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50 CFR Part 17
Endangered and Threatened Wildlife and Plants; Revised Endangered Status, Revised Critical Habitat Designation, and Taxonomic Revision for *Monardella linoides* ssp. *viminea*; Proposed Rule

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS–R8–ES–2010–0076]

RIN 1018–AX18

Endangered and Threatened Wildlife and Plants; Revised Endangered Status, Revised Critical Habitat Designation, and Taxonomic Revision for *Monardella linoides* ssp. *viminea*

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), propose to recognize the recent change to the taxonomy of the currently endangered plant taxon, *Monardella linoides* ssp. *viminea,* in which the subspecies was split into two distinct full species, *Monardella viminea* (willowy monardella) and *Monardella stoneana* (Jennifer's monardella). Because the original subspecies, *Monardella linoides* ssp. *viminea,* was listed as endangered under the Endangered Species Act of 1973, as amended (Act), we are reviewing and updating the threats analysis that we completed for the taxon in 1998, when it was listed as a subspecies, to determine if any of that analysis has changed based on this revised taxonomy. We are also reviewing the status of the new species, *Monardella stoneana.* We propose that *Monardella viminea's* current listing status should be retained as endangered, and we propose to delist the portion of the old listed taxon that has been split off into the new species, *Monardella stoneana,* because it does not meet the definition of endangered or threatened under the Act. We also propose to designate critical habitat for *Monardella viminea* (willowy monardella). Approximately 348 acres (141 hectares) are proposed for designation as critical habitat for *M. viminea,* in San Diego County, California. We are not proposing to designate critical habitat for *Monardella stoneana* at this time because we do not believe this species warrants listing under the Act. However, should we determine, after review of the best available scientific information and public comment, that *Monardella stoneana* does warrant listing, we will propose critical habitat for *Monardella stoneana,* should it be determined to be prudent, in a separate proposed rule.

DATES: We will accept comments received or postmarked on or before August 8, 2011. We must receive requests for public hearings, in writing, at the address shown in the **ADDRESSES** section by July 25, 2011.

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

(1) *Electronically*: Go to the Federal eRulemaking Portal: *http://www.regulations.gov.* In the Keyword box, enter Docket No. FWS–R8–ES–2010–0076, which is the docket number for this rulemaking. Then, in the Search panel on the left side of the screen, under the Document Type heading, click on the Proposed Rules link to locate this document. You may submit a comment by clicking on "Send a Comment or Submission."

(2) *By hard copy*: Submit by U.S. mail or hand-delivery to: Public Comments Processing, Attn: FWS–R8–ES–2010–0076; Division of Policy and Directives Management; U.S. Fish and Wildlife Service; 4401 N. Fairfax Drive, MS 2042–PDM; 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: 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 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 other concerned government agencies, the scientific community, industry, or any other interested party concerning this proposed rule. Please note that throughout the remainder of this document we will use the currently recognized names, *Monardella viminea,* for references to willowy monardella, and *Monardella stoneana,* for references to Jennifer's monardella. We particularly seek comments concerning:

(1) Specific information regarding our recognition of *Monardella viminea* and *M. stoneana* at the species rank, on the segregation of ranges of *M. stoneana* and *M. viminea,* and on our proposals that *M. viminea* should remain listed as endangered and that *M. stoneana* does not warrant listing under the Act (16 U.S.C. 1531 *et seq.*).

(2) Any available information on known or suspected threats and proposed or ongoing development projects with the potential to threaten either *Monardella viminea* or *M. stoneana.*

(3) The effects of potential threat factors to both *Monardella viminea* and *M. stoneana* that are the basis for a listing determination under section 4(a) of the Act, which are:

(a) The present or threatened destruction, modification, or curtailment of the species' habitat or range;

(b) Overutilization for commercial, recreational, scientific, or educational purposes;

(c) Disease or predation;

(d) The inadequacy of existing regulatory mechanisms; or

(e) Other natural or manmade factors affecting its continued existence.

(4) Specific information regarding impacts of fire on *Monardella viminea* or *M. stoneana* individuals or their habitat.

(5) The reasons why we should or should not designate habitat as "critical habitat" under section 4 of the Act for *Monardella viminea* 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 threats outweighs the benefit of designation such that the designation of critical habitat may not be prudent.

(6) Specific information on:

(a) The amount and distribution of *Monardella viminea* or *M. stoneana* habitat,

(b) What areas, that were occupied at the time of listing (or are currently occupied) and that contain features essential to the conservation of these species, should be included in the designation and why,

(c) Special management considerations or protection that may be needed in critical habitat areas we are proposing, including managing for the potential effects of climate change, and

(d) What areas not occupied at the time of listing are essential for the conservation of the species and why.

(7) Information that may assist us in identifying or clarifying the physical and biological features essential to the conservation of *Monardella viminea.*

(8) How the proposed critical habitat boundaries could be refined to more closely or accurately circumscribe the areas identified as containing the

physical and biological features essential to the conservation of *Monardella viminea.*

(9) How we could improve or modify our design of critical habitat units, particularly our criteria for width of essential habitat for *Monardella viminea.* We especially request information on West Sycamore Canyon and Unit 2 (where two groups of *M. viminea* were not included under the criteria used to draw proposed critical habitat boundaries) and areas such as Elanus, Lopez, and Rose Canyons that we have identified as not meeting the definition of critical habitat.

(10) Information on pollinators of *Monardella viminea* or *M. stoneana* that may be essential for the conservation of these species, including information on areas that provide habitat for these pollinators.

(11) Land use designations and current or planned activities in the subject areas and their possible impacts on proposed critical habitat.

(12) Information on the projected and reasonably likely impacts of climate change on the two species and the proposed critical habitat.

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

(14) Any probable economic, national security, or other relevant impacts of designating any area that may be included in the final designation; in particular, any impacts on small entities or families, and the benefits of including or excluding areas that exhibit these impacts.

(15) Whether any specific areas we are proposing for critical habitat designation for *Monardella viminea* should be considered for exclusion under section 4(b)(2) of the Act, and whether the benefits of potentially excluding any specific area outweigh the benefits of including that area under section 4(b)(2) of the Act, in particular for those lands covered by the County of San Diego Subarea Plan or the City of San Diego Subarea Plan under the Multiple Species Conservation Program (MSCP). Information on obtaining copies of these plans will be provided by the U.S. Fish and Wildlife Service, Carlsbad Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT**).

(16) 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 public concerns and comments.

You may submit your comments and materials concerning this proposed revised rule by one of the methods listed in the **ADDRESSES** section. We will not accept comments sent by e-mail or fax or to an address not listed in the **ADDRESSES** section. We will post your entire comment—including your personal identifying information—on *http://www.regulations.gov.* You may request at the top of your document that we withhold personal information such as your street address, phone number, or e-mail address 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 the proposed rule, will be available for public inspection on *http://www.regulations.gov* (under Docket Number FWS–R8–ES–2010–0076), 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**).

Public Hearing

The Act provides for one or more public hearings on this proposal, if requested. Requests must be received by the date listed in the **DATES** section. Such requests must be made in writing and be addressed to the Field Supervisor at the address provided in the **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 hearing.

Background

It is our intent to discuss only those topics directly relevant to our recognition of the taxonomic split of *Monardella linoides* ssp. *viminea* into two distinct taxa: *Monardella viminea* (willowy monardella) and *Monardella stoneana* (Jennifer's monardella); the retention of *M. viminea* as endangered; the proposed critical habitat for *M. viminea;* and our conclusion that *M. stoneana* is not endangered or threatened. This proposed rule incorporates new information specific to *M. viminea* and *M. stoneana* including species descriptions, distributions, taxonomic rank, and nomenclature. We also provide information on current threats to the two species, potential pollinators, and additional information on soil not included in our listing rule for *Monardella linoides* ssp. *viminea* published in the **Federal Register** on October 13, 1998 (63 FR 54938), and our critical habitat designation published in the **Federal Register** on November 8, 2006 (71 FR 65662).

Previous Federal Action

Monardella linoides ssp. *viminea* was listed as endangered in 1998 (63 FR 54938; October 13, 1998). An account of Federal actions prior to listing may be found in the listing rule (63 FR 54938; October 13, 1998). On November 9, 2005, we published a proposed rule to designate critical habitat for *M. linoides* ssp. *viminea* (70 FR 67956). On November 8, 2006 (71 FR 65662), we published our final rule designating critical habitat for *M. linoides* ssp. *viminea.* On January 14, 2009, the Center for Biological Diversity filed a complaint in the U.S. District Court for the Southern District of California challenging our designation of critical habitat for *M. linoides* ssp. *viminea* (*Center for Biological Diversity* v. *United States Fish and Wildlife Service and Dirk Kempthorne, Secretary of the Interior,* Case No. 3:09–CV–0050–MMA–AJB). A settlement agreement was reached with the plaintiffs dated November 14, 2009, in which we agreed to submit a proposed revised critical habitat designation to the **Federal Register** for publication by February 18, 2011, and a final revised critical habitat designation to the **Federal Register** for publication by February 17, 2012. By order dated February 10, 2011, the district court approved a modification to the settlement agreement that extended the deadline for **Federal Register** submission to June 18, 2011, for the proposed revised critical habitat designation. The deadline for submission of a final revised critical habitat designation to the **Federal Register** remains February 17, 2012.

Taxonomic and Nomenclatural Changes Affecting Monardella linoides ssp. viminea

In 2001, Kelly and Burrascano (2001, p. 4) noted that "multiple biologists" had observed differences in the southernmost occurrences of *Monardella linoides* ssp. *viminea.* Kelly and Burrascano (2001, p. 4) also stated that Andrew Sanders of the University of California at Riverside believed the plants were a separate species. Elvin and Sanders (2003, pp. 425–432) subsequently segregated the southern occurrences of willowy monardella as a distinct taxon and recognized it at the species rank as *M. stoneana* (see Figure 1). Elvin and Sanders (2003, p. 430) also returned willowy monardella to its original specific rank as *M. viminea.* The Service initially disagreed with the segregation and classification of *M. stoneana* due to lack of sufficient

supportive evidence presented by Elvin and Sanders (Bartel and Wallace 2004, pp. 1–3), a view continued in our 5-year review (Service 2008, pp. 6–7).

Further genetic investigation of *Monardella* has recently been conducted using ISSR (Inter-Simple Sequence Repeats). ISSR is a general term for a genome region between microsatellite loci that can be used for DNA fingerprinting and delimiting species. ISSR analysis can have multiple application uses, including taxonomic studies of closely related species (Prince 2010, pers. comm.). Using ISSRs, Prince (2009, pp. 22–31) performed an extensive survey of *Monardella* taxa and found that *M. stoneana* and *M. viminea* were both more closely related to different subspecies of *M. linoides* than to each other. These data are supportive of the earlier recognition by the California Department of Fish and Game (CDFG), California Natural Diversity Database (CNDDB), and the California Native Plant Society (CNPS) of *M. viminea* and *M. stoneana* as two separate taxa. Moreover, *M. viminea* and *M. stoneana* are treated as full species in the recently available online unpublished treatment of *Monardella* (Brunell *et al.,* in press) that will be published in the forthcoming revision of the Jepson Manual, the standard guide to the flora of California. According to the authors (Brunell *et al.,* in press), the two species can be morphologically differentiated based on slight differences in leaf width, bract length and width, and flower cluster width. Reportedly, *M. viminea* and *M. stoneana* will be similarly treated as separate species in the future treatment of the genus for the Flora of North America project (G. Wallace, Service 2010, pers. obs.). As a result of the new data and supportive references noted above, we propose to recognize the change in the taxonomic rank and nomenclature of the listed entity as two distinct species, *M. viminea* and *M. stoneana.* We have included those proposed changes in the Proposed Regulation Promulgation section of this rule, and we expect to adopt them when we publish a final determination for this action.

When we listed *Monardella linoides* ssp. *viminea,* we considered 20 occurrences to be extant in the United States (see Table 1) (63 FR 54938; October 13, 1998). As of 2008, 9 occurrences were considered to be extirpated, leaving 11 extant occurrences (Service 2008, p. 5). All 9 extirpated occurrences were in central San Diego County, in the range of what is now considered to be *M. viminea.* Based on updated information from Marine Corps Air Station (MCAS) Miramar (Kassebaum 2010, pers. comm.), two additional occurrences have since been extirpated, again in the range of *M. viminea.* Additionally, as a result of taxonomic changes, the two southernmost occurrences were reclassified as *M. stoneana* after the 2008 5-year review (see Table 1). Therefore, we believe there are now only seven occurrences of *M. viminea,* and these seven were extant at the time of listing. We are not aware of any new occurrences of *M. viminea,* other than those planted in 2007 as a conservation measure to offset impacts associated with the development of the Carroll Canyon Business Park. More information on the four translocated occurrences is discussed in the *Geographic Range and Status* section below. In addition to two occurrences now considered to be *M. stoneana* (but considered at listing to be *M. linoides* ssp. *viminea*), we now know of an additional 7 occurrences of *M. stoneana,* all in what was once the southern range of *M. linoides* ssp. *viminea* (Figure 1). We presume those occurrences were extant at the time *M. linoides* ssp. *viminea* was listed. The single plant in the *M. stoneana* occurrence at Otay Lakes (*M. stoneana* EO 4, former *M. viminea* EO 28) was extirpated by the 2007 Harris fire. Therefore, we consider eight extant occurrences of *M. stoneana.*

TABLE 1—A DESCRIPTION OF WHEN OCCURRENCES WERE FIRST RECOGNIZED BY THE SERVICE, WHEN THEY WERE FIRST CONSIDERED EXTIRPATED, AND WHICH OCCURRENCES THE SERVICE CURRENTLY CONSIDERS EXTANT

Location	CNDDB element occurrence number (EO)	Known and extant at listing	Extant at 2008 5-yr review	Currently extant
Monardella viminea:				
Lopez Canyon	1	x	x	x
Cemetery Canyon	3	x	.....	.....
Carroll Canyon	4	x	.....	.....
Sycamore Canyon	8	x	x	x
San Clemente Canyon	11	x	.....	.....
San Clemente Canyon	12, 18, 19	x	.....	.....
San Clemente Canyon	13	x	.....	.....
Murphy Canyon	14	x	.....	.....
Murphy Canyon	15	x	x	.....
San Clemente Canyon	16	x	.....	.....
San Clemente Canyon	17	x	.....	.....
West Sycamore Canyon	21	x	x	x
Elanus Canyon	24	x	x	x
Carroll Canyon	25	x	.....	.....
Spring Canyon	26	x	x	x
San Clemente Canyon	27	x	x	x
Otay Lakes	28	x	x	Now considered *M. stoneana* EO4
Sycamore Canyon	29	x	x	x
Miramar NAS	31	x	x	.....
Marron Valley	none	x	x	Now considered *M. stoneana* EO1
Monardella stoneana:				
Marron Valley	1	x	x	x
N.W. Otay Mountain	2	.....	x	x

TABLE 1—A DESCRIPTION OF WHEN OCCURRENCES WERE FIRST RECOGNIZED BY THE SERVICE, WHEN THEY WERE FIRST CONSIDERED EXTIRPATED, AND WHICH OCCURRENCES THE SERVICE CURRENTLY CONSIDERS EXTANT—Continued

Location	CNDDB element occurrence number (EO)	Known and extant at listing	Extant at 2008 5-yr review	Currently extant
N.W. Otay Mountain	3	.....	x	x
Otay Lakes	4	x	x	x
Buschalaugh Cove	5	.....	x	.....
Cottonwood Creek	6	.....	x	x
Copper Canyon	7	.....	x	x
S. of Otay Mountain	8	.....	x	x
Tecate Peak	9	.....	x	x

Sources: CNDDB 1998, 2007, 2010a, 2010b; Service 2008, Kassebaum 2010.

Throughout this document, we refer to previous reports and documents, including **Federal Register** publications. When evaluating information contained in documents issued prior to the present document, the reader must bear in mind that information may reference *Monardella viminea* as *M. linoides* ssp. *viminea* and may include statements or data referring to plants or populations now known as *M. stoneana.*

Only information relevant to actions described in this proposed rule is provided below. For additional information on *Monardella viminea,* including a detailed description of its life history and habitat, refer to the final listing rule published in the **Federal Register** on October 13, 1998 (63 FR 54938), the final rule designating critical habitat published in the **Federal Register** on November 8, 2006 (71 FR 65662), and the 5-year review completed in March 2008 (Service 2008). Actions described below include status reviews of *M. viminea* and *M. stoneana,* and a proposed revision of the critical habitat designation for *M. viminea.*

Status Review—*Monardella viminea*

History of the Action

Federal actions taken prior to listing are described in the listing rule published in the **Federal Register** on October 13, 1998 (63 FR 54938). On November 9, 2005, we published a proposed rule to designate critical habitat for *Monardella linoides* ssp. *viminea* (70 FR 67956). On November 8, 2006 (71 FR 65662), we published our final rule designating critical habitat for *M. linoides* ssp. *viminea.*

As described in the *Taxonomic and Nomenclatural Changes Affecting Monardella linoides* ssp. *viminea* section, genetic investigations conducted since the listing in 1998 and completed after our 2008 5-year review have provided the needed additional support for the recognition of *Monardella viminea* and *M. stoneana* as separate taxa at the species rank. This necessitates a review of the listing status of the remaining *M. viminea* occurrences and an assessment of the potential listing status of the newly segregated *M. stoneana.*

Species Description

Monardella viminea is a perennial herb or subshrub in the Lamiaceae (mint family) with a woody base and aromatic foliage. The waxy, green, hairy stems bear conspicuously gland-dotted linear or lance-shaped leaves, and dense, terminal clusters of white to rose-colored flowers. The leaves are 0.1–0.2 inch (in) (2–4 millimeters (mm)) wide at the base. The middle flower bracts are 0.4–0.6 in (10–15 mm) long (Elvin and Sanders 2003, p. 431). *Monardella viminea* grows in clumps of 1 to 4 individual plants (Ince and Krantz 2008, p. 2). As the number of plants within a clump cannot be reliably distinguished without exposing the roots, *M. viminea* is usually counted by clumps rather than as individual plants. Please see the Discussion of the Four Species section of the listing rule (63 FR 54938; October 13, 1998) and the Life History section of the 2005 proposed critical habitat rule (70 FR 67956; November 9, 2005) for more information on this species description.

Habitat

Monardella viminea occurs in coastal sage scrub and riparian scrub in sandy bottoms and on banks of ephemeral washes in canyons where surface water flows for usually less than 48 hours after a rain event (Scheid 1985, p. 3; Elvin and Sanders 2003, p. 430; Kelly and Burrascano 2006, p. 51). These semi-open washes and drainage areas typically have little to no canopy cover (Reiser 1994, p. 139). The species is commonly found with *Eriogonum fasciculatum* (California buckwheat) and *Baccharis sarothroides* (broom baccharis) in habitats characterized by low herbaceous cover and some shrub cover (Scheid 1985, p. 38). It is most commonly found in canyon bottoms, north-facing slopes, and along bends of meandering drainages (Elvin and Sanders 2003, p. 426; Rebman and Dossey 2006a, p. 5). Many of these areas maintain water longer than other portions of the drainage, although they do not have long-term standing water (Elvin and Sanders 2003, p. 426). At Marine Corps Air Station (MCAS) Miramar, *M. viminea* is absent from steeper portions of the canyons and prevalent in secondary stream channels, which suggests *M. viminea* presence is correlated with reaches where flow is relatively slow-moving or standing water is present (Rebman and Dossey 2006a, pp. 5–8).

Monardella viminea is found on soils characterized by a high content of coarse sandy grains and sediments and cobble deposits (Scheid 1985, p. 35). The larger sandy particles that make up *M. viminea* habitat soils are transported downstream by flood events (Scheid 1985, p. 36). Soil series that support *M. viminea* include Stony Land, Redding Gravelly Loam, Visalia Sandy Loam, and Riverwash (Scheid 1985, p. 35; Rebman and Dossey 2006a, pp. 5–6).

The 5-year review (Service 2008, p. 13) concluded that *Monardella viminea* requires a natural or managed regime of periodic, small fires. The coastal sage habitat that *M. viminea* favors benefits from small or managed fires that clear out dead or encroaching scrub vegetation and reduce nonnative species (Minnich 1983, p. 1290). However, there are two ways in which fire can negatively impact *M. viminea* habitat: (1) increased frequency of fires of all sizes, which can result in type conversion; or (2) invasion of nonnative grasses into riparian or coastal sage scrub habitats, which can choke out native vegetation, including shrubs associated with *M. viminea.* Additionally, large or unmanaged fires (sometimes referred to as "megafires")

can be a particular threat to a narrow endemic species like *M. viminea* because a single megafire could eliminate a large proportion of individual plants within the extant range of the species, although *M. viminea* is capable of resprouting after fire (Rebman and Dossey 2006b, p. 2). Additional information is needed regarding the role of fire in *M. viminea* habitat, particularly within riparian portions of canyons. Please see our request for information in the Public Comments section above. For more information on and discussion of the species' description and its habitat see the Discussion of the Four Species section of the listing rule (63 FR 54938; October 13, 1998) and the Distribution and Status section of the proposed critical habitat rule (70 FR 67956; November 9, 2005). However, we ask the reader to keep in mind that plants now treated as *M. stoneana* and their habitat were included in the discussion at the time those documents were published.

Life History

Very little is known about the germination and establishment of *Monardella viminea.* Mature plants flower readily, with inflorescences (flower heads) persisting for 10 to 12 weeks (Elvin and Sanders 2003, pp. 430–431). Plants are short-lived perennials, producing a new cohort of aerial stems each year from a persisting perennial root structure. Plants of this species are not known to be rhizomatous (connected by creeping underground stems); however, root masses may become detached over time, resulting in adjacent genetically identical but spatially separate plants. Rebman and Dossey (2006a, p. 10) reported that the peak flowering period at MCAS Miramar is early June to mid-July, with occasional flowering from May through August and, more rarely, into September.

No pollination studies are known to exist for *Monardella viminea;* however, other *Monardella* taxa are visited by butterfly and bee species (Elvin 2004, p. 2). Bees collected from the closely related *M. linoides* include wasp-like bees (*Hylaeus* sp.), mason bees (*Osmia* spp. or *Chalicodoma* spp.), and miner bees (*Anthophora* spp.) (Hurd 1979, pp. 1762, 1765, 2042, 2073, and 2164). Several observers report European honeybees (*Apis mellifera*) and bumblebees (*Bombus* spp.) as frequent visitors to *M. viminea* flowers (Kelly and Burrascano 2001, p. 7; Kelly and Burrascano 2006, pp. 7–8; Rebman and Dossey 2006a, pp. 10–11). Wasps and bees from the Bembicine and Andrenid families were collected from *M. viminea* plants on MCAS Miramar (Kelly and Burrascano 2001, p. 8). Butterflies known to visit *M. viminea* flowers include painted ladies (*Vanessa cardui*) (Rebman and Dossey 2006a, p. 11), gray hairstreaks (*Strymon melinus*), and funereal duskywing skippers (*Erynnis funeralis*) (University of California, Berkeley, CalPhotos database 2009). Successful sexual reproduction of flowering plants often depends on pollinator abundance and effectiveness (Javorek *et al.* 2002, p. 350). Therefore, adequate numbers of pollinators and sufficient pollinator movement through the habitat should be considered when assessing likely population distributions and survival, and habitat needs of *M. viminea.*

Geographic Range and Status

Monardella viminea is a geographically narrow endemic species restricted to three watersheds north of Kearny Mesa in San Diego County, California (Elvin and Sanders 2003, p. 431). The occurrences now considered to be *M. viminea* are entirely in the northern range of the originally listed entity *M. linoides* ssp. *viminea* (Figure 1). The portions of the watersheds where *M. viminea* occurs are found on lands owned by the Department of Defense at MCAS Miramar, and lands owned by the City of San Diego, lands owned by the County of San Diego, and lands under private ownership. In this proposed critical habitat we use the word "occurrence" when describing the location of plants (*e.g.,* in a critical habitat unit). In this context, we are referring to point locations or polygons representing observations of one or more *M. viminea* individuals. This may include one or more of the "element occurrences" (EOs) as described by CDFG in the CNDDB. Proposed critical habitat for *M. viminea* recognizes the importance of ecosystem processes that create and maintain suitable habitat for this species. Consequently, in the Critical Habitat sections of this document, our critical habitat units follow linear drainages that may include one or more of the "element occurrences" described by CNDDB. Because of the potentially transient nature of suitable habitat for this species, any reach along these drainages may be occupied at a given time. In all other respects in this document, "element occurrence" or "occurrence" references are those from the cumulative data of the CNDDB (2010a, EOs 1–31).

Figure 1. Range of *Monardella viminea* and *M. stoneana.*

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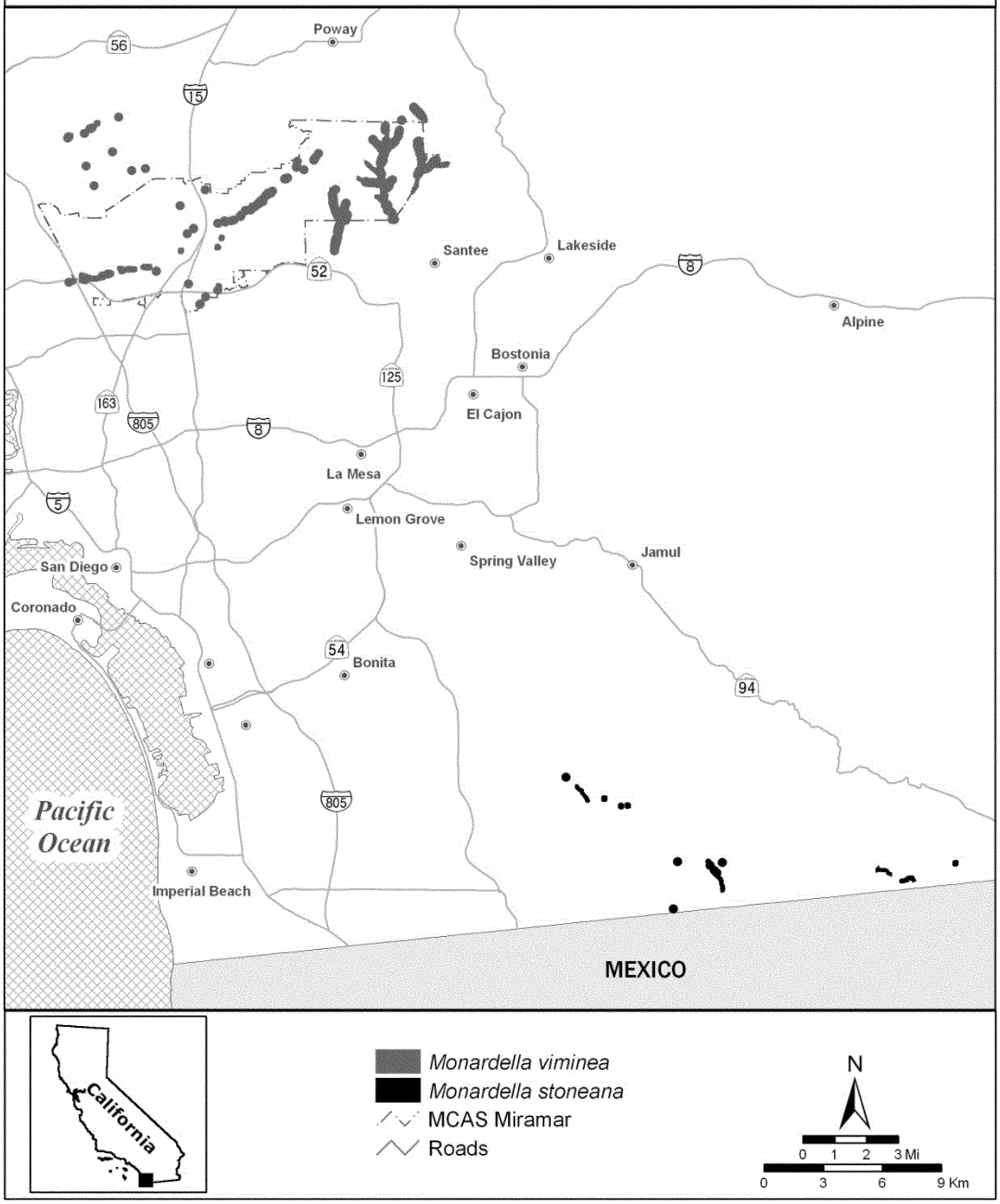
Figure 1
Monardella linoides ssp. *viminea* after taxonomic split



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As of 2008, all eleven known occurrences of *Monardella viminea* were considered declining in size (this total includes two occurrences known to be extirpated by 2010 and two occurrences now considered *M. stoneana*), as are four additional transplanted occurrences (see *Transplants* below) (Ince and Krantz 2008, p. 9; Service 2008 p. 5). On MCAS Miramar, the species has declined by 45 percent since the 2002 surveys, from 3,379 individual plants to 1,809 individual plants (Tierra Data 2011, p. 12). In the past 2 years, multiple clumps of *M. viminea* that burned in the 2003 Cedar Fire have resprouted (Kassebaum 2010, pers. comm.). The most recent survey of MCAS Miramar, conducted in 2009, found juveniles or seedlings present in all canyons except for Elanus (Tierra Data 2011, pp. 17–18). Prior to this survey, juveniles were only confirmed present in West Sycamore Canyon (Kassebaum 2010, pers. comm.).

Transplants

In addition to the seven currently remaining natural occurrences, in 2007, *Monardella viminea* was transplanted to four sites within the historical range of the species as a conservation measure to offset impacts associated with development of the Carroll Canyon Business Park. Three of the transplanted sites were in Carroll Canyon and the fourth in San Clemente Canyon (Ince 2010, p. 3). Most of the *M. viminea*

transplants have experienced low survival rates, generally less than 20 percent, although one Carroll Canyon transplanted occurrence was reported to have a 44 percent survival rate (Service 2003, p. 25; Ince 2010, p. 8).

Summary of Factors Affecting *Monardella viminea*

Section 4 of the Act and its implementing regulations (50 CFR 424) set forth the criteria for determining whether a species is endangered or threatened under the Act. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1) of the Act: (A) The present or threatened destruction, modification or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; and (E) other natural or manmade factors affecting its continued existence. Listing actions may be warranted based on any of the above threat factors, singly or in combination. Each of these factors for *Monardella viminea* is discussed below.

A. The Present or Threatened Destruction, Modification, or Curtailment of Its Habitat or Range

Urbanization/Development

The original listing rule identified urban and residential development as a threat to *Monardella linoides* ssp. *viminea* (63 FR 54938; October 13, 1998). Prior to 1992, San Diego had grown by "a factor of 10 over the last 50 years" (Soule *et al.* 1992, p. 39). At the time of listing, two large occurrences were located on private property and development proposals existed for one of these two parcels. Since listing, one of those two occurrences has been extirpated due to construction activities: EO 25 from the Carroll Canyon Business Park (CNDDB 2010a). Additionally, EO 14 in Murphy Canyon was believed extirpated after listing due to lingering impacts from construction activity near Highway 15 (CNDDB 2010a). Two occurrences at MCAS Miramar have been partially destroyed by road construction since the time of listing.

The Cities of San Diego and Santee have purchased private property as reserve land for *Monardella viminea.* Most occurrences are now found on land conserved or owned by MCAS Miramar, the City of San Diego, and the County of San Diego. Lands owned by the City and County of San Diego are covered by the MSCP, which is a habitat conservation plan (HCP) intended to maintain and enhance biological diversity in the San Diego region, and to conserve viable populations of endangered, threatened, and key sensitive species and their habitats (including *M. viminea*). The MSCP plan designates lands to be set aside for biological preserves. However, 20 percent of habitat for *M. viminea* occurs on privately owned land outside of the reserve areas. This habitat includes *M. viminea* occurrences in Sycamore and Spring Canyons (portions of EOs 8 and 26), and a transplanted occurrence where plants were removed for construction of the Carroll Canyon Business Park (Ince and Krantz 2008, p. 1). Any sites outside of the MSCP reserve areas are vulnerable to development; portions of Sycamore Canyon where *M. viminea* occurs were previously slated for development (Service 2003, pp. 1–23), though the project has been put on hold due to bankruptcy issues, and no development is scheduled (San Diego Business Journal 2011, pp. 1–3).

However, the occurrences discussed above represent only a small proportion of habitat that contains clumps of *Monardella viminea.* Seventy percent of land where *M. viminea* occurs is owned and managed by MCAS Miramar, and all remaining large occurrences (with more than 100 clumps of *M. viminea*) are found on MCAS Miramar. All canyon areas on the base are protected from development. Therefore, although urbanization does threaten some occurrences of *M. viminea,* the threat to the species' habitat is not significant across the range of the species, now or in the foreseeable future.

Sand and Gravel Mining

Sand and gravel mining has broad-scale disruptive qualities to native ecosystems (Kondolf *et al.* 2002, p. 56). Sand and gravel mining was identified at the time of listing as adversely affecting *Monardella linoides* ssp. *viminea* (63 FR 54938; October 13, 1998). The larger of two occurrences (340 individuals) found on private land at the time of listing was identified as being threatened by sand and gravel mining, which was a threat that had the potential to eliminate or disrupt these local populations through changes in hydrology and elimination of individual plants. Since listing, all occurrences vulnerable to mining impacts have since been extirpated, either by altered drainage patterns or construction unrelated to mining operations (CNDDB 2010, EOs 3 and 25). Currently, we are not aware of any ongoing mining activities or any plans for future mining activities that would impact the species. While we may not be fully aware of all potential gravel mining activities on private lands, few *M. viminea* occurrences are on private land. Therefore, we do not consider sand and gravel mining to currently be a threat to *M. viminea,* nor a threat in the foreseeable future.

Altered Hydrology

The original listing rule identified altered hydrology as a threat to *Monardella linoides* ssp. *viminea,* particularly to portions of the habitat now considered to be in the range of *M. viminea* (63 FR 54938; October 13, 1998). *Monardella viminea* requires a natural hydrological system to maintain the secondary benches and streambeds on which it grows (Scheid 1985, pp. 30–31, 34–35). Upstream development can disrupt this regime, increasing storm runoff which can in turn erode the sandy banks and secondary benches upon which *M. viminea* grows. Floods also have the potential to wash away plants much larger than *M. viminea,* as has occurred in Lopez Canyon during heavy runoff following winter storms (Kelly and Burrascano 2001, pp. 2–3). This flood severely impacted the *M. viminea* occurrences in Lopez Canyon (Kelly and Burrascano 2006, pp. 65–69). Additionally, areas where altered hydrology caused decreased flows may experience an increase in invasion by nonnative species into creek beds, which can smother seedling and mature plants, and prevent natural growth of *M. viminea* (Rebman and Dossey 2006a, p. 12).

Changes in local and regional hydrology have had detrimental effects on *Monardella viminea.* Increases in surface and subsurface soil moisture (via direct effects to the water table associated with watershed urbanization) and changing streams from ephemeral to perennial adversely affect native plants adapted to a drier Mediterranean climate (cool moist winters and hot dry summers), such as *M. viminea.* Watershed urbanization alters the riparian vegetation community through changes in median and minimum daily discharges, dry season run-off, and flood magnitudes, specifically for Los Peñasquitos Creek and other locations (White and Greer 2006, pp. 133–136). Nonnative species incursion has been exacerbated by the changing water regime (underground hydrology), and *M. viminea* has been unable to adapt to the increased soil moisture (Burrascano 2007, pers. comm.).

Since listing, three occurrences have been extirpated due to altered hydrological patterns: Cemetery Canyon, Carroll Canyon, and western

San Clemente Canyon. All three of these occurrences are on city-owned or private land (CNDDB 2010a, EOs 3, 4, 11). On MCAS Miramar, watersheds on the undeveloped eastern half of the base, where most large occurrences of *Monardella viminea* are found, appear to have retained their natural hydrological regime (Rebman and Dossey 2006, p. 37). The only canyon on MCAS Miramar with substantial development and a historic occurrence of *M. viminea* is Rose Canyon. This location has lost all but one individual *M. viminea* (Rebman and Dossey 2006, p. 37).

Considering synergistic and cumulative effects of these combined hydrological threats, exacerbated by heavy development surrounding several canyons, we expect that altered hydrology will continue to pose a significant threat to habitats that support *Monardella viminea,* particularly outside the border of MCAS Miramar. We anticipate that this threat will continue into the foreseeable future.

Fire and Type Conversion

The listing rule mentioned that fuel modification to exclude fire could affect *Monardella linoides* ssp. *viminea* (63 FR 54938; October 13, 1998); the same is true of the reclassified *M. viminea* and its habitat. Otherwise, fire was not considered a severe threat to the species at the time of listing.

Our understanding of fire in fire-dependent habitat has changed since *Monardella linoides* ssp. *viminea* was listed in 1998 (Dyer 2002, pp. 295–296). Fire is a natural component for regeneration and maintenance of *M. viminea* habitat. The species' habitat needs concerning fire seem contradictory: A total lack of fire for long periods is undesirable, because the fires that eventually will occur can be catastrophic; yet re-introduction of fire (either accidentally or purposefully) is also undesirable, because such fires often become catastrophic as a result of previous lack of fire (*i.e.,* megafires). This conflicting situation has resulted from a disruption of the natural fire regime.

Fire frequency has increased in North American Mediterranean Shrublands in California since about the 1950s, and studies indicate that southern California has demonstrated the greatest increase in wildfire ignitions, primarily due to an increase in population density beginning in the 1960s, and thus increasing the amount of human-caused fires (Keeley and Fotheringham 2003, p. 240). Increased wildfire frequency and decreased return fire interval, in conjunction with other effects of urbanization, such as increased nitrogen deposition and habitat disturbance due to foot and vehicle traffic, are believed to have resulted in the conversion of large areas of coastal sage scrub to nonnative grasslands in southern California (Service 2003, pp. 57–62; Brooks *et al.* 2004, p. 677; Keeley *et al.* 2005, p. 2109; Marschalek and Klein 2010, p. 8). This type conversion (conversion of one type of habitat to another) produces a positive feedback mechanism resulting in more frequent fires and increasing nonnative plant cover (Brooks *et al.* 2004, p. 677; Keeley *et al.* 2005, p. 2109).

However, threats to the habitat from fire exclusion, which impacts processes that historically created and maintained suitable habitat for *Monardella viminea,* may make it even more vulnerable to extinction. The long-term ecological effects of fire exclusion have not been specifically detailed for *M. viminea;* however, we believe the effects of fire, fire suppression, and fire management in southern California habitats will be similar to that at locations in the Rockies, Cascades, and Sierra Nevada Mountains (Keane *et al.* 2002, pp. 15–16). Fire exclusion in southern California habitat likely affects: (1) Nutrient recycling, (2) natural regulation of succession via selecting and regenerating plants, (3) biological diversity, (4) biomass, (5) insect and disease populations, (6) interaction between plants and animals, and (7) biological and biogeochemical processes (*i.e.,* soil property alteration) (after Keane *et al.* 2002, p. 8). Where naturally occurring fire is excluded, species that are adapted to fire (such as *M. viminea*) are often replaced by nonnative, invasive species that are better suited to the same areas in the absence of fire (Keane *et al.* 2002, p. 9).

Some fire management is provided by CAL FIRE, which is an emergency response and resource protection department. CAL FIRE creates fire management plans to identify prevention measures that reduce risk, inform and involve the local communities in the area, and provide a framework to diminish potential wildfire losses and implement all applicable fire management regulations and policies (CAL FIRE 2011b; County of San Diego 2011a). CAL FIRE has signed a document to assist in management of backcountry areas in San Diego County, including Sycamore Canyon Ranch and its *Monardella viminea* occurrence (DPR 2009, p. 14; County of San Diego 2011, p. 1). However, the land protected under this agreement is only two percent of all *M. viminea* habitat.

Therefore, given the conversion of coastal sage scrub to nonnative grasses and the changing fire regime of southern California, we consider type conversion and the habitat effects of altered fire regime, particularly from increased frequency of fire, to be a significant threat to *M. viminea's* habitat both now and in the foreseeable future.

Summary of Factor A

Monardella viminea continues to be threatened by habitat loss and degradation by altered hydrological regimes that can result in uncontrollable flood events. Habitat of this species is also threatened by an unnatural fire regime resulting from manmade disturbance and activities, which in turn can cause invasion of the area by nonnative plants. Of the seven natural and four transplanted occurrences, those that are in areas where continued development is expected to occur may experience further alterations to hydrology and fire regimes. These threats to habitat are occurring now and are expected to continue into the foreseeable future.

B. Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

To our knowledge, no commercial use exists for *Monardella viminea.* The listing rule suggested that professional and private botanical collecting could exacerbate the extirpation threat to the species due to botanists favoring rare or declining species (63 FR 54938; October 13, 1998). However, we are not currently aware of any interest by botanists in collecting *M. viminea.* Therefore, we do not believe that overutilization for commercial, recreational, scientific, or educational purposes constitutes a threat to this species now or in the foreseeable future.

C. Disease or Predation

Neither disease nor predation was known to be a threat affecting *Monardella linoides* ssp. *viminea* (63 FR 54938; October 13, 1998) at the time of listing. Volunteers have since noted grazing impacts to occurrences of *M. viminea* in Lopez Canyon (Kelly and Burrascano 2001, p. 5). However, this occurrence is the only documented location where grazing has occurred, and impacts were minimal. Therefore, based on the best available scientific and commercial information, neither disease nor herbivory constitute threats to *M. viminea* now or in the foreseeable future.

D. The Inadequacy of Existing Regulatory Mechanisms

At the time of listing, regulatory mechanisms that provided some protection for *Monardella linoides* ssp. *viminea* that apply to *Monardella viminea* included: (1) The Act in cases where *M. viminea* co-occurred with a Federally listed species; (2) the California Endangered Species Act (CESA); (3) the California Environmental Quality Act (CEQA); (4) implementation of conservation plans pursuant to California's Natural Community Conservation Planning Act; (5) land acquisition and management by Federal, State, or local agencies, or by private groups and organizations; and (6) local laws and regulations. The listing rule analyzed the potential level of protection provided by these regulatory mechanisms (63 FR 54938; October 13, 1998).

Currently, *Monardella linoides* ssp. *viminea* is listed as endangered under the Act (63 FR 54938; October 13, 1998). Provisions for its protection and recovery are outlined in sections 4, 7, 9 and 10 of the Act. This law is the primary mechanism for protecting *M. viminea,* which, as part of the original listed entity, currently retains protection under the Act. However, the protections afforded to *M. viminea* under the Act as part of *M. linoides* ssp. *viminea,* the currently listed entity, would continue to apply only if we determine to retain listed status for *M. viminea.* Therefore, for purposes of our analysis, we do not include the Act as an existing regulatory mechanism that protects *M. viminea.* We do note that *M. viminea* would likely continue to receive protection indirectly through habitat conservation plans (HCPs) approved under section10 of the Act and Natural Community Conservation Plans (NCCPs) approved under the State of California that will cover *M. viminea* even if the species is not Federally listed.

Federal Protections

National Environmental Policy Act (NEPA)

All Federal agencies are required to adhere to the National Environmental Policy Act (NEPA) of 1970 (42 U.S.C. 4321 *et seq.*) for projects they fund, authorize, or carry out. The Council on Environmental Quality's regulations for implementing NEPA (40 CFR 1500–1518) state that in their environmental impact statements agencies shall include a discussion on the environmental impacts of the various project alternatives (including the proposed action), any adverse environmental effects which cannot be avoided, and any irreversible or irretrievable commitments of resources involved (40 CFR 1502). The NEPA itself is a disclosure law that provides an opportunity for the public to submit comments on a particular project and propose other conservation measures that may directly benefit listed species; however, it does not impose substantive environmental mitigation obligations on Federal agencies. Any such measures are typically voluntary in nature and are not required by the statute. Activities on non-Federal lands are also subject to NEPA if there is a Federal nexus.

Sikes Act

In 1997, section 101 of the Sikes Act (16 U.S.C. 670a(a)) was revised by the Sikes Act Improvement Act to authorize the Secretary of Defense to implement a program to provide for the conservation and rehabilitation of natural resources on military installations. To do so, the Department of Defense was required to work with Federal and State fish and wildlife agencies to prepare an integrated natural resources management plan (INRMP) for each facility with significant natural resources. The INRMPs provide a planning tool for future improvements; provide for sustainable multipurpose use of the resources, including activities such as hunting, fishing, trapping, and non-consumptive uses; and allow some public access to military installations. At MCAS Miramar and other military installations, INRMPs provide direction for project development and for the management, conservation, and rehabilitation of natural resources, including *M. viminea* and its habitat.

Approximately 70 percent of the remaining habitat for *Monardella viminea* occurs within MCAS Miramar. The Marine Corps completed an INRMP (2006–2010) with the advice of the Service (Gene Stout and Associates 2006, p. ES–2). The 2011–2014 INRMP is expected to be published by the military in the upcoming weeks. This new INRMP continues to benefit the species by spatially and temporally protecting known populations on MCAS Miramar, most of which are not fragmented. Over 99 percent of all *M. viminea* occurrences on the base occur in Type I or II management areas, where conservation of listed species, including *M. viminea,* is a priority (Gene Stout and Associates 2006, pp. 5–2, 5–5). MCAS Miramar manages invasive species, a significant threat to *M. viminea,* in compliance with Executive Order 13112, which states that Federal agencies must provide for the control of invasive species (Gene Stout and Associates 2006, p. 7–3). Invasive species management is a must-fund project to be carried out annually, following guidelines established in the National Invasive Species Management Plan (Gene Stout and Associates 2006, p. 7–7). This plan mandates control measures for invasive species through a combination of measures including pesticides and mechanical removal (National Invasive Species Council 2001, p. 37), thus providing a benefit by addressing type conversion that results following fires (see Factor A above). It also provides wildland fire management, including creation of fuelbreaks, a prescribed burning plan, and research on the effects of wildfire on local habitat types (Gene Stout and Associates 2006, pp. 7–8—7–9). As a result, MCAS Miramar is addressing threats related to the potential stress of fire on individual plants (see Factor E). Despite the benefits to *M. viminea* provided through the INRMP, the species continues to decline on MCAS Miramar, due likely to the synergistic effects of flood, reduced shrub numbers, and exotic species encroachment (type conversion) following the 2003 Cedar wildfire (Tierra Data 2011, p. 26).

State and Local Regulations

California's Native Plant Protection Act (NPPA) and Endangered Species Act (CESA)

Under provisions of NPPA (Division 2, chapter 10 section 1900 *et seq.* of the California Fish and Game Code (CFG code)) and CESA (Division 3, chapter 1.5, section 2050 *et seq.* of CFG code), the CDFG Commission listed *Monardella linoides* ssp. *viminea* as endangered in 1979. Currently, the State of California recognizes the State-listed entity as *M. viminea.*

Both the CESA and NPPA include prohibitions forbidding the "take" of State endangered and listed species (Chapter 10, Section 1908 and Chapter 1.5, Section 2080, CFG code). With regard to prohibitions of unauthorized take under NPPA, landowners are exempt from this prohibition for plants to be taken in the process of habitat modification. When landowners are notified by the State that a rare or endangered plant is growing on their land, the landowners are required to notify CDFG 10 days in advance of changing land use in order to allow salvage of listed plants. Sections 2081(b) and (c) of CESA allow CDFG to issue incidental take permits for State-listed threatened species if:

(1) The authorized take is incidental to an otherwise lawful activity;

(2) The impacts of the authorized take are minimized and fully mitigated;

(3) The measures required to minimize and fully mitigate the impacts of the authorized take are roughly proportional in extent to the impact of the taking of the species, maintain the applicant's objectives to the greatest extent possible, and are capable of successful implementation;

(4) Adequate funding is provided to implement the required minimization and mitigation measures and to monitor compliance with and the effectiveness of the measures; and

(5) Issuance of the permit will not jeopardize the continued existence of a State-listed species.

The relationship between the NPPA and CESA has not been clearly defined under state law. The NPPA, which has been characterized as an exception to the take prohibitions of CESA, exempts a number of activities from regulation including: clearing of land for agricultural practices or fire control measures; removal of endangered or rare plants when done in association with an approved timber harvesting plan, or mining work performed pursuant to Federal or State mining laws, or by a public utility providing service to the public; or when a landowner proceeds with changing the use on their land in a manner that could result in take, provided the landowner notifies CDFG at least 10 days in advance of the change. These exemptions indicate that CESA and NPPA may be inadequate to protect *Monardella viminea* and its habitat, including from activities such as development/urbanization, altered hydrology or fuel modification.

California Environmental Quality Act (CEQA)

The California Environmental Quality Act (CEQA) (Public Resources Code 21000–21177) and the CEQA Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000–15387) require State and local agencies to identify the significant environmental impacts of their actions and to avoid or mitigate those impacts, if feasible. The CEQA applies to projects proposed to be undertaken or requiring approval by State and local government agencies, and the lead agency must complete the environmental review process required by CEQA, including conducting an initial study to identify the environmental impacts of the project and determine whether the identified impacts are significant; if significant impacts are determined, then an environmental impact report must be prepared to provide State and local agencies and the general public with detailed information on the potentially significant environmental effects (California Environmental Resources Evaluation System 2010). "Thresholds of Significance" are comprehensive criteria used to define environmental significant impacts based on quantitative and qualitative standards and include impacts to biological resources such as candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFG or the Service; or any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFG or Service (CEQA Handbook, Appendix G, 2010). Defining these significance thresholds helps ensure a "rational basis for significance determinations" and provides support for the final determination and appropriate revisions or mitigation actions to a project in order to develop a mitigated negative declaration rather than an environmental impact report (Governor's Office of Planning and Research 1994, p. 5). Under CEQA, projects may move forward if there is a statement of overriding consideration. If significant effects are identified, the lead agency has the option of requiring mitigation through changes in the project or to decide that overriding considerations make mitigation infeasible (CEQA section 21002). Protection of listed species through CEQA is, therefore, dependent upon the discretion of the lead agency involved.

California's Natural Community Conservation Planning (NCCP) Act

The NCCP program is a cooperative effort between the State of California and numerous private and public partners with the goal of protecting habitats and species. An NCCP identifies and provides for the regional or area-wide protection of plants, animals, and their habitats, while allowing compatible and appropriate economic activity. The program began in 1991, under the State's NCCP Act (CFG Code 2800–2835). The primary objective of the NCCP program is to conserve natural communities at the ecosystem scale while accommodating compatible land uses (*http://www.dfg.ca.gov/habcon/nccp/*). Regional NCCPs provide protection to Federally listed species, and often unlisted species, by conserving native habitats upon which the species depend. Many NCCPs are developed in conjunction with HCPs prepared pursuant to the Act. The City and County of San Diego Subarea Plans under the MSCP are discussed below.

City of San Diego and County of San Diego Subarea Plans under the Multiple Species Conservation Plan (MSCP)

The MSCP is a sub-regional HCP and NCCP made up of several subarea plans that have been in place for more than a decade. 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. The sub-regional MSCP covers 582,243 ac (235,625 ha) within the county of San Diego. Habitat conservation plans and multiple species conservation plans approved under section 10 of the Act are intended to protect covered species by avoidance, minimization, and mitigation of impacts.

The MSCP Subarea Plan for the City of San Diego includes *Monardella viminea* (denominated as *M. linoides* ssp. *viminea*) as a covered species. The City's subarea plan designates land to be set aside for a biological preserve (City of San Diego 1997, p. 1–1). As of January 2011, less than 20 percent of all *M. viminea* occurrences were in the City of San Diego MSCP plan area (Service 2008, p. 10); the majority of the other occurrences are on lands owned by MCAS Miramar, with small numbers of clumps occurring on private and county-owned lands. Almost all occurrences that occur within the City of San Diego's MSCP Subarea Plan area have been protected in MSCP reserves and are annually monitored (City of San Diego 2010, p. 1). However, the management plan for the City of San Diego MSCP Subarea Plan has not been finalized; thus long-term management and monitoring provisions for this plant are not in place. Although management needs are frequently identified for *M. viminea,* the actions are not carried out on a regular basis to decrease threats to the plants, such as presence of nonnative vegetation and altered hydrology.

Within the City of San Diego MSCP Subarea Plan, further protections are afforded by the Environmentally Sensitive Lands ordinance (ESL). The ESL provides protection for sensitive biological resources (including *Monardella viminea* and its habitat), by ensuring that development occurs "in a manner that protects the overall quality of the resources and the natural and topographic character of the area, encourages a sensitive form of development, retains biodiversity and interconnected habitats, maximizes physical and visual public access to and along the shoreline, and reduces hazards due to flooding in specific areas

while minimizing the need for construction of flood control facilities," thus providing protection against alteration of hydrology, a significant threat to *M. viminea.* The ESL was designed to act as an implementing tool for the City of San Diego Subarea Plan (City of San Diego 1997, p. 98).

The County of San Diego MSCP Subarea Plan covers 252,132 ac (102,035 ha) of unincorporated county lands in the southwestern portion of the MSCP plan area. Only two percent of *Monardella viminea* habitat occurs on County lands. The entirety of this habitat is included within the Sycamore Canyon Preserve established under the County of San Diego MSCP Subarea Plan. In 2009, a management plan was published for the preserve, with monitoring anticipated to begin in 2013. The plan specifically addresses *M. viminea* through removal of nonnative vegetation, habitat restoration, and implementation of a managed fire regime with a priority of protecting biological resources (DPR 2009, pp. 71, 76–77). Additionally, the plan mandates management to address the "natural history of the species and to reduce the risk of catastrophic fire," possibly including prescribed fire (DPR 2009, p. 71); these measures address the stressor of fire on individual plants (Factor E) and the threat of type conversion due to frequent fire (Factor A).

Summary of Factor D

In determining whether *Monardella viminea* should be retained as a listed species under the Act, we analyze the adequacy of existing regulatory mechanisms without regard to current protections afforded under the Act. The majority (greater than 70 percent) of *M. viminea* occurrences are on MCAS Miramar. The base has developed and is implementing an INRMP under the Sikes Act to protect these occurrences (Factor E) and is addressing threats from type conversion due to frequent fire (Factor A). However, notwithstanding the benefit to *M. viminea* provided by the INRMP, the synergistic effects of flood, reduced shrub numbers, frequent fire, and nonnative species encroachment are resulting in a decline of *M. viminea* on the base (Factor E). While the INRMP does not eliminate threats to the species from megafire, we do not believe megafire impacts are susceptible to a regulatory fix.

The majority of *Monardella viminea* occurrences outside of MCAS Miramar are located within land owned by the City of San Diego, and they receive protection under the City of San Diego's MSCP Subarea Plan, which was approved under CESA and NCCP Act. The City of San Diego's MSCP Subarea plan provides protective mechanisms for *M. viminea* for proposed projects; these protective mechanisms are intended to address potential impacts that could threaten the species, such as development or actions that could result in altered hydrology. One such plan was developed for the city-owned land within West Sycamore Canyon. This land, a total of 21 ac (9 ha), was included within the development project entitled Sycamore Estates. This plan included monitoring of *M. viminea* occurrences within West Sycamore Canyon and provisions to prevent altered hydrology to areas containing *M. viminea* through construction of mechanisms such as silt fences to prevent erosion and subsequent alteration of channel structure (T&B Planning Consultants 2001, pp. 136, 166). However, Sycamore Estates was never completed (see Factor A), and no monitoring has taken place in West Sycamore Canyon. Therefore, the plan addressing construction on Sycamore Estates is not currently protecting *M. viminea.*

The City of San Diego Subarea Plan also includes provisions for monitoring and management through development of location-specific management plans for preserve land. However, the City of San Diego MSCP Subarea Plan has not developed final monitoring and management plans for *M. viminea.* As a result, even though occurrences of *M. viminea* are monitored on a yearly basis and management needs for *M. viminea* habitat are identified, conservation measures to ameliorate immediate and significant threats to the species from nonnative species and alteration of hydrology are not actively being implemented because the management plans are not yet in place. With regards to lands covered by the County of San Diego MSCP Subarea Plan (two percent of the species' habitat), regulatory mechanisms are in place to conserve and manage *Monardella viminea.*

Despite the protections afforded to *Monardella viminea* under the Sikes Act through the INRMP for MCAS Miramar and the protections afforded under the City of San Diego and County of San Diego plans, we conclude that existing regulatory mechanisms at this time are inadequate to alleviate the threats to this species in the absence of the protections afforded by the Act.

E. Other Natural or Manmade Factors Affecting Its Continued Existence

Trampling

Trampling was identified as a threat to *Monardella linoides* ssp. *viminea* in the listing rule (63 FR 54938; October 13, 1998). Trampling of *M. viminea* occurs via human travel through the habitat of the species. This factor has not been quantified, and to date is only suspected to be a threat to *M. viminea* via direct mortality and increasing rates of erosion (Service 2008, p. 11). Trampling on private lands cannot currently be controlled and could impact populations located on private lands; however, few occurrences are located on private lands, and we have no evidence of trampling-related mortality. Therefore, we do not consider trampling to be a significant threat across the range of the species.

Nonnative Plant Species

The listing rule identifies nonnative plants as a threat to *Monardella linoides* ssp. *viminea* (63 FR 54938; October 13, 1998); this threat is ongoing for the occurrences of the listed entity now considered to be *M. viminea.* San Diego County habitats have been altered by invasion of nonnative species (Soule *et al.* 1992, p. 43). Nonnative grasses, which frequently out-compete native species for limited resources and grow more quickly, can smother seedling and mature *M. viminea* and prevent natural growth (Rebman and Dossey 2006a, p. 12). Nonnative plants also have the potential to lower water tables and alter rates of sedimentation and erosion by altering soil chemistry, nutrient levels, and the physical structure of soil. As such, they can often out-compete native species such as *M. viminea* (Kassebaum 2007, pers. comm.). Nonnative plants also alter frequencies, size, and intensity of fires (flame duration and length, soil temperature during a fire, and after-effects of long-term porosity and soil glassification, in which high heat causes silica particles in the soil to fuse together to form an impermeable barrier) (Vitousek *et al.* 1997, pp. 8–9; Arno and Fielder 2005, p. 19).

When the processes of natural disturbance, such as fire regime and normal storm flow events, are altered, native and nonnative plants can overcome otherwise suitable habitat for *Monardella viminea* (Kassebaum 2007, pers. comm.). At least four occurrences of *M. viminea* are believed to have been extirpated since listing due in part to invasion of native and nonnative plant species (CNDDB 2010a; EOs 11, 12, 13, and 15). Nonnative plants are present throughout all canyons on MCAS Miramar where *M. viminea* occurs, occupying areas that might instead be colonized by *M. viminea* seedlings (Tierra Data 2011, p. 29). Areas heavily invaded by nonnative grasses have fewer adult *M. viminea* plants than areas

free from invasion, or feature adult plants that have been reduced in size after the encroachment of nonnative species (Tierra Data 2011, p. 29). Additionally, one occurrence monitored by the City of San Diego has undergone a rapid increase in nonnative plant cover, climbing from 26 percent in 2008 to 71 percent in 2010 (City of San Diego 2008, p. 1; City of San Diego 2010, p. 11).

Due to the absence or alteration of the natural disturbance processes within the range of *Monardella viminea* that has caused competition for space and nutrients, increased fire intensity, and extirpation of *M. viminea* occurrences since listing, we consider nonnative plant species to be a significant factor threatening the continued existence of the species, both now and in the foreseeable future.

Small Population Size and Restricted Range

The listing rule identified the restricted range and small population size of *Monardella linoides* ssp. *viminea* as threats. These conditions increase the possibility of extinction due to chance events, such as floods, fires, or drought, beyond the natural variability of the ecosystem (Lande 1993, p. 912; 60 FR 40549, August 9, 1995). Chance or stochastic events have occurred in the range of *M. viminea,* and it is very possible that these events may continue to make *M. viminea* vulnerable to extinction, because of *M. viminea's* small numbers and limited range. Of the 20 occurrences of *M. viminea* known at the time of listing, 5 had fewer than 100 individuals. None of the smallest five populations were protected at the time of listing, and all have since been extirpated due to competition with nonnative grasses, construction, or unknown reasons (CNDDB 2010). As stated earlier, only 7 natural occurrences remain. Currently, despite their protection on reserve lands, many of the largest occurrences with multiple clumps and the healthiest-looking leaves and flowers are still declining in number.

In particular, small population size makes it difficult for *Monardella viminea* to persist while sustaining the impacts of fire, altered hydrologic regimes, and competition with nonnative plants. Prior to the 2008 5-year review, monitoring of the MCAS Miramar occurrences indicated that the population had declined significantly for unknown reasons that could not be clearly linked to the cumulative impacts of fire, herbivory, or hydrological regimes (Rebman and Dossey 2006a, p. 14). Since the 2006 surveys by Rebman and Dossey at MCAS Miramar, plants damaged in the 2003 fire have resprouted from the root. Despite the fact that plants have resprouted, biological monitors at MCAS Miramar report that the decline continues and the cause is unknown, with 45 percent of the population on MCAS Miramar lost since 2002 (Kassebaum 2010, pers. comm.; Tierra Data 2011, p. 12). No empirical information is readily available to estimate the rate of population decrease or time to extinction for *M. viminea;* however, its habitat and population have decreased since the time of listing. Therefore, based on the best available scientific information, we consider that small population size and the declining trend of *M. viminea* exacerbate the threats attributable to other factors.

Fire

Although the habitat occupied by *Monardella viminea* is dependent upon some form of disturbance to reset succession processes (such as periodic fire and scouring floods), we considered whether megafire events have the potential to severely impact or eliminate populations by killing large numbers of individual plants, their underground rhizomes (stems), and the soil seed bank. Also, severe fire could leave the soil under hydrophobic conditions, in which the soil becomes water-repellant, often resulting in plants receiving an inadequate amount of water (Agee 1996, pp. 157–158; Keane *et al.* 2002, p. 8; Keeley 2001, p. 87; Arno and Fiedler 2005, p. 19).

Recently, San Diego County has been impacted by multiple large fire events, a trend that is expected to continue. A model by Snyder *et al.* (2002, p. 9–3) suggests higher average temperatures for every month in every part of California, which would create drier, more combustible fuel types. Also, Miller and Schlegel (2006, p. 6) suggest that Santa Ana conditions (characterized by hot dry winds and low humidity) may significantly increase during fire season under global climate change scenarios. Small escaped fires have the potential to turn into large fires due to wind, weather conditions of temperature and humidity, lack of prescribed fires to control fuels, invasive vegetation, and inadequate wildfire control/prevention. For example, the October 2007 Harris fire in San Diego County burned 20,000 acres (ac) (8,094 hectares (ha)) within 4 hours of ignition (California Department of Forestry 2008, p. 57). Another fire near Orange, California, turned into a large size-class fire in less than 12 hours, and an unattended campfire set off the June 2007 Angora fire near Lake Tahoe in northern California, which spread 4 miles (6.4 kilometers) in its first 3 hours, and burned over 3,000 ac (1,214 ha) (USDA 2007, p. 1).

A narrow endemic such as *Monardella viminea* could be especially sensitive to megafire events. One large fire could impact all or a large proportion of the entire area where the species is found, as occurred in the 2003 Cedar Fire, where 98 percent of occurrences on MCAS Miramar and *M. viminea* clumps in the privately owned portions of Sycamore Canyon burned. However, despite the overlap of the Cedar Fire with *M. viminea* occurrences on MCAS Miramar, the decline of the burned occurrences of *M. viminea* was not as severe as initially expected, as plants were later able to resprout from the root. Additionally, new juveniles and seedlings documented by the 2009 survey occurred primarily on lands burned by the 2003 Cedar Fire (Tierra Data 2011, p. 16).

Given the increased frequency of megafires within Southern California ecosystems, and the inability of regulatory mechanisms to prevent or control megafire, we find that megafire does have the potential to impact occurrences of *Monardella viminea.* However, given *M. viminea's* persistence through past fires and its ability to recover from direct impact by fires, we do not find that megafire is a significant threat to individual *M. viminea* plants now, nor is likely to become a significant threat in the foreseeable future. However, as noted in the Factor A discussion above, we do find that type conversion due to altered fire regime and megafire are threats to the habitat that supports *M. viminea.*

Climate Change

A broad consensus exists among scientists that the earth is in a warming trend caused by anthropogenic greenhouse gases such as carbon dioxide (IPCC 2007). Researchers have documented climate-related changes in California (Croke *et al.* 1998, pp. 2128, 2130; Breshears *et al.* 2005, p. 15144). Predictions for California indicate prolonged drought and other climate-related changes will continue in the future (Field *et al.* 1999, pp. 8–10; Lenihen *et al.* 2003, p. 1667; Hayhoe *et al.* 2004, p. 12422; Breshears *et al.* 2005, p. 15144; Seager *et al.* 2007, p. 1181; IPCC 2007, p. 9). Models are not yet powerful enough to predict what will happen in localized regions, such as southern California, but many scientists believe warmer, wetter winters and warmer, drier summers will occur within the next century (Field *et al.* 1999, pp. 2–3, 20). The impacts on

species like *Monardella viminea,* which depend on specific hydrological regimes, may be more severe (Graham 1997, p. 2).

Since approximately the time of listing in 1998, an extended drought in the region (San Diego County Water Authority 2010, p. 2) created unusually dry habitat conditions. From 2000 to 2009, at one of the closer precipitation gauges to the species' range (Lake Cuyamaca, San Diego County, California), 8 of 10 years had precipitation significantly below normal (San Diego County Water Authority 2010, p. 2). This extended drought has cumulatively affected moisture regimes, riparian habitat, and vegetative conditions in and around suitable habitat for *Monardella viminea,* and thus increased the stress on individual plants. As stated above, predictions indicate that future climate change may lead to similar, if not more severe, drought conditions.

The predicted future drought could impact the dynamic of the streambeds where *Monardella viminea* grows. Soil moisture and transportation of sediments by downstream flow have been identified as key habitat features required by *M. viminea.* The species is characterized as being associated with areas of standing water after rainfall (Elvin and Sanders 2003, p. 426). Monitors for the City of San Diego have observed decreased plant health and increased dormancy of *Monardella* species in years with low rainfall (City of San Diego 2003, p. 3; City of San Diego 2004, p. 3). Specific analyses of population trends as correlated to rainfall are difficult due to inconsistent plant count methods (City of San Diego 2004, p. 67).

Additionally, drier conditions may result in increased fire frequency. As discussed under Factors A and E, this could make the ecosystems in which *Monardella viminea* currently grows more vulnerable to the threats of subsequent erosion and invasive species. In a changing climate, conditions could change in a way that would allow both native and nonnative plants to invade the habitat where *M. viminea* currently occurs (Graham 1997, p. 10).

While we recognize that climate change and increased drought associated with climate change are important issues with potential effects to listed species and their habitats, the best available scientific information does not currently give evidence specific enough for us to formulate accurate predictions regarding its effects to particular species, including *Monardella viminea.* Therefore, we do not consider global climate change a current threat to *M. viminea,* now or in the foreseeable future.

Summary of Factor E

Based on a review of the best available scientific and commercial data regarding trampling, nonnative plant species, megafire, climate change, and small population size and restricted range, we found that nonnative plant species pose a significant threat to *Monardella viminea.* Additionally, the small population size and restricted range of *M. viminea* could exacerbate threats to the species. We found no other evidence that trampling or other natural or manmade factors pose a significant threat to *M. viminea,* either now or in the foreseeable future. We conclude based on the best available scientific information that *M. viminea* could be affected by fire impacts associated with the death of individual plants; however, we do not consider this a significant threat to the continued existence of the species. Finally with regard to the direct and indirect effects of climate change on individual *M. viminea* plants and its habitat, we have no information at this point to demonstrate that predicted climate changes poses a significant threat to the species either now or in the foreseeable future.

Proposed Determination—*Monardella viminea*

We have carefully assessed the best scientific and commercial information available regarding the past, present, and future threats to *Monardella viminea.* As described above, we find that threats attributable to Factor A (The Present or Threatened Destruction, Modification, or Curtailment of Its Habitat or Range) represent significant threats to *M. viminea,* particularly through severe alteration of hydrology in Carroll, Lopez, and San Clemente Canyons. Additionally, type conversion and habitat degradation due to frequent fire represent a significant and immediate threat to the species across its range. We also find that, in the absence of the Act, other existing regulatory mechanisms as described under Factor D would not provide protections adequate to alleviate threats to *M. viminea.* Finally, we find that threats attributable to Factor E (Other Natural or Manmade Factors Affecting Its Continued Existence) represent significant threats to the species throughout its range, including impacts from nonnative plant species invading canyons where *M. viminea* exists. Additionally, the small population size of *M. viminea* could exacerbate the threats to the species. Furthermore, the synergistic effects of flood, reduced shrub numbers, frequent fire, and nonnative species encroachment pose an increased risk to the species, resulting in continued population decline such as that seen on MCAS Miramar in recent years.

When the species was listed in 1998, there were 18 extant occurrences of what we now consider to be *Monardella viminea;* currently, there are only 7 known natural occurrences of *M. viminea.* All seven of these occurrences have continued to decline since listing and since the most recent (2008) 5-year review. Since the recent taxonomic revision of *Monardella linoides* ssp. *viminea* into two separate species, we now know that both the number of clumps and the limited geographic range of *M. viminea* are substantially less than originally thought, as two of the occurrences at time of listing are now considered to be *M. stoneana.* As discussed above, natural occurrences of *M. viminea* occur in only six watersheds in a very limited area of San Diego County. Transplanted occurrences occur in two additional canyons; however, over the past 3 years, survival of three of the transplanted sites is below 20 percent, with the fourth at only 44 percent (Ince 2010, p. 8). Additionally, the most recent surveys from MCAS Miramar, which holds the majority of the largest occurrences, have shown a rapid decline of the species over the past 7 years (Tierra Data 2011, p. 12).

The Act defines an endangered species as any species that is "in danger of extinction throughout all or a significant portion of its range" and a threatened species as any species "that is likely to become endangered throughout all or a significant portion of its range within the foreseeable future." Given the rapid population decline (particularly the decline of 45 percent of the population on MCAS Miramar since 2002), the species' limited range and small population size, and continuing significant threats, we find that *Monardella viminea* is in danger of extinction throughout its range. Therefore, endangered status under the Act continues to be warranted for *M. viminea.*

Status Review—*Monardella stoneana*

Species Description

Monardella stoneana is a perennial herb or subshrub in the Lamiaceae (mint family) with a woody base and aromatic leaves. The sparsely pubescent multiple stems bear sparsely gland-dotted broadly lanceolate to lance-ovate leaves, and dense, terminal clusters of pale

pink flowers. The leaves are 0.6–1.2 in (15–30 mm) long by 0.2–0.4 in (4–10 mm) wide, and the middle flower bracts are 0.3–0.4 in (7–10 mm) long (Elvin and Sanders 2003, pp. 426, 431–432). *Monardella stoneana* often grows together in clumps of one to four individual plants. As the number of plants within a clump cannot be reliably distinguished without exposing the roots, the species is usually counted by clumps rather than as individual plants.

Habitat

Monardella stoneana occurs in cypress forest and chaparral habitats on banks of ephemeral washes in canyons where surface water flows for usually less than 48 hours after a rain event (Elvin and Sanders 2003, p. 430; SANDAG 1995). It is often found with *Baccharis sarothroides* (broom baccharis) and Cupressus (cypress) species (CNDDB 2010b). It is most commonly found in canyon bottoms and north-facing slopes, and along bends of meandering drainages (Elvin and Sanders 2003, p. 426). Many of the streams where *M. stoneana* grows hold water for up to several months during the rainy season (Elvin and Sanders 2003, p. 426). *Monardella stoneana* is found on rockier substrate than *M. viminea,* often between spaces in stones or boulders along the creek bed (Elvin and Sanders 2003, p. 426; City of San Diego 2005, p. 3; City of San Diego 2008, p. 4).

The chaparral habitat that *Monardella stoneana* favors benefits from small or managed fires that clear out dead or encroaching scrub vegetation and reduce nonnative species (Minnich 1983, p. 1290). Chaparral is more resistant to fire than coastal sage scrub, due to strong recruitment and effective germination after repeated fire events (Keeley 1987, p. 439; Tyler 1995, p. 1009). As with *M. viminea,* there are two ways in which fire can negatively impact *M. stoneana.* First, an increased frequency of fires of all sizes can result in type conversion or invasion of nonnative grasses into chaparral habitats that can choke out native vegetation, including shrubs associated with *M. stoneana.* This is a habitat-based effect. Second, large or unmanaged fires (megafire) can be a particular threat to a narrow endemic species like *M. stoneana* because a single megafire could eliminate a large proportion of individual plants within the extant range of the species. Rebman and Dossey (2006b, p. 2) reported that *M. viminea* is capable of resprouting after fire; we expect the same to be true of *M. stoneana.* Additional information is needed on the role of fire in *M. stoneana* habitat, particularly within riparian portions of canyons, and the effects of fire on clumps of *M. stoneana.* Please see our request for information in the Public Comments section above.

Life History

Very little is known about the germination and establishment of *Monardella stoneana.* Mature plants of the closely related *M. viminea* flower readily, with inflorescences persisting for 10 to 12 weeks (Elvin and Sanders 2003, pp. 430–431). Plants are short-lived perennials producing a new cohort of aerial stems each year from a persisting perennial root structure. Plants of this species are not known to be rhizomatous; however, root masses may become separated over time, resulting in adjacent genetically identical but separate plants.

No pollination studies are known to exist for *Monardella stoneana;* however, other *Monardella* taxa are visited by butterfly and bee species (Elvin 2003, p. 2). Bees collected from the closely related *M. linoides* include wasp-like bees (*Hylaeus* sp.), mason bees (*Osmia* spp. or *Chalicodoma* spp.), and miner bees (*Anthophora* spp.) (Hurd 1979, pp. 1762, 1765, 2042, 2073, and 2164). Successful reproduction of flowering plants depends on pollinator abundance and effectiveness (Javorek *et al.* 2002, p. 350). Therefore, pollinator movement and availability should be considered when assessing likely population distributions and survival, and habitat needs of *M. stoneana.*

Geographic Range and Status

Monardella stoneana is a geographically narrow endemic restricted to southwestern San Diego County, in the United States, and to northern portions of Baja California, Mexico (Figure 1). All eight extant occurrences and one extirpated occurrence (Table 1) are found in the vicinity of Otay Mesa, Otay Mountain, and Tecate Peak (CNDDB 2010b). *Monardella stoneana* occurs on lands owned by the BLM, the City of San Diego, the State of California, the CDFG, and lands under private ownership. The use of the word occurrence, as described in the *Geographic Range and Status* section for *M. viminea,* also applies to *M. stoneana.*

A total of two occurrences now considered *Monardella stoneana* were known and extant at the time of listing (63 FR 54938; October 13, 1998). According to the most recent report from the CNDDB, eight occurrences of *M. stoneana* are currently extant, with additional clumps easily visible in Mexico just across the border from California (CNDDB 2010b, EOs 7, 8). Due to the rarity of juveniles of this species and the closely related *M. viminea,* and the fact that most occurrences were discovered less than 5 years after listing, we believe all occurrences were extant at the time of listing.

There is little information available on the population trends of most *Monardella stoneana* occurrences since listing. Only two EOs receive regular monitoring, EO 1 (Marron Valley) and EO 5 (Buschalaugh Cove). The Buschalaugh Cove occurrence, located on land owned by the City of San Diego, declined from two clumps in 2004 to one clump in 2006, and then no clumps in 2008 (City of San Diego 2004, p. 3; City of San Diego 2006, p. 8; City of San Diego 2008, p. 2). The last remaining clump at this occurrence was burned as a result of the 2007 Harris Fire and has not been located by monitors since that time (City of San Diego 2008, p. 2; City of San Diego 2009, p. 2; City of San Diego 2010, p. 256). The Marron Valley occurrence, also located on land owned by the City of San Diego, appears to have declined slightly from 120 individuals in 2002, to 95 in 2010 (City of San Diego 2010a, p. 238; City of San Diego 2010b, p. 2). However, the City of San Diego acknowledges that its monitoring methods are not always consistent across years (City of San Diego 2005, pp. 2–3), so the differences could be an artifact of inconsistencies in monitoring. Since 2005, the population has remained steady at 95 plants (City of San Diego 2010b, p. 2).

Little information is available on the other occurrences. Reports from the CNDDB state that the Otay Lakes occurrence declined from 200 clumps in 1989, to 25 plants in 2005 (EO 4; CNDDB 2010b, p. 4); these are the only two surveys we are aware of for this occurrence. According to the CNDDB, all other occurrences are still extant (CNDDB 2010b). No surveys have been conducted in Mexico; the only known occurrences in Mexico are those visible across the border, as discussed above.

Summary of Factors Affecting *Monardella stoneana*

As stated above in the Summary of Factors Affecting *Monardella viminea* section, the original listing rule for the *M. linoides* ssp. *viminea* contained a discussion of these five factors, as did the 2008 5-year review. However, the reader must bear in mind that both of these documents included discussions regarding *M. linoides* ssp. *viminea,* without separation, or recognition of *M. stoneana* or *M. viminea.* Below, each of

the five listing factors is discussed for *M. stoneana* specifically.

A. The Present or Threatened Destruction, Modification, or Curtailment of Its Habitat or Range

Urbanization/Development

The original listing rule identified urban development as one of the most important threats to *Monardella linoides* ssp. *viminea* (63 FR 54938; October 13, 1998). However, the urbanization and development threats described in the 1998 listing rule apply only to those occurrences now attributable to *M. viminea.*

Monardella stoneana occurs almost entirely on publicly owned land managed by the BLM (approximately 34 percent), CDFG (approximately 55 percent), or City of San Diego (approximately 7 percent). These occurrences are protected from habitat destruction or modification due to urban development because they are conserved and managed within the BLM's Otay Mountain Wilderness or the City of San Diego's and CDFG's preserves under the MSCP; this contrasts with *M. viminea* occurrences conserved by the City of San Diego that do not have management plans (see also Factor D discussion below and Factor D discussion for *M. viminea*).

The *Monardella stoneana* occurrences located on the two sections of land owned by the City of San Diego have been set aside for conservation purposes and are undevelopable. The one occurrence located on private land at the Otay Lakes site is contained within lands set aside as part of the Otay Ranch Preserve, and thus protected from development. Based on the lack of threats from development on land currently occupied by *M. stoneana,* we do not believe that urban development is a threat to this species now, nor will it be in the foreseeable future, within the United States. While we are not aware of any proposed development in areas occupied by *M. stoneana* in Mexico, we are also not aware of the extent of the species' distribution in Mexico. Thus, the best scientific evidence does not support urbanization as a significant threat to *M. stoneana* in Mexico.

Sand and Gravel Mining

Sand and gravel mining activities were identified as threats to *Monardella linoides* ssp. *viminea* in the 1998 listing rule and the recent 5-year review (63 FR 54938, October 13, 1998; Service 2008). As was the case for urban development, the threats described in the 1998 listing rule apply only to those occurrences now attributable to *M. viminea.* We are not aware of any historical mining that has impacted occurrences of *M. stoneana,* nor are we aware of any plans for future mining activities that may impact the species. Therefore, we believe that sand and gravel mining activities do not pose a threat to the continued persistence of *M. stoneana.*

Altered Hydrology

The original listing rule identified altered hydrology as a threat to *Monardella linoides* ssp. *viminea* (63 FR 54938; October 13, 1998). *Monardella viminea* depends on a natural hydrological system to maintain the secondary alluvial benches and streambeds on which it grows (Scheid 1985, pp. 30–31, 34–35); we believe the closely related *M. stoneana* does as well. Upstream development can disrupt this regime by increasing storm runoff, which can result in erosion of stream banks and rocky cobble upon which *M. stoneana* grow. Floods also have the potential to wash away plants much larger than *M. stoneana,* as has occurred with *M. viminea* in Lopez Canyon (Kelly and Burrascano 2001, pp. 2–3). On the other hand, decreased flows increase the possibility of invasion by nonnative species into the creek bed, which can smother seedling and mature plants and disrupt growth processes (Rebman and Dossey 2006a, p. 12).

Habitat characteristics for *Monardella stoneana* have not been described in detail, but, as with *M. viminea,* alteration of hydrology may disrupt the natural processes and habitat characteristics that support *M. stoneana.* However, *M. stoneana* reportedly "most often grows among boulders, stones, and in cracks of the bedrock of these intermittent streams in rocky gorges" (Elvin and Sanders 2003, p. 429), which suggests the habitat of *M. stoneana* may be largely resistant to erosion events. More importantly, given the lack of urban development in the Otay area where the majority of the plants occur, substantial alteration of hydrology has not occurred to date and is not expected to occur in the foreseeable future, and is thus not a threat to *M. stoneana.*

Fire and Type Conversion

As discussed under Factor A for *Monardella viminea,* our understanding of the role of fire in fire-dependent habitat has changed since the time of listing, and the intensity of wildfire and frequency of megafires has increased compared to historical regimes. However, *M. stoneana* is associated with different habitat types than *M. viminea.* While *M. viminea* occurs in coastal sage scrub and riparian scrub, *M. stoneana* is found primarily in chaparral habitats.

Chaparral is more resistant to fire than coastal sage scrub, due to strong recruitment and effective germination after repeated fire events (Keeley 1987, p. 439; Tyler 1995, p. 1009). Chaparral is considered a crown-fire ecosystem, meaning ecosystems which "have endogenous mechanisms for recovery that include resprouting from basal burrs and long-lived seed banks that are stimulated to germinate by fire" (Keane *et al.* 2008, p. 702). These ecosystems are also resilient to high-intensity burns (Keeley *et al.* 2008, p. 1545).

The fire regime in Baja California, Mexico, where some *Monardella stoneana* occurs, has not undergone the same fire suppression activities that have occurred in the United States. Some researchers claim that the fire regime of chaparral growing in Baja California is thus not affected by megafires due to a lack of fire suppression activities (Minnich and Chou 1997, Minnich 2001). Nevertheless, Keeley and Zedler (2009, p. 86) believe that the fire regime in Baja California still mirrors that of Southern California, similarly consisting of "small fires punctuated at periodic intervals by large fire events" Therefore, we expect that impacts from fire in Baja California will be similar to that in San Diego County.

Despite the resiliency of chaparral ecosystems to fire events, chaparral, like coastal sage scrub, has been experiencing type conversion in many areas in southern California. As with coastal sage scrub, chaparral habitat is also being invaded by nonnative species (Keeley 2006, p. 379). Nonnative grasses sprout more quickly after a fire than chaparral species; this process is exacerbated by increased fire intervals (Keeley 2001, pp. 84–85).

However, monitoring data from the MSCP Rare Plant Field Surveys by the City of San Diego indicate that type conversion is not taking place in chaparral habitats surrounding occurrences of *Monardella stoneana.* For the past decade, the City of San Diego has been monitoring the occurrences of *M. stoneana* on City lands, documenting their general habitats and assessing disturbances and threats. In the City of San Diego 2006 report, the Otay Lakes occurrence of *M. stoneana* (one clump comprised of two individuals) was reported as having "fair to good" habitat, with monitors noting that threats occurred, such as encroachment of tamarisk (*Tamarisk* spp.) and other nonnative plants (10 percent cover), and immigrant trails

(City of San Diego 2006, p. 8). This occurrence was lost after the 2006 survey, as described in the *Geographic Range and Status* section of this proposed rule. Although the 2008 and 2010 survey reports for the Otay Lakes site describe habitat disturbances such as type conversion due to fire frequency and invasive species (particularly nonnative grasses) (City of San Diego 2008, p. 2; City of San Diego 2010, p. 5), the surveys also indicate that the percent cover of native species has increased from 2008 to 2010 (from 23 to 42 percent), while the percent cover of nonnative species has increased (from 30 to 44 percent) (City of San Diego 2008, p. 1; City of San Diego 2010; p. 5). The most recent survey report (2010) described the habitat at this site as "fair to good" (City of San Diego 2010, p. 254).

For the Marron Valley site, the MSCP Rare Plant Field Surveys conducted by the City of San Diego recorded 95 individuals of *Monardella linoides* ssp. *viminea* (now *M. stoneana*) in its 2006 survey report, which was unchanged in survey results from 2008 to 2010 (City of San Diego 2006, p. 1; City of San Diego 2008, p. 1; City of San Diego 2009, p.1; City of San Diego, p. 5). Habitat at the Marron Valley site was characterized as "fair to good" for 2008 through 2010 (City of San Diego 2008, p. 2; City of San Diego 2010, p. 11). As with the Otay Lakes location, type conversion due to frequent fire (Factor A) and invasion of nonnative grasses was described as a disturbance/stressor to the *M. stoneana* habitat (City of San Diego 2008, p. 2; City of San Diego 2009, p. 2). Nonetheless, recent surveys indicate that the percent ground cover by native species at the Marron Valley site (EO 1) has increased from 2008 to 2010 (from 26 to 32 percent), while the percent ground cover by nonnative species has also increased (from 15 to 22 percent) (City of San Diego 2008, p. 1; City of San Diego 2010; p. 5). While no habitat assessment surveys are available for other *M. stoneana* occurrences on Otay Mountain or near Tecate Peak, we would expect the results to be similar to those from the Marron Valley and Otay Lakes occurrences, as they occur in the same or similar habitat types (SANDAG 1995).

Zedler *et al.* (1983, p. 816) concluded that short-interval fires on Otay Mountain will lead to an increase in herbs and subshrubs given their observation that the "common pattern after chaparral fires, like that of 1979 [on Otay Mountain], is for native and introduced annual herbs to dominate for the 1st yr and then gradually decline as the cover of shrub and subshrubs inceases [sic]." Additionally, monitoring data for *Monardella stoneana* has not recorded the same rapid increases in nonnative vegetation as have occurred in habitat where *M. viminea* grows (City of San Diego 2008, p. 1; City of San Diego 2009; p. 1). While several *M. viminea* occurrences have been extirpated due to invasion of nonnative vegetation (see Factor A discussion for *M. viminea* above), no occurrences of *M. stoneana* have been similarly affected.

Nonetheless, fire is still a stressor to *Monardella stoneana* habitat and many other sensitive habitats throughout southern California. To this end, on land owned and managed by the CDFG and BLM, which contain approximately 88 percent of all occurrences of *M. stoneana,* fire management is provided by CAL FIRE. CAL FIRE is an emergency response and resource protection department. The CAL FIRE protects lives, property, and natural resources from fire, and it protects and preserves timberlands, wildlands, and urban forests. The CAL FIRES's varied programs work together to plan protection strategies incorporating concepts of the National Fire Plan, the California Fire Plan, individual CAL FIRE Unit Fire Plans, and Community Wildfire Protection Plans (CWPPs). Fire Plans outline the fire situation within each CAL FIRE Unit, and CWPPs do the same for communities (CAL FIRE 2011a, p. 1; County of San Diego 2011a). Each plan identifies prevention measures to reduce risks, informs and involves the local communities in the area, and provides a framework to diminish potential wildfire losses and implement all applicable fire management regulations and policies (CAL FIRE 2011b; County of San Diego 2011a). Planning includes other State, Federal, and local government agencies as well as Fire Safe Councils (CAL FIRE 2011a, p. 1). Cooperative efforts via contracts and agreements between State, Federal, and local agencies are essential to respond to wildland fires (CAL FIRE 2011a, p. 1). Because of these types of cooperative efforts, fire engines and crews from many different agencies may respond at the scene of an emergency (CAL FIRE 2011a, p. 1); however, CAL FIRE typically takes the lead with regard to planning for megafire prevention, management, and suppression, and CAL FIRE is in charge of incident command during a wildfire.

The San Diego County Fire Authority (SDCFA), local governments, and CAL FIRE cooperatively protect 1.42 million ac (0.6 million ha) of land with 54 fire stations throughout San Diego County (County of San Diego 2011b, p. 1). Wildfire management plans and associated actions can help to reduce the impacts of type conversion due to frequent fire on natural resources, including *M. stoneana.*

Therefore, based on the best available scientific and commercial information, type conversion due to more frequent fire does not pose a threat to *M. stoneana* or its associated plant communities now or in the foreseeable future. The stress of frequent fire on *M. stoneana* is further alleviated by management actions undertaken by CAL FIRE. More intense fire, however, could pose a threat to individual clumps of *M. stoneana;* impacts to clumps of *M. stoneana* from intense fire events are discussed below under Factor E.

Summary of Factor A

We evaluated several factors with the potential to destroy, modify, or curtail *Monardella stoneana*'s habitat or range, including urban development, sand and gravel mining, type conversion due to frequent fire, and altered hydrology. Based on our review of the best available scientific and commercial information, we conclude that *M. stoneana* is not threatened by the present or threatened destruction, modification, or curtailment of its habitat or range, either now or in the foreseeable future.

B. Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

To our knowledge, no commercial use exists for *Monardella stoneana.* The 1998 listing rule for *Monardella linoides* ssp. *viminea* suggested that professional and private botanical collecting could exacerbate the extirpation threat to the subspecies due to botanists favoring rare or declining species (63 FR 54938; October 13, 1998). However, we are not currently aware of any interest by botanists in collecting *M. stoneana.* Therefore, we do not believe that overutilization for commercial, recreational, scientific, or educational purposes constitutes a threat to this species, either now or in the foreseeable future.

C. Disease or Predation

Neither disease nor predation was known to be a threat affecting *Monardella linoides* ssp. *viminea* (63 FR 54938; October 13, 1998) at the time of listing. Data from the CNDDB (CNDDB 2010b) list grazing as a potential threat for the *M. stoneana* occurrence located on the Otay Ranch Preserve (EO 4). However, we have no other information quantifying the extent of this grazing and its impact on this occurrence. Therefore, based on the best available

scientific and commercial information, neither disease nor herbivory constitutes a threat to *M. stoneana,* either now or in the foreseeable future.

D. The Inadequacy of Existing Regulatory Mechanisms

At the time of listing, regulatory mechanisms identified as providing some level of protection for *Monardella linoides* ssp. *viminea* included: (1) The Act in cases where *M. linoides* ssp. *viminea* co-occurred with a Federally listed species; (2) California Endangered Species Act (CESA), as the species was listed as endangered in California in 1979; (3) the California Environmental Quality Act (CEQA); (4) implementation of conservation plans pursuant to California's Natural Community Conservation Planning Act; (5) local laws and regulations; and (6) enforcement of Mexican laws (63 FR 54938; October 13, 1998). The listing rule provided an analysis of the potential level of protection provided by these regulatory mechanisms (63 FR 54938; October 13, 1998). With the proposed separation of *M. viminea* from *M. stoneana,* we have re-evaluated current protective regulatory mechanisms for *M. stoneana,* as discussed below. However, as with *M. viminea,* protections afforded to *M. stoneana* under the Act as part of *M. linoides* ssp. *viminea,* the currently listed entity, would continue to apply only if we determine to retain listed status for *M. stoneana.* Therefore, for purposes of our analysis, we do not include the Act as an existing regulatory mechanism that protects *M. stoneana.* We do note that *M. stoneana* would likely continue to receive protection indirectly through habitat conservation plans approved under section 10 of the Act and Natural Community Conservation Plans (NCCPs) approved under the State of California that will cover *M. stoneana* even if the species is not Federally listed.

Federal Regulations

National Environmental Policy Act (NEPA)

All Federal agencies are required to adhere to the National Environmental Policy Act (NEPA) of 1970 for projects they fund, authorize, or carry out. The Council on Environmental Quality's regulations for implementing NEPA (40 CFR 1500–1518) state that in their environmental impact statements agencies shall include a discussion on the environmental impacts of the various project alternatives (including the proposed action), any adverse environmental effects which cannot be avoided, and any irreversible or irretrievable commitments of resources involved (40 CFR 1502). NEPA itself is a disclosure law that provides an opportunity for the public to submit comments on a particular project and propose other conservation measures that may directly benefit listed species; however, it does not impose substantive environmental mitigation obligations on Federal agencies. Any such measures are typically voluntary in nature and are not required by the statute. Activities on non-Federal lands are also subject to NEPA if there is a Federal nexus.

Wilderness Act and Federal Land Policy and Management Act

Monardella stoneana is a BLM-designated sensitive species (BLM 2010, p. 8). BLM-designated sensitive species are those species requiring special management consideration to promote their conservation and reduce the likelihood and need for future listing under the Act. This status makes conservation of *M. stoneana* a management priority in the Otay Mountain Wilderness, in which approximately 34 percent of *M. stoneana* occurs.

The Federal Land Policy and Management Act of 1976 (FLPMA) (43 U.S.C. 1701 *et seq.*) governs the management of public lands under the jurisdiction of the BLM. The legislative goals of FLPMA are to establish public land policy; to establish guidelines for its [BLM's] administration; and to provide for the management, protection, development, and enhancement of the public lands. While FLPMA generally directs that public lands be managed on the basis of multiple use, the statute also directs that such lands be managed to "protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values; * * * [to] preserve and protect certain public lands in their natural condition; [and to] * * * provide food and habitat for fish and wildlife * * * ." (43 U.S.C. 1701(a)(8)). Although the BLM has a multiple-use mandate under the FLPMA which allows for grazing, mining, and off-road vehicle use, the BLM also has the ability under the FLPMA to establish and implement special management areas such as Areas of Critical Environmental Concern, wilderness areas, research areas, and so forth. BLM's South Coast Resource Management Plan covers the San Diego County area.

The Otay Mountain Wilderness Act (1999) (Pub. L. 106–145) and BLM management policies provide protection for all *Monardella stoneana* occurring within the Otay Mountain Wilderness. The Otay Mountain Wilderness Act provides that the Otay Mountain designated wilderness area (*i.e.,* Otay Mountain Wilderness; 18,500 ac (7,486 ha)) will be managed in accordance with the provisions of the Wilderness Act of 1964 (16 U.S.C. 1131 *et seq.*). The Wilderness Act of 1964 strictly limits the use of wilderness areas, imposing restrictions on vehicle use, new developments, chainsaws, mountain bikes, leasing, and mining, in order to protect the natural habitats of the areas, maintain species diversity, and enhance biological values. Lands acquired by BLM within the Otay Mountain Wilderness boundaries become part of the designated wilderness area and are managed in accordance with all provisions of the Wilderness Act and regulations pertaining to the Wilderness Act.

The Memorandum of Understanding (MOU) between the Service, the BLM, the County of San Diego, the City of San Diego, SANDAG, and the CDFG, was issued in 1994 in conjunction with the development of the County of San Diego Subarea Plan under the MSCP for cooperation in habitat conservation planning and management (BLM 1994, pp. 1–8), and applies to the Otay Mountain Wilderness because it falls entirely within the boundary of this subarea plan. The MOU (BLM 1994, p. 3) details BLM's commitment to manage lands to "conform with" the County of San Diego Subarea Plan, which in turn requires protection of *M. stoneana* (see Habitat Conservation Plans section below). Additionally, pursuant to the MOU, private lands acquired by BLM will be evaluated for inclusion within the designated wilderness area, and if the lands do not meet wilderness qualifications, these lands would be included in the MSCP conservation system (BLM 1994, p. 3). Therefore, protections provided by the County of San Diego Subarea Plan under the MSCP (see Habitat Conservation Plans section below) also apply to the Otay Mountain Wilderness.

Protections for *Monardella stoneana* are also included in the BLM's draft of the South Coast Resource Management Plan (SCRMP). Fire management activities occur on Otay Mountain as part of the BLM's current (1994) South Coast Resource Management Plan. In addition, at some point in the future on an as-needed basis, additional brush clearing and other fuels modifications, including burning, may occur.

The BLM is collaborating with the Service to revise the South Coast Resource Management Plan, which covers the Otay Mountain Wilderness.

The draft revised plan specifically includes a goal of restoring fire frequency to 50 years through fire prevention or suppression and prescribed burns; once an area has not burned for 50 years, the plan allows for annual prescribed burning of up to 500 ac (200 ha) in the Otay Mountain Wilderness (BLM 2010, pp. 4–171—4–172). We believe the management regime undertaken by BLM under the SCRMP is adequate to protect the species and its habitat from the threat of type conversion due to frequent fire (Factor A).

State and Local Regulations

Native Plant Protection Act (NPPA) and California Endangered Species Act (CESA)

Under provisions of NPPA (Division 2, chapter 10 section 1900 *et seq.* of the CFG code) and CESA (Division 3, chapter 1.5, section 2050 *et seq.* of the CFG code), the CDFG Commission listed *Monardella linoides* ssp. *viminea* as endangered in 1979. Currently, the State of California recognizes the State-listed entity as *M. viminea.* No such recognition is afforded *M. stoneana* under CESA. Though not listed under CESA, the CDFG does recognize *M. stoneana* as a rare and imperiled plant (lists S1.2 and 1B.2).

California Environmental Quality Act (CEQA)

The California Environmental Quality Act (CEQA) (Public Resources Code 21000–21177) and the CEQA Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000–15387) requires State and local agencies to identify the significant environmental impacts of their actions and to avoid or mitigate those impacts, if feasible. CEQA applies to projects proposed to be undertaken or requiring approval by State and local government agencies, and the lead agency must complete the environmental review process required by CEQA, including conducting an Initial Study to identify the environmental impacts of the project and determine whether the identified impacts are significant; if significant impacts are determined, then an Environmental Impact Report must be prepared to provide State and local agencies and the general public with detailed information on the potentially significant environmental effects (California Environmental Resources Evaluation System, 2010). "Thresholds of Significance" are comprehensive criteria used to define environmentally significant impacts based on quantitative and qualitative standards and include impacts to biological resources such as candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFG or the Service; or any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFG or Service (CEQA Handbook, Appendix G, 2010). Defining these significance thresholds helps ensure a "rational basis for significance determinations" and provides support for the final determination and appropriate revisions or mitigation actions to a project in order to develop a mitigated negative declaration rather than an Environmental Impact Report (Governor's Office of Planning and Research, 1994, p. 5). Under CEQA, projects may move forward if there is a statement of overriding consideration. If significant effects are identified, the lead agency has the option of requiring mitigation through changes in the project or to decide that overriding considerations make mitigation infeasible (CEQA section 21002). Protection of listed species through CEQA is, therefore, dependent upon the discretion of the lead agency involved.

Otay Mountain Ecological Reserve

Fifty-five percent of *Monardella stoneana* occurrences are found on the Otay Mountain Ecological Reserve, which is owned by the State of California and managed by CDFG. The Reserve is managed in a manner consistent with protections applying to the Otay Mountain Wilderness Area (T. Nelson 2011, pers. comm.). In the case of Otay Mountain Ecological Reserve, those measures include protection from development, watershed alteration, and fire management. Fire management prevents stress on *M. stoneana* habitat due to type conversion caused by too frequent fires (Factor A).

The Natural Community Conservation Planning (NCCP) Act

The NCCP program is a cooperative effort between the State of California and numerous private and public partners with the goal of protecting habitats and species. An NCCP identifies and provides for the regional or area-wide protection of plants, animals, and their habitats, while allowing compatible and appropriate economic activity. The program began in 1991 under the State's NCCP Act (CFG Code 2800–2835). The primary objective of the NCCP program is to conserve natural communities at the ecosystem scale while accommodating compatible land uses (*http://www.dfg.ca.gov/habcon/nccp/*). Regional NCCPs provide protection to Federally listed species by conserving native habitats upon which the species depend. Many NCCPs are developed in conjunction with HCPs prepared pursuant to the Act. The City and County of San Diego Subarea Plans under the MSCP are discussed below under the discussion of the Act.

San Diego Multiple Species Conservation Plan (MSCP)

Monardella linoides ssp. viminea is a covered species under the San Diego Multiple Species Conservation Program (MSCP) (City of San Diego 1997, Table 3–5). The most recent revision of the Rare Plant Monitoring Review lists *M. stoneana* as a covered species and recognized narrow endemic (McEachern *et al.* 2007, p. 33). The MSCP is a regional conservation plan covering 582,000 acres in southwestern San Diego County and is designed to protect sensitive species and habitats within the boundaries of the plan. The MSCP covers 582,243 ac (235,625 ha) and 12 jurisdictions. Each jurisdiction is responsible for developing its own subarea plan to implement the regional MSCP within that jurisdiction.

Known occurrences of *Monardella stoneana* located within the City of San Diego Subarea Plan under the MSCP include the occurrence just east of Buschalaugh Cove on the lower Otay Reservoir (EO 5) and a portion of the occurrence in an unnamed tributary of Cottonwood Creek east of Marron Valley (EO 6). The City of San Diego MSCP Subarea Plan requires preservation of 100 percent of the occurrences on city-owned lands in the Otay area. City-owned lands represent a total of 7 percent of habitat for the species. Additional impact avoidance and other measures are required under the City's plan to protect narrow endemic species, such as *M. stoneana,* and the subarea plan includes area-specific management directives designed to maintain long-term survival in the planning area (Service 1997, pp. 104–105). Under the City of San Diego Subarea Plan, impacts to narrow endemic plants, including *M. stoneana,* inside the MHPA (Multi-Habitat Protection Area) will be avoided. Additionally, the City has completed a fire management plan for the Marron Valley area. This plan outlines as major goals the reduction of too-short fire return intervals. It also provides for protection of native plant community structure and biodiversity, including protection for *M. stoneana* and the canyon where it is found (EO 1) (Tierra Data 2006, pp. 4–1–4–2).

The County of San Diego Subarea Plan covers 252,132 ac (102,035 ha) in

the southwestern portion of the County's unincorporated lands, and is implemented in part by the Biological Mitigation Ordinance (BMO). As discussed in the Wilderness Act and Federal Land Policy and Management Act section above, protections provided by the County of San Diego Subarea Plan under the MSCP also apply to the Otay Mountain Wilderness, and thus are discussed here. The County of San Diego Subarea plan outlines the specific criteria and requirements for projects within the MSCP subarea plan's boundaries to alleviate threats from development and increased fire frequency (see MSCP, County of San Diego Subarea Plan (2007) and County of San Diego Biological Mitigation Ordinance (Ord. Nos. 8845, 9246) 1998). The BMO requires that all impacts to narrow endemic plant species, including *Monardella stoneana,* be avoided to the maximum extent practicable (City of San Diego 2007, p. 11). All projects within the County's MSCP subarea plan boundaries must comply with both the MSCP requirements and the County's policies under CEQA.

The private land on Otay Mountain where *Monardella stoneana* is known to occur is part of Otay Ranch; this land is zoned as "Open Space" by the County of San Diego and identified as part of the County of San Diego's preserve for the MSCP. Only 4 percent of *M. stoneana* habitat occurs on private land. This land is also covered by the Otay Ranch Phase 2 Resource Management Plan (Otay Ranch 2002), approved by the County in 2002. This plan provides for the phased conservation and development of lands in southern San Diego County. A large portion of land is identified for conservation and will be dedicated as associated development occurs. The Otay Ranch Phase 2 Management Plan provides protection for 100 percent of *M. stoneana* occurring on the preserve (Otay Ranch 2002, p. 144) and includes provisions to manage the 4 percent of *M. stoneana* habitat that is on private land in a way that will benefit this species (Otay Ranch 2002, pp. 18–19, 52–53).

Additionally, the County of San Diego Resource Protection Ordinance (RPO) (County of San Diego 2007) applies to unincorporated lands in the County, both within and outside of the MSCP subarea plan boundaries. The RPO identifies restrictions on development to reduce or eliminate impacts to natural resources, including wetlands, wetland buffers, floodplains, steep slope lands, and sensitive habitat lands. Sensitive habitat lands are those that support unique vegetation communities or those that either are necessary to support a viable population of sensitive species (such as *M. stoneana*), are critical to the proper functioning of a balanced natural ecosystem, or serve as a functioning wildlife corridor (County of San Diego, 2007, p. 3). They can include areas that contain maritime succulent scrub, southern coastal bluff scrub, coastal and desert dunes, calcicolous scrub, and maritime chaparral, among others. Impacts to RPO sensitive habitat lands are only allowed when all feasible measures have been applied to reduce impacts and when mitigation provides an equal or greater benefit to the affected species (County of San Diego, 2007, p. 13).

Summary of Factor D

On City and County lands occupied by *Monardella stoneana* or containing its habitat, we believe the County of San Diego Resource Protection Ordinance, the Biological Mitigation Ordinance, and the Subarea plans for the City and County of San Diego provide mechanisms to conserve *M. stoneana* in association with new development or other proposed projects, and they provide mechanisms for the creation of biological reserves. The County of San Diego subarea plan provides protective mechanisms for the small percentage of *M. stoneana* on private land for new development or other proposed projects, and includes provisions for monitoring and management through development of location-specific management plans. Unlike for habitat containing *M. viminea,* the City of San Diego has developed final monitoring and management plans for *M. stoneana.* Conservation measures addressing stressors from type conversion due to frequent fire are thus identified, and are being carried out at the Marron Valley occurrence, which is the only city-owned land where *M. stoneana* is extant. However, as only a small percentage of *M. stoneana* occurs on city-owned lands, these actions on their own, although providing a benefit to the one occurrence on city-owned land, are not enough to protect the species as a whole.

On land owned and managed by the CDFG and BLM, which contain approximately 88 percent of all occurrences of *Monardella stoneana,* fire management is provided by CAL FIRE, and further protection of natural resources on state lands is provided by management conducted consistent with the Wilderness Act.

Based on our review of the best available scientific and commercial information, we conclude *M. stoneana* is not threatened by inadequate existing regulatory mechanisms. Federal, State, and local regulatory mechanisms help to reduce wildfire impacts, primarily to property and human safety; they do not adequately protect *M. stoneana* from direct mortality caused by megafires. However, the impact of megafire on wildlands is not a threat that is susceptible to elimination by regulatory mechanisms. Therefore, we do not find existing regulations inadequate to protect *M. stoneana,* now or in the foreseeable future.

E. Other Natural or Manmade Factors Affecting Its Continued Existence

Trampling

Trampling was identified as a threat to *Monardella linoides* ssp. *viminea* in the original listing rule (63 FR 54938; October 13, 1998). Trampling by pedestrians may result in damage or death to *M. stoneana* plants. The City of San Diego MSCP previously identified Off-Highway Vehicle (OHV) activity and disturbance from illegal immigrant activity as a major management issue (City of San Diego 1997, p. 52). All *M. stoneana* clusters occur in close proximity to the Mexico border, where historically many illegal immigrants cross on foot. Monitoring reports previously noted immigrant trails through *M. stoneana* habitat at the Otay Lakes location (City of San Diego 2006, p. 8). However, the recent border fence construction and other enforcement activities in the Otay Mountain Wilderness area have reduced illegal immigrant traffic (Ford 2010, p. 1), and thus potential impacts of trampling at the Otay Lakes, Marron Valley, and Otay Mountain locations. So while there may be some impacts due to trampling to individual plants, it is unlikely to occur at levels that would affect the status of the species. Based on the best scientific information, we believe that trampling (human disturbance activities) does not pose a significant risk to the persistence of *M. stoneana* now or in the foreseeable future.

Nonnative Plant Species

The listing rule identifies nonnative plants as a threat to *Monardella linoides* ssp. *viminea* (63 FR 54938; October 13, 1998). San Diego County habitats have been altered by invasion of nonnative species (Soule *et al.* 1992, p. 43). Nonnative grasses, which frequently grow more quickly than native species, can smother seedling and mature *M. viminea* and prevent natural growth (Rebman and Dossey 2006a, p. 12). The same effect is likely for *M. stoneana.* Monitors for the City of San Diego MSCP recorded invasive plants at the Marron Valley location in the 2008 and

2009 survey reports (City of San Diego 2008, p. 2; City of San Diego 2009, p. 1). At the Otay Lakes location, the invasive plant tamarisk was documented in 2006 (City of San Diego 2006, p. 8), and nonnative grasses were documented in 2008 and 2009 (City of San Diego 2008, p. 2; City of San Diego 2009, p. 2).

However, despite the presence of nonnative plants in the range of *Monardella stoneana,* monitoring reports have not recorded the same level of invasion by nonnative grasses that has occurred in the vicinity of *M. viminea.* As discussed under Factor A, the percent ground cover of nonnative and native plant species has increased between 2008 and 2010 at both Otay Lakes and Marron Valley. Additionally, the number of individual plants of *M. stoneana* at Marron Valley has not changed since 2006 (City of San Diego 2006, p. 1; City of San Diego 2008, p. 1; City of San Diego 2009, p. 1; City of San Diego 2010, p. 11). These observations are consistent with the observation of Minnich and Bahre (1995, p. 17) that generally, the ground cover of all herbaceous plants, including that of nonnative grasses, was absent or consisted of thinly scattered plants within the chaparral along the California-Baja California boundary. Furthermore, these monitored occurrences have not undergone the same increase in nonnative vegetation recorded at *M. viminea* occurrences in Sycamore Canyon and on MCAS Miramar. Therefore, based on the best available scientific information, we find that nonnative species do not constitute a threat to the continued existence of *M. stoneana.*

Small Population Size

The original listing rule identified the restricted range and small population size of *Monardella linoides* ssp. *viminea* as a threat as it increases the possibility of extinction due to chance events such as floods, fires, or drought, outside the natural variability of the ecosystem (63 FR 54938; October 13, 1998; Lande 1993, p. 912). With the split of *M. linoides* ssp. *viminea* into two entities, the magnitude of this threat would likely increase; however, we note that several additional *M. stoneana* occurrences have been discovered. Similarly, Prince (2009, p. 2) suggests that multiple undiscovered occurrences of *M. stoneana* may exist in the vicinity of Tecate Peak. This area has not been extensively surveyed, as it is difficult to access. Additional habitat may exist in Mexico; however, we are unaware of any surveys confirming the presence or absence of *M. stoneana* in Mexico, apart from plants seen directly across the border. Based on information in our files, these are the only occurrences in Mexico of which we are aware. However, suitable habitat and landscape conditions exist in Mexico, close to the current range of the species in the United States.

Of the 20 known occurrences of *Monardella linoides* ssp. *viminea* at the time of listing, only 2 were later considered to be *M. stoneana.* Subsequent surveys have identified additional occurrences, and *M. stoneana* is currently known from approximately eight occurrences in the Otay Mountains area (CNDDB 2010b). The number of plants in Mexico is unknown and has been minimally investigated. Plants across the border in Mexico are visible from at least two occurrences south of Otay Mountain, but these occurrences have not been formally surveyed. Additionally, the most recent survey for this area was in 2005 (CNDDB 2010a), so the continued existence of these Mexico occurrences and the number of clumps present cannot be confirmed.

Any decrease in occurrences may result in decreased reproductive opportunities and genetic exchange between canyons through pollination. However, effects from this threat may be less severe if more occurrences exist in Mexico than are currently known. However, we do not consider small population size alone sufficient to meet the information threshold indicating that the species warrants listing. In the absence of information identifying threats to the species and linking those threats to the rarity of the species, the Service does not consider rarity or small populations alone to be a threat. For example, the habitat supporting *M. viminea* faces significant threats from the impacts of fire, altered hydrologic regimes, and competition with nonnative plants. As discussed above, *M. stoneana* does not face such threats. A species that has always had small population sizes or been rare, yet continues to survive, is likely well equipped to continue to exist into the future. Many naturally rare species have persisted for long periods within small geographic areas, and many naturally rare species exhibit traits that allow them to persist despite their small population sizes. *Monardella stoneana* appears to have persisted for over two decades in the two occurrences known since the 1970s and 1980s, respectively (CNDDB 2010b; EOs 1 and 4); this is in contrast to *M. viminea* occurrences, many of which have undergone population declines during the same time period. The other seven occurrences were discovered in 2003 or later, so long-term data are not available; one of those seven occurrences has since been extirpated (EO 5). *Monardella stoneana* has not experienced a significant population decline since listing, nor have multiple occurrences been extirpated. One of two occurrences monitored by the City of San Diego (EO 1) has remained stable throughout the past decade of monitoring, though one occurrence (EO 5) containing one clump was extirpated (although the EO 5 occurrence contained a maximum of only two clumps since monitoring began in 2000). This is in contrast to *M. viminea,* which has experienced a loss of several populations since listing. Consequently, the fact that this species is rare and has small populations does not indicate that it is in danger of extinction now or in the foreseeable future. Therefore, though small population size may pose a threat to *M. stoneana,* it is not alone enough to cause the extinction of the species within the foreseeable future.

Fire

As discussed under Factor E for *Monardella viminea,* fire can impact individual plants. This is especially true of megafire events that cannot be controlled or ameliorated through management efforts. A narrow endemic such as *M. stoneana* could be especially sensitive to megafire events. One large fire could impact all or a large proportion of the entire area where the species is found, as occurred for *M. viminea* in the 2003 Cedar fire. However, as discussed in Factor E for *M. viminea,* the decline of the burned occurrences of *M. viminea* was not as severe as initially expected. We expect that *M. stoneana* would experience the same ability to sprout from the roots, as it is closely related to *M. viminea.*

Furthermore, despite the increased frequency of fire, *M. stoneana* has persisted through all large fires in the region. The GIS fire boundaries show that each occurrence of *M. stoneana* has been burned at least once in the past decade. In the past two decades, 8 of 9 EOs burned two or more times, and 4 occurrences burned three or more times. The only reports of damage are from EO 5, which lost its one remaining plant, and EO 4, which was "damaged" in a recent (unspecified) fire, but not extirpated (CNDDB 2010b). In the occasion that a fire impacts all of the occurrences, we anticipate that the effects to *M. stoneana* individuals would be comparable to *M. viminea,* where the best available information show individuals are recovering from having 98 percent of the occurrences on MCAS Miramar being burned in the 2003 Cedar Fire.

Given the increased frequency of megafires within Southern California ecosystems, and the inability of regulatory mechanisms to prevent or control megafire, we find that megafire does have the potential to impact occurrences of *Monardella stoneana.* However, given the species' persistence through past fires, and the ability of a closely related species to recover from direct impact by fires, we do not expect that megafire is a significant threat to individual *M. stoneana* plants now, nor is likely to become a threat in the foreseeable future.

Climate Change

As noted above in our status determination for *Monardella viminea,* a broad consensus exists among scientists that the earth is in a warming trend caused by anthropogenic greenhouse gases such as carbon dioxide (IPCC 2007). Researchers have documented climate-related changes in California (Croke *et al.* 1998, pp. 2128, 2130; Breshears *et al.* 2005, p. 15144). Predictions for California indicate prolonged drought and other climate-related changes will continue in the future (*e.g.,* Field *et al.* 1999, pp. 8–10; Lenihen *et al.* 2003, p. 1667; Hayhoe *et al.* 2004, p. 12422; Breshears *et al.* 2005, p. 15144; Seager *et al.* 2007, p. 1181; IPCC 2007, p. 9). Models are not yet powerful enough to predict what will happen in localized regions such as southern California and northern Baja California, but many scientists believe warmer, wetter winters and warmer, drier summers will occur within the next century (Field *et al.* 1999, pp. 2–3, 20). The impacts on species like *M. stoneana,* which depend on specific hydrological regimes, may be more severe (Graham 1997, p. 2).

Since approximately the time of listing in 1998, an extended drought in the region (San Diego County Water Authority 2010, p. 2) created unusually dry habitat conditions. From 2000 to 2009, at one of the closer precipitation gauges to the *Monardella stoneana* occurrences (Lake Cuyamaca, San Diego County, California), 8 of 10 years had precipitation significantly below normal (San Diego County Water Authority 2010, p. 2). This extended drought has cumulatively affected moisture regimes, riparian habitat, and vegetative conditions in and around suitable habitat for *M. stoneana,* increasing the stress on individual plants. As stated above, future climate changes may lead to similar, if not more severe, conditions.

The predicted drought could impact the dynamics of the streambeds where *Monardella stoneana* grows. Soil moisture and transportation of sediments by downstream flow have been identified as key habitat features required by *M. stoneana.* The species is characterized as being associated with areas of standing water after rainfall (Elvin and Sanders 2003, p. 426). Monitors for the City of San Diego have observed decreased plant health and increased dormancy of *Monardella* species in years with low rainfall (City of San Diego 2003, p. 3; City of San Diego 2004, p. 3). Specific analyses of population trends as correlated to rainfall are difficult due to inconsistent plant count methods (City of San Diego 2004, p. 67).

While drier conditions associated with climate change may result in increased fire frequency within some plant communities as discussed under Factor A, the effect of more arid conditions is not known on chaparral, the plant community associated with *Monardella stoneana.* According to Minnich and Bahre (1997, p. 20), fires in the chaparral of northern Baja California, Mexico, are smaller and more frequent than those observed across the border in southern California. Nonetheless, despite these differences in the present fire regimes within chaparral in California and Mexico, Minnich and Bahre (1997, p. 20) concluded that their "repeat photographs of the monument markers, field samples, repeat aerial photography, and fire history maps show that chaparral succession is similar across the international boundary between Jacumba [in California] and Tecate [in Mexico] and that chaparral succession along the border is similar to that found elsewhere in California." Except for a statistically significant correlation that early autumn rains cut short the fire season at its peak, Keeley and Fotheringham (2003, p. 235) did not find patterns between rainfall and burning for chaparral and coastal sage shrublands. As a result, increased aridity may have little effect on chaparral.

Preliminary information for *Monardella stoneana* does show that the effects of climate change on chaparral may be less than the effects on coastal sage scrub (see Climate Change section for *M. viminea* above). While we recognize that climate change and increased drought associated with climate change are important issues with potential effects to listed species and their habitats, the best available scientific evidence does not give specific evidence for us to formulate accurate predictions regarding climate change's effects to particular species, including *M. stoneana,* at this time. Therefore, we do not consider global climate change a current threat to *M. stoneana,* either now or in the foreseeable future.

Summary of Factor E

We found no evidence that other natural or manmade factors pose a significant threat to *M. stoneana.* Based on a review of the best available scientific and commercial data, trampling and nonnative invasive plant species are not a significant threat. We conclude based on the best available scientific information that *M. stoneana* could be affected temporarily by fire impacts associated with the death of individual plants; however, we do not consider this a threat to the continued existence of the species. Small population size could exacerbate other threats, but as there are none, this is not a factor; small population size in itself does not cause *M. stoneana* to be warranted for listing. In addition, BLM conducts ongoing management that provides a benefit to *M. stoneana.* Finally, with regard to the direct and indirect effects of climate change on individual *M. stoneana* plants, we have no information at this point to demonstrate that predicted climate changes pose a significant threat to the species now or in the foreseeable future.

Proposed Determination—*Monardella stoneana*

We have carefully assessed the best scientific and commercial information available regarding the past, present, and future threats to *Monardella stoneana.* Unlike *M. viminea, M. stoneana* has not undergone a dramatic decline in population size. While megafire and small population size may impact *M. stoneana,* these factors do not pose a threat to the continued existence of the species. Apart from those factors, we found no significant threats to *M. stoneana* related to Factors A, B, C, D, or E, as described above. We find that the best available information for Factor A (The Present or Threatened Destruction, Modification, or Curtailment of Its Habitat or Range), including information on the potential effects of urban development, sand and gravel mining, type conversion due to frequent fire, and altered hydrology, indicates that listing *M. stoneana* as endangered or threatened under the Act is not warranted based on the present or threatened destruction, modification, or curtailment of its habitat or range. To the extent that *M. stoneana* may be experiencing localized impacts, analysis of recent and current surveys of *M. stoneana* habitat in the Otay Mountain locations indicate that its habitat is

under protective status and remains in relatively good condition, with active management and monitoring activities. We found no available information concerning Factors B (Overutilization) and C (Disease or Predation) to indicate that listing *M. stoneana* as endangered or threatened under the Act is warranted. We find that the best available information concerning Factor D (Inadequacy of Existing Regulatory Mechanisms) indicates that listing the *M. stoneana* as endangered or threatened under the Act is not warranted based on inadequacy of existing regulations. We find that the best available information concerning Factor E (Other Natural or Manmade Factors Affecting Its Continued Existence) indicates that trampling and nonnative plants are not currently threats to the continued existence of *M. stoneana,* nor are they expected to be in the foreseeable future. We do not consider *M. stoneana's* small population size in and of itself a threat such that the species warrants listing, nor is it expected to be in the foreseeable future. A species like *M. stoneana* that has always had small population sizes or been rare, yet continues to survive, is likely well equipped to continue to exist into the future. Additionally, unlike *M. viminea, M. stoneana* has not undergone a dramatic decline in population size. We have no information to demonstrate that predicted climate changes will result in a significant threat to the species now or in the foreseeable future. Even though *M. stoneana* could be affected by megafire, we do not believe that megafire poses a significant threat to the existence of the species now or in the foreseeable future.

In conclusion, we have carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by *Monardella stoneana.* Our review of the information pertaining to the five threat factors does not support a conclusion that threats of sufficient imminence, intensity, or magnitude exist—either singly or in combination—to the extent that the species is in danger of extinction, or likely to become so within the foreseeable future, throughout all or a significant portion of its range. Therefore, based on the best available scientific information, we find *M. stoneana* does not warrant listing at this time. However, if we receive new information that alters our analysis, we will revisit and re-evaluate the status of *M. stoneana.* We are specifically seeking public comment on this determination. Please refer to the **ADDRESSES** section of this rule for information on where to submit your comments and materials concerning this proposed rule.

Critical Habitat—*Monardella viminea*

Due to the taxonomic split of *Monardella linoides* ssp. *viminea* into two distinct taxa (*Monardella viminea* (willowy monardella) and *Monardella stoneana* (Jennifer's monardella); see *Taxonomic and Nomenclatural Changes Affecting* Monardella linoides *ssp.* viminea section above), and our conclusions that *M. viminea* is endangered and *M. stoneana* is not warranted for listing, we are proposing revising critical habitat for *M. viminea.* If we subsequently determine based on the best available information that *M. stoneana* should be listed, we will propose critical habitat, if prudent, for *M. stoneana.*

Background

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

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

(a) Essential to the conservation of the species and

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

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

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

Critical habitat receives protection under section 7 of the Act through the requirement that Federal agencies insure, in consultation with the Service, that any action they authorize, fund, or carry out is not likely to result in the destruction or adverse modification of 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) would apply, but even in the event of a destruction or adverse modification finding, the obligation of the Federal action agency and the landowner 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 it was listed must contain physical and biological features which are essential to the conservation of the species and which may require special management considerations or protection. Critical habitat designations identify, to the extent known using the best scientific and commercial data available, those physical and biological features that are essential to the conservation of the species (such as space, food, cover, and protected habitat), focusing on the principal biological or physical constituent elements (primary constituent elements) within an area that are essential to the conservation of the species (such as roost sites, nesting grounds, seasonal wetlands, water quality, tide, soil type). Primary constituent elements are the elements of physical and biological features that are essential to the conservation of the species.

Under the Act, we can designate critical habitat in areas outside the geographical area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species. We designate critical habitat in areas outside the geographical area occupied by a species only when a designation limited to its range would be inadequate to ensure the conservation of the species. When the best available scientific data do not demonstrate that the conservation needs of the species require such additional areas, we will not designate critical habitat in areas outside the geographical area occupied by the species at the time of listing. An area currently occupied by

the species, but that was not occupied at the time of listing may, however, be essential to the conservation of the species and may be included in the critical habitat designation.

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 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, the species' most recent 5-year Review, or other unpublished materials and expert opinion or personal knowledge.

Habitat is dynamic, and species may move from one area to another over time. Climate change will be a particular challenge for biodiversity because the interaction of additional stressors associated with climate change and current stressors may push species beyond their ability to survive (Lovejoy 2005, pp. 325–326). The information currently available on the effects of global climate change and increasing temperatures does not make sufficiently precise estimates of the location and magnitude of the effects to enable us to accurately predict its impacts on the narrow habitat range of *Monardella viminea,* which is limited to the western portion of central San Diego County. We are also not currently aware of any climate change information specific to the habitat of *M. viminea* that would indicate what areas may become important to the species in the future. Therefore, we are unable to determine what additional areas, if any, may be appropriate to include in the critical habitat for this species to address the effects of climate change.

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 be required for recovery of the species. Areas that are important to the conservation of the species, both inside and outside the critical habitat designation, will continue to be subject to: (1) Conservation actions implemented under section 7(a)(1) of the Act, (2) regulatory protections afforded by the requirement in section 7(a)(2) of the Act for Federal agencies to insure their actions are not likely to jeopardize the continued existence of any endangered or threatened species, and (3) the prohibitions of section 9 of the Act if actions occurring in these areas may affect the species. Federally funded or permitted projects affecting listed species outside their designated critical habitat areas may still result in jeopardy findings in some cases. These protections and conservation tools will continue to contribute to recovery of this species. 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 at the time of these planning efforts calls for a different outcome.

Proposed Critical Habitat Designation for *Monardella viminea*

Physical and Biological Features

In accordance with sections 3(5)(A)(i) and 4(b)(1)(A) of the Act and regulations at 50 CFR 424.12, in determining which areas within the geographical area occupied at the time of listing to designate as critical habitat, we consider the physical and biological features essential to the conservation of the species which may require special management considerations or protection. These include, but are not limited to:

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

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

(3) Cover or shelter;

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

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

We derive the specific physical and biological features required for *Monardella viminea* from studies of this species' habitat, ecology, and life history as described below. We also reviewed monitoring reports from private firms, the City of San Diego, Friends of Los Peñasquitos Canyon, the Service, and MCAS Miramar; technical reports; the CNDDB (CNDDB 2010a, EOs 1–31.); Geographic Information System (GIS) data (such as species occurrence data, soil data, land use, topography, aerial imagery, and ownership maps); correspondence to the Service from recognized experts; and other information as available. Additional information can be found in the final listing rule published in the **Federal Register** on October 13, 1998 (63 FR 54938).

The primary constituent elements required for *Monardella viminea* are derived from the physical and biological needs of this species as described in the Background section for *M. viminea* in the beginning of this proposal, the previous critical habitat rule (71 FR 65662; November 8, 2006), the final listing rule (63 FR 54938; October 13, 1998), and below. The areas in this proposed critical habitat contain or support the soil types, potential insect pollinators, and vegetation associated with *M. viminea* occupancy, and include areas adjacent to plants (or plant clumps) necessary to maintain associated physical processes, such as suitable hydrological regime, and biotic associations, such as pollination. These areas provide suitable space, water, minerals, and other physiological needs for reproduction and growth of *M. viminea.* We have determined that *M. viminea* requires the physical and biological features described below:

Space for Individual and Population Growth and for Normal Behavior

Habitats that provide space for growth and persistence of *Monardella viminea* include: (1) Washes in coastal sage scrub or riparian scrub vegetation; (2) terraced secondary benches, channel banks, and stabilized sand bars; (3) soils with a high content of coarse-grained sand and low content of silt and clay; and (4) open ground cover, less than half of which is herbaceous vegetation cover (Scheid 1985, pp. 30–35; Service 1998, p. 54938; Elvin and Sanders 2003,

pp. 426, 430; Kelly and Burrascano 2006, p. 51).

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

Monardella viminea is most often found on the first above-water sandbar in intermittent streambeds, where water runs for 24 to 48 hours after heavy rain events (Elvin and Sanders 2003, p. 430; Kelly and Burrascano 2006, p. 51). It can also be found within the streambed if flow is infrequent enough and the soil is stable (Scheid 1985, pp. 3, 38–39). The most robust *M. viminea* individuals tend to occur in wide, open canyons with broad channels and secondary benches, as opposed to narrow, graded canyons (Kassebaum 2010, pers. comm.).

Monardella viminea plants are found on soil where subsurface layers stay relatively moist throughout the year and where water accumulates after rainstorms, such as north-facing slopes or canyon bottoms (Elvin and Sanders 2003, pp. 426, 430). Plants with inadequate soil moisture dry out during summer months and do not survive (Kelly and Burrascano 2006, p. 5). The species does not occur on soils that are permanently wet (Elvin and Sanders 2003, p. 425). *Monardella viminea* occurrences have been lost from areas where wetter soils result in an increase in density of surrounding vegetation (Kelly and Burrascano 2001, p. 4).

Monardella viminea most generally occurs on soil types with high sand content, often characterized by sediment and cobble deposited by flood events (Scheid 1985, p. 35; Rebman and Dossey 2006a, pp. 5–6). Natural Resources Conservation Service soil series where *M. viminea* is known to occur includes (but may not be limited to): Stony Land, Redding Gravelly Loam, Visalia Sandy Loam, and Riverwash (Rebman and Dossey 2006a, p. 6).

Cover or Shelter

Monardella viminea requires open to semi-open canopies of coastal sage and riparian scrub with limited herbaceous understory. *Monardella viminea* plants usually occur in areas with an average of 75 percent ground cover, of which approximately 65 percent is woody cover, and less than 10 percent is herbaceous cover (Scheid 1985, pp. 32, 37–38). Herbaceous cover, such as annual grasses, can grow in greater density than native riparian and chaparral species, and through resource competition and shading, herbaceous cover would likely prevent natural growth and reproduction of *M. viminea* (Rebman and Dossey 2006a, p. 12); therefore, suitable habitat for the species is not dominated by herbaceous cover.

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

Monardella viminea is visited by numerous bees and butterflies, and is likely pollinated by a diverse array of insects, each of which have their own habitat requirements (see *Life History* section for *M. viminea* above); however, we are currently unaware of which insect species pollinate *M. viminea.* Pollinators facilitate mixing of genes within and among plant populations, without which inbreeding and reduced fitness may occur (Widen and Widen 1990, p. 191). Native sand wasps within the range of *M. viminea,* such as those from the Bembicine family, require sandy areas, such as dunes or sandy washes, to nest, while solitary bees from the Andrenidae family nest in upland areas (Kelly and Burrascano 2001, p. 8). Native bees typically are more efficient pollinators than introduced European honeybees (Javorek *et al.* 2002, p. 345). Therefore, populations serviced by a higher proportion of native pollinator species are likely to maintain higher reproductive output and persist for more generations than populations served by fewer native pollinators or with pollination limitations of any kind (Javorek *et al.* 2002, p. 350). Pollinators also require space for individual and population growth; therefore, adequate habitat should be preserved for pollinators in addition to the habitat necessary for *M. viminea* plants. In this proposed critical habitat, we acknowledge the importance of pollinators to *M. viminea.* However, we do not include pollinators and their habitats as a primary constituent element (PCE), because: (1) Meaningful data on specific pollinators and their habitat needs are lacking; and (2) we were not able to quantify the amount of habitat needed for pollinators, given the lack of information on the specific pollinators of *M. viminea.*

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

The long-term conservation of *Monardella viminea* is dependent on several factors including, but not limited to, maintenance of areas necessary to sustain natural ecosystem components, functions, and processes (such as full sun exposure and natural hydrologic regimes); and sufficient adjacent suitable habitat for vegetative reproduction, population expansion, and pollination.

Open or semi-open rocky, sandy alluvium on terraced floodplains, benches, stabilized sandbars, channel banks, and sandy washes along ephemeral streams, washes, and floodplains are needed for individual and population growth of *Monardella viminea* (Scheid 1985, pp. 30–31, 34–35). Within those areas, *M. viminea* requires adequate sunlight to grow. Woody overgrowth is common and can help to maintain adequate soil moisture, but areas crowded with herbaceous understory may not provide adequate light for *M. viminea.*

The 2008 5-year review (Service 2008, p. 7) concluded that *Monardella viminea* requires a natural hydrological regime to maintain or create suitable habitat conditions. This hydrological regime maintains the floodplains, benches, and sandbars where *M. viminea* grows. Characteristics of riparian channels and seasonal stream flow determine timing, pattern, and depth of deposition of alluvial materials and formation of sandbars and channel banks, which in turn determine location of plants within the streambed, and suitable habitat to support individuals and clumps of *M. viminea* (Scheid 1985, pp. 30–31 and 36–37). Decreases in flows, which would otherwise scour annual grasses and seeds from the area, result in increased cover of nonnative grasses, and decreased light and moisture availability for *M. viminea.* Rapidly growing nonnative grasses can smother seedling and mature *M. viminea* and prevent natural growth (Rebman and Dossey 2006a, p. 12). Additionally, increased flows can result in erosion that may alter floodplains and erode banks, channel bars, and sandy washes where *M. viminea* occurs (Kelly and Burrascano 2006, pp. 65–69).

Primary Constituent Elements

Under the Act and its implementing regulations, we are required to identify the physical and biological features essential to the conservation of *Monardella viminea* in areas occupied at the time of listing, focusing on the features' primary constituent elements. We consider primary constituent elements to be the elements of physical and biological features that are essential to the conservation of the species.

Based on our current knowledge of the physical or biological features and habitat characteristics required to sustain the species' life-history processes, we determine that the primary constituent element specific to *Monardella viminea* is riparian channels with ephemeral drainages and adjacent floodplains:

(1) With a natural hydrological regime, in which:

(a) Water flows only after peak seasonal rainstorms;

(b) High runoff events periodically scour riparian vegetation and redistribute alluvial material to create new stream channels, benches, and sandbars; and

(c) Water flows for usually less than 48 hours after a rain event, without long-term standing water;

(2) Surrounding vegetation that provides semi-open, foliar cover with:

(a) Little or no herbaceous understory;

(b) Little to no canopy cover;

(c) Open ground cover, less than half of which is herbaceous vegetation cover;

(d) Some shrub cover; and

(e) An association of other plants, including *Eriogonum fasciculatum* (California buckwheat) and *Baccharis sarothroides* (broom baccharis);

(3) That contain ephemeral drainages that:

(a) Are made up of coarse, rocky, or sandy alluvium; and

(b) Contain terraced floodplains, terraced secondary benches, stabilized sandbars, channel banks, or sandy washes; and

(4) That have soil with high sand content, typically characterized by sediment and cobble deposits, and further characterized by a high content of coarse, sandy grains and low content of silt and clay.

The need for space for individual and population growth and normal behavior is provided by all sections of the PCE. The need for food, water, air, light, minerals, or other physiological requirements is provided by all sections of the PCE. Cover and shelter requirements are provided by section (2) of the PCE. Areas for reproduction are provided by all sections of the PCE. Finally, habitats representative of the historical, geographical, and ecological distributions of a species are provided by all sections of the PCE.

Special Management Considerations or Protection

When designating critical habitat, we assess whether the physical and biological features within the geographical area occupied by the species at the time of listing that are essential to the conservation of the species may require special management considerations or protection.

The area proposed for designation as critical habitat will require some level of management or protection to address the current and future threats to the physical and biological features. In all units, special management considerations or protection may be required to provide for the sustained function of the ephemeral washes on which *Monardella viminea* depends.

The primary constituent element for *M. viminea* may require special management considerations or protection to reduce the following threats, among others: cover by nonnative plant species that crowds, shades, or competes for resources; habitat alteration due to altered hydrology from urbanization and associated infrastructure; and any actions that alter the natural channel structure or course, particularly increased water flow that could erode soils inhabited by *M. viminea* or cover them with sediment deposits (all sections of PCE). Conservation actions that could be implemented to address these threats include (but are not limited to): Removal of nonnative vegetation by weeding; planting of native species along stream courses in canyons to help control erosion; use of silt fences to control erosion; restriction of development that alters natural hydrological characteristics of stream courses in canyons; and implementation of prescribed burns (all sections of PCE). Additionally, specialized dams and smaller barriers could be installed in canyons to help address floodwater runoff that results from upstream development (which can cause erosion and loss of clumps of *M. viminea*), though these dams must be of adequate size and strength to withstand increased storm flow caused by urbanization (PCE section 3).

Criteria Used To Identify Critical Habitat

As required by section 4(b)(1)(A) of the Act, we use the best scientific and commercial data available to designate critical habitat. We review available information pertaining to the habitat requirements of the species. In accordance with the Act and its implementing regulation at 50 CFR 424.12(e), we consider whether designating additional areas—outside those currently occupied as well as those occupied at the time of listing—is necessary to ensure the conservation of the species. We are not currently proposing to designate any areas outside the geographical area occupied by the species at the time of listing because currently occupied areas (which are within the area occupied by the species at the time of listing) are sufficient for the conservation of the species.

This proposed rule updates the information used in our 2006 final designation of critical habitat for *Monardella linoides* ssp. *viminea* (71 FR 65662; November 8, 2006) with the best available data, including new information not available when the 2006 rule was completed.

This section provides details of the process we used to delineate the proposed critical habitat. This proposed critical habitat designation is based on the best scientific data available, including our analysis of the distribution and ecology of *Monardella viminea* as identified in the 1998 final listing rule, the 2008 5-year review, new information on the species' distribution and ecology made available since listing, reclassification of *M. viminea* as a species, and State and local measures in place for the conservation of *M. viminea.* Specific differences from the 2006 designation of critical habitat are described in the Summary of Changes from Previously Designated Critical Habitat section below.

The areas in this proposed designation of critical habitat for *Monardella viminea* were occupied by the species at the time of listing and remain occupied today, and they possess those specific physical and biological features essential to the conservation of the species that may require special management considerations or protection. For this proposed rule, we completed the following steps to delineate critical habitat: (1) Compiled all available data from observations of *M. viminea* into a GIS database; (2) identified occurrences that were extant at the time of listing and those occurrences that are currently extant or contain transplanted *M. viminea;* (3) identified areas containing all the components that make up the PCE that may require special management considerations or protection; (4) circumscribed boundaries of potential critical habitat units based on the above information; and (5) removed all areas that did not have the PCE and therefore are not considered essential to the conservation of *M. viminea,* or that are exempt from critical habitat under 4(a)(3)(B)(i) of the Act. These steps are described in detail below.

(1) We compiled observational data from the following sources to include in our GIS database for *Monardella viminea:* (a) CNDDB data and supporting observation documentation information on *M. viminea;* (b) monitoring reports from MCAS Miramar; and (c) monitoring reports from private organizations and local government organizations, such as the Carroll Canyon Business Park and the City of San Diego Subarea Plan under the MSCP. No monitoring reports from the County of San Diego were available.

(2) We considered extant all occurrences where presence of living plants has been confirmed within the past 10 years. Using this information, we determined that seven occurrences are currently extant. Based on data from the CNDDB, we confirmed that all of these seven occurrences were known and extant at the time of listing. We also documented the presence of transplanted individual plants in Carroll, San Clemente, and Lopez Canyons and included them in our analysis.

(3) To identify areas containing all the components that make up the PCE for *Monardella viminea* that may require special management considerations or protection, we conducted the following steps:

(a) We determined occurrence locations likely to belong to the same population. Regardless of observation date, all occurrence locations downstream from an extant occurrence and which would be connected to the upstream occurrence during runoff events (that could transport seeds downstream) were considered part of the same extant occurrence; this was completed by examining survey reports from MCAS Miramar, the City of San Diego, and the Friends of Los Peñasquitos Canyon.

(b) In order to create a scientifically based approach to drawing critical habitat units, we first examined the utility of GIS vegetation data polygons containing *Monardella viminea* occurrences (SANDAG 1995) because the species is frequently associated with coastal sage scrub and riparian scrub habitats (Scheid 1985, p. 3; Elvin and Sanders 2003, p. 430; Kelly and Burrascano 2006, p. 51). In an attempt to better distinguish the width of the specific areas within drainages that contain the PCE, we searched for a correlation between habitat type and clumps of *M. viminea.* We found *M. viminea* occurred in areas mapped as 11 different vegetation types, with the greatest number (45 percent) falling within "Diegan Coastal Sage Scrub." We noted that mapped polygons of this vegetation type and some other vegetation types were relatively large and did not correspond well with the drainage areas where *M. viminea* and the PCE was likely to occur, indicating that they were poor predictors for areas that contain the physical and biological features essential to the conservation of *M. viminea.*

(c) We examined polygons that were labeled as "riparian" vegetation for possible useful information to assist in delineation of potential critical habitat areas because *Monardella viminea* is generally described as a riparian-associated species. We found that although southern sycamore-alder riparian woodland is rare in canyons where *M. viminea* exists, where it is present, it closely corresponds to areas that contain *M. viminea* and the physical and biological features essential to its conservation. Because of this close correlation, we used the southern sycamore-alder riparian woodland habitat type to identify the widest distance of a riparian vegetation type polygon from an occupied streambed line; we found this distance to be 490 ft (150 m).

(d) We then tested the 490 ft (150 m) value as an estimate of the distance from the streambed most likely to capture the PCE throughout the species' range. We used the widest distance from the streambed to help identify areas that meet the definition of critical habitat rather than the median (or another value). We wanted to ensure that we captured all potential areas that have the physical and biological features essential to the conservation of *M. viminea* versus those areas that only contain occurrences of the species. We found that this 490 ft (150 m) distance, when applied to all streambeds where *M. viminea* occurred, captured all clumps of *M. viminea* except two in the southern end of West Sycamore Canyon. The two southern clumps occur in an area that appears to be a remnant habitat wash area at the end of West Sycamore Canyon, which likely received additional stream flow during storm events greater than 48 hours after a rain event (or more frequently than just after a peak seasonal rainstorm), and thus does not likely support occupancy long term nor significantly contribute to population persistence.

The conservation of *Monardella viminea* depends on preservation of habitat containing the physical and biological features essential to the conservation of the species. Like most plants, *M. viminea* is occasionally found in areas considered atypical for the species. For example, a plant was once found growing in mesa-top habitat along a tributary of Rose Canyon (Rebman and Dossey 2006a, p. 24, no EO number). We consider that the habitat areas outlined using the method described above will capture only the habitat that contains the physical and biological features essential to the conservation of *M. viminea.* We determined the distance of 492 ft (150 m) was appropriate to capture areas surrounding occupied streambeds that contain the physical and biological features essential to the conservation of the species and that meet the definition of critical habitat, and we applied it across the species' range.

(4) We removed all areas not containing the physical and biological features essential to the conservation of *Monardella viminea. Monardella viminea* requires all four sections of the PCE for growth and reproduction; thus, only areas that contained all four sections of the PCE were considered as critical habitat. We removed areas in Rose Canyon (no EO number), Elanus Canyon (EO 24), and Lopez Canyon (EO 1), and all four transplanted occurrences. All of these areas are characterized by dense urban development on at least one border. As discussed under Factor A for *M. viminea,* urbanization results in increased frequency and intensity of storm flow events, to the point that they wash away sandbars rather than scouring them of vegetation. Further discussion of why we did not include these occurrences as critical habitat is included in the Summary of Changes from Previously Designated Critical Habitat section below. We also removed areas within the boundaries of MCAS Miramar for this proposed rule because these areas are exempt under section 4(a)(3)(B)(i) of the Act from critical habitat designation (see Exemptions section below).

When determining proposed critical habitat boundaries, we made every effort to avoid including developed areas such as lands covered by buildings, pavement, and other structures because such lands lack physical and biological features for *Monardella viminea.* 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 critical habitat have been excluded by text in the proposed rule and are not proposed for designation as critical habitat. Therefore, if the critical habitat is finalized as proposed, a Federal action involving these lands would not trigger section 7 consultation with respect to critical habitat and the requirement of no adverse modification unless the specific action would affect the physical and biological features in the adjacent critical habitat.

We are proposing for designation of critical habitat lands that we have determined were occupied at the time of listing and contain sufficient elements of physical and biological features to support life-history processes essential for the conservation of the species.

Summary of Changes From Previously Designated Critical Habitat

The areas identified in this proposed rule constitute a revision of the areas we described and mapped as meeting the definition of critical habitat for *Monardella linoides* ssp. *viminea* in the final critical habitat designation published in the **Federal Register** on November 8, 2006 (71 FR 65662) (see Table 2). This proposed rule identifies 348 ac (141 ha) that meet the definition of critical habitat for *Monardella viminea.* This proposed rule includes all 73 ac (30 ha) designated as critical habitat in the final rule in 2006, and portions of areas excluded from the 2006 designation. This proposed rule also differs in area from the 2006 designation due to the removal of areas now identified as habitat for *M. stoneana* (255 ac (103 ha); 71 FR 65662, November 8, 2006), as described above in the Background section of this proposed rule. The rest of the change in area is primarily due to our improved GIS mapping techniques, improved description of the areas containing the PCE for *M. viminea,* and our removal of lands in Lopez Canyon, Elanus Canyon, and Rose Canyon that we no longer consider to meet the definition of critical habitat (see *Criteria Used to Identify Critical Habitat* section above and Proposed Critical Habitat Designation—*Monardella viminea* section below).

The differences between this proposed rule and the 2006 critical habitat designation include the following:

(1) Recognition of *Monardella linoides* subsp. *viminea* as two distinct taxa at the species rank as *Monardella viminea* (willowy monardella) and *M. stoneana* (Jennifer's monardella). Given our determination that *M. viminea* warrants listing as endangered, we are proposing critical habitat for *M. viminea.*

(2) We revised the Background section to include our updated knowledge of life history, taxonomy, and nomenclature, including information on potential pollinators of *Monardella viminea.*

(3) We revised the description of the PCEs for *Monardella viminea* to include a single PCE with more detailed information on the physical and biological features essential to *Monardella viminea* including soil characteristics, disturbance regimes, stream flow, and ground cover that support this species.

(4) We revised the criteria used to identify critical habitat based on our reevaluation of all available *Monardella viminea* information, including that available since the publication of the 2006 rule, to ensure this proposed rule reflects the best available scientific data. Our conclusion based on this reevaluation differs from the 2006 critical habitat designation in how we identified and delineated critical habitat.

(5) Our reevaluation does not identify some areas as critical habitat that were designated as critical habitat in the 2006 final critical habitat rule. In the 2006 final critical habitat rule, all habitat containing occurrences of *Monardella viminea* was classified as critical habitat. However, we have revised the PCE for *M. viminea* based on our improved understanding of the habitat features essential for the species' conservation and, in this proposed rule, we have proposed critical habitat only in locations that contain the revised PCE. While Elanus, Lopez, and Rose Canyons contain species occurrences, they do not contain the PCE. We now recognize that urbanization around all three canyons has substantially altered drainage patterns, such that peak flood events have increased in intensity and frequency to the point where they occur more than just after peak rainfall events, and such that they regularly wash away entire channels and benches where *M. viminea* grows (PCE section (3)(b)). Thus the three areas do not contain all the components that make up the PCE identified for *M. viminea.*

We note that the habitat available in these canyons only supports a limited number of plants: Elanus Canyon has approximately 16 plants, Lopez Canyon has 8 plants, and Rose Canyon has the smallest occurrence of *Monardella viminea* with only 3 plants. Rose Canyon contains limited habitat for *M. viminea,* with little space downstream for expansion of the occurrence (Kassebaum 2010, pers. comm.), and the area around Rose Canyon is developed, which has disrupted the natural hydrological regime on which long-term persistence of *M. viminea* depends (Rebman and Dossey 2006, p. 37), resulting in high runoff events that occur more frequently than just at peak seasonal rainfalls. The area around Lopez Canyon is also heavily urbanized, and floods from storm runoff have already eroded channels and benches where *M. viminea* grows. A portion of land surrounding the southern half of Elanus Canyon has been developed. This development, located along the eastern side of the canyon, has also resulted in altered hydrology. Thus, we do not consider Elanus, Lopez, or Rose Canyons to meet the definition of critical habitat.

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 this reason, a critical habitat designation does not signal that habitat outside the designated area is unimportant or may not be required for recovery of the species. We solicit information during the public comment period on any areas that we have not included in this proposed rule (including Elanus, Lopez, and Rose Canyons), including any evidence that they meet the definition of critical habitat (see Public Comments section).

(6) We changed unit numbers and names in this proposed rule to reflect estimated population distributions instead of political boundaries (such as former Unit 2 that consisted of all partial polygons within MCAS Miramar, regardless of population distribution).

(7) Our revised criteria resulted in both inclusion of areas that meet the definition of critical habitat and removal of areas from the 2005 proposed rule or the 2006 final rule that do not meet the definition of critical habitat. Changes from areas identified in the 2005 proposed rule as meeting the definition of critical habitat include the exclusion of areas in Elanus, Lopez, and Rose Canyons that we no longer consider to meet the definition of critical habitat (see *Criteria Used to Identify Critical Habitat* section above).

(8) We did not include any areas associated with former Units 7, 8, and 9, described in the 2006 final critical habitat designation for *Monardella linoides* ssp. *viminea,* because these areas/occurrences are now recognized as supporting *M. stoneana* (see *Taxonomic and Nomenclatural Changes Affecting* Monardella linoides *ssp.* viminea section above).

The differences between the 2006 final critical habitat designation and the proposed revised critical habitat designation in this rule are summarized below in Table 2. Please note that Table 2's units for the 2006 final rule do not correspond to the unit numbers presented in that rule; they correspond to the proposed units in this document.

TABLE 2—COMPARISON OF THE 2006 FINAL CRITICAL HABITAT DESIGNATION FOR MONARDELLA LINOIDES SSP. VIMINEA AND THE PROPOSED CRITICAL HABITAT FOR M. VIMINEA.

[Note: This table does not include the 255 ac (103 ha) of habitat now identified as occupied by *M. stoneana*.]

Location	2006 final critical habitat		2011 proposed critical habitat	
	Unit name	Area containing essential features ac (ha)	Unit name	Area containing essential features ac (ha)
Sycamore Canyon	Unit 1 Partial 4(a)(3)(B)(i) exemption.	373 (151)	Unit 1 Partial 4(a)(3)(B)(i) exemption.	350 (142)
West Sycamore Canyon		529 (214)	Unit 2 Partial 4(a)(3)(B)(i) exemption.	577 (233)
Spring Canyon		245 (99)	Unit 3 Partial 4(a)(3)(B)(i) exemption.	273 (111)
East San Clemente Canyon.		638 (258)	Unit 4 Partial 4(a)(3)(B)(i) exemption.	467 (189)
West San Clemente Canyon.		114 (46)	Unit 5 Partial 4(a)(3)(B)(i) exemption.	227 (92)
Lopez Canyon		77 (31)		0 (0)
Elanus Canyon		82 (33)		0 (0)
Rose Canyon		185 (75)		0 (0)
TOTAL ESSENTIAL HABITAT**.		2,242 (907)		1,894 (767)
TOTAL EXEMPT		1,863 (754)		1,546 (626)
TOTAL EXCLUDED OR BEING CONSIDERED FOR EXCLUSION.		306 (124) (excluded in 2006).		208 (84) (considered for exclusion)
TOTAL CRITICAL HABITAT*.		73 (30) Designated		348 (141) Proposed

*Values in this table may not sum due to rounding.
** See Table 4 for acreages considered for exclusion in each unit.

Proposed Critical Habitat Designation—*Monardella viminea*

We are proposing five units as critical habitat for *Monardella viminea.* The proposed critical habitat areas we describe below constitute our current best assessment of areas that meet the definition of critical habitat for *M. viminea.* This proposed rule, if finalized, will replace the current critical habitat designation for *M. linoides* ssp. *viminea* at 50 CFR 17.96(a). The five units we propose as critical habitat are: (1) Sycamore Canyon, (2) West Sycamore Canyon, (3) Spring Canyon, (4) East San Clemente Canyon, and (5) West San Clemente Canyon. The approximate area of each proposed critical habitat unit is shown in Table 3. All proposed units were occupied by *M. viminea* at the time the species was listed (as *M. linoides* ssp. *viminea*), are currently occupied by *M. viminea,* and contain the primary constituent element essential for the conservation of the species. A summary of the five units showing areas, ownership, and exemptions is given below in Table 3.

TABLE 3—PROPOSED CRITICAL HABITAT UNITS FOR *Monardella Viminea,* SHOWING ESTIMATED AREA IN ACRES (HECTARES), LAND OWNERSHIP, AND AREAS EXEMPT UNDER SECTION 4(A)(3)(B)(I) OF THE ACT

Location of proposed non-exempt acres*	Federal ac (ha)	State and local ac (ha)	Private ac (ha)	Total ac (ha)
Unit 1. Sycamore Canyon	0 (0)	36 (15)	158 (64)	194 (79)
Unit 2. West Sycamore Canyon	0 (0)	27 (11)	0 (0)	27 (11)
Unit 3. Spring Canyon	0 (0)	5 (2)	92 (37)	97 (39)
Unit 4. East San Clemente Canyon	0 (0)	13(5)	0 (0)	13 (5)
Unit 5. West San Clemente Canyon	0 (0)	16 (7)	<1 (<1)	16 (7)
Location of Exempt areas at MCAS Miramar—EXEMPT under section 4(a)(3)(B) of the Act				
Sycamore Canyon	156 (63)	0 (0)	0 (0)	156 (63)
West Sycamore Canyon	550 (222)	0 (0)	0 (0)	550 (222)
Spring Canyon	176 (71)	0 (0)	0 (0)	176 (71)
East San Clemente Canyon	454 (184)	0 (0)	0 (0)	454 (184)
West San Clemente Canyon	210 (85)	0 (0)	0 (0)	210 (85)
Total Essential Habitat	1,546 (625)	86 (35)	263 (106)	1,894 (767)
Total Area Proposed Revised Critical Habitat	0 (0)	86 (35)	263 (106)	348 (141)**

* Values in this table may not sum due to rounding.
** See Table 4 for acreages proposed for exclusion in each unit.

We present brief descriptions of the five proposed critical habitat units, and reasons why they meet the definition of critical habitat for *Monardella viminea.*

Unit 1: Sycamore Canyon

Unit 1 consists of 194 ac (79 ha) and is located in Sycamore Canyon at the northeastern boundary of MCAS Miramar, north of Santee Lakes in San Diego County, California. Three separate branches of the canyon within the unit pass outside the boundaries of MCAS Miramar and consist of 36 ac (15 ha) of land owned by San Diego County, 1 ac (less than 1 ha) of land owned by water districts, and 158 ac (64 ha) of private land, 110 ac (45 ha) of which are within the boundaries of the City of Santee, which has no approved MSCP; and 47 ac (19 ha) of which are within the boundaries of the City of San Diego. This canyon is the only place where *Monardella viminea* is found in oak woodland habitat, and is one of the few areas in the range of *M. viminea* with mature riparian habitat (Rebman and Dossey 2006a, p. 23). Sycamore Canyon, in which this unit is found, is essential to the recovery of the species because it supports over 400 individuals (City of San Diego 2010, p. 257; Tierra Data 2011, p. 12). The habitat in this unit provides redundancy and resiliency for *M. viminea,* and since not all areas of this unit are occupied by *M. viminea* (*i.e.,* the unit is occupied, although there are areas such as within the canyon where plants are not currently growing), the unit provides space for the growth and expansion of the species. This unit contains the physical and biological features essential to the conservation of *M. viminea,* including riparian channels with a natural hydrological regime (PCE section (1)), ephemeral drainages made up of rocky or sandy alluvium (PCE section (3)), and surrounding vegetation that provides semi-open foliar cover (PCE section (2)). The PCE in this subunit may require special management considerations or protection to address threats from nonnative plant species and erosion of the canyon (City of San Diego 2005, p. 68; 2006, p. 10; 2009, p. 2). Please see the *Special Management Considerations or Protection*—Monardella viminea section of this proposed rule for a discussion of the threats to *M. viminea* habitat and potential management considerations. We are considering exclusion of portions of Unit 1 (83 ac (34 ha)) for *M. viminea* from critical habitat under section 4(b)(2) of the Act that are covered by the City of San Diego and County of San Diego Subarea Plans under the MSCP; see Considered Exclusions—*Monardella viminea* section of this proposed rule for more information.

Unit 2: West Sycamore Canyon

Unit 2 consists of 27 ac (11 ha), comprised of 21 ac (9 ha) of land owned by the City of San Diego and 6 ac (2 ha) of land owned by water districts, and is located in West Sycamore Canyon adjacent to the eastern section of MCAS Miramar, in San Diego County, California. The northernmost point of the unit is just outside the boundary of MCAS Miramar. West Sycamore Canyon, in which Unit 2 is found, is essential to the recovery of *Monardella viminea* as it contains the largest number of *M. viminea* individuals of any canyon in the species' range (Tierra Data 2011, p. 12). The habitat in this unit provides redundancy and resiliency for *M. viminea,* and since not all areas of this unit are occupied by *M. viminea* (*i.e.,* the unit is occupied, although there are areas such as within the canyon where plants are not currently growing), the unit provides space for the growth and expansion of the species. Unit 2, which contains proposed critical habitat for *M. viminea* in that portion of West Sycamore Canyon located outside of MCAS Miramar, contains the physical and biological features essential to the conservation of *M. viminea,* including riparian channels with a natural hydrological regime (PCE section (1)), ephemeral drainages made up of rocky or sandy alluvium (PCE section (3)), and surrounding vegetation that provides semi-open foliar cover (PCE section (2)). The PCE in this unit may require special management considerations or protection to address threats associated with erosion from heavy rainfall events. Please see the *Special Management Considerations or Protection*—Monardella viminea section of this proposed rule for a discussion of the threats to *M. viminea* habitat and potential management considerations. We are considering exclusion of a portion of Unit 2 (21 ac (9 ha)) for *M. viminea* from critical habitat under section 4(b)(2) of the Act that is covered by the City of San Diego Subarea Plan under the MSCP; see Considered Exclusions—*Monardella viminea* section of this proposed rule for more information.

Unit 3: Spring Canyon

Unit 3 consists of 97 ac (39 ha) and is located in Spring Canyon south of the border of MCAS Miramar and north of State Route 52 and Kumeyaay Lake in San Diego County, California. This unit is composed of 5 ac (2 ha) of land owned by the City of San Diego and 92 ac (37 ha) of private land within the boundaries of the City of San Diego. The occurrences in this canyon exist in dense clumps along the canyon on the inside edge of meandering portions of the streambed, and on low benches adjacent to drainages, and comprise a large population of *Monardella viminea* with over 500 plants in 2002 (Rebman and Dossey 2006a, pp. 21, 23). Spring Canyon, in which Unit 3 is found, is essential to the recovery of *M. viminea* because, as one of the least disturbed canyons on MCAS Miramar and due to its isolation from developed areas (Rebman and Dossey 2006a, p. 23), it supports the natural hydrological regime necessary for growth and reproduction of the species. Unit 3 contains proposed critical habitat for *M. viminea* in that portion of Spring Canyon located outside of MCAS Miramar. Spring Canyon, in which Unit 3 is found, is also essential to the recovery of the species because it currently contains over 350 individuals (Tierra Data 2011, p. 12). The habitat in this unit provides redundancy and resiliency for *M. viminea,* and since not all areas of this unit are occupied by *M. viminea* (*i.e.,* the unit is occupied although there are areas such as within the canyon where plants are not currently growing), the unit provides space for the growth and expansion of the species. This unit contains the physical and biological features essential to the conservation of *M. viminea,* including riparian channels with a natural hydrological regime (PCE section (1)), ephemeral drainages made up of rocky or sandy alluvium (PCE section (3)), and surrounding vegetation that provides semi-open foliar cover (PCE section (2)). The PCE in this unit may require special management considerations or protection to address threats from nonnative species. Please see the *Special Management Considerations or Protection*—Monardella viminea section of this proposed rule for a discussion of the threats to *M. viminea* habitat and potential management considerations. We are considering exclusion of Unit 3 (97 ac (39 ha)) from critical habitat under section 4(b)(2) of the Act because all of the land within the unit is covered by the City of San Diego Subarea Plan under the MSCP; see Considered Exclusions—*Monardella viminea* section of this proposed rule for more information.

Unit 4: East San Clemente Canyon

Unit 4 consists of 13 ac (5 ha) of land located in the eastern portion of San Clemente Canyon north of the northeastern border of MCAS Miramar

in San Diego County, California. This unit is composed of 7 ac (3 ha) of land owned by the City of San Diego, and 6 ac (3 ha) of land owned by the California Department of Transportation. We are considering it a separate unit from the other portion of San Clemente Canyon because the Sim J. Harris aggregate mine acts as a barrier to the physical and biotic continuity between the two portions of the canyon. Unit 4 is drier than the western portion of the canyon (Unit 5) and consists of mature chaparral habitat (Rebman and Dossey 2006a, p. 22). This unit is essential to the recovery of the species because San Clemente Canyon, which includes Unit 4, contains over 500 individuals (Rebman and Dossey 2006a, p. 22). The habitat in this unit provides redundancy and resiliency for *M. viminea,* and since not all areas of this unit are occupied by *M. viminea* (*i.e.,* the unit is occupied, although there are areas such as within the canyon where plants are not currently growing), the unit provides space for the growth and expansion of the species. This unit contains the physical and biological features essential to the conservation of *M. viminea,* including riparian channels with a natural hydrological regime (PCE section (1)), ephemeral drainages made up of rocky or sandy alluvium (PCE section (3)), and surrounding vegetation that provides semi-open foliar cover (PCE section (2)). The PCE in this unit may require special management considerations or protection to address threats from nonnative species. Please see the *Special Management Considerations or Protection*—Monardella viminea section of this proposed rule for a discussion of the threats to *M. viminea* habitat and potential management considerations. We are considering exclusion of a portion of Unit 4 (7 ac (3 ha)) for *M. viminea* from critical habitat under section 4(b)(2) of the Act that is covered by the City of San Diego Subarea Plan under the MSCP; see Considered Exclusions—*Monardella viminea* section of this proposed rule for more information.

Unit 5: West San Clemente Canyon

Unit 5 consists of 16 ac (7 ha) of land made up of 16 ac (7 ha) of land owned by the California Department of Transportation and less than 1 ac (<1 ha) of private land within the boundaries of the City of San Diego. This unit is located in the western portion of San Clemente Canyon, and begins near Clairemont Mesa Boulevard and continues east to the boundary of MCAS Miramar, in San Diego County, California. We consider this unit as a separate unit from the other part of San Clemente Canyon because the Sim J. Harris aggregate mine acts as a barrier to the physical and biotic continuity between the two portions of the canyon. This portion of the canyon is wetter and contains more riparian habitat than the eastern portion of San Clemente Canyon in Unit 4 and is one of few areas of *Monardella viminea* habitat where riparian vegetation persists (Rebman and Dossey 2006a, p. 22). The western portion of San Clemente Canyon (where Unit 5 is located) is essential to the recovery of the species because it contains the PCE and consists of over 500 individuals of *M. viminea* (Tierra Data 2011, p. 12). The habitat in this unit provides redundancy and resiliency for *M. viminea,* and since not all areas of this unit are occupied by *M. viminea* (*i.e.,* the unit is occupied, although there are areas such as within the canyon where plants are not currently growing), this unit provides space for the growth and expansion of the species. Additionally, Unit 5 is essential to recovery because it is made up of several separate sites along the drainage where groups of naturally occurring *M. viminea* plants have been reported in a configuration that will likely contribute to gene exchange via pollinators. This unit contains the physical and biological features essential to the conservation of *M. viminea,* including riparian channels with a natural hydrological regime (PCE section (1)), ephemeral drainages made up of rocky or sandy alluvium (PCE section (3)), and surrounding vegetation that provides semi-open foliar cover (PCE section (2)). The PCE in this unit may require special management considerations or protection. The historical flow regime and flooding from the upper portion of the canyon to this unit is prevented by the Sim J. Harris aggregate mine. Therefore, in the future, this unit may require management to prevent overgrowth of annual species that would otherwise be scoured by periodic flooding. Please see the *Special Management Considerations or Protection*—Monardella viminea section of this proposed rule for a discussion of the threats to *M. viminea* habitat and potential management considerations. We are considering exclusion of a portion of Unit 5 (<1 ac (<1 ha)) from critical habitat under section 4(b)(2) of the Act that is covered by the City of San Diego Subarea Plan under the MSCP; see Considered Exclusions—*Monardella viminea* section of this proposed rule for more information.

Effects of Critical Habitat Designation

Section 7 Consultation

Section 7(a)(2) of the Act requires Federal agencies, including the Service, to ensure that any action they fund, authorize, or carry out is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of designated critical habitat of such species. In addition, section 7(a)(4) of the Act requires Federal agencies to confer with the Service on any agency action which is likely to jeopardize the continued existence of any species proposed to be listed under the Act or result in the destruction or adverse modification of proposed critical habitat.

Decisions by the 5th and 9th Circuit Courts of Appeals have invalidated our regulatory 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, 442 (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 continue to serve its intended conservation role for the species.

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

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

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

When we issue a biological opinion concluding that a project is likely to jeopardize the continued existence of a listed species and/or destroy or adversely modify critical habitat, we provide reasonable and prudent

alternatives to the project, if any are identifiable, that would avoid the likelihood of jeopardy and/or destruction or adverse modification of critical habitat. We define "reasonable and prudent alternatives" (at 50 CFR 402.02) as alternative actions identified during consultation that:

(1) Can be implemented in a manner consistent with the intended purpose of the action,

(2) Can be implemented consistent with the scope of the Federal agency's legal authority and jurisdiction,

(3) Are economically and technologically feasible, and

(4) Would, in the Director's opinion, avoid the likelihood of jeopardizing the continued existence of the listed species and/or avoid the likelihood of destroying or adversely modifying critical habitat.

Reasonable and prudent alternatives can vary from slight project modifications to extensive redesign or relocation of the project. Costs associated with implementing a reasonable and prudent alternative are similarly variable.

Regulations at 50 CFR 402.16 require Federal agencies to reinitiate consultation on previously reviewed actions in instances where we have listed a new species or subsequently designated critical habitat that may be affected and the Federal agency has retained discretionary involvement or control over the action (or the agency's discretionary involvement or control is authorized by law). Consequently, Federal agencies sometimes may need to request reinitiation of consultation with us on actions for which formal consultation has been completed, if those actions may affect subsequently listed species or designated critical habitat.

Federal activities that may affect *Monardella viminea* or its designated critical habitat require section 7 consultation under the Act. Activities on State, Tribal, local, or private lands requiring a Federal permit (such as a permit from the U.S. Army Corps of Engineers under section 404 of the Clean Water Act (33 U.S.C. 1251 *et seq.*) or a permit from us under section 10 of the Act) or involving some other Federal action (such as funding from the Federal Highway Administration, Federal Aviation Administration, or the Federal Emergency Management Agency) are subject to the section 7 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 consultations.

Application of the "Adverse Modification" Standard

The key factor related to the adverse modification determination is whether, with implementation of the proposed Federal action, the affected critical habitat would continue to serve its intended conservation role for the species. Activities that may destroy or adversely modify critical habitat are those that alter the physical and biological features to an extent that appreciably reduces the conservation value of critical habitat for *Monardella viminea.* As discussed above, the role of critical habitat is to support life-history needs of the species and provide for the conservation of the species.

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

Activities that may affect critical habitat designated for *Monardella viminea,* when carried out, funded, or authorized by a Federal agency, should result in consultation with the Service. These activities include, but are not limited to:

(1) Actions that would alter channel morphology or geometry and resultant hydrology to a degree that appreciably reduces the value of critical habitat for either the long-term survival or recovery of the species. Such activities could include, but are not limited to: Water impoundment, channelization, or diversion; road and bridge construction (including instream structures); licensing, relicensing, or operation of dams or other water impoundments; and mining and other removal or deposition of materials. Examples of effects these activities may have on *Monardella viminea* habitat include (but are not limited to) a permanent removal or reduction of suitable space for individual and population growth or an increase in woody or herbaceous ground cover (due to increased moisture levels in soil occupied by the species) that affects the availability of suitable habitat for reproduction and survival of *M. viminea.*

(2) Actions that would significantly directly or indirectly affect pollinator abundance or efficacy to a degree that appreciably reduces the value of the critical habitat for the long-term survival or recovery of the species. Such activities include, but are not limited to: Destruction of critical habitat that contains pollinators; introduction of nonnative insects into designated critical habitat that could compete with native pollinators; clearing or trimming of other native vegetation in designated critical habitat in a manner that diminishes appreciably its utility to support *Monardella viminea* pollinators (such as clearing vegetation for fuels control); and application of pesticides.

(3) Actions that would significantly alter sediment deposition patterns and rates within a stream channel to a degree that appreciably reduces the value of the critical habitat for the long-term survival or recovery of the species. Such activities include, but are not limited to: Excessive sedimentation from road construction; excessive recreational trail use; residential, commercial, and industrial development; aggregate mining; and other watershed and floodplain disturbances. These activities may reduce the amount and distribution of suitable habitat for individual and population growth, and reduce or change habitat quality for reproduction, germination, and development.

(4) Actions that would significantly alter biotic features to a degree that appreciably reduces the value of the critical habitat for both the long-term survival or the recovery of the species. Such activities include, but are not limited to, modifying the habitats that support *Monardella viminea* to include coastal sage scrub, riparian scrub, and (in some areas) riparian oak woodland. Proposals for application of herbicides or fire retardant chemicals could also necessitate consultation. These activities may reduce the amount or quality of suitable habitat for individuals and populations; reduce or change sites for reproduction and development; or reduce the quality of water, light, minerals, or other nutritional or physiological requirements.

(5) Actions that could contribute to the introduction or support of nonnative species into critical habitat to a degree that appreciably reduces the value of the critical habitat for both the long-term survival or recovery of *Monardella viminea.* Such activities include, but are not limited to: Landscape disturbance or plant introductions that result in increased numbers of individuals and taxa of nonnative species for landscape or erosion control purposes, or addition of nutrients that would fertilize nonnative plant taxa. These activities may reduce the suitable space for individual and population growth, reduce or change sites for reproduction and development of offspring, and introduce or support nonnative plant taxa that compete with *M. viminea.*

Exemptions

Application of Section 4(a)(3) of the Act

The Sikes Act Improvement Act of 1997 (Sikes Act) (16 U.S.C. 670a) required each military installation that includes land and water suitable for the conservation and management of natural resources to complete an integrated natural 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.

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

We consult with the military on the development and implementation of INRMPs for installations with Federally listed species. We analyzed the INRMP developed by MCAS Miramar, the only military installation located within the range of the proposed critical habitat designation for *Monardella viminea,* to determine if the military lands are exempt under section 4(a)(3) of the Act.

Marine Corps Air Station Miramar (MCAS Miramar)

Marine Corps Air Station Miramar has an approved INRMP (Gene Stout and Associates 2006) that addresses *Monardella viminea,* and the Marine Corps has committed to work closely with us and CDFG to continually refine the existing INRMP as part of the Sikes Act's INRMP review process. In accordance with section 4(a)(3)(B) of the Act, the Secretary has determined that conservation efforts identified in the INRMP provide a benefit to *M. viminea* occurring on MCAS Miramar (see the following section that details this determination). Therefore, the 1,546 ac (625 ha) of habitat occupied by *M. viminea* at the time of listing on which are found the physical or biological features essential to its conservation and thus qualified for consideration as critical habitat on MCAS Miramar are exempt from this critical habitat designation for *M. viminea* under section 4(a)(3)(B)(i) of the Act. The rationale for this exemption is the same as it was for the 2006 designation (71 FR 65662; November 8, 2006).

In the previous final critical habitat designation for *Monardella viminea,* we exempted MCAS Miramar from the designation of critical habitat (71 FR 65662; November 8, 2006). We based this decision on the conservation benefits to *M. viminea* identified in the INRMP developed by MCAS Miramar in May 2000, and the updated INRMP prepared by MCAS Miramar in October 2006 (Gene Stout and Associates *et al.* 2006). We determined that conservation efforts identified in the INRMP provide a benefit to *M. viminea* on MCAS Miramar (Gene Stout and Associates *et al.* 2006, Section 7, p. 17). We reaffirm that continued conservation efforts on MCAS Miramar provide a benefit to *M. viminea.* Therefore, lands containing features essential to the conservation of *M. viminea* on this installation are exempt from this proposed critical habitat designation for *M. viminea* under section 4(a)(3)(B)(i) of the Act.

Provisions in the INRMP for MCAS Miramar benefit *Monardella viminea* by requiring efforts to avoid and minimize impacts to this species and riparian watersheds. All *M. viminea* suitable habitat is managed as specified for Level 1 or Level 2 Habitat Management Areas defined by the INRMP (Kassebaum 2010, pers. comm.). Under the INRMP, Level I Management Areas receive the highest conservation priority of the various Management Areas on MCAS Miramar. The conservation of watersheds in the Level I Management Areas is achieved through:

(1) Education of base personnel;

(2) Implementation of proactive measures that help avoid accidental impacts (such as signs and fencing);

(3) Development of procedures to respond to and restore accidental impacts; and

(4) Monitoring of *M. viminea* occurrences on MCAS Miramar (Gene Stout and Associates *et al.* 2006, Section 7, pp. 17–23).

Additionally, MCAS Miramar's environmental security staff reviews projects and enforces existing regulations and base orders that avoid and minimize impacts to natural resources, including *M. viminea* and its habitat. The INRMP for MCAS Miramar provides a benefit to *M. viminea* and includes measures designed to prevent degradation or destruction of the species' riparian habitat.

Based on the above considerations, and in accordance with section 4(a)(3)(B)(i) of the Act, we have determined that *Monardella viminea* habitat on MCAS Miramar is subject to the MCAS Miramar INRMP and that conservation efforts identified in the INRMP provide and will continue to provide a benefit to *M. viminea* occurring in habitats within and adjacent to MCAS Miramar. Therefore, lands within this installation are exempt from critical habitat designation under section 4(a)(3) of the Act. We are not including approximately 1,546 ac (625 ha) of habitat in this proposed critical habitat designation because of this exemption.

Exclusions

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

Section 4(b)(2) of the Act states that the Secretary must designate and make revisions to 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 statute on its face, as well as the legislative history are 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, the Secretary may exercise his discretion to

exclude a specific area from critical habitat designation if the determination is made that the benefits of excluding the area outweigh the benefits of inclusion. The Secretary may exercise discretion to exclude an area from designated critical habitat based on economic impacts, impacts on national security, or any other relevant impacts. In considering whether to exercise discretion to exclude a particular area from the designation, we identify the benefits of including the area in the designation, identify the benefits of excluding the area from the designation, and evaluate whether the benefits of exclusion outweigh the benefits of inclusion. If the analysis indicates that the benefits of exclusion outweigh the benefits of inclusion, the Secretary may exercise his discretion to exclude the area only if such exclusion would not result in the extinction of the species.

When identifying the benefits of inclusion for an area, we consider the additional regulatory benefits that area would receive from the protection from adverse modification or destruction as a result of actions with a Federal nexus; the educational benefits of mapping essential habitat for recovery of the listed species; and any benefits that may result from a designation due to State or Federal laws that may apply to critical habitat.

When identifying the benefits of exclusion, we consider, among other things, whether exclusion of a specific area is likely to result in conservation; the continuation, strengthening, or encouragement of partnerships; or implementation of a management plan that provides equal to or more conservation than a critical habitat designation would provide.

In the case of *Monardella viminea,* the benefits of critical habitat include public awareness of *M. viminea* presence and the species' critical habitat and the importance of protecting that habitat, and in cases where a Federal nexus exists, increased habitat protection for *M. viminea* due to the prohibition against adverse modification or destruction of critical habitat.

When we evaluate the existence of a conservation plan when considering the benefits of exclusion, we consider a variety of factors, including but not limited to, whether the plan is finalized; how it provides for the conservation of the essential physical and biological features; whether there is a reasonable expectation that the conservation management strategies and actions contained in a management plan will be implemented into the future; whether the conservation strategies in the plan are likely to be effective; and whether the plan contains a monitoring program or adaptive management to ensure that the conservation measures are effective and can be adapted in the future in response to new information.

After identifying the benefits of inclusion and the benefits of exclusion, we carefully weigh the two sides to evaluate whether the benefits of exclusion outweigh those of inclusion. If our analysis indicates that the benefits of exclusion outweigh the benefits of inclusion, we then determine whether exclusion would result in extinction. If exclusion of an area from critical habitat will result in extinction, we will not exclude it from the designation.

The Secretary is considering whether to exercise discretion to exclude certain lands from critical habitat. Based on the information provided by entities seeking exclusion, as well as any additional public comments we receive, we will evaluate whether certain lands are appropriate for exclusion from the final critical habitat designation under section 4(b)(2) of the Act. If the analysis indicates that the benefits of excluding lands from the final designation outweigh the benefits of designating those lands as critical habitat, then the Secretary may exercise his discretion to exclude the lands from the final designation.

We are considering whether to exercise the delegated discretion of the Secretary to exclude the areas listed below either because:

(1) Their value for conservation will be preserved for the foreseeable future by existing protective actions, or

(2) They are appropriate for exclusion under the "other relevant factor" provisions of section 4(b)(2) of the Act.

We specifically request comments on the inclusion or exclusion of these areas, as listed in Table 4. In the paragraphs below, we provide a preliminary analysis of these lands under section 4(b)(2) of the Act.

TABLE 4—AREAS BEING CONSIDERED FOR EXCLUSION UNDER SECTION 4(B)(2) OF THE ACT FROM THIS PROPOSED CRITICAL HABITAT DESIGNATION FOR *Monardella viminea.***

Unit*	Area Covered by City of San Diego Subarea Plan (acres (hectares))	Area Covered by County of San Diego Subarea Plan (acres (hectares))
1. Sycamore Canyon	47 (19)	36 (15)
2. West Sycamore Canyon	21 (9)	0 (0)
3. Spring Canyon	97 (39)	0 (0)
4. East San Clemente Canyon	7 (3)	0 (0)
5. West San Clemente Canyon	< 1 (< 1)	0 (0)
Total ***	172 (70)	36 (15)

* Values in this table may not sum due to rounding.

** The areas being considered for exclusion in this table are included in Tables 1 and 2 above.

*** All areas that are covered by the HCPs (City of San Diego Subarea Plan under the MSCP and County of San Diego Subarea Plan under the MSCP) are considered for exclusion.

Exclusions Based on Economic Impacts

Under section 4(b)(2) of the Act, we consider the economic impacts of specifying any particular area as critical habitat. In order to consider economic impacts, we are preparing an analysis of the economic impacts of the proposed critical habitat designation and related factors.

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** section). During the development of a final designation, we will consider economic impacts, public comments, and other

new information, and areas may be excluded from the final critical habitat designation under section 4(b)(2) of the Act and our implementing regulations at 50 CFR 424.19.

Exclusions Based on National Security Impacts

Under section 4(b)(2) of the Act, we consider whether there are lands owned or managed by the Department of Defense where a national security impact might exist. In preparing this proposal, we have exempted from the designation of critical habitat those lands on MCAS Miramar because the base has an approved INRMP which the Marine Corps is implementing and which we have concluded provides a benefit to *Monardella viminea.*

There are no other lands within the proposed designation of critical habitat that are owned or managed by the Department of Defense, and, therefore, we anticipate no impact on national security. Consequently, the Secretary is not considering exercising his discretion to exclude any areas from the final designation based on impacts on national security.

Exclusions Based on Other Relevant Impacts

Under section 4(b)(2) of the Act, we consider any other relevant impacts, in addition to economic impacts and impacts on national security. We consider a number of factors including whether the landowners have developed any HCPs or other management plans for the area, or whether there are conservation partnerships that would be encouraged by designation of, or exclusion from, critical habitat. In addition, we look at any Tribal issues, and consider the government-to-government relationship of the United States with Tribal entities. We also consider any social impacts that might occur because of the designation.

Land and Resource Management Plans, Conservation Plans, or Agreements Based on Conservation Partnerships

We consider whether a current land management or conservation plan (HCPs as well as other types) provides adequate management or protection for critical habitat of *Monardella viminea.* In particular, we consider whether:

(1) The plan is complete and provides the same or better level of protection from adverse modification or destruction than is likely to result from a consultation under section 7 of the Act;

(2) There is a reasonable expectation that the conservation management strategies and actions will be implemented for the foreseeable future, based on past practices, written guidance, or regulations; and

(3) The plan provides conservation strategies and measures consistent with currently accepted principles of conservation biology.

We are considering exercising our delegated discretion to exclude proposed critical habitat covered by the City of San Diego Subarea Plan and the County of San Diego Subarea Plan under the San Diego Multiple Species Conservation Program. Our review of the plans under section 4(b)(2) of the Act is consistent with our commitments to the City and County in the Implementing Agreements (IA) to consider the plans in future designations of critical habitat for covered species (Service *et al.* 1997 p. 23 (City of San Diego IA and Service *et al.* 1998 p. 23 (County of San Diego IA). We will consider the above criteria and other relevant factors in making a decision under section 4(b)(2) of the Act.

San Diego Multiple Species Conservation Program (MSCP)—County of San Diego Subarea Plan and City of San Diego Subarea Plan

The Multiple Species Conservation Program (MSCP) is a comprehensive habitat conservation planning program that encompasses 582,243 (235,626 ha) acres within 12 jurisdictions of southwestern San Diego County. The MSCP is a subregional plan that identifies the conservation needs of 85 Federally listed and sensitive species, including *Monardella viminea,* and serves as the basis for development of subarea plans by each jurisdiction in support of section 10(a)(1)(B) permits. The subregional MSCP identifies where mitigation activities should be focused, such that upon full implementation of the subarea plans approximately 171,920 ac (69,574 ha) of the 582,243 ac (235,626 ha) MSCP plan area will be preserved and managed for covered species. Conservation of *Monardella viminea* is addressed in the sub-regional plan, and in the City of San Diego and County of San Diego Subarea Plans that we are considering for exclusion in this rule.

The subregional MSCP identifies where mitigation activities should be focused, such that upon completion approximately 171,920 ac (69,574 ha) of the 582,243 ac (235,626 ha) MSCP plan area will be preserved for conservation (MSCP 1998, pp. 2–1, and 4–2 to 4–4).

The City and County Subarea Plans identify areas where mitigation activities should be focused to assemble its preserve areas (*i.e.,* MHPA or PAMA). Those areas of the MSCP preserve that are already conserved, as well as those areas that are designated for inclusion in the preserve under the plan, are referred to as the "preserve area" in this proposed revised critical habitat designation. 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 land will manage and monitor their land in the preserve for species and habitat protection (MSCP 1998, pp. 2–1, and 4–2 to 4–4).

The City and County Subarea Plans include multiple conservation measures that provide benefits to *Monardella viminea.* The MSCP requires the City and the County to develop framework and site specific management plans, subject to the review and approval of the Service and CDFG, to guide the management of all preserve land under City and County control. Currently, the framework plans are in place, and the County of San Diego has developed a site-specific management plan for the one area under its ownership that contains *M. viminea* (Sycamore Canyon), which incorporates requirements to monitor and adaptively manage *M. viminea* habitat over time. In contrast, though the City of San Diego has conserved 100 percent of *M. viminea* occurrences on City-owned lands within preserve areas (City of San Diego 1997, p. 127), it has not developed any site-specific management plan for any lands containing *M. viminea,* including the lands we are proposing as critical habitat. Any *M. viminea* occurrences that occur on private lands that have not been conserved by the City of San Diego Subarea Plan receive no management or protection other than that provided by the ESL (almost all occurrences that occur within the City of San Diego's MSCP Subarea Plan area have been protected in MSCP reserves; see Factor D discussion above). The ESL provides

protection for sensitive biological resources (including *Monardella viminea* and its habitat), by ensuring that development occurs "in a manner that protects the overall quality of the resources and the natural and topographic character of the area, encourages a sensitive form of development, retains biodiversity and interconnected habitats, maximizes physical and visual public access to and along the shoreline, and reduces hazards due to flooding in specific areas while minimizing the need for construction of flood control facilities." The ESL was designed to act as an implementing tool for the City of San Diego Subarea Plan (City of San Diego 1997, p. 98).

The MSCP also provides for a biological monitoring program, and *Monardella viminea* is identified as a first priority species for field monitoring under both the City and County Subarea Plans. Under the County's subarea plan, Group A plant species, including *M. viminea,* are conserved following guidelines outlined by the County's Biological Mitigation Ordinance, which uses a process that:

(1) Requires avoidance to the maximum extent feasible;

(2) Allows for a maximum 20 percent encroachment into a population if total avoidance is not feasible; and

(3) Requires mitigation at the 1:1 to 3:1 (in kind) for impacts if avoidance and minimization of impacts would result in no reasonable use of the property.

We are considering exercising our delegated discretion to exclude from critical habitat a portion of Unit 1 covered by the County of San Diego Subarea Plan under section 4(b)(2) of the Act. This area encompasses approximately 36 ac (15 ha) of land. We are also considering exercising our delegated discretion to exclude from critical habitat portions of Units 1–5 covered by the City of San Diego Subarea Plan under section 4(b)(2) of the act. This area encompasses 172 ac (70 ha) of land. All areas that are covered by the HCPs (City of San Diego Subarea Plan under the MSCP and County of San Diego Subarea Plan under the MSCP) are considered for exclusion.

Peer Review

In accordance with our joint policy on peer review published in the **Federal Register** on July 1, 1994 (59 FR 34270), we will seek the expert opinions of at least three appropriate and independent specialists regarding this proposed rule. The purpose of peer review is to ensure that our critical habitat designation is based on scientifically sound data, assumptions, and analyses. We have invited these peer reviewers to comment during this public comment period on our specific assumptions and conclusions in this proposed 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 the final determination. Accordingly, the 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 requested. We must receive your request within 45 days after the date of this **Federal Register** publication. Send your request to the address shown in the **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 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 (Regulatory Planning and Review). 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 (5 U.S.C. 801 *et seq.*), whenever an agency must publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effects of the rule on small entities (small businesses, small organizations, and small government jurisdictions). However, no regulatory flexibility analysis is required if the head of an agency certifies the rule will not have a significant economic impact on a substantial number of small entities. The SBREFA amended RFA to require Federal agencies to provide a certification statement of the factual basis for certifying that the rule will not have a significant economic impact on a substantial number of small entities.

At this time, we lack the available economic information necessary to provide an adequate factual basis for the required RFA finding. Therefore, we defer the RFA finding until completion of the draft economic analysis prepared under section 4(b)(2) of the Act and Executive Order 12866. This draft economic analysis will provide the required factual basis for the RFA finding. Upon completion of the draft economic analysis, we will announce availability of the draft economic analysis of the proposed designation 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 have 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.

Energy Supply, Distribution, or Use—Executive Order 13211

Executive Order 13211 (Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use) requires agencies to prepare Statements of Energy Effects when undertaking certain actions. We do not expect the designation of this proposed critical habitat to significantly affect energy supplies, distribution, or use, because there are no energy or distribution facilities within the area proposed as critical habitat. 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.

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

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

(1) This rule would not produce a Federal mandate. In general, a Federal mandate is a provision in legislation, statute, or regulation that would impose an enforceable duty upon State, local, or Tribal governments, or the private sector, and includes both "Federal intergovernmental mandates" and "Federal private sector mandates." These terms are defined in 2 U.S.C. 658(5)–(7). "Federal intergovernmental mandate" includes a regulation that "would impose an enforceable duty upon State, local, or Tribal governments" with two exceptions. It excludes "a condition of Federal assistance." It also excludes "a duty arising from participation in a voluntary Federal program," unless the regulation "relates to a then-existing Federal program under which $500,000,000 or more is provided annually to State, local, and Tribal governments under entitlement authority," if the provision would "increase the stringency of conditions of assistance" or "place caps upon, or otherwise decrease, the Federal Government's responsibility to provide funding," and the State, local, or Tribal governments "lack authority" to adjust accordingly. At the time of enactment, these entitlement programs were: Medicaid; Aid to Families with Dependent Children 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 that otherwise require approval or authorization from a Federal agency for an action, may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency. Furthermore, to the extent that non-Federal entities are indirectly impacted because they receive Federal assistance or participate in a voluntary Federal aid program, the Unfunded Mandates Reform Act would not apply, nor would critical habitat shift the costs of the large entitlement programs listed above onto State governments.

(2) We do not believe that this rule would significantly or uniquely affect small governments. Small governments would be affected only to the extent that any programs having Federal funds, permits, or other authorized activities must ensure that their actions would not adversely affect the critical habitat. Therefore, a Small Government Agency Plan is not required. However, we will further evaluate this issue as we conduct our economic analysis, and review and revise this assessment if appropriate.

Takings—Executive Order 12630

In accordance with Executive Order 12630 (Government Actions and Interference with Constitutionally Protected Private Property Rights), we have analyzed the potential takings implications of designating critical habitat for *Monardella viminea* in a takings implications assessment. Critical habitat designation does not affect landowner actions that do not require Federal funding or permits, nor does it preclude development of habitat conservation programs or issuance of incidental take permits to permit actions that do require Federal funding or permits to go forward. The takings implications assessment concludes that this designation of critical habitat for *M. viminea* would not pose significant takings implications for lands within or affected by the designation.

Federalism—Executive Order 13132

In accordance with Executive Order 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 of critical habitat in areas currently occupied by *Monardella viminea* would impose no additional restrictions to those currently in place and, therefore, has little incremental impact on State and local governments and their activities. The designation may have some benefit to these governments because the areas that contain the physical and biological features essential to the conservation of the species are more clearly defined, and the elements of the features 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 (rather than having them wait for case-by-case section 7 consultations to occur).

Where State and local governments require approval or authorization from a Federal agency for actions that may affect critical habitat, consultation under 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 that it meets the requirements of sections 3(a) and 3(b)(2) of the Order. We have proposed designating critical habitat in accordance with the provisions of the Act. This proposed rule uses standard property descriptions and identifies the elements of physical and biological features essential to the conservation of *Monardella viminea* within the designated areas to assist the public in understanding the habitat needs of the species.

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 (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 under the National Environmental Policy Act (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), Executive Order 13175 (Consultation and Coordination With Indian Tribal Governments), and the Department of the Interior's manual at 512 DM 2, we readily acknowledge our responsibility to communicate meaningfully with recognized Federal Tribes on a government-to-government basis. In accordance with Secretarial Order 3206 of June 5, 1997 (American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act), we readily acknowledge our responsibilities to work directly with Tribes in developing programs for healthy ecosystems, to acknowledge that Tribal lands are not subject to the same controls as Federal public lands, to remain sensitive to Indian culture, and to make information available to Tribes.

We have determined that there are no Tribal lands occupied by *Monardella viminea* that contain the features essential for conservation of the species, and no Tribal lands unoccupied by *M. viminea* that are essential for the conservation of the species. Therefore, we have not proposed designation of critical habitat for *M. viminea* on Tribal lands.

References Cited

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

Authors

The primary authors of this package are the staff members of the Carlsbad Fish and Wildlife Office.

List of Subjects in 50 CFR Part 17

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

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—ENDANGERED AND THREATENED WILDLIFE AND PLANTS

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 "*Monardella linoides* ssp. *viminea*" under "FLOWERING PLANTS" in the List of Endangered and Threatened 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							
*	*	*	*	*	*	*	
Monardella viminea	Willowy monardella	U.S.A. (CA), Mexico	Lamiaceae	E	649	17.96(a)	NA
*	*	*	*	*	*	*	

3. In § 17.96, amend paragraph (a) by revising critical habitat for *Monardella linoides* ssp. *viminea* (willowy monardella) under Family Lamiaceae to read as follows:

§ 17.96 Critical habitat—plants.

(a) *Flowering plants.*

* * * * *

Family Lamiaceae: *Monardella viminea* (willowy monardella)

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

(2) Within these areas, the primary constituent element of the physical and biological features essential to the conservation of *Monardella viminea* is riparian channels with ephemeral drainages and adjacent floodplains:

(i) With a natural hydrological regime, in which:

(A) Water flows only after peak seasonal rainstorms;

(B) High runoff events periodically scour riparian vegetation and redistribute alluvial material to create new stream channels, benches, and sandbars; and

(C) Water flows for usually less than 48 hours after a rain event, without long-term standing water;

(ii) With surrounding vegetation that provides semi-open, foliar cover with:

(A) Little or no herbaceous understory;

(B) Little to no canopy cover;

(C) Open ground cover, less than half of which is herbaceous vegetation cover;

(D) Some shrub cover; and

(E) An association of other plants, including *Eriogonum fasciculatum* (California buckwheat) and *Baccharis sarothroides* (broom baccharis);

(iii) That contain ephemeral drainages that:

(A) Are made up of coarse, rocky, or sandy alluvium; and

(B) Contain terraced floodplains, terraced secondary benches, stabilized sandbars, channel banks, or sandy washes; and

(iv) That have soil with high sand content, typically characterized by sediment and cobble deposits, and further characterized by a high content of coarse, sandy grains and low content of silt and clay.

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

(4) *Critical habitat map units.* Data layers defining map units were created using a base of U.S. Geological Survey 7.5' quadrangle maps. 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 *Monardella viminea* follows:

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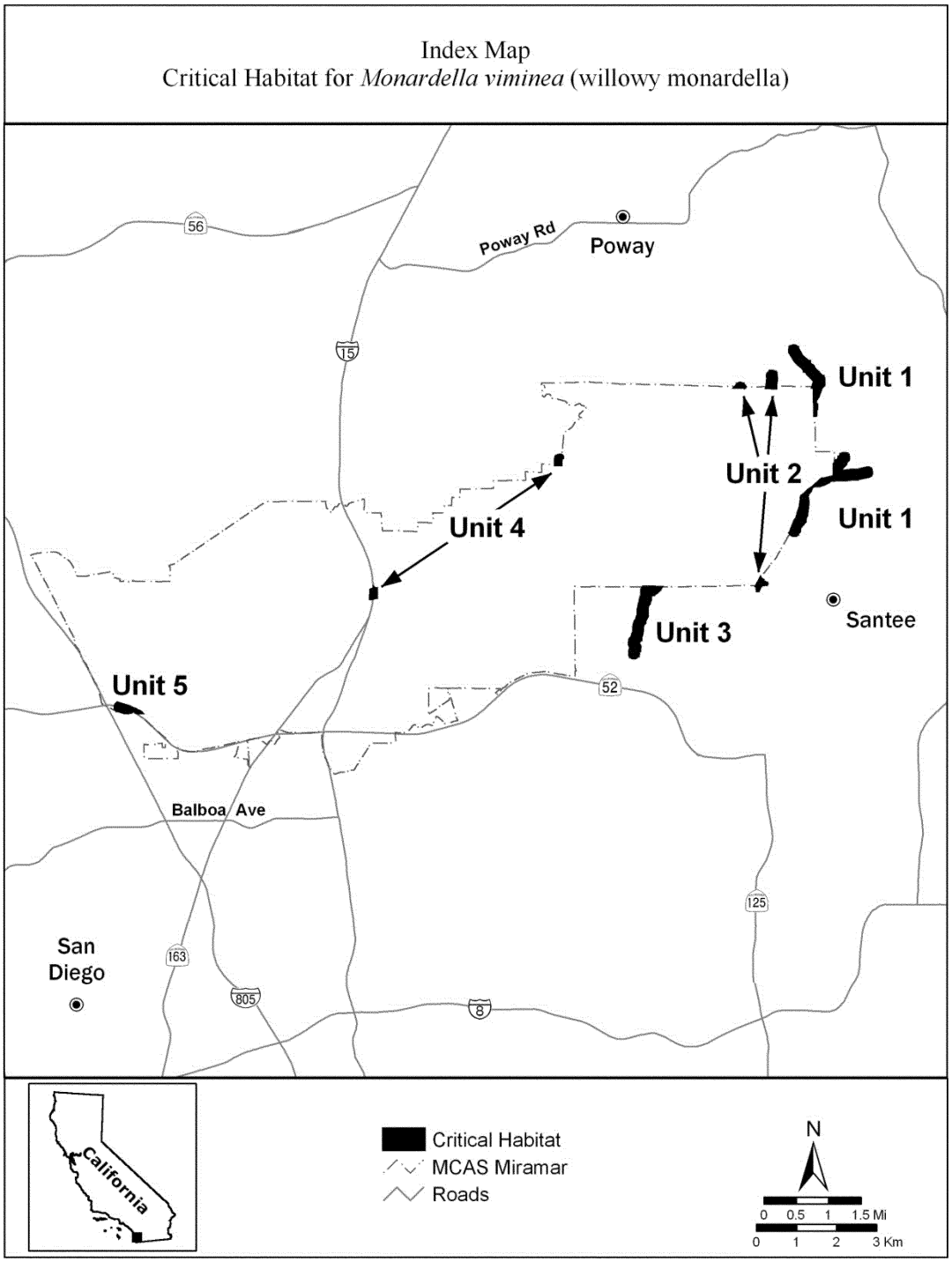
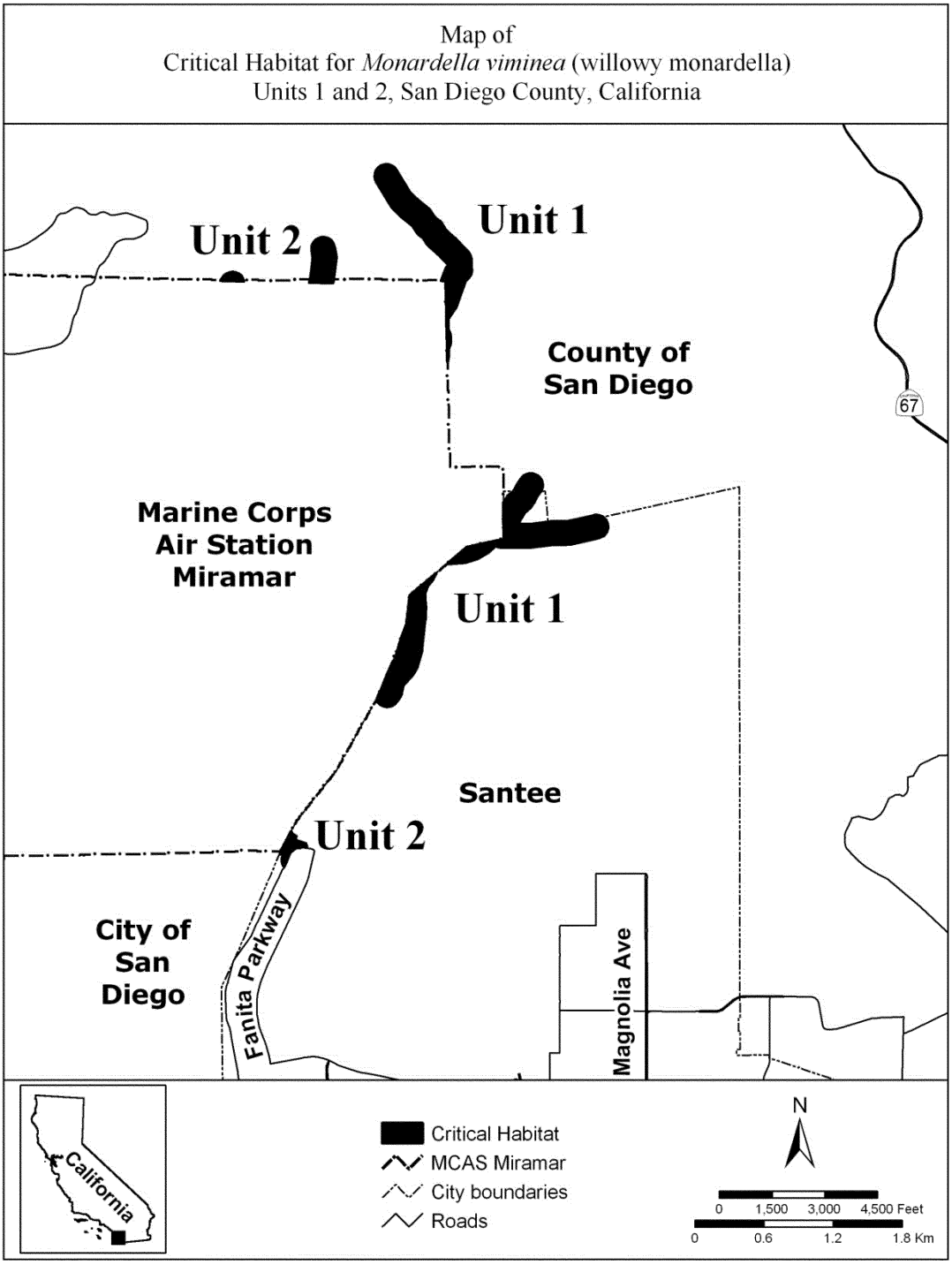

Index Map
Critical Habitat for *Monardella viminea* (willowy monardella)
56
Poway Rd
Poway
15
Unit 1
Unit 2
Unit 1
Unit 4
Unit 3
Santee
Unit 5
52
Balboa Ave
125
San Diego
163
805
8
California
Critical Habitat
MCAS Miramar
Roads
N
0 0.5 1 1.5 Mi
0 1 2 3 Km

(6) Unit 1: Sycamore Canyon and West Sycamore Canyon, San Diego County, California.

(i) [Reserved for textual description of Unit 1.]

(ii) [Reserved for textual description of Unit 2.]

(iii) *Note:* Map of Unit 1 and Unit 2, Sycamore Canyon and West Sycamore Canyon, follows:

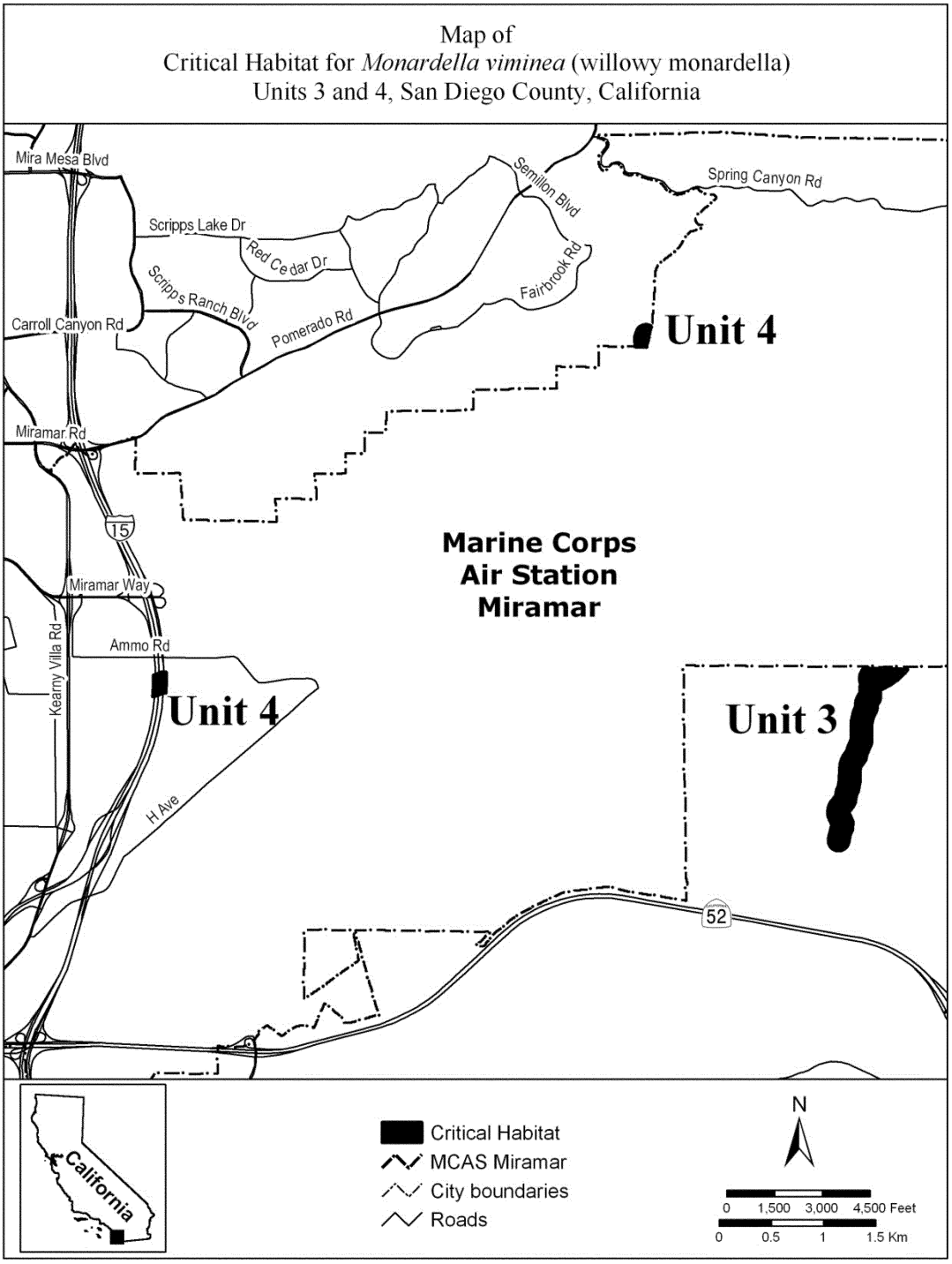


(7) Units 3 and 4: Spring Canyon and East San Clemente Canyon, San Diego County, California.

(i) [Reserved for textual description of Unit 3.]

(ii) [Reserved for textual description of Unit 4.]

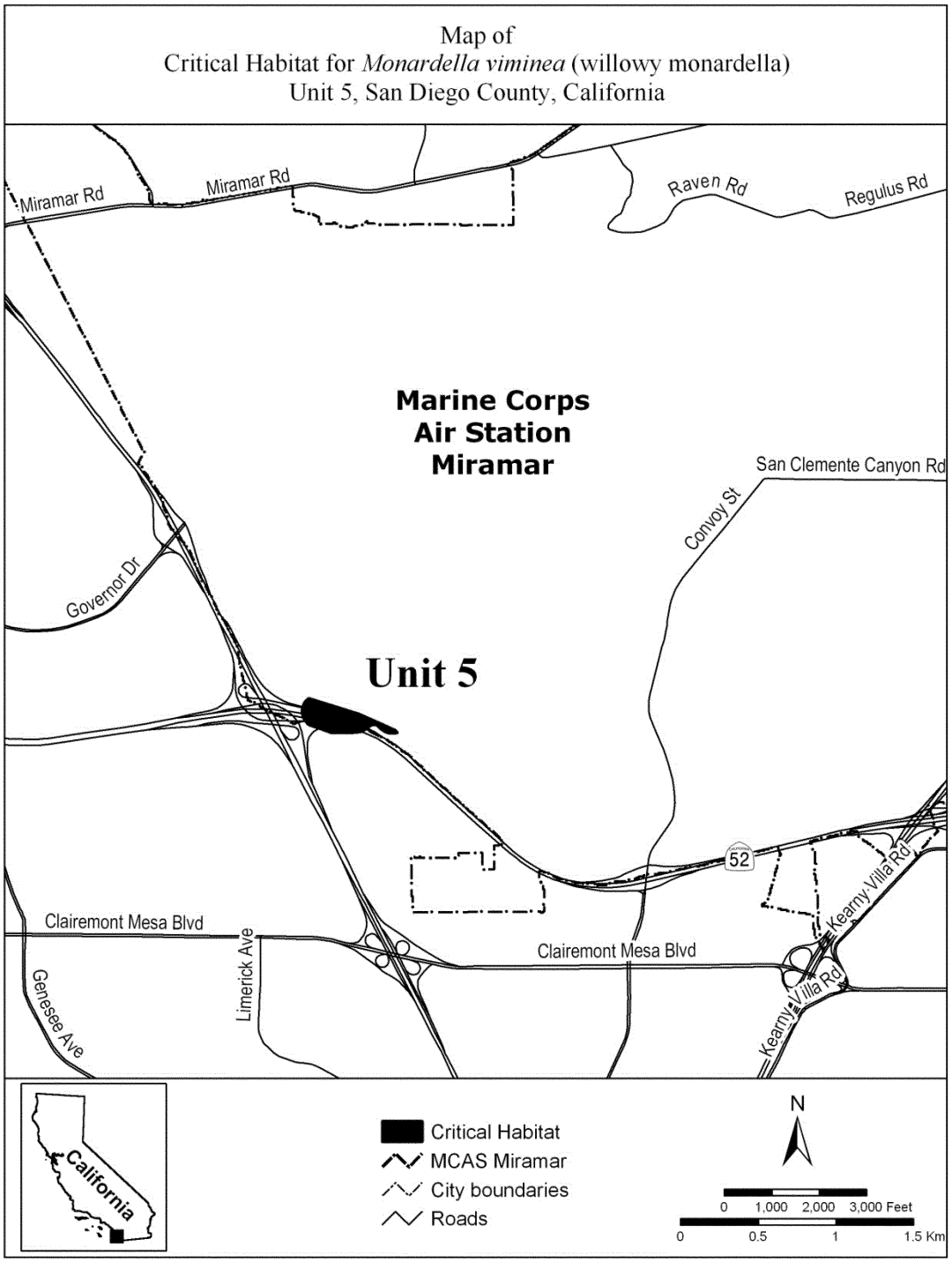
(iii) *Note:* Map of Unit 3 and Unit 4, Spring Canyon and East San Clemente Canyon, follows:



(8) Unit 5: West San Clemente Canyon, San Diego County, California.

(i) [Reserved for textual description of Unit 5.]

(ii) *Note:* Map of Unit 5, West San Clemente Canyon, follows:



* * * * *

Dated: May 25, 2011.

Eileen Sobeck,

Acting Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 2011–13912 Filed 6–8–11; 8:45 am]

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