion of the threats to *B. filifolia* habitat and potential management considerations.

#### Unit 4: Southern Orange County

Unit 4 is located in southern Orange County and consists of three subunits totaling 925 ac (374 ha). This unit contains 185 ac (75 ha) of local government land and 740 ac (299 ha) of private land.

#### Subunit 4b: Caspers Wilderness Park

Subunit 4b consists of 185 ac (75 ha) of local government land in Caspers Wilderness Park and 20 ac (8 ha) of private land in the City of San Juan Capistrano, in the southwestern region of the Santa Ana Mountains, southern Orange County. Lands within this proposed subunit contain clay loam, sandy loam, or rocky outcrop, and consist primarily of grassland and sagebrush-buckwheat scrub habitat. Subunit 4b contains the physical and biological features essential to the conservation of *Brodiaea filifolia* because it (1) contains the PCEs for *B. filifolia*, including clay soils and loamy soils underlain by a clay subsoil (PCE 1A), and areas with a natural, generally intact surface and subsurface soil structure that support *B. filifolia* and pollinator habitat (PCE 2); and (2) supports a stable, persistent occurrence.

This subunit is located in the foothills of the Santa Ana Mountains and represents the highest elevation and northernmost occurrence in Orange County. Ninety percent of this occurrence is protected from urban development as part of Caspers Wilderness Park; these lands will be managed and monitored in accordance with the Orange County Southern Subregion HCP for conservation of *B. filifolia*. The physical and biological features essential to the conservation of the species in this subunit may require special management considerations or protection to address threats from nonnative invasive plants. Please see the "Special Management Considerations or Protection" section of this proposed rule for a discussion of the threats to *B. filifolia* habitat and potential management considerations. We are considering the portion of this subunit owned by Orange County at Caspers Wilderness Park (185 ac (75 ha)) for exclusion under section 4(b)(2) of the Act because this subunit is within the area addressed by the Orange County Southern Subregion HCP; please see the **Areas Considered for Exclusion Under Section 4(b)(2) of the Act** section of this proposed rule for a discussion about our consideration to exclude this area.

#### Subunit 4c: Cañada Gobernadora/Chiquita Ridgeline

Subunit 4c consists of 133 ac (54 ha) of private land in and around Cañada Gobernadora on Rancho Mission Viejo in southern Orange County. Lands within this subunit contain clay, clay loam, or sandy loam and consist primarily of dry-land agriculture and sagebrush-buckwheat scrub habitat. Subunit 4c contains the physical and biological features essential to the conservation of *Brodiaea filifolia* because it (1) contains the PCEs for *B. filifolia*, including clay soils and loamy soils underlain by a clay subsoil (PCE 1A), and areas with a natural, generally intact surface and subsurface soil structure that support *B. filifolia* and pollinator habitat (PCE 2); and (2) supports a stable, persistent occurrence. The physical and biological features essential to the conservation of the species in this subunit may require special management considerations or protection to address threats from the indirect effects associated with urban development. Please see the "Special Management Considerations or Protection" section of this proposed rule for a discussion of the threats to *B. filifolia* habitat and potential management considerations. We are considering this subunit for exclusion

under section 4(b)(2) of the Act because this subunit is within the area addressed by the Orange County Southern Subregion HCP; please see the **Areas Considered for Exclusion Under Section 4(b)(2) of the Act** section of this proposed rule for a discussion about our consideration to exclude this area.

#### Subunit 4g: Cristianitos Canyon

Subunit 4g consists of 587 ac (238 ha) of privately owned land in Cristianitos Canyon on Rancho Mission Viejo in southern Orange County. Lands within this subunit are underlain by clay and sandy loam soils and consist primarily of annual grassland and needlegrass grassland. Subunit 4g contains the physical and biological features essential to the conservation of *Brodiaea filifolia* because it (1) contains the PCEs for *B. filifolia*, including clay soils and loamy soils underlain by a clay subsoil (PCE 1A), and areas with a natural, generally intact surface and subsurface soil structure that support *B. filifolia* and pollinator habitat (PCE 2); (2) supports an occurrence in rare and unique habitat, representing one of the few places where this species occurs in needlegrass grassland in Orange County; and (3) supports an occurrence of at least 6,505 individuals of *B. filifolia*, as documented in 2003 (Dudek and Associates, Inc. 2006, Chapter 3 pp. 73-74, 83; Service 2007, pp. 149-150). The physical and biological features essential to the conservation of the species in this subunit may require special management considerations or protection to address threats from the indirect effects associated with urban development. Please see the "Special Management Considerations or Protection" section of this proposed rule for a discussion of the threats to *B. filifolia* habitat and potential management considerations. We are considering this subunit for exclusion under section 4(b)(2) of the Act because this subunit is within the area addressed by the Orange County Southern Subregion HCP; please see the **Areas Considered for Exclusion Under Section 4(b)(2) of the Act** section of this proposed rule for a discussion about our consideration to exclude this area.

#### Unit 5: Northern San Diego County – Devil Canyon

Subunit 5b consists of 266 ac (108 ha) Federal land (Cleveland National Forest) and 8 ac (3 ha) of private land in northern San Diego County. Lands within this subunit contain Cienega Very Rocky Coarse Sandy Loam, Fallbrook Sandy Loam, and Cienega Coarse Sandy Loam soils and consist primarily of chaparral and oak

woodland vegetation. Subunit 5b contains the physical and biological features essential to the conservation of *Brodiaea filifolia* because it (1) contains the PCEs for *B. filifolia*, including sandy loam soils (PCE 1E) and areas with a natural, generally intact surface and subsurface soil structure that support *B. filifolia* and pollinator habitat (PCE 2); (2) supports an occurrence in rare and unique habitat, representing one of the few places where this species occurs in a drainage in oak woodland habitat and occurring in unusual seeps and drainages on low granitic outcrops; and (3) supports a stable, persistent occurrence. The Cleveland National Forest does not currently have a management plan specific to *B. filifolia*; however, timing of cattle grazing has been adjusted to avoid the flowering period for the species (Winter 2004, pers. comm.). The physical and biological features essential to the conservation of the species in this subunit may require special management considerations or protection to address threats from nonnative invasive plants. Please see the "Special Management Considerations or Protection" section of this proposed rule for a discussion of the threats to *B. filifolia* habitat and potential management considerations.

#### Unit 6: Oceanside, San Diego County

Unit 6 is located in Oceanside, San Diego County and consists of five subunits totaling 231 ac (93 ha) of private land.

#### Subunit 6a: Alta Creek

Subunit 6a consists of 72 ac (29 ha) of private land in the City of Oceanside, in northern coastal San Diego County. This subunit was not included in the 2005 final critical habitat designation but is included in this proposed rule based on new information related to the distribution of *Brodiaea filifolia*. Lands within this subunit contain fine sandy loam, loam, or loamy fine sand and consist primarily of coastal sage scrub habitat. Subunit 6a contains the physical and biological features essential to the conservation of *B. filifolia* because it (1) contains the PCEs for *B. filifolia*, including loamy soils underlain by a clay subsoil (PCE 1A) and areas with a natural, generally intact surface and subsurface soil structure that support *B. filifolia* and pollinator habitat (PCE 2); and (2) supports a stable, persistent occurrence. The physical and biological features essential to the conservation of the species in this subunit may require special management considerations or protection to address threats from the

indirect effects associated with urban development. Please see the “Special Management Considerations or Protection” section of this proposed rule for a discussion of the threats to *B. filifolia* habitat and potential management considerations.

#### Subunit 6b: Mesa Drive

Subunit 6b consists of 17 ac (7 ha) of private land in the City of Oceanside, in northern coastal San Diego County. Lands within this subunit contain loamy fine sands and consist primarily of grassland habitat. Subunit 6b contains the physical and biological features essential to the conservation of *Brodiaea filifolia* because it (1) contains the PCEs for *B. filifolia*, including loamy soils underlain by a clay subsoil (PCE 1A) and areas with a natural, generally intact surface and subsurface soil structure that support *B. filifolia* and pollinator habitat (PCE 2); and (2) supports a stable, persistent occurrence. The physical and biological features essential to the conservation of the species in this subunit may require special management considerations or protection to address threats from the indirect effects associated with urban development and habitat disturbance on local government lands (Roberts 2005, pp. 1–3). Please see the “Special Management Considerations or Protection” section of this proposed rule for a discussion of the threats to *B. filifolia* habitat and potential management considerations.

#### Subunit 6c: Mission View/ Sierra Ridge

Subunit 6c consists of 12 ac (5 ha) of private land in the City of Oceanside, in northern coastal San Diego County. This subunit was not included in the 2005 final critical habitat designation but is included in this proposed rule based on new information related to the distribution of *Brodiaea filifolia*. Lands within this subunit contain fine loamy sands and consist primarily of coastal sage scrub habitat. Subunit 6c contains the physical and biological features essential to the conservation of *B. filifolia* because it (1) contains the PCEs for *B. filifolia*, including loamy soils underlain by a clay subsoil (PCE 1A) and areas with a natural, generally intact surface and subsurface soil structure that support *B. filifolia* and pollinator habitat (PCE 2); and (2) supports a stable, persistent occurrence. The physical and biological features essential to the conservation of the species in this subunit may require special management considerations or protection to address threats from the indirect effects associated with urban development. Please see the “Special

Management Considerations or Protection” section of this proposed rule for a discussion of the threats to *B. filifolia* habitat and potential management considerations.

#### Subunit 6d: Taylor/Darwin

Subunit 6d consists of 35 ac (14 ha) of private land in the City of Oceanside, in northern coastal San Diego County. Lands within this subunit contain clay soil and fine loamy sands and consist primarily of annual and needlegrass grassland. Subunit 6d contains the physical and biological features essential to the conservation of *Brodiaea filifolia* because it (1) contains the PCEs for *B. filifolia*, including loamy soils underlain by a clay subsoil (PCE 1A) and areas with a natural, generally intact surface and subsurface soil structure that support *B. filifolia* and pollinator habitat (PCE 2); and (2) supports an occurrence of at least 6,200 individuals of *B. filifolia*, as documented in 2005 (CNDDDB 2009, p. 38). The site is conserved and will not be developed (Helix Environmental Planning, Inc. 2004, p. 5-13). The physical and biological features essential to the conservation of the species in this subunit may require special management considerations or protection to address threats from nonnative invasive plants. Please see the “Special Management Considerations or Protection” section of this proposed rule for a discussion of the threats to *B. filifolia* habitat and potential management considerations.

#### Subunit 6e: Arbor Creek/Colucci

Subunit 6e consists of 94 ac (38 ha) of private land in the City of Oceanside, in northern coastal San Diego County. This subunit was not included in the 2005 final critical habitat designation but is included in this proposed rule based on new information related to the distribution of *Brodiaea filifolia*. Lands within this subunit contain clay soil and fine loamy sands and consist primarily of annual and needlegrass grassland. Subunit 6e contains the physical and biological features essential to the conservation of *B. filifolia* because it (1) contains the PCEs for *B. filifolia*, including loamy soils underlain by a clay subsoil (PCE 1A) and areas with a natural, generally intact surface and subsurface soil structure that support *B. filifolia* and pollinator habitat (PCE 2); and (2) supports a stable, persistent occurrence, which occurs in the largest continuous block of grassland habitat remaining in City of Oceanside. The physical and biological features essential to the conservation of the species in this subunit may require

special management considerations or protection to address threats from nonnative invasive plants and urban development. Please see the “Special Management Considerations or Protection” section of this proposed rule for a discussion of the threats to *B. filifolia* habitat and potential management considerations.

#### Unit 7: Carlsbad, San Diego County

Unit 7 is located in Carlsbad, San Diego County and consists of four subunits totaling 263 ac (106 ha) of private land.

#### Subunit 7a: Letterbox Canyon

Subunit 7a consists of 57 ac (23 ha) of private land in the City of Carlsbad, in northern coastal San Diego County. Lands within this subunit contain heavy clay soils and consist primarily of annual grassland. Subunit 7a contains the physical and biological features essential to the conservation of *Brodiaea filifolia* because it (1) contains the PCEs for *B. filifolia*, including loamy soils underlain by a clay subsoil (PCE 1A) and areas with a natural, generally intact surface and subsurface soil structure that support *B. filifolia* and pollinator habitat (PCE 2); and (2) supports an occurrence of at least 39,500 individuals of *B. filifolia*, as documented in 2005 (CNDDDB 2009, p. 15). The site is conserved and will be managed and monitored in perpetuity (Service and CDFG 2005, p. 1). The physical and biological features essential to the conservation of the species in this subunit may require special management considerations or protection to address threats from the indirect effects associated with urban development. Please see the “Special Management Considerations or Protection” section of this proposed rule for a discussion of the threats to *B. filifolia* habitat and potential management considerations. We are considering this subunit for exclusion under section 4(b)(2) of the Act because this subunit is within the area addressed by the Carlsbad HMP under the MHCP; please see the **Areas Considered for Exclusion Under Section 4(b)(2) of the Act** section of this proposed rule for a discussion about our consideration to exclude this area.

#### Subunit 7b: Rancho Carrillo

Subunit 7b consists of 37 ac (15 ha) of private land in the City of Carlsbad, in northern coastal San Diego County. This subunit was not included in the 2005 final critical habitat designation but is included in this proposed rule based on new information related to the distribution of *Brodiaea filifolia*. Lands

within this subunit contain clay or sandy loam soils and consist primarily of annual grasslands and coastal sage scrub habitat. Subunit 7b contains the physical and biological features essential to the conservation of *B. filifolia* because it (1) contains the PCEs for *B. filifolia*, including loamy soils underlain by a clay subsoil (PCE 1A) and areas with a natural, generally intact surface and subsurface soil structure that support *B. filifolia* and pollinator habitat (PCE 2); and (2) supports an occurrence of at least 797,000 individuals of *B. filifolia*, as documented in 2005 (this estimate was of vegetative plants and not flowering plants) (Scheidt and Allen 2005, p. 1). The physical and biological features essential to the conservation of the species in this subunit may require special management considerations or protection to address threats from the indirect effects associated with urban development and nonnative invasive plants. Please see the "Special Management Considerations or Protection" section of this proposed rule for a discussion of the threats to *B. filifolia* habitat and potential management considerations. We are considering this subunit for exclusion under section 4(b)(2) of the Act because this subunit is within the area addressed by the Carlsbad HMP under the MHCP; please see the **Areas Considered for Exclusion Under Section 4(b)(2) of the Act** section of this proposed rule for a discussion about our consideration to exclude this area.

#### Subunit 7c: Calavera Hills Village H

Subunit 7c consists of 71 ac (29 ha) of private land in the City of Carlsbad, in northern coastal San Diego County. Lands within this subunit contain clay soil and consist primarily of annual and needlegrass grassland. Subunit 7c contains the physical and biological features essential to the conservation of *Brodiaea filifolia* because it (1) contains the PCEs for *B. filifolia*, including loamy soils underlain by a clay subsoil (PCE 1A) and areas with a natural, generally intact surface and subsurface soil structure that support *B. filifolia* and pollinator habitat (PCE 2); and (2) supports a stable, persistent occurrence of at least 2,243 plants, as documented in 2008 (McConnell 2008, p. 9). The site is conserved and will not be developed (Planning Systems 2002, pp. 8-9). The physical and biological features essential to the conservation of the species in this subunit may require special management considerations or protection to address threats from nonnative invasive plants. Please see the "Special Management

Considerations or Protection" section of this proposed rule for a discussion of the threats to *B. filifolia* habitat and potential management considerations. We are considering this subunit for exclusion under section 4(b)(2) of the Act because this subunit is within the area addressed by the Carlsbad HMP under the MHCP; please see the **Areas Considered for Exclusion Under Section 4(b)(2) of the Act** section of this proposed rule for a discussion about our consideration to exclude this area.

#### Subunit 7d: Rancho La Costa

Subunit 7d consists of 98 ac (40 ha) of private land in the City of Carlsbad, in northern coastal San Diego County. Lands within this subunit contain clay soil and consist primarily of annual and needlegrass grassland. Subunit 7d contains the physical and biological features essential to the conservation of *Brodiaea filifolia* because it (1) contains the PCEs for *B. filifolia*, including loamy soils underlain by a clay subsoil (PCE 1A) and areas with a natural, generally intact surface and subsurface soil structure that support *B. filifolia* and pollinator habitat (PCE 2); and (2) supports an occurrence of at least 13,445 individuals of *B. filifolia*, as documented in 2008 (CNDDDB 2009, p. 30). The site is conserved and will not be developed (Center for Natural Lands Management 2005, pp. 1-5). The physical and biological features essential to the conservation of the species in this subunit may require special management considerations or protection to address threats from nonnative invasive plants. Please see the "Special Management Considerations or Protection" section of this proposed rule for a discussion of the threats to *B. filifolia* habitat and potential management considerations. We are considering this subunit for exclusion under section 4(b)(2) of the Act because this subunit is within the area addressed by the Carlsbad HMP under the MHCP; please see the **Areas Considered for Exclusion Under Section 4(b)(2) of the Act** section of this proposed rule for a discussion about our consideration to exclude this area.

#### Unit 8: San Marcos, San Diego County

Unit 8 is located in San Marcos, northern San Diego County and consists of three subunits totaling 108 ac (44 ha) of private land.

#### Subunit 8b: Rancho Santalina/Loma Alta

Subunit 8b consists of 47 ac (19 ha) of private land in the City of San Marcos, northern San Diego County. This subunit was not included in the

2005 final critical habitat designation but is included in this proposed rule based on new information related to the distribution of *Brodiaea filifolia*. Lands within this subunit contain clay, loam, or loamy fine sand soils and consist primarily of annual and needlegrass grassland. Subunit 8b contains the physical and biological features essential to the conservation of *B. filifolia* because it (1) contains the PCEs for *B. filifolia*, including loamy soils underlain by a clay subsoil (PCE 1A) and areas with a natural, generally intact surface and subsurface soil structure that support *B. filifolia* and pollinator habitat (PCE 2); and (2) supports an occurrence of at least 5,552 individuals of *B. filifolia*, as documented in 2000, and approximately 12,000 *B. filifolia* corms were transplanted to the area in 2004 (CNDDDB 2009, p. 10). The physical and biological features essential to the conservation of the species in this subunit may require special management considerations or protection to address threats from the indirect effects associated with urban development, unauthorized recreational activities, and nonnative invasive plants. Please see the "Special Management Considerations or Protection" section of this proposed rule for a discussion of the threats to *B. filifolia* habitat and potential management considerations.

#### Subunit 8d: Upham

Subunit 8d consists of 54 ac (22 ha) of private land in the City of San Marcos, northern San Diego County. Lands within this subunit contain clay soils and consist primarily of annual and needlegrass grassland and vernal pool habitat. Subunit 8d contains the physical and biological features essential to the conservation of *Brodiaea filifolia* because it (1) contains the PCEs for *B. filifolia*, including loamy soils underlain by a clay subsoil (PCE 1A) and areas with a natural, generally intact surface and subsurface soil structure that support *B. filifolia* and pollinator habitat (PCE 2); (2) supports a rare or unique occurrence, representing one of three occurrences that are associated with vernal pool habitat; and (3) supports an occurrence of at least 342,000 individuals of *B. filifolia*, as documented in 1993 (CNDDDB 2009, p. 9). The physical and biological features essential to the conservation of the species in this subunit may require special management considerations or protection to address threats from the indirect effects associated with urban development, unauthorized recreational

activities, and nonnative invasive plants. Please see the “Special Management Considerations or Protection” section of this proposed rule for a discussion of the threats to *B. filifolia* habitat and potential management considerations.

#### Subunit 8f: Oleander/San Marcos

Subunit 8f consists of 7 ac (3 ha) of land owned by the San Marcos Unified School District near the City of San Marcos, in northern San Diego County. This subunit was not included in the 2005 final critical habitat designation but is included in this proposed rule based on new information related to the distribution of *Brodiaea filifolia*. Lands within this subunit contain clay, loam, or loamy fine sand soils and consist primarily of annual grassland. Unit 8f contains the physical and biological features essential to the conservation of *B. filifolia* because it (1) contains the PCEs for *B. filifolia*, including loamy soils underlain by a clay subsoil (PCE 1A) and areas with a natural, generally intact surface and subsurface soil structure that support *B. filifolia* and pollinator habitat (PCE 2); and (2) supports an occurrence of at least 3,802 individuals of *B. filifolia*, as documented in 2005 (Dudek and Associates, Inc. 2005, p. 19). The physical and biological features essential to the conservation of the species in this subunit may require special management considerations or protection to address threats from nonnative invasive plants. Please see the “Special Management Considerations or Protection” section of this proposed rule for a discussion of the threats to *B. filifolia* habitat and potential management considerations.

#### Unit 11: Western Riverside County

Unit 11 is located in western Riverside County and consists of eight subunits totaling 1,494 ac (605 ha). This unit contains 53 ac (21 ha) of Federal land, 766 ac (310 ha) of State land, 5 ac (2 ha) of local government land and 670 ac (271 ha) of private land.

#### Subunit 11a: San Jacinto Wildlife Area

Subunit 11a consists of 385 ac (156 ha) of State land (CDFG) and 16 ac (6 ha) of private land at the San Jacinto Wildlife Area, in western Riverside County. Lands within this subunit contain Willows silty clay, Waukena loam and Waukena fine sandy loam, Traver fine sandy loam and Traver loamy fine sand, and Hanford coarse sandy loam soils and consist primarily of annual grassland, alkali scrub habitat, and alkali playa habitat. Subunit 11a contains the physical and biological

features essential to the conservation of *Brodiaea filifolia* because it (1) contains the PCEs for *B. filifolia*, including silty loam soils underlain by a clay subsoil or caliche that are generally poorly drained and moderately to strongly alkaline (PCE 1C) and areas with a natural, generally intact surface and subsurface soil structure that support *B. filifolia* and pollinator habitat (PCE 2); (2) supports a rare or unique occurrence, representing one of four occurrences associated with alkali playa habitat; and (3) supports a stable, persistent occurrence. The physical and biological features essential to the conservation of the species in this subunit may require special management considerations or protection to address threats from nonnative invasive plants and construction of new roads or improvements to existing roadways (Service 2005b, pp. 137, 189). Please see the “Special Management Considerations or Protection” section of this proposed rule for a discussion of the threats to *B. filifolia* habitat and potential management considerations. We are considering this subunit for exclusion under section 4(b)(2) of the Act because this subunit is within the area addressed by the Western Riverside County MSHCP; please see the **Areas Considered for Exclusion Under Section 4(b)(2) of the Act** section of this proposed rule for a discussion about our consideration to exclude this area.

#### Subunit 11b: San Jacinto Avenue and Dawson Road

Subunit 11b consists of 117 ac (47 ha) of private land near San Jacinto Avenue and Dawson Road, in western Riverside County. Lands within this subunit contain Willows silty clay and Domino silt loam soils and consist primarily of annual grassland, alkali scrub habitat, and alkali playa habitat. Subunit 11b contains the physical and biological features essential to the conservation of *Brodiaea filifolia* because it (1) contains the PCEs for *B. filifolia*, including silty loam soils underlain by a clay subsoil or caliche that are generally poorly drained and moderately to strongly alkaline (PCE 1C) and areas with a natural, generally intact surface and subsurface soil structure that support *B. filifolia* and pollinator habitat (PCE 2); and (2) supports a rare or unique occurrence, representing one of four occurrences that are associated with alkali playa habitat. The physical and biological features essential to the conservation of the species in this subunit may require special management considerations or protection to address threats from discing, grazing, manure dumping, and nonnative invasive plants (CNDDDB

2009, p. 60). Please see the “Special Management Considerations or Protection” section of this proposed rule for a discussion of the threats to *B. filifolia* habitat and potential management considerations. We are considering this subunit for exclusion under section 4(b)(2) of the Act because this subunit is within the area addressed by the Western Riverside County MSHCP; please see the **Areas Considered for Exclusion Under Section 4(b)(2) of the Act** section of this proposed rule for a discussion about our consideration to exclude this area.

#### Subunit 11c: Case Road

Subunit 11c consists of 180 ac (73 ha) of private land west of I-215, near the City of Perris, in western Riverside County. Lands within this subunit contain Willows silty clay and Domino silt loam soils and consist primarily of agricultural land, floodplain habitat, alkali scrub habitat, and alkali playa habitat. Subunit 11c contains the physical and biological features essential to the conservation of *Brodiaea filifolia* because it (1) contains the PCEs for *B. filifolia*, including silty loam soils underlain by a clay subsoil or caliche that are generally poorly drained and moderately to strongly alkaline (PCE 1C) and areas with a natural, generally intact surface and subsurface soil structure that support *B. filifolia* and pollinator habitat (PCE 2); (2) supports a rare or unique occurrence, representing one of four occurrences that are associated with alkali playa habitat; and (3) supports an occurrence of at least 4,555 individuals of *B. filifolia*, as documented in 2000 (Glenn Lukos Associates, Inc. 2000a, Map of San Jacinto River Stage 3 Project Impacts Version 2 Alignment; Glenn Lukos Associates, Inc. 2000b, pp. 17-18; CNDDDB 2009, p. 2). The physical and biological features essential to the conservation of the species in this subunit may require special management considerations or protection to address threats from OHV activity, encroaching urban development, manure dumping, and nonnative invasive plants. Please see the “Special Management Considerations or Protection” section of this proposed rule for a discussion of the threats to *B. filifolia* habitat and potential management considerations. We are considering this subunit for exclusion under section 4(b)(2) of the Act because this subunit is within the area addressed by the Western Riverside County MSHCP; please see the **Areas Considered for Exclusion Under Section 4(b)(2) of the Act** section of this

proposed rule for a discussion about our consideration to exclude this area.

#### Subunit 11d: Railroad Canyon

Subunit 11d consists of 53 ac (21 ha) of Federal land owned by the Bureau of Land Management and 205 ac (83 ha) of private land north of Kaban County Park and southwest of the City of Perris, in western Riverside County. Lands within this subunit contain Lodo rocky loam, Garretson gravelly very fine sandy loam and Garretson very fine sandy loam, Escondido fine sandy loam, and Grangeville fine sandy loam soils and consist primarily of annual grassland. Subunit 11d contains the physical and biological features essential to the conservation of *Brodiaea filifolia* because it (1) contains the PCEs for *B. filifolia*, including silty loam soils underlain by a clay subsoil or caliche that are generally poorly drained and moderately to strongly alkaline (PCE 1C) and areas with a natural, generally intact surface and subsurface soil structure that support *B. filifolia* and pollinator habitat (PCE 2); and (2) supports an occurrence of at least 3,205 individuals of *B. filifolia*, as documented in 2000 (Glenn Lukos Associates 2000a, pp. 13, 24; CNDDDB 2009, p. 23). The occurrence in Railroad Canyon is at risk from the proposed San Jacinto River Flood Control Project. That project includes channelization of the river, which may result in changes in floodplain process essential to the species persistence in this subunit (Service 2004b, p. 382). The physical and biological features essential to the conservation of the species in this subunit may require special management considerations or protection to address threats from the indirect effects associated with urban development, river channelization for flood control, and nonnative invasive plants. Please see the "Special Management Considerations or Protection" section of this proposed rule for a discussion of the threats to *B. filifolia* habitat and potential management considerations. We are considering this subunit for exclusion under section 4(b)(2) of the Act because this subunit is within the area addressed by the Western Riverside County MSHCP; please see the **Areas Considered for Exclusion Under Section 4(b)(2) of the Act** section of this proposed rule for a discussion about our consideration to exclude this area.

#### Subunit 11e: Upper Salt Creek (Stowe Pool)

Subunit 11e consists 145 ac (59 ha) of private land in the Upper Salt Creek drainage west of Hemet, in western

Riverside County. Lands within this subunit contain Willows silty clay, Chino silt loam, Honcut loam, and Wyman loam and consist primarily of annual grassland, alkali scrub habitat, and alkali playa habitat. Subunit 11e contains the physical and biological features essential to the conservation of *Brodiaea filifolia* because it (1) contains the PCEs for *B. filifolia*, including silty loam soils underlain by a clay subsoil or caliche that are generally poorly drained and moderately to strongly alkaline (PCE 1C), and areas with a natural, generally intact surface and subsurface soil structure that support *B. filifolia* and pollinator habitat (PCE 2); and (2) supports a rare or unique occurrence, representing one of three occurrences that are associated with vernal pool habitat. This subunit is crossed by roadways that, if altered (widened or realigned), could change the topography and thereby negatively affect the hydrologic integrity of the pool complexes and favor the growth of nonnative invasive plant species (CNDDDB 2009, p. 24; Service 2004b, p. 382). The physical and biological features essential to the conservation of the species in this subunit may require special management considerations or protection to address threats from nonnative invasive plants and transportation projects. Please see the "Special Management Considerations or Protection" section of this proposed rule for a discussion of the threats to *B. filifolia* habitat and potential management considerations. We are considering this subunit for exclusion under section 4(b)(2) of the Act because this subunit is within the area addressed by the Western Riverside County MSHCP; please see the **Areas Considered for Exclusion Under Section 4(b)(2) of the Act** section of this proposed rule for a discussion about our consideration to exclude this area.

#### Subunit 11f: Santa Rosa Plateau - Mesa de Colorado

Subunit 11f consists of 221 ac (89 ha) of State-owned land, 5 ac (2 ac) of local government land and 8 ac (3 ha) of private land on the Santa Rosa Plateau, in southwestern Riverside County. Lands within this subunit contain Murrieta stony clay loam, and Las Posas rocky loam and Las Posas loam soils and consist primarily of annual and needlegrass grassland and vernal pool habitat. Subunit 11f contains the physical and biological features essential to the conservation of *Brodiaea filifolia* because it (1) contains the PCEs for *B. filifolia*, including clay loam soil series underlain by heavy clay loams or clays derived from olivine basalt lava

flows that generally occur on mesas and gentle to moderate slopes (PCE 1D) and areas with a natural, generally intact surface and subsurface soil structure that support *B. filifolia* and pollinator habitat (PCE 2); (2) supports a rare or unique occurrence, representing one of three occurrences that are associated with vernal pool habitat; and (3) supports an occurrence of at least 31,725 individuals of *B. filifolia*, as documented in 1990 (CNDDDB 2009, p. 5). The physical and biological features essential to the conservation of the species in this subunit may require special management considerations or protection to address threats from the indirect effects associated with urban development and nonnative invasive plants. Please see the "Special Management Considerations or Protection" section of this proposed rule for a discussion of the threats to *B. filifolia* habitat and potential management considerations. We are considering this subunit for exclusion under section 4(b)(2) of the Act because this subunit is within the area addressed by the Western Riverside County MSHCP; please see the **Areas Considered for Exclusion Under Section 4(b)(2) of the Act** section of this proposed rule for a discussion about our consideration to exclude this area.

#### Subunit 11g: Santa Rosa Plateau - South of Tenaja Road

Subunit 11g consists of 117 ac (47 ha) of State-owned land on the Santa Rosa Plateau, in southwestern Riverside County. Lands within this subunit contain Murrieta stony clay loam, and Las Posas rocky loam and Las Posas loam soils and consist primarily of annual and needlegrass grassland and vernal pool habitat. Subunit 11g contains the physical and biological features essential to the conservation of *Brodiaea filifolia* because it (1) contains the PCEs for *B. filifolia*, including clay loam soil series underlain by heavy clay loams or clays derived from olivine basalt lava flows that generally occur on mesas and gentle to moderate slopes (PCE 1D) and areas with a natural, generally intact surface and subsurface soil structure that support *B. filifolia* and pollinator habitat (PCE 2); and (2) supports a rare or unique occurrence, occurring along an ephemeral drainage in seep type habitats. The physical and biological features essential to the conservation of the species in this subunit may require special management considerations or protection to address threats from nonnative invasive plants. Please see the "Special Management Considerations or Protection" section of

this proposed rule for a discussion of the threats to *B. filifolia* habitat and potential management considerations. We are considering this subunit for exclusion under section 4(b)(2) of the Act because this subunit is within the area addressed by the Western Riverside County MSHCP; please see the **Areas Considered for Exclusion Under Section 4(b)(2) of the Act** section of this proposed rule for a discussion about our consideration to exclude this area.

Subunit 11h: Santa Rosa Plateau - North of Tenaja Road

Subunit 11h consists of 44 ac (18 ha) of State-owned land on the Santa Rosa Plateau, in southwestern Riverside County. Lands within this subunit contain Murrieta stony clay loam, and Las Posas rocky loam and Las Posas loam soils and consist primarily of annual and needlegrass grassland and vernal pool habitat. Subunit 11h contains the physical and biological features essential to the conservation of *Brodiaea filifolia* because it (1) contains the PCEs for *B. filifolia*, including clay loam soil series underlain by heavy clay loams or clays derived from olivine basalt lava flows that generally occur on mesas and gentle to moderate slopes (PCE 1D), and areas with a natural, generally intact surface and subsurface soil structure that support *B. filifolia* and pollinator habitat (PCE 2); and (2) supports a rare or unique occurrence, occurring along an ephemeral drainage in seep type habitats. The physical and biological features essential to the conservation of the species in this subunit may require special management considerations or protection to address threats from nonnative invasive plants. Please see the "Special Management Considerations or Protection" section of this proposed rule for a discussion of the threats to *B. filifolia* habitat and potential management considerations. We are considering this subunit for exclusion under section 4(b)(2) of the Act because this subunit is within the area addressed by the Western Riverside County MSHCP; please see the **Areas Considered for Exclusion Under Section 4(b)(2) of the Act** section of this proposed rule for a discussion about our consideration to exclude this area.

*Unit 12: Central San Diego County – Artesian Trails*

Unit 12 is located in central San Diego County and consists of 109 ac (44 ha) of private land. This unit was not included in the 2005 final critical habitat designation but is included in this proposed rule based on new information related to the distribution of *Brodiaea*

*filifolia*. Lands within this subunit contain fine loamy sands and consist primarily of coastal sage scrub habitat and annual grassland. Unit 12 contains physical and biological features that are essential to the conservation of *B. filifolia* because it (1) contains the PCEs for *B. filifolia*, including loamy soils underlain by a clay subsoil (PCE 1A) and areas with a natural, generally intact surface and subsurface soil structure that support *B. filifolia* and pollinator habitat (PCE 2); and (2) supports a stable, persistent occurrence. The physical and biological features essential to the conservation of the species in this subunit may require special management considerations or protection to address threats from the indirect effects associated with urban development and nonnative invasive plants. Please see the "Special Management Considerations or Protection" section of this proposed rule for a discussion of the threats to *B. filifolia* habitat and potential management considerations. We are considering this subunit for exclusion under section 4(b)(2) of the Act because this subunit is within the area addressed by the Western Riverside County MSHCP; please see the **Areas Considered for Exclusion Under Section 4(b)(2) of the Act** section of this proposed rule for a discussion about our consideration to exclude this area.

#### Effects of Critical Habitat Designation

##### Section 7 Consultation

Section 7(a)(2) of the Act requires Federal agencies, including the Service, to ensure that actions they fund, authorize, or carry out are not likely to destroy or adversely modify critical habitat. Decisions by the Fifth and Ninth Circuit Courts of Appeals have invalidated our definition of "destruction or adverse modification" (50 CFR 402.02) (see *Gifford Pinchot Task Force v. U.S. Fish and Wildlife Service*, 378 F. 3d 1059 (9th Cir 2004) and *Sierra Club v. U.S. Fish and Wildlife Service et al.*, 245 F.3d 434, 442F (5th Cir 2001)), and we do not rely on this regulatory definition when analyzing whether an action is likely to destroy or adversely modify critical habitat. Under the statutory provisions of the Act, we determine destruction or adverse modification on the basis of whether, with implementation of the proposed Federal action, the affected critical habitat would remain functional (or retain the current ability for the PCEs to be functionally established) to serve its intended conservation role for the species (Service 2004c, p. 3). Section 7(a)(2) of the Act requires Federal

agencies, including the Service, to evaluate their actions with respect to any species that is endangered or threatened and with respect to its critical habitat, if any is proposed or designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402.

Section 7(a)(4) of the Act requires Federal agencies to confer with us on any action that is likely to jeopardize the continued existence of a species proposed for listing 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. We may issue a formal conference report if requested by a Federal agency. Formal conference reports on proposed critical habitat contain an opinion that is prepared according to 50 CFR 402.14, as if critical habitat were designated. We may adopt the formal conference report as the biological opinion when the critical habitat is designated, if no substantial new information or changes in the action alter the content of the opinion (see 50 CFR 402.10(d)). The conservation recommendations in a conference report or opinion are advisory.

If a species is listed or critical habitat is designated, section 7(a)(2) of the Act requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of 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. As a result of this consultation, we document compliance with the requirements of section 7(a)(2) through our issuance of:

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

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

An exception to the concurrence process referred to in (1) above occurs in consultations involving National Fire Plan projects. In 2004, the U.S. Forest Service and the BLM reached agreements with the Service to streamline a portion of the section 7 consultation process (BLM-ACA 2004, pp. 1–8; FS-ACA 2004, pp. 1–8). The agreements allow the U.S. Forest Service and the BLM the opportunity to

make “not likely to adversely affect” (NLAA) determinations for projects implementing the National Fire Plan. Such projects include prescribed fire, mechanical fuels treatments (thinning and removal of fuels to prescribed objectives), emergency stabilization, burned area rehabilitation, road maintenance and operation activities, ecosystem restoration, and culvert replacement actions. The U.S. Forest Service and the BLM must insure staff are properly trained, and both agencies must submit monitoring reports to the Service to determine if the procedures are being implemented properly and that effects on endangered species and their habitats are being properly evaluated. As a result, we do not believe the alternative consultation processes being implemented as a result of the National Fire Plan will differ significantly from those consultations being conducted by the Service.

If we issue a biological opinion concluding that a project is likely to jeopardize the continued existence of a listed species or destroy or adversely modify critical habitat, we also provide reasonable and prudent alternatives to the project, if any are identifiable. We define “reasonable and prudent alternatives” at 50 CFR 402.02 as alternative actions identified during consultation that:

- Can be implemented in a manner consistent with the intended purpose of the action,
- Can be implemented consistent with the scope of the Federal agency’s legal authority and jurisdiction,
- Are economically and technologically feasible, and
- Would, in the Director’s opinion, avoid jeopardizing the continued existence of the listed species or destroying or adversely modifying its 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 we have listed a new species or subsequently designated critical habitat that may be affected and the Federal agency has retained discretionary involvement or control over the action (or the agency’s discretionary involvement or control is authorized by law). Consequently, Federal agencies may sometimes need to request reinstatement of consultation with us on actions for which formal

consultation has been completed, if those actions with discretionary involvement or control may affect subsequently listed species or designated critical habitat.

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

#### *Application of the “Adverse Modification” Standard*

The key factor related to the adverse modification determination is whether, with implementation of the proposed Federal action, the affected critical habitat would continue to serve its intended conservation role for the species, or would retain its current ability for the primary constituent elements to be functionally established. Activities that may destroy or adversely modify critical habitat are those that alter the physical and biological features to an extent that appreciably reduces the conservation value of critical habitat for *Brodiaea filifolia*. Generally, the conservation role of the *B. filifolia* proposed revised critical habitat units is to support viable populations throughout this species’ range.

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

Activities that, when carried out, funded, or authorized by a Federal agency, may affect critical habitat and therefore should result in consultation for *Brodiaea filifolia* include, but are not limited to, the following:

- (1) Actions that result in ground disturbance. Such activities could include (but are not limited to) residential or commercial development,

OHV activity, pipeline construction, new road construction or widening, existing road maintenance, manure dumping, and grazing. These activities potentially impact the habitat and PCEs of *Brodiaea filifolia* by damaging, disturbing, and altering soil composition through direct impacts, increased erosion, and increased nutrient content. Additionally, changes in soil composition may lead to changes in the vegetation composition, thereby changing the overall habitat type.

- (2) Actions that result in alteration of the hydrological regimes typically associated with *Brodiaea filifolia* habitat. Such activities could include residential or commercial development, OHV activity, pipeline construction, new road construction or widening, existing road maintenance, and channelization of drainages. These activities could alter surface layers and the hydrological regime in a manner that promotes loss of soil matrix components and moisture necessary to support the growth and reproduction of *B. filifolia*.

- (3) Actions that would disturb the existing vegetation communities adjacent to *Brodiaea filifolia* habitat prior to annual pollination and seed set (reproduction). Such activities could include (but are not limited to) grazing, mowing, grading, or discing habitat in the spring and early summer months. These activities could alter the habitat for pollinators leading to potential decreased pollination and reproduction.

- (4) 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 could result in excavation, or mechanized land clearing of *Brodiaea filifolia* habitat. These activities could alter the habitat in such a way that soil, seeds, and corms of *B. filifolia* are removed and which permanently alter the habitat.

- (5) Licensing or construction of communication sites by the Federal Communications Commission or funding of construction or development activities by the U.S. Department of Housing and Urban Development that could result in excavation, or mechanized land clearing of *Brodiaea filifolia* habitat.

#### **Exemptions Under Section 4(a)(3) of the Act**

The National Defense Authorization Act for Fiscal Year 2004 (Pub. L. 108–136) amended the Act to limit areas eligible for designation as critical habitat. Specifically, section 4(a)(3)(B)(i)

of the Act (16 U.S.C. 1533(a)(3)(B)(i)) now provides: "The Secretary shall not designate as critical habitat any lands or other geographical areas owned or controlled by the Department of Defense, or designated for its use, that are subject to an integrated natural resources management plan prepared under section 101 of the Sikes Act [Improvement Act of 1997 (Sikes Act)] (16 U.S.C. 670a), if the Secretary determines in writing that such plan provides a benefit to the species for which critical habitat is proposed for designation."

The Sikes Act required each military installation that includes land and water suitable for the conservation and management of natural resources to complete an integrated natural resources management plan (INRMP) by November 17, 2001. An INRMP integrates implementation of the military mission of the installation with stewardship of the natural resources found on the base. Each INRMP includes:

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

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

We consult with the military on the development and implementation of INRMPs for installations with federally listed species. Only one military installation with an approved INRMP, Marine Corps Base Camp Pendleton (MCB Camp Pendleton), is located within the range of *Brodiaea filifolia* and supports features essential to the species' conservation. We analyzed MCB Camp Pendleton's INRMP to determine if the lands subject to the INRMP should be exempted under the authority of section 4(a)(3)(B) of the Act.

Marine Corps Base Camp Pendleton has committed to work closely with us, CDFG, and California Department of Parks and Recreation (CDPR) to continually refine the existing INRMP as part of the Sikes Act's INRMP review process. Based on the considerations discussed below and in accordance with

section 4(a)(3)(B)(i) of the Act, we have determined that conservation efforts identified in the INRMP provide a benefit to *Brodiaea filifolia* occurring in habitats within or adjacent to MCB Camp Pendleton. Therefore, approximately 1,531 ac (620 ha) of habitat on MCB Camp Pendleton subject to the INRMP is exempt from critical habitat designation under section 4(a)(3) of the Act, and is not included in this proposed revised critical habitat designation.

In the previous final critical habitat designation for *Brodiaea filifolia*, we exempted lands determined to contain features essential to the conservation of species on MCB Camp Pendleton from the designation of critical habitat (70 FR 73820; December 13, 2005). We based this decision on the conservation benefits to *B. filifolia* identified in the INRMP developed by MCB Camp Pendleton in November 2001. A revised and updated INRMP was prepared by MCB Camp Pendleton in March 2007 (MCB Camp Pendleton 2007). We determined that conservation efforts identified in the INRMP provide a benefit to the populations of *B. filifolia* and this species' habitat occurring on MCB Camp Pendleton (MCB Camp Pendleton 2007, Section 4, pp. 51–76). The INRMP provides measures that promote the conservation of *B. filifolia* within the 1,531 ac (620 ha) of habitat that we believe contain the features essential to the conservation of *B. filifolia* on MCB Camp Pendleton, which are subject to the INRMP, within the following areas: Cristianitos Canyon, Bravo One, Bravo Two South, Basilone/San Mateo Junction, Camp Horno, Pilgrim Creek, and South White Beach.

Measures included for *Brodiaea filifolia* in the MCB Camp Pendleton INRMP require ongoing efforts to survey and monitor the species, and provide this information to all necessary personnel through MCB Camp Pendleton's GIS database on sensitive resources and in their published resource atlas. The updated INRMP includes the following conservation measures for *B. filifolia*: (1) Surveys and monitoring, studies, impact avoidance and minimization, and habitat restoration and enhancement; (2) species survey information stored in MCB Camp Pendleton's GIS database and recorded in a resource atlas that is published and updated on a semi-annual basis; (3) use of the resource atlas to plan operations and projects to avoid impacts to *B. filifolia* and to trigger section 7 consultations if an action may affect the species; and (4) transplantation when avoidance is not possible. These measures are

established and represent ongoing aspects of existing programs that provide a benefit to *B. filifolia*. MCB Camp Pendleton also has Base Directives and Range and Training Regulations that are integral to their INRMP and provide benefits to *B. filifolia*. MCB Camp Pendleton implements Base Directives to avoid and minimize adverse effects to *B. filifolia*, such as: (1) Limit bivouac, command post, and field support activities such that they are no closer than 164 ft (50 m) to occupied habitat year round; (2) limit vehicle and equipment operations to existing road and trail networks year round; and (3) require environmental clearance prior to any soil excavation, filling, or grading. Finally, MCB Camp Pendleton has contracted and funded surveys for *B. filifolia* in summer 2005 and development of a GIS-based monitoring system that will provide improved management of natural resources on the installation, including for *B. filifolia*.

Additionally, MCB Camp Pendleton's environmental security staff review projects and enforce existing regulations and orders that, through their implementation, avoid and minimize impacts to natural resources, including *Brodiaea filifolia* and its habitat. As a result, activities occurring on MCB Camp Pendleton are currently being conducted in a manner that minimizes impacts to *B. filifolia* habitat. Finally, MCB Camp Pendleton provides training to personnel on environmental awareness for sensitive resources on the Base including *B. filifolia* and its habitat.

Based on MCB Camp Pendleton's Sikes Act program (including the management of *Brodiaea filifolia*), there is a high degree of certainty that MCB Camp Pendleton will continue to implement their INRMP in coordination with the Service and the CDFG in a manner that provides a benefit to *B. filifolia*, coupled with a high degree of certainty that the conservation efforts of their INRMP will be effective. Service biologists work closely with MCB Camp Pendleton on a variety of issues relating to endangered and threatened species, including *B. filifolia*. The management programs, Base Directives, and Range and Training Regulations that avoid and minimize impacts to *B. filifolia* are consistent with section 7 consultations with MCB Camp Pendleton. Therefore, the Secretary has determined that the INRMP for MCB Camp Pendleton provides a benefit for *B. filifolia*, and lands subject to the INRMP for MCB Camp Pendleton containing features essential to the conservation of the species are exempt from critical habitat

designation pursuant to section 4(a)(3) of the Act. As a result, we are not including approximately 1,531 ac (620 ha) of habitat for *B. filifolia* on MCP Camp Pendleton in this proposed revised critical habitat designation.

#### Areas Considered for Exclusion Under Section 4(b)(2) of the Act

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

Under section 4(b)(2) of the Act, in considering whether to exclude a particular area from the designation, we must identify the benefits of including the area in the designation, identify the benefits of excluding the area from the designation, and determine whether the benefits of exclusion outweigh the benefits of inclusion. If, based on this analysis, we determine that the benefits of exclusion outweigh the benefits of inclusion, we can exclude the area only if such exclusion would not result in the extinction of the species.

An analysis of the economic impacts for our previous proposed critical habitat designation was conducted and made available to the public on October 6, 2005 (70 FR 58361). This economic analysis was finalized for the final rule to designate critical habitat for *Brodiaea filifolia* as published in the **Federal Register** on December 13, 2005 (70 FR 58361). In compliance with section 4(b)(2) of the Act we are preparing a new draft economic analysis of the impacts of this proposed revision to critical habitat for *B. filifolia*, to evaluate the potential impacts of this proposed revised designation and related factors. See the "Regulatory Flexibility Act" section for more information. 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. At that time, copies of the draft economic analysis will be available for

downloading from the Internet at <http://www.regulations.gov>, or by contacting the Carlsbad Fish and Wildlife Office directly (see **FOR FURTHER INFORMATION CONTACT**). Based on public comment on that document and the proposed designation itself, as well as the information in the final economic analysis, the Secretary may exclude from critical habitat areas different from those identified for possible exclusion in this proposed rule under the provisions of section 4(b)(2) of the Act, up to and including all areas proposed for designation. This is also addressed in our implementing regulations at 50 CFR 424.19.

In addition to economic impacts, we consider a number of factors in a section 4(b)(2) analysis. For example, we consider whether there are lands owned by the Department of Defense where a national security impact might exist. We also consider whether landowners have developed any habitat conservation plans (HCPs) or other management plans for the area, or whether there are conservation partnerships that would be encouraged or discouraged by designation of, or exclusion from, critical habitat in an area. In addition, we look at the presence of Tribal lands or Tribal Trust resources that might be affected, and consider the government-to-government relationship of the United States with the Tribal entities. We also consider any social impacts that might occur because of the designation.

As discussed in further detail in the *Habitat Conservation Plan Lands—Exclusions under Section 4(b)(2) of the Act* section below, we have preliminarily identified certain areas that we are considering excluding from the final revised critical habitat designation for *Brodiaea filifolia* under section 4(b)(2) of the Act. However, we specifically solicit comments on the inclusion or exclusion of such areas (see **Public Comments** section).

Most federally listed species in the United States will not recover without the cooperation of non-Federal landowners. More than 60 percent of the United States is privately owned (National Wilderness Institute 1995, p. 2), and at least 80 percent of endangered or threatened species occur either partially or solely on private lands (Crouse *et al.* 2002, p. 720). Stein *et al.* (1995, p. 400) found that only about 12 percent of listed species were found almost exclusively on Federal lands (90 to 100 percent of their known occurrences restricted to Federal lands) and that 50 percent of federally listed species are not known to occur on Federal lands at all.

Given the distribution of listed species with respect to land ownership, conservation of listed species in many parts of the United States is dependent upon working partnerships with a wide variety of entities and the voluntary cooperation of many non-Federal landowners (Wilcove and Chen 1998, p. 1407; Crouse *et al.* 2002, p. 720; James 2002, p. 271). Building partnerships and promoting voluntary cooperation of landowners are essential to our understanding the status of species on non-Federal lands, and necessary for us to implement recovery actions such as reintroducing listed species and restoring and protecting habitat.

Many private landowners, however, are wary of the possible consequences of attracting endangered species to their property. Mounting evidence suggests that some regulatory actions by the Federal government, while well-intentioned and required by law, can (under certain circumstances) have unintended negative consequences for the conservation of species on private lands (Wilcove *et al.* 1996, pp. 5–6; Bean 2002, pp. 2–3; Conner and Mathews 2002, pp. 1–2; James 2002, pp. 270–271; Koch 2002, pp. 2–3; Brook *et al.* 2003, pp. 1639–1643). Many landowners fear a decline in their property value due to real or perceived restrictions on land use options where threatened or endangered species are found. Consequently, harboring endangered species is viewed by many landowners as a liability. This perception results in anti-conservation incentives, because maintaining habitats that harbor endangered species represents a risk to future economic opportunities (Main *et al.* 1999, pp. 1264–1265; Brook *et al.* 2003, pp. 1644–1648).

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

#### *Habitat Conservation Plan Lands—Exclusions under Section 4(b)(2) of the Act*

The benefits of excluding lands with approved HCPs that cover listed plant

species from critical habitat designation include relieving landowners, communities, and counties of any additional regulatory burden that might be imposed by critical habitat. Many HCPs take years to develop, and upon completion, are consistent with recovery objectives for listed species that are covered within the plan area. Many HCPs also provide conservation benefits to unlisted sensitive species.

A related benefit of excluding lands covered by approved HCPs from critical habitat designation is the unhindered, continued ability it gives us to seek new partnerships with future plan participants, including States, counties,

local jurisdictions, conservation organizations, and private landowners, which together can implement conservation actions that we would be unable to accomplish otherwise. Habitat conservation plans often cover a wide range of species, including listed plant species and species that are not State and federally listed and would otherwise receive little protection from development. By excluding these lands, we preserve our current partnerships and encourage additional conservation actions in the future.

*Brodiaea filifolia* is covered under the Orange County Southern Subregion HCP, the Carlsbad HMP under the

MHCP, the Western Riverside County MSHCP, and the City and County of San Diego Subarea Plans under the MSCP. The Secretary is considering exercising his discretion to exclude lands covered by these plans (see Table 5 for a list of the subunits that are being considered for exclusion). In this revised proposed rule, we are seeking input from the stakeholders in these HCPs and from the public on lands that the Secretary should consider for exclusion from the final designation of critical habitat for *B. filifolia*.

TABLE 5. LANDS THAT MEET THE DEFINITION OF CRITICAL HABITAT, ARE INCLUDED IN APPROVED HABITAT CONSERVATION PLANS (HCPs), AND ARE BEING CONSIDERED FOR EXCLUSION UNDER SECTION 4(B)(2) OF THE ACT IN THIS PROPOSED REVISED CRITICAL HABITAT DESIGNATION.

HCP and Associated Subunit	Area considered for exclusion (acres/hectares) <sup>1</sup>
Orange County Southern Subregion HCP	
4b. Caspers Wilderness Park	205 ac (83 ha)
4c. Cañada Gobernadora/Chiquita Ridgeline	133 ac (54 ha)
4g. Cristianitos Canyon	587 ac (238 ha)
<i>Subtotal Orange County Southern Subregion HCP</i>	<i>925 ac (374 ha)</i>
Carlsbad HMP under the San Diego MHCP	
7a. Letterbox Canyon	57 ac (23 ha)
7b. Rancho Carrillo	37 ac (15 ha)
7c. Calavera Hills Village H	71 ac (29 ha)
7d. Rancho La Costa (Villages of La Costa HCP)	98 ac (40 ha)
<i>Subtotal Carlsbad HMP under the San Diego MHCP</i>	<i>263 ac (106 ha)</i>
Western Riverside County MSHCP	
11a. San Jacinto Wildlife Area	401 ac (162 ha)
11b. San Jacinto Avenue/Dawson Road	117 ac (47 ha)
11c. Case Road	180 ac (73 ha)
11d. Railroad Canyon	257 ac (104 ha)
11e. Upper Salt Creek (Stowe Pool)	145 ac (59 ha)
11f. Santa Rosa Plateau – Mesa de Colorado	234 ac (95 ha)
11g. Santa Rosa Plateau – South of Tenaja Road	117 ac (47 ha)
11h. Santa Rosa Plateau – North of Tenaja Road	44 ac (18 ha)
<i>Subtotal for Western Riverside County MSHCP</i>	<i>1,494 ac (605 ha)</i>
City and County of San Diego Subarea Plans under the San Diego MSCP	
12. Central San Diego County - Artesian Trails	109 ac (44 ha)
<i>Subtotal for City and County of San Diego Subarea Plans under the San Diego MSCP</i>	<i>109 ac (44 ha)</i>
<b>Total</b>	<b>2,791 ac (1,129 ha)</b>

<sup>1</sup> Values in this table may not sum due to rounding.

Below is a brief description of the lands proposed as critical habitat covered by each HCP that the Secretary is considering to exercise his discretion to exclude.

#### Orange County Southern Subregion HCP

The Orange County Southern Subregion HCP is a large-scale multi-jurisdictional HCP encompassing approximately 86,021 ac (34,811 ha) in southern Orange County. The Orange County Southern Subregion HCP was developed by the County of Orange (County), Rancho Mission Viejo, and the Santa Margarita Water District (Water District) to address impacts to 32 species, including *Brodiaea filifolia*, resulting from residential and associated infrastructure development. The Service issued incidental take permits on January 10, 2007 (Service 2007, p. 431), under section 10(a)(1)(B) of the Act to the three permittees for a period of 75 years. Specifically, the Secretary is considering to exercise his discretion to exclude 925 ac (374 ha) in Subunits 4b, 4c, and 4g that are included in the area covered by the Orange County Southern Subregion HCP (see Table 5 for the amount of land being considered for exclusion in each subunit).

The Orange County Southern Subregion HCP will establish approximately 30,426 ac (12,313 ha) of habitat reserve (Service 2007, p. 19). The HCP provides for a large, biologically diverse and permanent habitat reserve that will protect: (1) Large blocks of natural vegetation communities that provide habitat for the covered species; (2) "important" and "major" populations of the covered species in key locations; (3) wildlife corridors and habitat linkages that connect the large habitat blocks and covered species populations to each other, the Cleveland National Forest, and the adjacent Orange County Central-Coastal NCCP/HCP; and (4) the underlying hydrogeomorphic processes that support the major vegetation communities providing habitat for the covered species (Service 2007, p. 10).

Specific land use purposes are identified in the Orange County Southern Subregion HCP. In each of the areas that we proposed as critical habitat, lands were mapped as Reserves and Open Space Areas. These two categories of land use make up areas within the Orange County Southern Subregion HCP that are conserved or will be conserved as the plan is implemented. In Subunit 4b, Caspers Wilderness Park, all 205 ac (83 ha) of the proposed critical habitat that are within the plan area are conserved or will be conserved under the HCP. In

Subunit 4c, Cañada Gobernadora/Chiquita Ridgeline, 90 ac (36 ha) of the 133 ac (54 ha) of proposed critical habitat within the plan area are conserved or will be conserved under the HCP. In Subunit 4g, Cristianitos Canyon, 339 ac (137 ha) of the 587 ac (238 ha) of proposed critical habitat within the plan area are conserved or will be conserved under the HCP. The remaining 249 ac (101 ha) of land in Subunit 4G are identified as potential orchards. Overall, 652 ac (264 ha) of the 925 ac (374 ha) that we are considering for exclusion under section 4(b)(2) of the Act are conserved or will be conserved under the HCP.

In addition to the creation of a habitat reserve, the following conservation measures specified in the Orange County Southern Subregion HCP will contribute to the protection and management of *Brodiaea filifolia* habitat: (1) Habitat conservation and restoration activities will occur in the areas identified as "important" and "major" populations under the Orange County Southern Subregion HCP (such actions for *B. filifolia* within the Habitat Reserve would include the control of nonnative invasive species); (2) monitoring of *B. filifolia* will focus on the Cañada Gobernadora/Chiquita Ridgeline and Cristianitos Canyon occurrences (which are the two largest occurrences); (3) monitoring and management associated with the Orange County Southern Subregion HCP should help address the threat of competition with nonnative invasive species; (4) plans will be developed for construction projects near occurrences of *B. filifolia* to minimize any indirect effect of the projects; and (5) the Orange County Southern Subregion HCP includes a Translocation, Propagation, and Management Plan for Special-Status Plants (Appendix I of the Orange County Southern Subregion HCP) that describes the various methods for restoration of *B. filifolia*, including seed collection, receptor site selection and preparation, greenhouse propagation, translocation, introduction, direct seeding, and long-term maintenance (Service 2007, pp. 152–156).

In summary, the Secretary is considering to exercise his discretion to exclude 925 ac (374 ha) that meet the definition of critical habitat for *Brodiaea filifolia* within the Orange County Southern Subregion HCP under section 4(b)(2) of the Act. The 1998 final listing rule for *B. filifolia* identified the following primary threats for this species: urbanization, alteration of hydrological conditions and channelization of drainages, discing for dry-land farming and fire suppression

practices, OHV activity, grazing, drought, and competition from nonnative invasive plants (63 FR 54938; October 13, 1998, pp. 54983–54989). The Orange County Southern Subregion HCP enacts conservation measures that minimize the impact of these threats on *B. filifolia*. We will analyze the benefits of inclusion and the benefits of exclusion of the areas covered by this plan in the final revised critical habitat rule for *B. filifolia*. We encourage any public comment in relation to our consideration of the areas in Subunits 4b, 4c, and 4g for exclusion (see **Public Comments** section above).

#### San Diego Multiple Habitat Conservation Program (MHCP)

The San Diego MHCP is a comprehensive, multi-jurisdictional, planning program designed to create, manage, and monitor an ecosystem preserve in northwestern San Diego County. The San Diego MHCP is also a regional subarea plan under the State of California's Natural Communities Conservation Plan (NCCP) program and was developed in cooperation with CDFG. The MHCP preserve system is intended to protect viable populations of native plant and animal species and their habitats in perpetuity, while accommodating continued economic development and quality of life for residents of northern San Diego County. The MHCP includes an approximately 112,000 ac (45,324 ha) study area within the cities of Carlsbad, Encinitas, Escondido, San Marcos, Oceanside, Vista, and Solana Beach. The Secretary is considering to exercise his discretion to exclude lands covered by the Carlsbad HMP; the only completed subarea plan under the MHCP. The 10(a)(1)(B) permit for the Carlsbad HMP was issued on November 9, 2004 (Service 2004a). Specifically, the Secretary is considering to exercise his discretion to exclude 263 ac (106 ha) in Subunits 7a, 7b, 7c, and 7d that are within the Carlsbad HMP (which as stated earlier, includes the area covered by the Villages of La Costa HCP) under the MHCP (see Table 5 for the amount of land being considered for exclusion in each subunit).

#### Carlsbad Habitat Management Plan (Carlsbad HMP)

*Brodiaea filifolia* is a covered species under the Carlsbad HMP. Nine occurrences of *B. filifolia* exist within the City of Carlsbad. We have proposed four of these nine occurrences as critical habitat in Subunits 7a, 7b, 7c, and 7d. Under the HMP, all known occurrences of *B. filifolia* within existing preserve areas (7 of 9 known occurrences) will be

conserved at 100 percent. All covered activities impacting *B. filifolia* outside of already preserved areas are required to be consistent with the MHCP's narrow endemic policy, which requires mitigation for unavoidable impacts and management practices designed to achieve no net loss of narrow endemic populations, occupied acreage, or population viability within Focused Planning Areas. Additionally, cities cannot permit more than five percent gross cumulative loss of narrow endemic populations or occupied acreage within the Focused Planning Areas, and no more than 20 percent cumulative loss of narrow endemic locations, population numbers, or occupied acreage outside of Focused Planning Areas (AMEC 2003, pp. 2–14, D-1). All conserved populations of *B. filifolia* will be incorporated into the preserve areas of the HMP. The HMP includes provisions to manage the populations within the preserve areas in order to provide for the long-term conservation of the species.

Specific land use purposes are identified in the Carlsbad HMP. In each of the areas that we proposed as critical habitat, lands were mapped as Hardline Conservation Areas and Proposed Hardline Conservation Areas. These two categories of land use make up the areas within the Carlsbad HMP that are conserved or will be conserved as the plan is implemented. In Subunit 7a, Letterbox Canyon, 17 ac (7 ha) of the 57 ac (23 ha) of proposed critical habitat within the plan area are conserved or will be conserved under the HMP. In Subunit 7b, Rancho Carrillo, all 37 ac (15 ha) of the proposed critical habitat that are within the plan area are conserved or will be conserved under the HMP. In Subunit 7c, Calavera Hills Village H, 60 ac (24 ha) of the 71 ac (29 ha) of proposed critical habitat within the plan area are conserved or will be conserved under the HMP. In Subunit 7d, Rancho La Costa, 32 ac (13 ha) of the 98 ac (40 ha) of proposed critical habitat within the plan area are conserved or will be conserved under the HMP. Overall, of the 263 ac (106 ha) that we are considering for exclusion under section 4(b)(2) of the Act, 145 ac (59 ha) are conserved or will be conserved under the HMP.

At the time the Carlsbad HMP permit was issued (November 9, 2004), *Brodiaea filifolia* was a conditionally covered species under the HMP, as the proposed hard-lined reserve on the Fox-Miller property within Subunit 7a did not meet the conditions for coverage of

the species under the HMP. The project was subsequently redesigned to meet the narrow endemic standards by impacting less than five percent of the known population, and a long-term management plan was submitted. On December 2, 2005, the Service and CDFG concluded that the City of Carlsbad would receive full coverage for *B. filifolia* under the HMP (CDFG and Service 2005, p. 1).

In summary, the Secretary is considering to exercise his discretion to exclude under section 4(b)(2) of the Act a total of 263 ac (106 ha) that meet the definition of critical habitat for *Brodiaea filifolia* within the Carlsbad HMP under the MHCP. The 1998 final listing rule for *B. filifolia* identified the following primary threats for this species: urbanization, alteration of hydrological conditions and channelization of drainages, discing for dry-land farming and fire suppression practices, OHV activity, grazing, drought, and competition from nonnative invasive plants (63 FR 54938; October 13, 1998, pp. 54983–54989). The Carlsbad HMP under the MHCP enacts conservation measures that minimize the impact of these threats on *B. filifolia*. We will analyze the benefits of inclusion and the benefits of exclusion of the areas covered by this subarea plan in the final revised critical habitat rule for *B. filifolia*. We encourage any public comment in relation to our consideration of the areas in Subunits 7a, 7b, 7c, and 7d for exclusion (see **Public Comments** section above).

Western Riverside County Multiple Species Habitat Conservation Plan (Western Riverside County MSHCP)

The Western Riverside County MSHCP is a large-scale, multi-jurisdictional HCP encompassing about 1.26 million ac (510,000 ha) in western Riverside County (Unit 11). The Western Riverside County MSHCP addresses 146 listed and unlisted “covered species,” including *Brodiaea filifolia*. Participants in the Western Riverside County MSHCP include 14 cities; the County of Riverside, including the Riverside County Flood Control and Water Conservation Agency (County Flood Control), Riverside County Transportation Commission, Riverside County Parks and Open Space District, and Riverside County Waste Department; CDPR; and the California Department of Transportation. The Western Riverside County MSHCP was designed to establish a multi-species conservation program that minimizes

and mitigates the expected loss of habitat and the incidental take of covered species. The Service issued a single incidental take permit on June 22, 2004 (Service 2004b), under section 10(a)(1)(B) of the Act to 22 permittees under the Western Riverside County MSHCP for a period of 75 years. Specifically, the Secretary is considering to exercise his discretion to exclude 1,494 ac (605 ha) in Unit 11 (Subunits 11a–11f), of which we anticipate the majority will be conserved for *B. filifolia*, within the Western Riverside County MSHCP Plan Area (see Table 5 for the amount of land being considered for exclusion in each subunit).

The Western Riverside County MSHCP will establish approximately 153,000 ac (61,917 ha) of new conservation lands (Additional Reserve Lands) to complement the approximate 347,000 ac (140,426 ha) of pre-existing natural and open space areas (Public/Quasi-Public (PQP) lands). These PQP lands include those under Federal ownership, primarily managed by the USFS and BLM, and also permittee-owned or controlled open-space areas, primarily managed by the State and Riverside County. Collectively, the Additional Reserve Lands and PQP lands form the overall Western Riverside County MSHCP Conservation Area. The configuration of the 153,000 ac (61,916 ha) of Additional Reserve Lands is based on textual descriptions of habitat conservation necessary to meet the conservation goals for all covered species within the bounds of the approximately 310,000-ac (125,453-ha) Criteria Area. The Criteria Area is broken into criteria cells, and each cell has a description of conservation targets that will be achieved within that cell. This differs from some HCPs where the actual conservation area is mapped or “hardlined” during the planning stages. The interpretation of the textual descriptions, and therefore the creation of the actual conservation area, occurs over time as the implementation of the Western Riverside County MSHCP takes place. Each subunit has land in different mapping categories (some of which overlap) as they relate to different policies and review processes under the Western Riverside County MSHCP. The break-down for each subunit in terms of how much land is considered “Public/Quasi Public,” within the “Criteria Area”, or in one of the “Criteria Area Species Survey Areas” (CASSA) is presented in Table 8.

TABLE 8. AREAS PROPOSED FOR CRITICAL HABITAT WITHIN THE WESTERN RIVERSIDE COUNTY MSHCP AND THE DIFFERENT CONSERVATION CATEGORIES REPRESENTED IN THE WESTERN RIVERSIDE COUNTY MSHCP (ACRES (AC) HECTARES (HA)).

Location	Public/Quasi Public Lands	Lands within the Criteria Area	Lands within the CASSA	Area considered for exclusion
11a. San Jacinto Wildlife Area	387 ac (157 ha)	86 ac (35 ha)	86 ac (35 ha) CASSA 3	401 ac (162 ha)
11b. San Jacinto Avenue/Dawson Road	0 ac (0 ha)	117 ac (47 ha)	117 ac (47 ha) CASSA 3	117 ac (47 ha)
11c. Case Road	0 ac (0 ha)	179 ac (73 ha)	180 ac (73 ha) CASSA 3	180 ac (73 ha)
11d. Railroad Canyon	78 ac (32 ha)	202 ac (82 ha)	135 ac (55 ha) CASSA 3	257 ac (104 ha)
11e. Upper Salt Creek (Stowe Pool)	0 ac (0 ha)	145 ac (59 ha)	145 ac (59 ha) CASSA 3	145 ac (59 ha)
11f. Santa Rosa Plateau – Mesa de Colorado	221 ac (89 ha)	53 ac (21 ha)	53 ac (21 ha) CASSA 7	234 ac (95 ha)
11g. Santa Rosa Plateau - South of Tenaja Road	117 ac (47 ha)	0 ac (0 ha)	0 ac (0 ha)	117 ac (47 ha)
11h. Santa Rosa Plateau - North of Tenaja Road	44 ac (18 ha)	0 ac (0 ha)	0 ac (0 ha)	44 ac (18 ha)
Total <sup>1</sup>	846 ac (342 ha)	782 ac (316 ha)	715 ac (289 ha)	1,494 ac (605 ha)

<sup>1</sup> Values in this table may not sum due to rounding.

The Western Riverside County MSHCP identifies five conservation objectives that will be implemented to provide long-term conservation of *Brodiaea filifolia*: (1) Include within the MSHCP Conservation Area at least 6,900 ac (2,792 ha) of grassland and playa/ vernal pool habitat within the San Jacinto River, Mystic Lake, and Salt Creek areas; (2) include within the Western Riverside County MSHCP Conservation Area at least 11 major locations supporting *B. filifolia* in two core areas along the San Jacinto River and on the Santa Rosa Plateau; (3) conduct surveys for the species in certain areas of suitable habitat until the conservation goals are met (in accordance with the “Additional Survey Needs and Procedures” policy within the CASSA, which includes avoidance of 90 percent of portions of property with long-term conservation value until the species conservation objectives are met); (4) include within the Western Riverside County MSHCP Conservation Area the floodplain along the San Jacinto River to maintain floodplain processes along the San Jacinto River; and (5) include within the MSHCP Conservation Area the floodplain along Salt Creek from Warren Road to Newport Road, and the vernal pools in Upper Salt Creek west of Hemet (Dudek and Associates, Inc. 2003, pp. P-435–P-446; Service 2004b, pp. 383-384). Additionally, the Western Riverside County MSHCP requires surveys to be

conducted for *B. filifolia* within the MSHCP Conservation Area at least every 8 years to verify occupancy at a minimum 75 percent of the known locations. Management measures will be triggered, as appropriate, if a decline in species distribution is documented below this threshold. Other management actions will help maintain habitat and populations of *B. filifolia* by preventing alteration of hydrology and floodplain dynamics, OHV use, grazing, and competition from nonnative invasive plants.

The goal of conserving 6,900 ac (2,792 ha) of occupied or suitable habitat for *Brodiaea filifolia* in the MSHCP Conservation Area can be attained through acquisition or other dedications of land assembled from within the Criteria Area (i.e., the Additional Reserve Lands) or Narrow Endemic Plan Species Survey Area, and through coordinated management of existing PQP lands. We internally mapped a “Conceptual Reserve Design,” that illustrates existing PQP lands and predicts the geographic distribution of the Additional Reserve Lands based on our interpretation of the textual descriptions of habitat conservation necessary to meet conservation goals. Our Conceptual Reserve Design was intended to predict one possible future configuration of the eventual approximately 153,000 ac (61,916 ha) of Additional Reserve Lands in conjunction with the existing PQP

lands, including approximately 6,900 ac (2,792 ha) of “suitable” *B. filifolia* habitat, that will be conserved to meet the goals and objectives of the plan (Service 2004b, p. 73).

Preservation and management of approximately 6,900 ac (2,792 ha) of *Brodiaea filifolia* habitat under the Western Riverside County MSHCP will contribute to conservation and ultimate recovery of this species. *Brodiaea filifolia* is threatened primarily by agricultural activities, development, and fuel modification actions to prevent wildfire within the area the plan covers (Service 2004b, pp. 378–386). The Western Riverside County MSHCP will remove and reduce threats to this species and the physical and biological features essential to its conservation as the plan is implemented by placing large blocks of occupied and unoccupied habitat into preservation throughout the Conservation Area. Areas identified for preservation and conservation include known locations of the species along the San Jacinto River, Mystic Lake, and Salt Creek portions of the MSHCP Conservation Area. Specific areas targeted for conservation include occurrences along Goetz Road, Perris Valley airport, Tenaja Road, Mesa de Colorado, Hemet vernal pools, South SJWA, Squaw Mountain, Santa Rosa ranch, Slaughterhouse, North SJWA, and Redondo Mesa.

The Western Riverside County MSHCP Conservation Area will

maintain floodplain processes along the San Jacinto River and along Salt Creek to provide for the distribution of *Brodiaea filifolia* to shift over time as hydrologic conditions and seed bank sources change. As described above, surveys for *B. filifolia* will be conducted in certain areas of suitable habitat until the conservation goals are met (in accordance with the "Additional Survey Needs and Procedures" policy within CASSA. The CASSA area includes potential habitat for *B. filifolia*; thus, focused surveys are required for this species. Conservation within this area includes avoidance of 90 percent of portions of property with long-term conservation value until the species conservation objectives of the Western Riverside County MSHCP are met. Additionally, policies such as the Riparian/Riverine and Vernal Pool Policy (Dudek and Associates, Inc. 2003, pp. 6-20-6-27) provide additional conservation requirements.

The Western Riverside County MSHCP incorporates several processes that allow for Service oversight and participation in program implementation. These processes include: (1) Consultation with the Service on a long-term management and monitoring plan; (2) submission of annual monitoring reports; (3) annual status meetings with the Service; and (4) submission of annual implementation reports to the Service (Service 2004b, p. 9-10). Below we provide a brief analysis of the lands in Unit 11 that the Secretary is considering to exercise his discretion to exclude and how this area is covered by the Western Riverside County MSHCP or other conservation measures.

The Western Riverside County MSHCP has several measures in place to ensure the plan is implemented in a way that conserves *Brodiaea filifolia* in accordance with the species-specific criteria and objectives for this species. In the areas we propose as critical habitat, we expect the Western Riverside County MSHCP will adequately conserve this species or provide for biologically equivalent conservation in an equally suitable area. We are proposing six subunits within Unit 11, all of which are within the boundaries of the Western Riverside County MSHCP.

Lands already in permanent conservation include a portion of lands in Subunits 11a, 11d, 11f, 11g, 11h. For example, subunit 11f is within the Santa Rosa Plateau Ecological Reserve. This Reserve has four landowners: CDFG, the County of Riverside, the Metropolitan Water District of Southern California, and The Nature Conservancy. The landowners and the Service (which

owns no land on the Plateau) signed a cooperative management agreement on April 16, 1991 (Dangermond and Associates, Inc. 1991), and meet regularly to work on the management of the Reserve (Riverside County Parks 2009, p. 2). The vernal pools within Subunit 11f are managed and monitored to preserve the unique vernal pool plants and animals that occur on the Santa Rosa Plateau, including Mesa de Colorado.

Approximately 96 percent of Subunit 11a (385 ac (156 ha)) is within the San Jacinto Wildlife Area, a wildlife area owned and operated by the CDFG. This area consists of restored wetlands that provide habitat for waterfowl and wading birds, as well as seasonally flooded vernal plain habitat along the San Jacinto River north of the Ramona Expressway that supports *Brodiaea filifolia*. The Service regularly works with CDFG to ensure that the seasonally flooded alkali vernal plain habitat at the San Jacinto Wildlife Area continues to function and provide a benefit to *B. filifolia* and other sensitive species that use this habitat. In addition to the portion of Subunit 11a owned by CDFG, 84 ac (34 ha) of the remaining land is within the Criteria Area.

Subunits 11b, 11c, 11e, and the remainder of the other subunits not discussed above are not conserved at this time. These subunits have protections in place from past conservation efforts, through various HCP requirements (such as the "Additional Survey Needs and Procedures" policy within the CASSA), or because they are within the Criteria Area. Projects in the Criteria Area will be implemented through the Joint Project Review Process to ensure that the requirements of the MSHCP permit and the Implementing Agreement are properly met (Western Riverside County MSHCP, Volume 1, section 6.6.2 in Dudek and Associates, Inc. 2003, p. 6-82).

In summary, the Secretary is considering to exercise his discretion to exclude 1,494 ac (605 ha) of proposed critical habitat for *Brodiaea filifolia* on permittee-owned or controlled lands in Subunits 11a, 11b, 11c, 11d, 11e, 11f, 11g, and 11h that meet the definition of critical habitat for *B. filifolia* within the Western Riverside County MSHCP under section 4(b)(2) of the Act. The 1998 final listing rule for *B. filifolia* identified the following primary threats to *B. filifolia*: habitat destruction and fragmentation from urban and agricultural development, pipeline construction, road construction, alteration of hydrology and floodplain dynamics, excessive flooding,

channelization, OHV activity, trampling by cattle and sheep, weed abatement, fire suppression practices (including discing and plowing), and competition from nonnative invasive plant species (63 FR 54938; October 13, 1998). The implementation of the Western Riverside County MSHCP helps to address these threats through a regional planning effort rather than through a project-by-project approach and outlines species-specific objectives and criteria for the conservation of *B. filifolia*. In the final revised critical habitat rule for *B. filifolia*, we will analyze the benefits of inclusion and exclusion of this area from critical habitat under section 4(b)(2) of the Act. We encourage any public comment in relation to our consideration of the areas in Subunits 11a, 11b, 11c, 11d, 11e, 11f, 11g, and 11h for exclusion (see **Public Comments** section above).

San Diego Multiple Species Conservation Program (MSCP) – City and County of San Diego Subarea Plans

The MSCP is a subregional HCP made up of several subarea plans that has been in place for more than a decade. The subregional plan area encompasses approximately 582,243 ac (235,626 ha) (County of San Diego 1997, p. 1-1; MSCP 1998, pp. 2-1, and 4-2 to 4-4) and provides for conservation of 85 federally listed and sensitive species ("covered species") through the establishment and management of approximately 171,920 ac (69,574 ha) of preserve lands within the Multi-Habitat Planning Area (MHPA) (City of San Diego) and Pre-Approved Mitigation Areas (PAMA) (County of San Diego). The MSCP was developed in support of applications for incidental take permits for several federally listed species by 12 participating jurisdictions and many other stakeholders in southwestern San Diego County. Under the umbrella of the MSCP, each of the 12 participating jurisdictions is required to prepare a subarea plan that implements the goals of the MSCP within that particular jurisdiction. *Brodiaea filifolia* was evaluated in the City and County of San Diego Subarea Plans under the MSCP. The Service issued an incidental take permit to the City of San Diego on July 18, 1997 (Service 1997), and to the County of San Diego on March 17, 1998 (Service 1998), under section 10(a)(1)(B) of the Act; each permit is for a period of 50 years. Specifically, the Secretary is considering to exercise his discretion to exclude 109 ac (44 ha) in Unit 12 that are within the City and County of San Diego Subarea Plans.

Upon completion of preserve assembly, approximately 171,920 ac

(69,574 ha) of the 582,243-ac (235,626-ha) MSCP plan area will be preserved (MSCP 1998, pp. 2–1 and 4–2 to 4–4). City and County of San Diego Subarea Plans identify areas where mitigation activities should be focused to assemble preserve areas in the MHPA and the PAMA. When the preserve is completed, the public sector (i.e., Federal, State, and local government, and general public) will have contributed 108,750 ac (44,010 ha) (63.3 percent) to the preserve, of which 81,750 ac (33,083 ha) (48 percent) was existing public land when the MSCP was established and 27,000 ac (10,927 ha) (16 percent) will have been acquired. At completion, the private sector will have contributed 63,170 ac (25,564 ha) (37 percent) to the preserve as part of the development process, either through avoidance of impacts or as compensatory mitigation for impacts to biological resources outside the preserve. Currently and in the future, Federal and State governments, local jurisdictions and special districts, and managers of privately owned lands will manage and monitor their lands in the preserve for species and habitat protection (MSCP 1998, pp. 2-1 and 4–2 to 4–4).

Private lands within the PAMA and MHPA are subject to special restrictions on development, and lands that are dedicated to the preserve must be legally protected and permanently managed to conserve the covered species. Public lands owned by the County, State of California, and the Federal government that are identified for conservation under the MSCP must also be protected and permanently managed to protect the covered species. Specifically, *Brodiaea filifolia* is only known to occur in the areas proposed as Unit 12 within the City and County of San Diego Subarea Plans and those areas are being conserved under the plans.

Numerous processes are incorporated into the MSCP that allow our oversight of the MSCP implementation. For example, the MSCP imposes annual reporting requirements and provides for our review and approval of proposed subarea plan amendments and preserve boundary adjustments and for Service review and comment on projects during the California Environmental Quality Act review process. We also chair the MSCP Habitat Management Technical Committee and the Monitoring Subcommittee (MSCP 1998, pp. 5–11 to 5–23). Each MSCP subarea plan must account annually for the progress it is making in assembling conservation areas. We must receive annual reports that include, both cumulatively and by project, the habitat acreage destroyed

and conserved within the subareas. This accounting process ensures that habitat conservation proceeds in rough proportion to habitat loss and in compliance with the MSCP subarea plans and the plans' associated implementing agreements.

In summary, the Secretary is considering to exercise his discretion to exclude 109 ac (44 ha) that meet the definition of critical habitat for *Brodiaea filifolia* within the City and County of San Diego Subarea Plans under the San Diego MSCP under section 4(b)(2) of the Act. The 1998 final listing rule for *B. filifolia* identified the following primary threats to *B. filifolia*: habitat destruction and fragmentation from urban and agricultural development, pipeline construction, road construction, alteration of hydrology and flood plain dynamics, excessive flooding, channelization, OHV activity, trampling by cattle and sheep, weed abatement, fire suppression practices (including discing and plowing), and competition from nonnative invasive plant species (63 FR 54938; October 13, 1998). The implementation of the City and County of San Diego Subarea Plans under the San Diego MSCP helps to address these threats through a regional planning effort rather than through a project-by-project approach, and outlines species-specific objectives and criteria for the conservation of *B. filifolia*. We will analyze the benefits of inclusion and exclusion of this area from critical habitat under section 4(b)(2) of the Act. We encourage any public comment in relation to our consideration of the areas in Unit 12 for exclusion (see **Public Comments** section above).

#### Peer Review

In accordance with our joint policy published in the **Federal Register** on July 1, 1994 (59 FR 34270), we are obtaining the expert opinions of at least three appropriate independent specialists regarding this proposed rule. The purpose of peer review is to ensure that our critical habitat designation is based on scientifically sound data, assumptions, and analyses. We will invite these peer reviewers to comment during this public comment period on our specific assumptions and conclusions in this proposed revised designation of critical habitat. We will consider all comments and information we receive during this comment period on this proposed rule during our preparation of a final determination. Accordingly, our final decision may differ from this proposal.

#### Public Hearings

Section 4(b)(5) of the Act provides for one or more public hearings on this proposal, if we receive any requests for hearings. We must receive your request for a public hearing within 45 days after the date of this **Federal Register** publication. Send your request to Jim Bartel, Field Supervisor of the Carlsbad Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT** section). We will schedule public hearings on this proposal, if any are requested, and announce the dates, times, and places of those hearings, as well as how to obtain reasonable accommodations, in the **Federal Register** and local newspapers at least 15 days before the first hearing.

#### Required Determinations

##### *Regulatory Planning and Review – Executive Order 12866*

The Office of Management and Budget (OMB) has determined that this rule is not significant and has not reviewed this proposed rule under Executive Order 12866 (E.O. 12866). OMB bases its determination upon the following four criteria:

(1) Whether the rule will have an annual effect of \$100 million or more on the economy or adversely affect an economic sector, productivity, jobs, the environment, or other units of the government.

(2) Whether the rule will create inconsistencies with other Federal agencies' actions.

(3) Whether the rule will materially affect entitlements, grants, user fees, loan programs, or the rights and obligations of their recipients.

(4) Whether the rule raises novel legal or policy issues.

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

Under the Regulatory Flexibility Act (RFA; 5 U.S.C. 601 *et seq.*, as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996), whenever an agency must publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the 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. SBREFA amended the RFA to require Federal agencies to provide a statement of factual basis for certifying that the rule will not have a significant

economic impact on a substantial number of small entities.

An analysis of the economic impacts of the 2004 proposed critical habitat designation was made available to the public on October 6, 2005 (70 FR 58361), and finalized for the final rule to designate critical habitat for *Brodiaea filifolia* as published in the **Federal Register** on December 13, 2005 (70 FR 58361). The costs associated with critical habitat for *B. filifolia*, across the entire area considered for designation (across designated and excluded areas), were primarily due to mitigation and other conservation costs that may be required for real estate development projects. After excluding land in Riverside and San Diego Counties from the proposed critical habitat, the economic impact was estimated to be between \$12.2 and \$14.7 million (on a present/2005 value basis) or \$12.2 to \$16.9 million in undiscounted dollars (an annualized cost of \$0.6 to \$0.8 million annually) over the next 20 years. Based on the 2005 economic analysis, we concluded that the designation of critical habitat for *B. filifolia*, as proposed in 2004, would not result in significant small business impacts. This analysis is presented in the notice of availability for the economic analysis as published in the **Federal Register** on October 6, 2005 (70 FR 58361).

We are preparing a new analysis of the economic impacts of this proposed revision to critical habitat for *Brodiaea filifolia*. At this time, we lack current economic information necessary to provide an updated factual basis for the required RFA finding with regard to this proposed revision to critical habitat. Therefore, we defer the RFA finding until completion of the draft economic analysis prepared under section 4(b)(2) of the Act and E.O. 12866. The draft economic analysis will provide the required factual basis for the RFA finding. Upon completion of the draft economic analysis, we will announce its availability in the **Federal Register** and reopen the public comment period for the proposed designation. We will include with this announcement, as appropriate, an initial regulatory flexibility analysis or a certification that the rule will not have a significant economic impact on a substantial number of small entities accompanied by the factual basis for that determination. We concluded that deferring the RFA finding until completion of the draft economic analysis is necessary to meet the purposes and requirements of the RFA. Deferring the RFA finding in this manner will ensure that we make a sufficiently informed determination

based on adequate economic information and provide the necessary opportunity for public comment.

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

In accordance with the Unfunded Mandates Reform Act, we make the following findings:

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

The designation of critical habitat does not impose a legally binding duty on non-Federal Government entities or private parties. Under the Act, the only regulatory effect is that Federal agencies must ensure that their actions do not destroy or adversely modify critical habitat under section 7. While non-Federal entities that receive Federal funding, assistance, 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 onto State governments.

(2) Based in part on an analysis conducted for the previous designation of critical habitat and extrapolated to this designation, we do not expect this rule to significantly or uniquely affect small governments. Small governments will be affected only to the extent that if any of their programs or activities involve Federal funds, permits, or other authorizations, the Federal action agencies must ensure that their actions are not likely to destroy or adversely modify the critical habitat. Therefore, a Small Government Agency Plan is not required. However, as we conduct our economic analysis for the revised rule, we will further evaluate this issue and revise this assessment if appropriate.

*Takings – Executive Order 12630*

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

*Federalism – Executive Order 13132*

In accordance with E.O. 13132 (Federalism), 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 proposed critical habitat designation with appropriate State resource agencies in California. The designation may have some benefit to these governments because the areas that contain the features essential to the conservation of the species are more clearly defined, and the primary constituent elements of the habitat necessary to the conservation of the species are specifically identified. This information does not alter where and

what federally sponsored activities may occur. However, it may assist these local governments in long-range planning (because these local governments no longer have to wait for case-by-case section 7 consultations to occur).

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

#### *Civil Justice Reform – Executive Order 12988*

In accordance with Executive Order 12988 (Civil Justice Reform), it has been determined that the rule does not unduly burden the judicial system and meets the requirements of sections 3(a) and 3(b)(2) of the Order. We have proposed to revise critical habitat in accordance with the provisions of the Act. This proposed rule uses standard property descriptions and identifies the primary constituent elements within the designated areas to assist the public in understanding the habitat needs of *Brodiaea filifolia*.

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

This rule does not contain any new collections of information that require approval by OMB under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). This rule will not impose recordkeeping or reporting requirements on State or local governments, individuals, businesses, or organizations. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

#### *National Environmental Policy Act (NEPA) (42 U.S.C. 4321 et seq.)*

It is our position that, outside the jurisdiction of the U.S. Court of Appeals for the Tenth Circuit, we do not need to prepare environmental analyses as defined by NEPA (42 U.S.C. 4321 et seq.) in connection with designating critical habitat under the Act. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244). This position was upheld by the U.S. Court of Appeals for the Ninth

Circuit (*Douglas County v. Babbitt*, 48 F.3d 1495 (9th Cir. 1995), cert. denied 516 U.S. 1042 (1996)).

#### *Clarity of the Rule*

We are required by Executive Orders 12866 and 12988 and by the Presidential Memorandum of June 1, 1998, to write all rules in plain language. This means that each rule we publish must:

- (1) Be logically organized;
- (2) Use the active voice to address readers directly;
- (3) Use clear language rather than jargon;
- (4) Be divided into short sections and sentences; and
- (5) Use lists and tables wherever possible.

If you feel that we have not met these requirements, send us comments by one of the methods listed in the **ADDRESSES** section. To better help us revise the rule, your comments should be as specific as possible. For example, you should tell us the numbers of the sections or paragraphs that are unclearly written, which sections or sentences are too long, the sections where you feel lists or tables would be useful, etc.

#### *Government-to-Government Relationship with Tribes*

In accordance with the President's memorandum of April 29, 1994, Government-to-Government Relations with Native American Tribal Governments (59 FR 22951), E.O. 13175, and the Department of the Interior's manual at 512 DM 2, we have a responsibility to communicate meaningfully with recognized Federal Tribes on a government-to-government basis. In accordance with Secretarial Order 3206 of June 5, 1997 (American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act), we readily acknowledge our responsibilities to work directly with Tribes in developing programs for healthy ecosystems, to acknowledge that tribal lands are not subject to the same controls as Federal public lands, to remain sensitive to Indian culture, and to make information available to Tribes.

We determined that there are no tribal lands meeting the definition of critical habitat for *Brodiaea filifolia*. Therefore, critical habitat for *B. filifolia* is not being proposed on tribal lands. We will continue to coordinate with tribal governments as applicable during the designation process.

#### *Energy Supply, Distribution, or Use – Executive Order 13211*

On May 18, 2001, the President issued an Executive Order (E.O. 13211; Actions Significantly Affect Energy Supply, Distribution, or Use) on regulations that significantly affect energy supply, distribution, and use. E.O. 13211 requires agencies to prepare Statements of Energy Effects when undertaking certain actions. Based on an analysis conducted for the previous designation of critical habitat and extrapolated to this designation, along with a further analysis of the additional areas included in this revision, we determined that this proposed rule to designate critical habitat for *Brodiaea filifolia* is not expected to significantly affect energy supplies, distribution, or use. Therefore, this action is not a significant energy action, and no Statement of Energy Effects is required. However, we will further evaluate this issue as we conduct our economic analysis, and review and revise this assessment as warranted.

#### **References Cited**

A complete list of all references cited in this rulemaking is available on <http://www.regulations.gov> and upon request from the Field Supervisor, Carlsbad Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT** section).

#### **Author(s)**

The primary author of this proposed rule is the staff from the Carlsbad Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT** 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 § 17.12(h), revise the entry for “*Brodiaea filifolia*” under “Flowering Plants” to read as follows:

#### **§ 17.12 Endangered and threatened plants.**

\* \* \* \* \*

(h) \* \* \*

SPECIES		Historic Range	Family	Status	When Listed	Critical Habitat	Special Rules
Scientific Name	Common Name						
Flowering Plants							
*	*	*	*	*	*	*	*
<i>Brodiaea filifolia</i>	thread-leaved brodiaea	U.S.A. (CA)	Themidaceae – Cluster Lily	T	650	17.96(a)	NA
*	*	*	*	*	*	*	*

3. Amend § 17.96(a) by:
- a. Removing the entry for “*Brodiaea filifolia* (thread-leaved brodiaea)” under Family Liliaceae; and
  - b. Adding a new entry for “*Brodiaea filifolia* (thread-leaved brodiaea)” under Family Themidaceae in alphabetic order by family name to read as follows:

**§ 17.96 Critical habitat—plants.**

(a) *Flowering plants.*

\* \* \* \* \*

Family Themidaceae: *Brodiaea filifolia* (thread-leaved brodiaea)

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

(2) Within these areas, the primary constituent elements for *Brodiaea filifolia* consist of two components:

(i) Appropriate soil series at a range of elevations and in a variety of plant communities, specifically:

(A) Clay soil series of various origins (such as Alo, Altamont, Auld, or Diablo), clay lenses found as unmapped inclusions in other soils series, or loamy soils series underlain by a clay subsoil

(such as Fallbrook, Huerhuero, or Las Flores) occurring between the elevations of 100 and 2,500 ft (30 and 762 m).

(B) Soils (such as Cieneba-rock outcrop complex and Ramona family-Typic Xerothents soils) altered by hydrothermal activity occurring between the elevations of 1,000 and 2,500 ft (305 and 762 m).

(C) Silty loam soil series underlain by a clay subsoil or caliche that are generally poorly drained, moderately to strongly alkaline, granitic in origin (such as Domino, Grangeville, Traver, Waukena, or Willows) occurring between the elevations of 600 and 1,800 ft (183 and 549 m).

(D) Clay loam soil series (such as Murrieta) underlain by heavy clay loams or clays derived from olivine basalt lava flows occurring between the elevations of 1,700 and 2,500 ft (518 and 762 m).

(E) Sandy loam soils derived from basalt and granodiorite parent materials; deposits of gravel, cobble, and boulders; or hydrologically fractured, weathered granite in intermittent streams and seeps occurring between 1,800 and 2,500 ft (549 and 762 m).

(ii) Areas with a natural, generally intact surface and subsurface soil structure, not permanently altered by anthropogenic land use activities (such as deep, repetitive discing, or grading) extending out up to 820 ft (250 m) from mapped occurrences of *Brodiaea filifolia*.

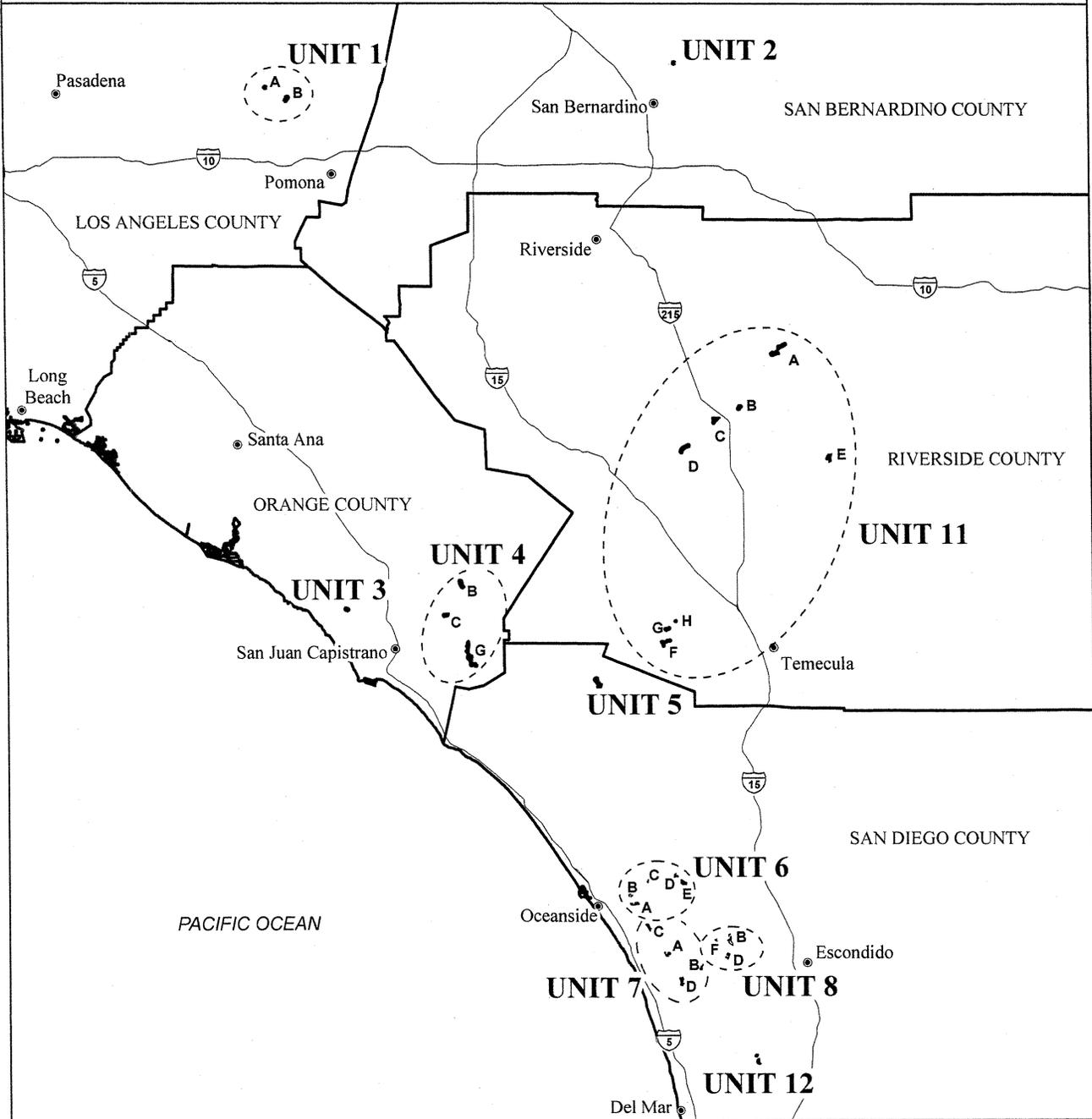
(3) Critical habitat does not include manmade structures existing on the effective date of this rule and not containing one or more of the primary constituent elements, such as buildings, aqueducts, airports, and roads, and the land on which such structures are located.

(4) *Critical habitat map units.* Data layers defining map units were created using a base of U.S. Geological Survey 7.5’ quadrangle maps. Critical habitat units were then mapped using Universal Transverse Mercator (UTM) zone 11, North American Datum (NAD) 1983 coordinates.

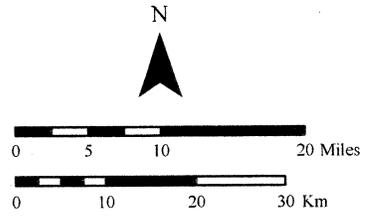
(5) *Note:* Index Map of critical habitat units for *Brodiaea filifolia* (thread-leaved brodiaea) follows:

**BILLING CODE 4310–55–S**

### Critical Habitat for *Brodiaea filifolia* (thread-leaved brodiaea) Index Map



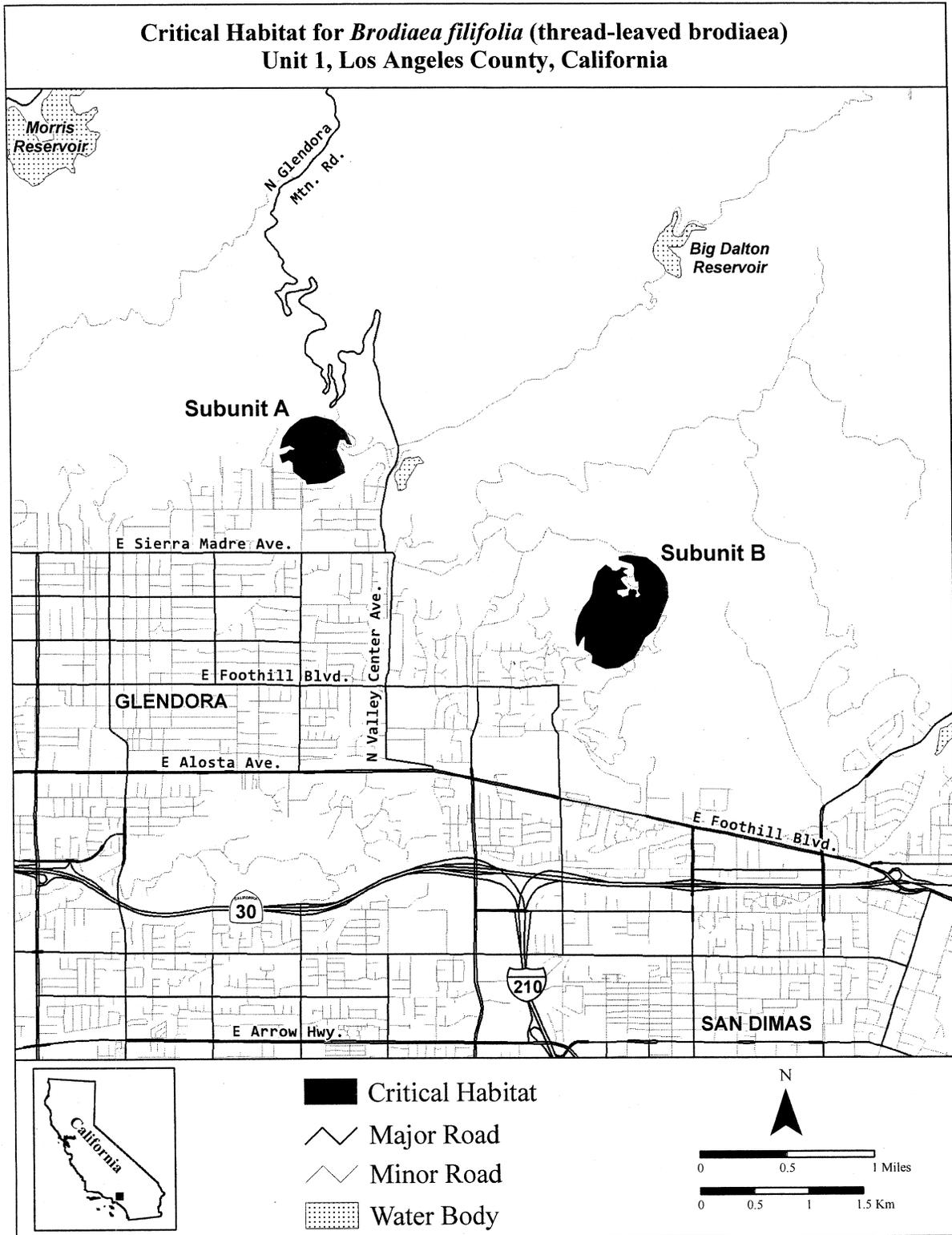
- Critical Habitat
- Unit Grouping
- City
- Major Road
- County Boundary



(6) Unit 1: Los Angeles County.  
 (i) Subunit 1a, Glendora [Description of unit location to be inserted here.]

(ii) Subunit 1b, San Dimas. [Description of unit location to be inserted here.]

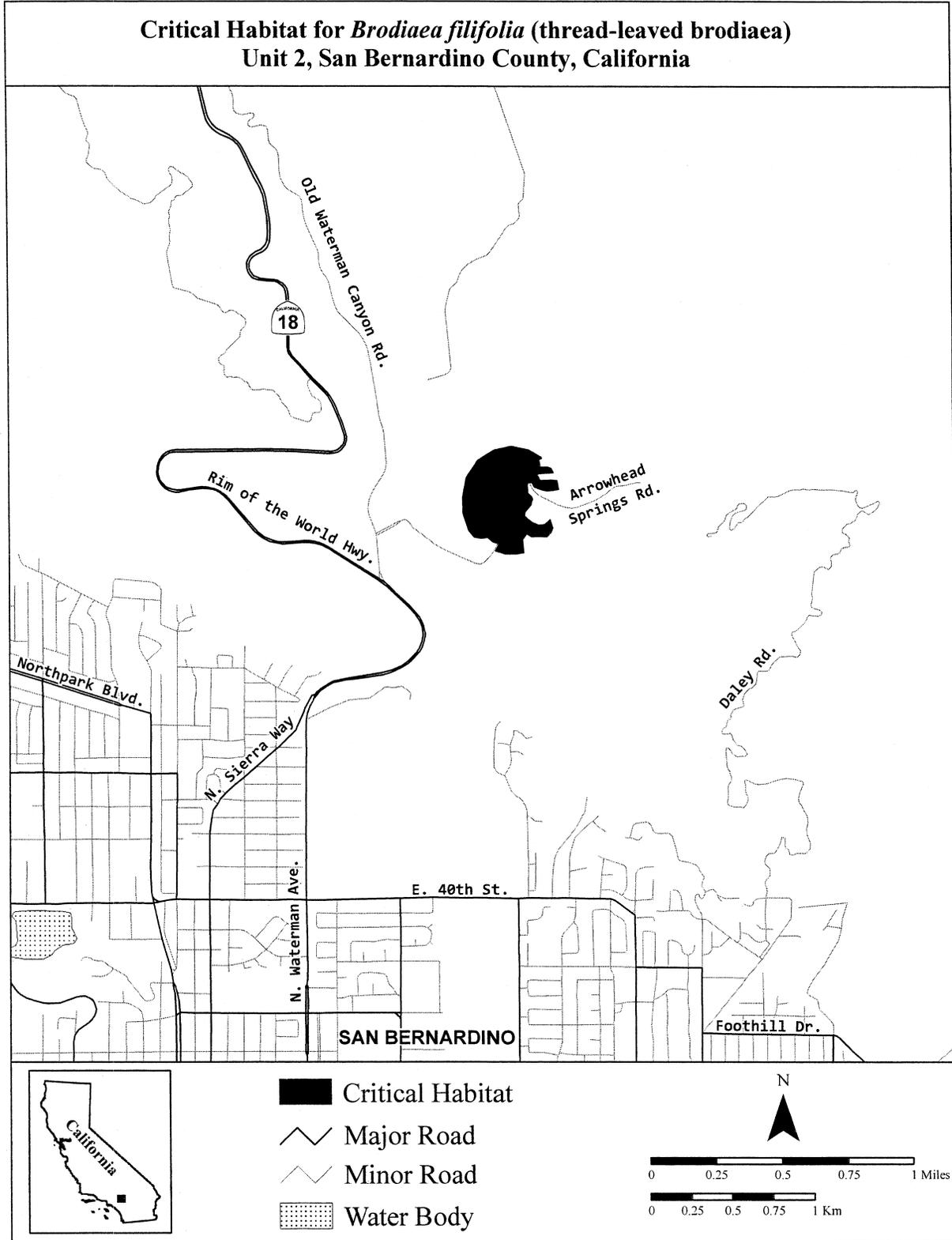
(iii) Note: Map of Unit 1, Subunits 1a and 1b, follows:



(7) Unit 2: San Bernardino County.

(i) [Description of unit location to be inserted here.]

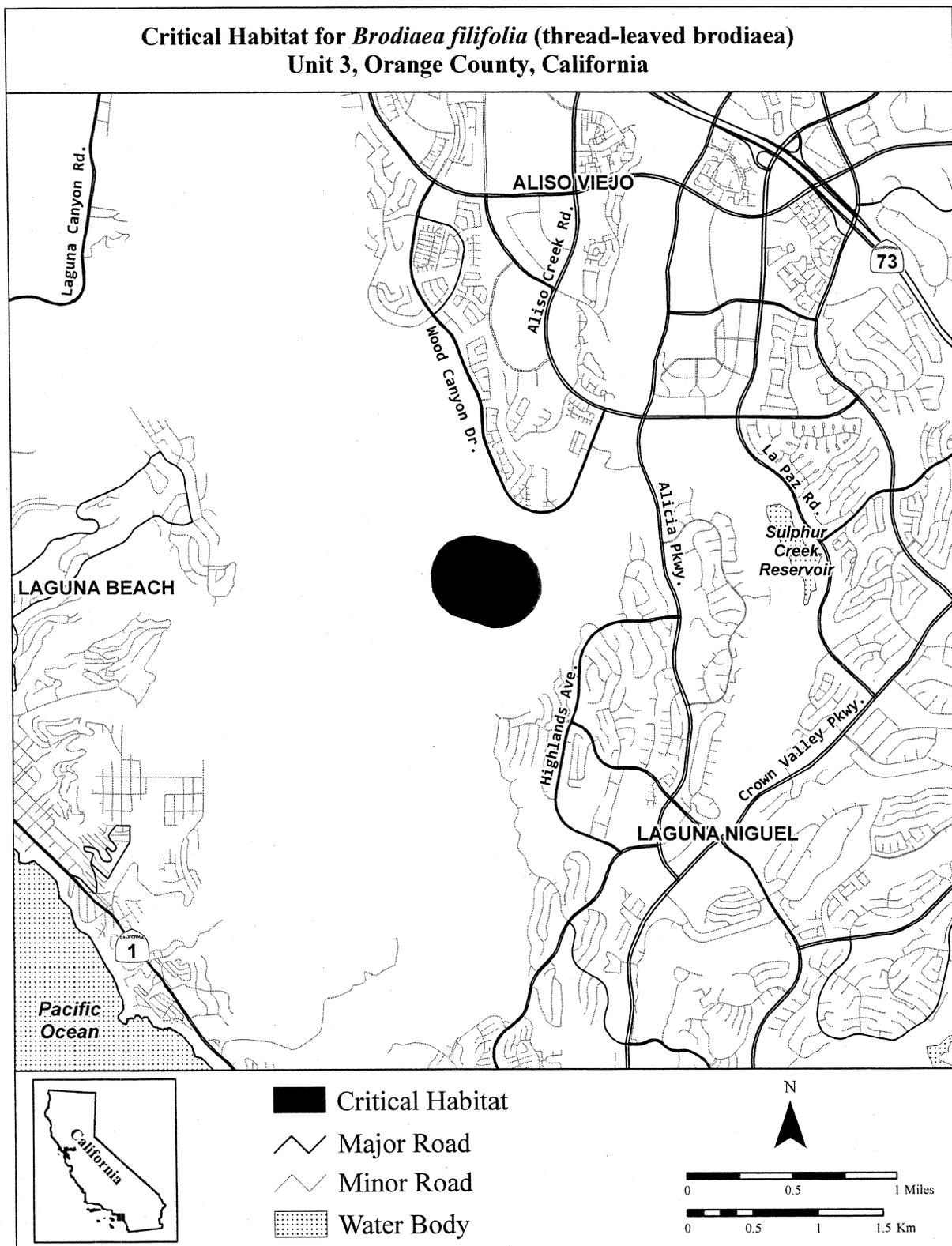
(ii) Note: Map of Unit 2 follows:



(8) Unit 3: Central Orange County.

(i) [Description of unit location to be inserted here.]

(ii) Note: Map of Unit 3 follows:

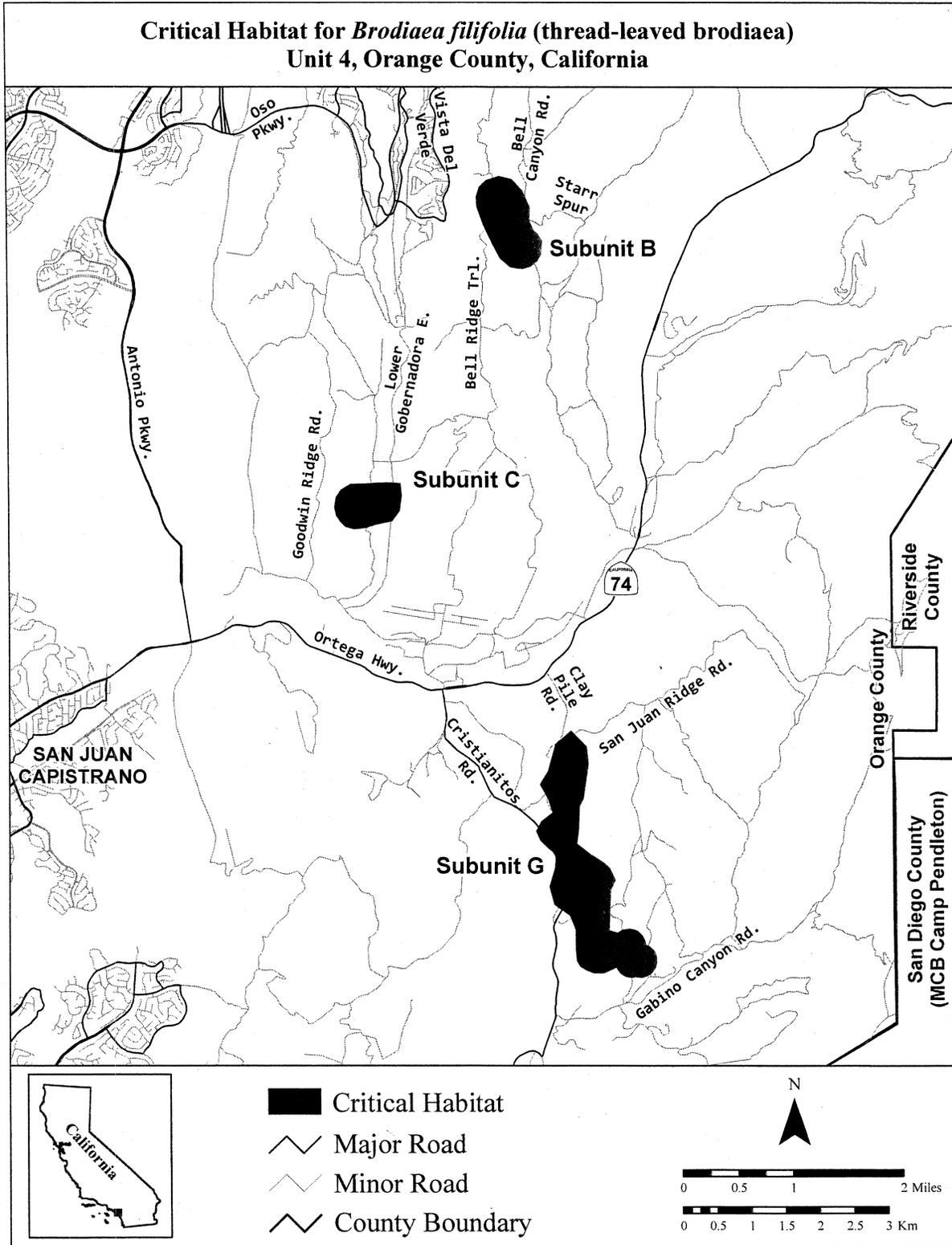


(9) Unit 4: Southern Orange County.  
(i) Subunit 4b, Caspers Wilderness Park. [Description of unit location to be inserted here.]

(ii) Subunit 4c, Cañada Gobernadora/Chiquita Ridgeline. [Description of unit location to be inserted here.]

(iii) Subunit 4g, Christianitos Canyon. [Description of unit location to be inserted here.]

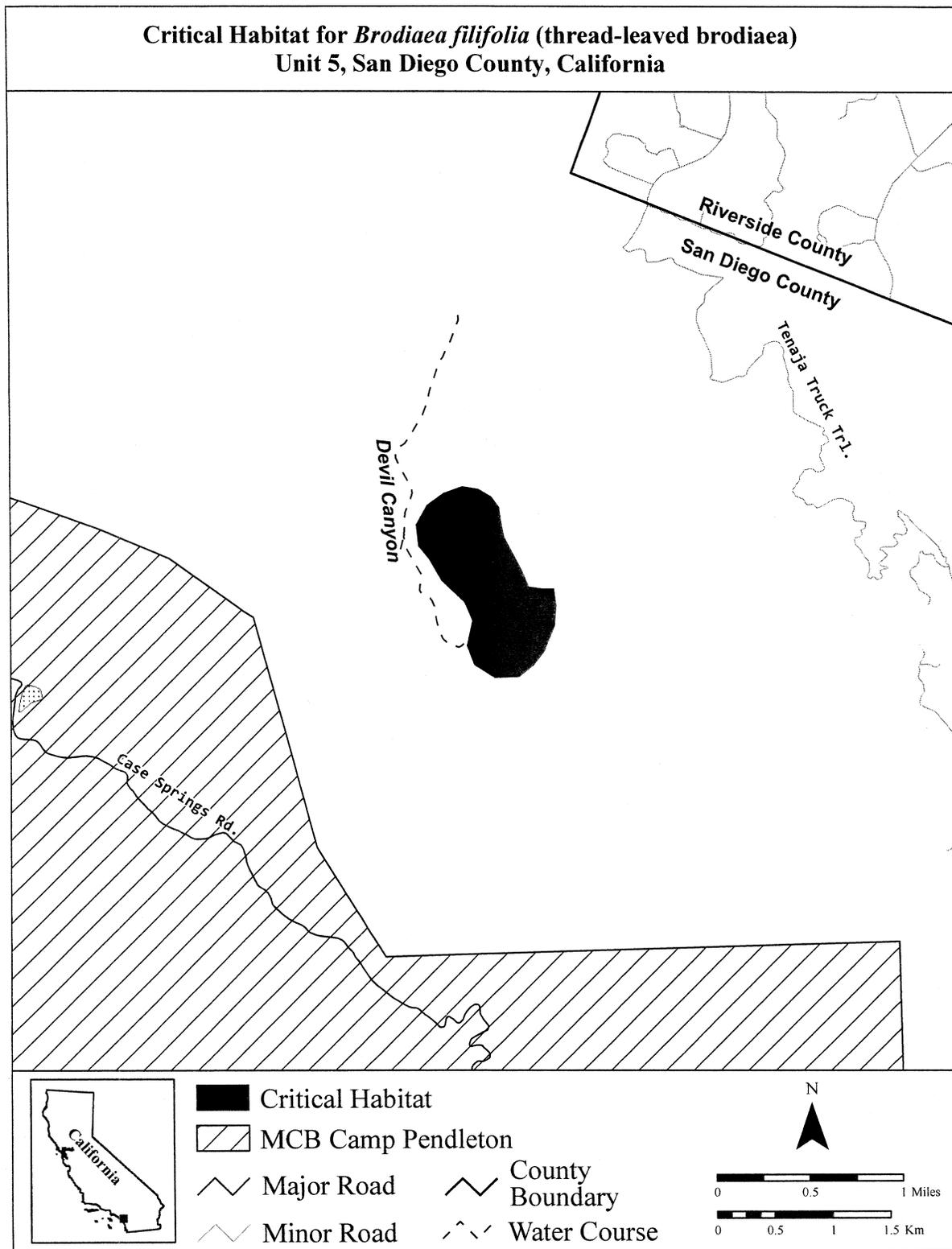
(iv) Note: Map of Unit 4 follows:



(10) Unit 5: Northern San Diego County.

(i) Subunit 5b, Devil Canyon.  
 [Description of unit location to be inserted here.]

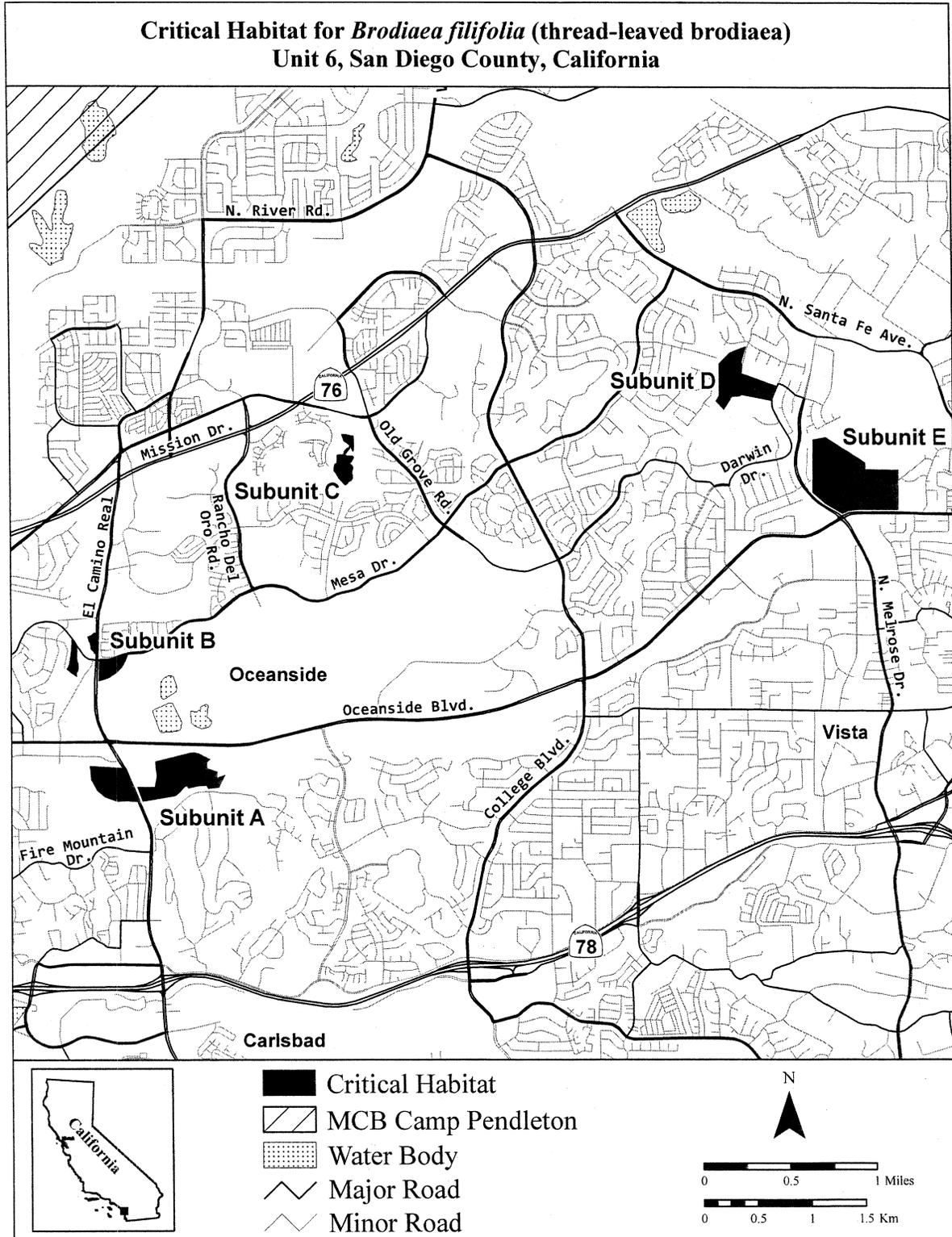
(ii) Note: Map of Unit 5 follows:



(11) Unit 6: Oceanside.  
 (i) Subunit 6a, Alta Creek.  
 [Description of unit location to be inserted here.]  
 (ii) Subunit 6b, Mesa Drive.  
 [Description of unit location to be inserted here.]

(iii) Subunit 6c, Mission View/Sierra Ridge.  
 [Description of unit location to be inserted here.]  
 (iv) Subunit 6d, Taylor/Darwin.  
 [Description of unit location to be inserted here.]

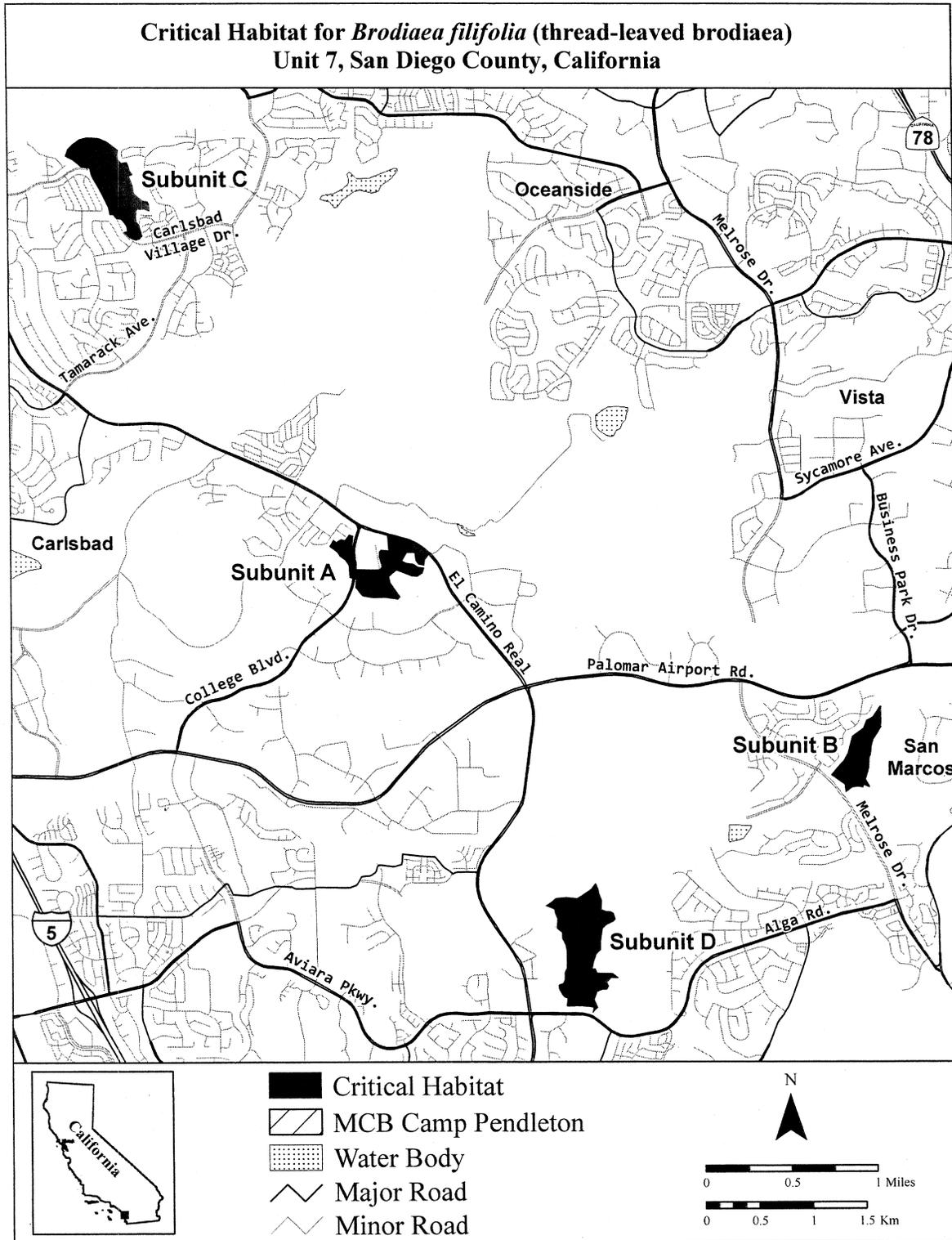
(v) Subunit 6e, Arbor Creek.  
 [Description of unit location to be inserted here.]  
 (vi) Note: Map of Unit 6 follows:



(12) Unit 7: Carlsbad.  
 (i) Subunit 7a, Letterbox Canyon.  
 [Description of unit location to be inserted here.]

(ii) Subunit 7b, Rancho Carrillo.  
 [Description of unit location to be inserted here.]  
 (iii) Subunit 7c, Calavera Hills Village.  
 [Description of unit location to be inserted here.]

(iv) Subunit 7d, Rancho La Costa.  
 [Description of unit location to be inserted here.]  
 (v) Note: Map of Unit 7 follows:

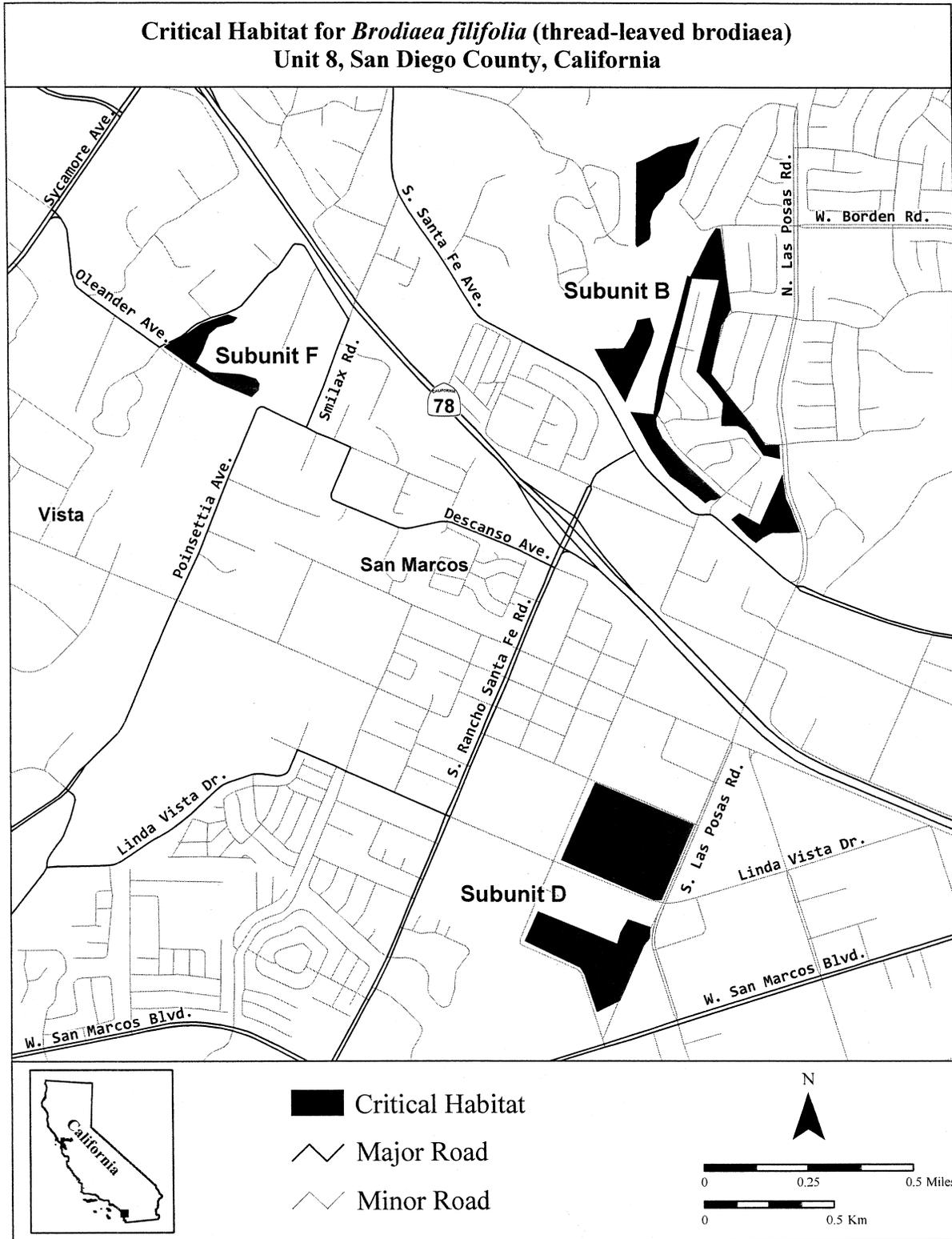


(13) Unit 8: San Marcos and Vista.  
(i) Subunit 8b, Rancho Santalina/  
Loma Alta. [Description of unit location  
to be inserted here.]

(ii) Subunit 8d, Upham. [Description  
of unit location to be inserted here.]

(iii) Subunit 8f, Oleander/San Marcos.  
[Description of unit location to be  
inserted here.]

(iv) Note: Map of Unit 8 follows:



(14) Unit 11: Riverside County.  
(i) Subunit 11a, San Jacinto Wildlife Area. [*Description of unit location to be inserted here.*]

(ii) Subunit 11b, San Jacinto Avenue/Dawson Road. [*Description of unit location to be inserted here.*]

(iii) Subunit 11c, Case Road. [*Description of unit location to be inserted here.*]

(iv) Subunit 11d, Railroad Canyon. [*Description of unit location to be inserted here.*]

(v) Subunit 11e, Upper Salt Creek (Stowe Pool). [*Description of unit location to be inserted here.*]

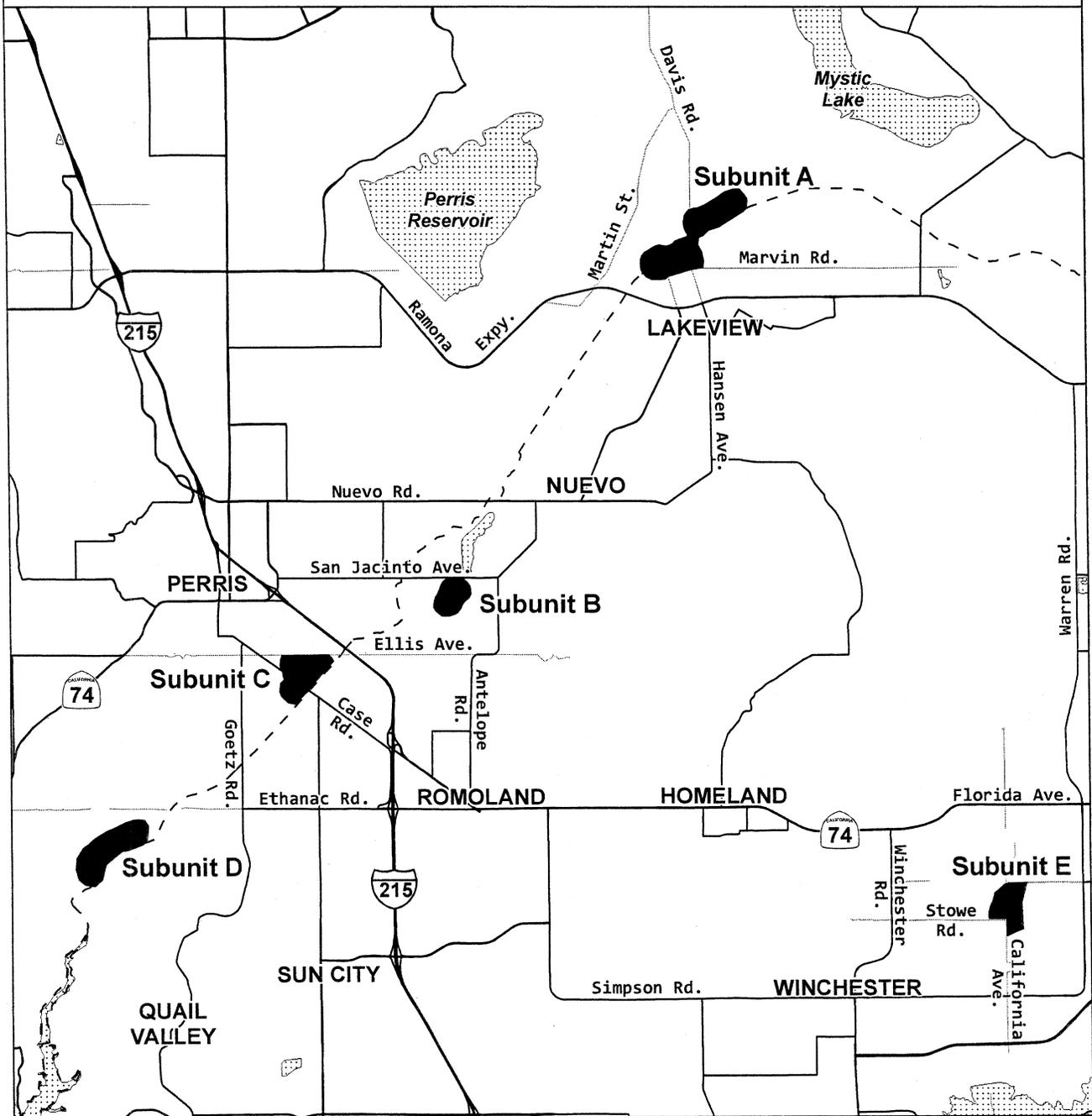
(vi) Subunit 11f, Santa Rosa Plateau—Mesa de Colorado. [*Description of unit location to be inserted here.*]

(vii) Subunit 11g, Santa Rosa Plateau—South of Tenaja Road. [*Description of unit location to be inserted here.*]

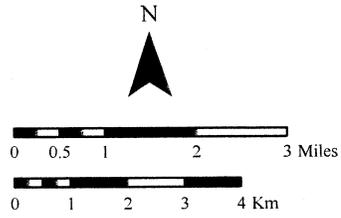
(viii) Subunit 11h, Santa Rosa Plateau—North of Tenaja Road. [*Description of unit location to be inserted here.*]

(ix) *Note:* Map of Unit 11 follows:

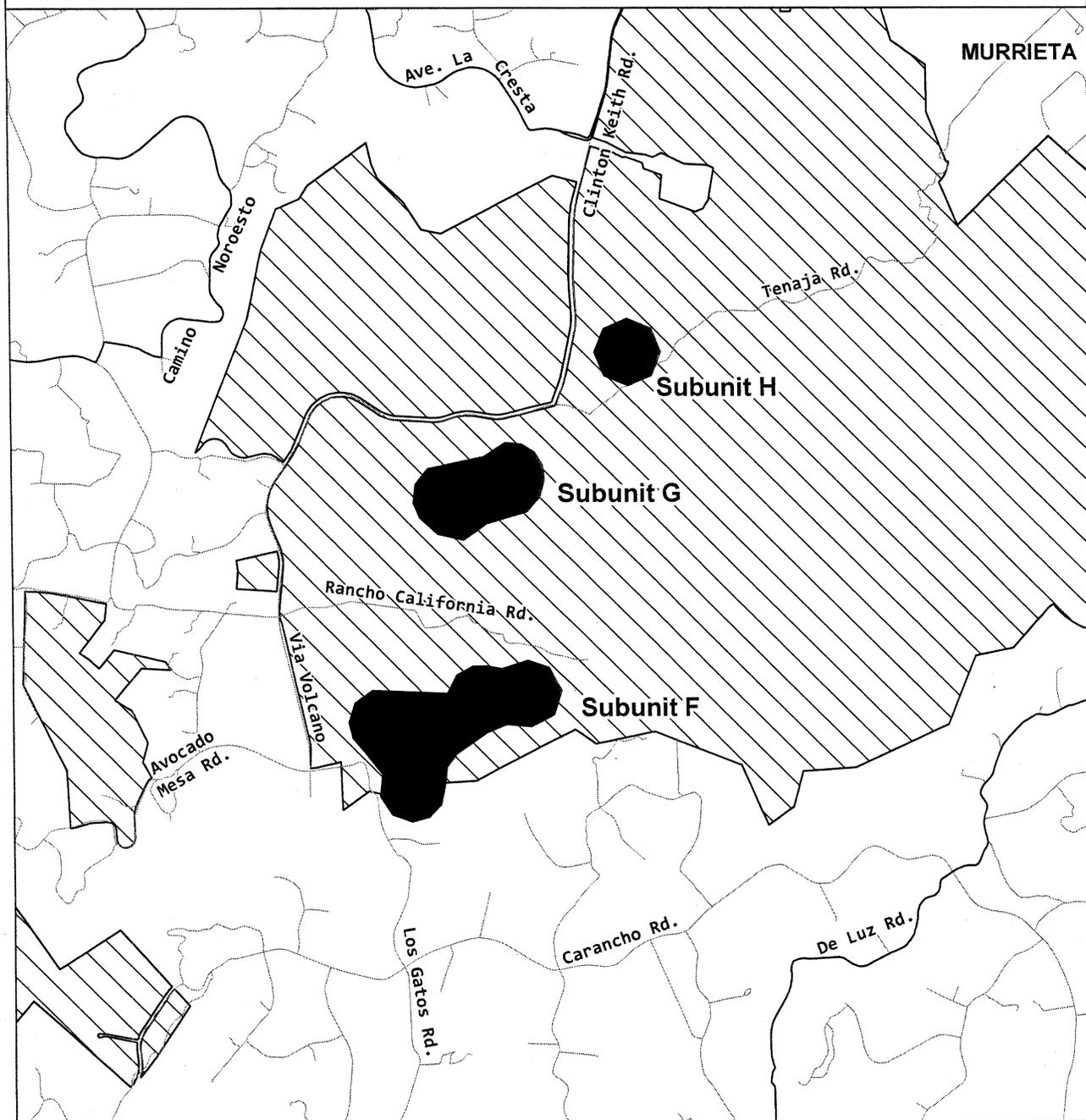
### Critical Habitat for *Brodiaea filifolia* (thread-leaved brodiaea) Unit 11, Subunits A-E, Riverside County, California



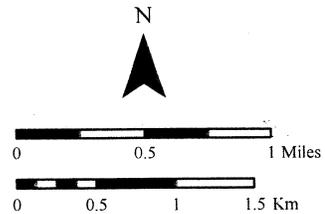
-  Critical Habitat
-  Water Body
-  San Jacinto River
-  Major Road
-  Minor Road



### Critical Habitat for *Brodiaea filifolia* (thread-leaved brodiaea) Unit 11, Subunits F-H, Riverside County, California



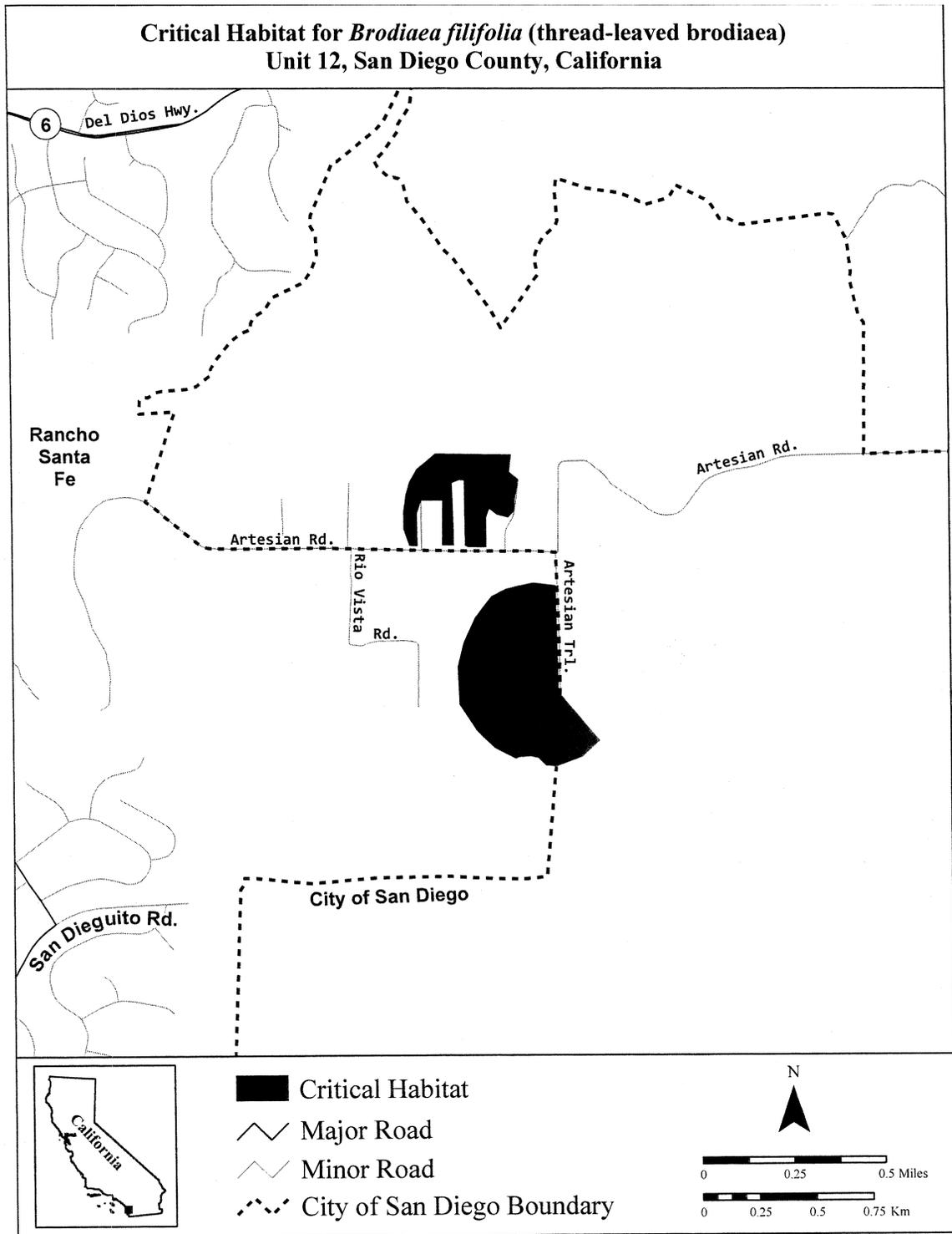
-  Critical Habitat
-  Santa Rosa Plateau Nature Reserve
-  Major Road
-  Minor Road



(15) Unit 12: San Diego County.

(i) [Description of unit location to be inserted here.]

(ii) Note: Map of Unit 12 follows:



\* \* \* \* \*

Dated: November 21, 2009.  
**Thomas L. Strickland,**  
*Assistant Secretary for Fish and Wildlife and Parks.*  
 [FR Doc. E9-28869 Filed 12-7-09; 8:45 am]  
**BILLING CODE 4310-55-C**