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50 CFR Chapter 17

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

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS–R8–ES–2010–0076; 4500030114]

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: Final rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), 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 reviewed and updated the threats analysis that we completed for the taxon in 1998, when it was listed as a subspecies. We also reviewed the status of the new species, *Monardella stoneana.* We retain the listing status of *Monardella viminea* as endangered, and we remove protections afforded by the Act from those individuals now recognized as the separate species, *Monardella stoneana,* because the new species does not meet the definition of endangered or threatened under the Act. We also revise designated critical habitat for *Monardella viminea.* In total, approximately 122 acres (50 hectares) in San Diego County, California, fall within the boundaries of the critical habitat designation. We are not designating critical habitat for *Monardella stoneana* because this species does not warrant listing under the Act.

DATES: This rule becomes effective on April 5, 2012.

ADDRESSES: This final rule and the associated final economic analysis are available on the Internet at *http://www.regulations.gov.* Comments and materials received, as well as supporting documentation used in preparing this final rule, are available for public inspection, by appointment, during normal business hours, at the U.S. Fish and Wildlife Service, Carlsbad Fish and Wildlife Office, 6010 Hidden Valley Road, Suite 101, Carlsbad, CA 92011; telephone 760–431–9440; facsimile 760–431–5901.

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:

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 designation of critical habitat for *M. viminea* under the Act (16 U.S.C. 1531 *et seq.*), and our conclusion that *M. stoneana* does not meet the definition of endangered or threatened under the Act. For more information on the biology and ecology of *M. viminea* and *M. stoneana,* refer to the final listing rule published in the **Federal Register** on October 13, 1998 (63 FR 54938) and the critical habitat rule published November 8, 2006 (71 FR 65662). For new information specific to *M. viminea* and *M. stoneana,* including species descriptions, distributions, taxonomic ranks, and nomenclature, as well as new information on soils, potential pollinators, and current threats to the two species not included in our original listing or critical habitat rules for *M.* linoides ssp. *viminea,* refer to the proposed rule to designate revised critical habitat for *M. viminea* published in the **Federal Register** on June 9, 2011 (76 FR 33880). For information on the associated draft economic analysis for the proposed rule to designate revised critical habitat, refer to the document published in the **Federal Register** on September 28, 2011 (76 FR 59990).

Procedural Aspects of This Rule

In 2003, Elvin and Sanders proposed a taxonomic split of the previously listed entity *Monardella linoides* ssp. *viminea* into two distinct species. The Service initially disagreed with the segregation and classification of *M. stoneana* as a distinct species due to lack of sufficient supportive evidence presented by Elvin and Sanders (Bartel and Wallace 2004, pp. 1–3), but upon review of corroborating genetic analysis by Prince (2009), we accept the treatment of Elvin and Sanders (2003). This treatment found that some discrete occurrences that were previously identified as the listed entity *Monardella linoides* ssp. *viminea* do not in fact represent that entity, but rather a separate taxon. We also accept, and will use here, the scientific name *Monardella viminea* for the listed willowy monardella. Elvin and Sanders (2003, p. 426) provided the name *Monardella stoneana* for plants they determined were sufficiently distinct from willowy monardella to warrant recognition at the species rank. These authors returned willowy monardella to species status as *M. viminea,* the name under which it was originally described. In addition, Elvin and Sanders (2003, p. 431) point out its distinctiveness from *M. linoides* taxa in San Diego County, California.

Several consequences result from the change in taxonomy and recognition of the species split. First, we will refer to willowy monardella as *Monardella viminea.* Second, the range, description, and the magnitude and immediacy of threats to the listed entity (now *M. viminea*) have changed. A map of the distributions of the two species, *M. viminea* and *M. stoneana,* is provided in Figure 1, below. Third, those individuals now recognized as *M. stoneana,* which are identified as morphologically and ecologically distinct from the listed entity (*M. viminea*), are no longer afforded protections by the Act under the name *M. viminea.*

In this final rule, we present the results of a status review for *Monardella viminea* in consideration of its changed morphological and ecological description and diminished range. We also present our revised designation of critical habitat for *M. viminea.* Finally, we present the results of our status review for those plants previously protected under the Act as *M. viminea,* and that are now identified as *M. stoneana,* and conclude *M. stoneana* does not meet the definition of endangered or threatened under the Act.

We first proposed recognizing the taxonomic classification of *Monardella linoides* ssp. *viminea* as a distinct species (*M. viminea*) and reclassifying a portion of *Monardella linoides* ssp. *viminea* as a separate species (*M. stoneana*) in the proposed listing and revised critical habitat rule published in the **Federal Register** on June 9, 2011 (76 FR 33880). Based on the information presented in the proposed rule (see *Taxonomic and Nomenclatural Changes Affecting* Monardella linoides *ssp.* viminea of the

proposed rule (76 FR 33880, June 9, 2011)), and acceptance by the scientific community, we finalize the taxonomic change and amend the List of Endangered and Threatened Plants at 50 Code of Federal Regulations (CFR) 17.12(h) to identify the listed entity as ''*Monardella viminea* (willowy monardella).''

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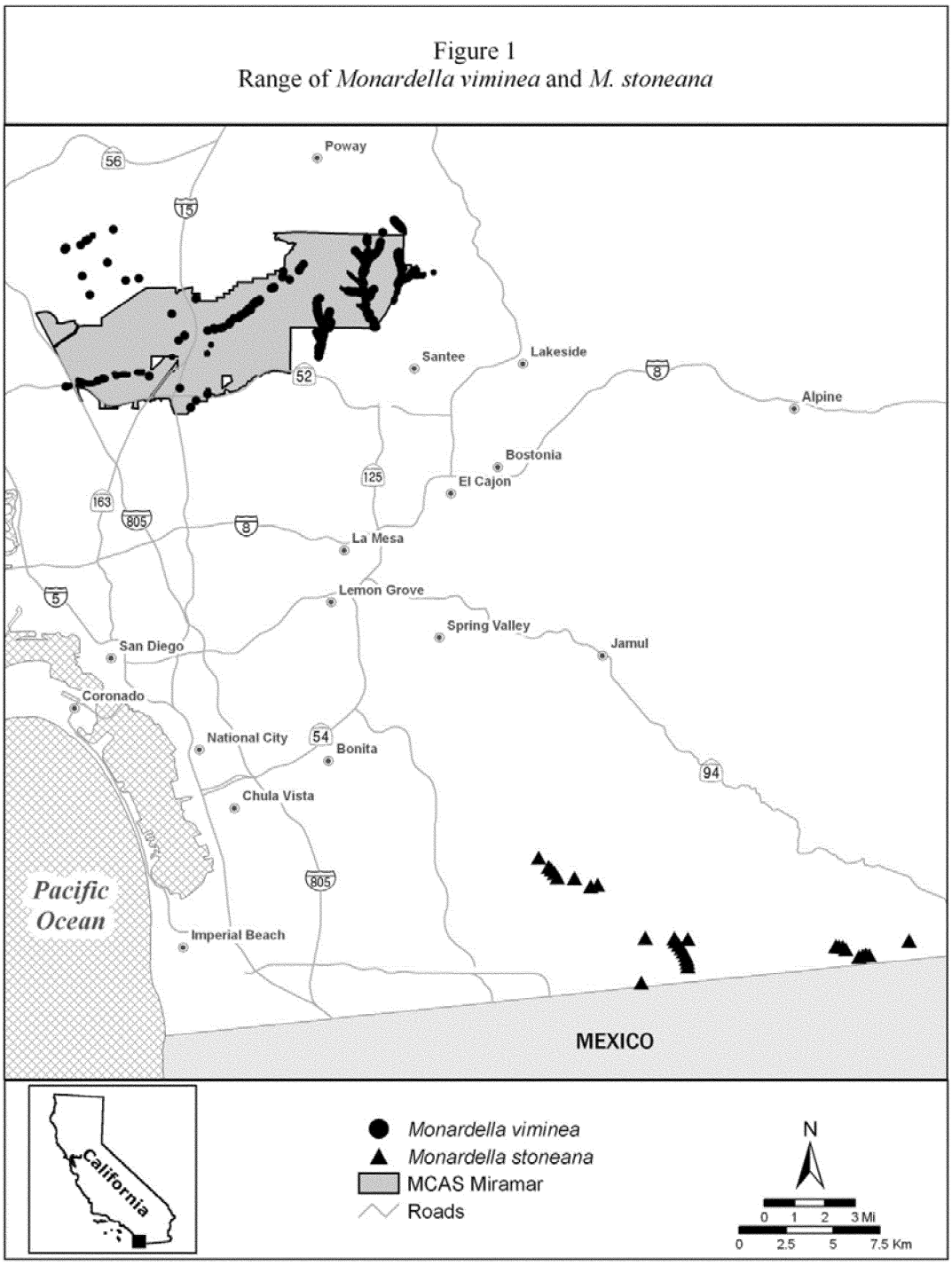

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New Information on Occurrences of Monardella viminea and Monardella stoneana

In this document we use the word ''occurrence'' when describing the location of *Monardella viminea* plants. In this context, we are referring to point locations that contain one or more *M. viminea* individuals or to polygons representing the boundaries of clumps of plants. These point locations or polygons may include one or more of the ''element occurrences'' (EOs) as described by the California Department of Fish and Game (CDFG) in the California Natural Diversity Database (CNDDB). Utilizing EOs to describe locations of *M. viminea* plants in our listing and critical habitat analyses is

consistent with terminology used by the Service in previous rules for this species. It also provides clarity in referencing clumps of plants in canyons that may be referred to by multiple or changing names. In all other respects in this document, ''element occurrence'' or ''occurrence'' references are those from the cumulative data of the CNDDB (2011a, EOs 1–31).

As discussed in the June 9, 2011, proposed rule (76 FR 33880), 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 extirpated, leaving 11 extant occurrences (Service 2008, p. 5). All nine 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.), 2 additional occurrences of those 11 extant occurrences have since been extirpated, again in the range of *M. viminea.* Additionally, as a result of taxonomic changes, the two southernmost element occurrences previously considered *M. linoides* ssp. *viminea* were reclassified as *M. stoneana* after the 2008 5-year review, leaving seven extant occurrences of *M. viminea* (see Table 1). We now consider an eighth occurrence to be extant, as described in the following paragraphs.

TABLE 1—LIST OF ELEMENT OCCURRENCES OF MONARDELLA VIMINEA AND MONARDELLA STONEANA BY LOCATION, AND WHEN THOSE OCCURRENCES WERE KNOWN TO BE EXTANT

Location	CNDDB Element Occurrence No. (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	X		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
NW Otay Mountain	2		X	X
NW Otay Mountain	3		X	X
Otay Lakes	4	X	X	X
Buschalaugh Cove	5		X	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, 2011a, 2011b; Service 2008, Table 1; Kassebaum 2010, pers. comm.

After a new review of Geographical Information Systems (GIS) data and the most recent survey report from MCAS Miramar, we found that an occurrence of *M. viminea* in San Clemente Canyon had incorrectly been reported as extirpated both in the 2008 5-year review and the June 9, 2011, proposed rule. Further reviews of data from MCAS Miramar showed that plants have continuously been present in the location that was incorrectly considered extirpated (Rebman and Dossey 2006, Map 10; Tierra Data 2011, Map 6). Therefore, we now recognize EO 12 as extant. We believe there are now eight element occurrences of *M. viminea,* and that these eight EOs were extant at the time of listing. Therefore, we currently consider only 10 occurrences to be extirpated rather than 11. 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 four translocated occurrences is discussed in the *Geographic Range and Status* section in the proposed rule (76 FR 33880, June 9, 2011).

In addition to two occurrences now considered to be *Monardella stoneana* (but considered at listing to be *M. linoides* ssp. *viminea*), we now know of an additional seven occurrences of *M. stoneana,* all in what was once the southern range of *M. linoides* ssp. *viminea* (Figure 1, above). We presume those occurrences were extant at the time *M. linoides* ssp. *viminea* was listed. Although we reported in the June 9, 2011, proposed rule that the single plant in the *M. stoneana* occurrence at Otay

Lakes (*M. stoneana* EO 4, formerly *M. viminea* EO 28) was extirpated by the 2007 Harris Fire, 2011 surveys by the City of San Diego reported a single plant had resprouted in the same location (City of San Diego 2011a, p. 229). The monitor for the city reported that the plant was of robust size and height, making it more likely to be a resprout than a juvenile or seedling (Miller 2011, pers. comm.). Therefore, in this final rule, we now consider nine occurrences of *M. stoneana* to be extant.

Throughout this document we refer to previous reports and documents, including **Federal Register** publications. Information contained in documents issued prior to the present document 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.*

Summary of Changes From Proposed Rule

In preparing this final listing rule and critical habitat designation, we reviewed and considered comments from the public on the proposed listing of *Monardella viminea,* proposed removal of plants now recognized as *M. stoneana* from the listed entity, and proposed designation of critical habitat for *M. viminea* published on June 9, 2011 (76 FR 33880). As a result of public comments and peer review, we made slight changes to our analysis of threats for both species and the revised designation of critical habitat for *M. viminea.* These changes are as follows:

(1) We added information from a *Monardella viminea* habitat study conducted by researchers at MCAS Miramar. The study examined three different treatments for enhancing habitat conditions for *M. viminea:* hand removal of nonnative grasses, herbicide application to nonnative grasses, and application of cobble to provide rock mulch (AMEC 2011, p. 1–1). We also added findings from the study to the Factor A and Factor C analyses for *M. viminea,* and to the *Special Management Considerations or Protection* section. Additionally, we added information on habitat fragmentation to the Factor A analysis for *M. viminea.*

(2) Based on information submitted by commenters, we added information to the five-factor analyses for both species, such as the effects of trampling on *Monardella viminea,* the effects of road construction on *M. stoneana,* and factors influencing the lack of recruitment for *M. viminea.*

(3) Based on a suggestion we received from a commenter, we added a discussion of protections afforded by the Clean Water Act (33 U.S.C. 1251 *et seq.*) to the five-factor analyses for both species.

(4) Based on information presented by a commenter, we revised the list of activities requiring consultation for critical habitat, including removal of activities that have previously had no detrimental effect on *Monardella viminea* (such as fire retardant use). We also removed mention of herbicide application as an activity that requires consultation because small-scale application of herbicide on weeds in direct proximity to *M. viminea* has a demonstrated benefit to the species.

(5) We updated this final rule to include information about protections afforded to *Monardella viminea* by the newly approved integrated natural resources management plan (INRMP) for MCAS Miramar.

(6) Based on information submitted by commenters, we updated the *Special Management Considerations or Protection* section with measures on how to manage and protect essential habitat that supports *Monardella viminea.*

(7) Based on further communication with managers of Otay Mountain Ecological Reserve, we updated the management policies and guidelines for the Reserve in the Factor D discussion for *Monardella stoneana.*

(8) We added further information on possible threats posed by illegal border crossings to Factor A for *Monardella stoneana.*

(9) As requested by a commenter, we revised the Altered Hydrology section in the Factor A analysis for *Monardella viminea* to address changing watershed conditions in the range of the species.

(10) The areas designated as critical habitat in this final rule constitute a slight revision of the critical habitat for *Monardella viminea* we proposed on June 9, 2011 (76 FR 33880). During the first public comment period, we received notification from MCAS Miramar that we were not using the most recent boundaries in the proposed rule (Dept. of Environmental Management, MCAS Miramar 2011, p. 3). While there was no change in the total area identified as critical habitat, ownership area totals in some areas did change, as shown in Table 2.

TABLE 2—CHANGES IN OWNERSHIP AREA TOTALS BETWEEN PROPOSED AND FINAL RULES

	Proposed critical habitat			Final critical habitat		
	Federal ac (ha)	State/local ac (ha)	Private ac (ha)	Federal ac (ha)	State/local ac (ha)	Private ac (ha)
Unit 1—Sycamore Canyon	156 (63)	25 (10)	170 (69)	153 (62)	22 (8)	175 (70)
Unit 2—West Sycamore Canyon	550 (222)	27 (11)	0 (0)	551 (223)	26 (11)	0 (0)
Unit 3—Spring Canyon	176 (71)	5 (2)	92 (37)	170 (69)	5 (2)	98 (40)
Unit 4—East San Clemente Canyon	454 (184)	13 (5)	0 (0)	462 (187)	5 (2)	0 (0)
Unit 5—West San Clemente Canyon	210 (85)	16 (7)	1 (<1)	227 (92)	0 (0)	0 (0)
Total	1,546 (626)	86 (35)	263 (106)	1,563 (663)	58 (24)	273 (111)
Total Essential Habitat	.....	.....	1,895 (767)	.....	.....	1,895 (767)
	Exempted	Proposed excluded	Proposed designation *	Exempted	Excluded **	Designated
	1,546 (626)	208 (84)	348 (141)	1,563 (663)	210 (85)	122 (50)

Values in this table may not sum due to rounding.

* "Proposed designation" includes acreages proposed for exclusion.

** Excluded acreages include private lands covered by the City of San Diego and County of San Diego Subarea Plans under the San Diego Multiple Species Conservation Program (MSCP).

(11) Table 3 of the proposed rule incorrectly listed Unit 1 as consisting of 158 ac (64 ha) of private land and 36 ac (15 ha) of state and local land. The table should have shown 170 ac (69 ha) of private land and 25 ac (10 ha) of state and local land.

(12) In the June 9, 2011, proposed revised rule, we stated that we were considering lands owned by or under the jurisdiction of the City of San Diego Subarea Plan and the County of San Diego Subarea Plan under the San Diego Multiple Species Conservation Program (MSCP) for exclusion under section 4(b)(2) of the Act. We have now made a final determination that the benefits of exclusion outweigh the benefits of inclusion of lands covered by the City and County Subarea Plans and that exclusion of these lands will not result in extinction of the species. Therefore, the Secretary is exercising his discretion to exclude approximately 177 acres (ac) (72 hectares (ha)) of land within the boundaries of the City of San Diego Subarea Plan and 32 ac (13 ha) within the County of San Diego Subarea Plan from this final designation. For a complete discussion of the benefits of inclusion and exclusion, see the Exclusions section below.

Only information relevant to actions described in this final 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), the 5-year review completed in March 2008 (Service 2008), and the proposed rule published on June 9, 2011 (76 FR 33880). Actions described below include status reviews of *M. viminea* and *M. stoneana* and a revision of the critical habitat designation for *M. viminea.*

Previous Federal Actions

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; we published the proposed rule in the **Federal Register** on June 9, 2011 (76 FR 33880). The deadline for submission of a final revised critical habitat designation to the **Federal Register** remains February 17, 2012. This rule complies with the conditions of the settlement agreement.

Summary of Factors Affecting *Monardella viminea*

Section 4 of the Act and its implementing regulations (50 CFR part 424) set forth the procedures for adding species to the Federal Lists of Endangered and Threatened Wildlife and Plants. 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; or (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 the parcels. Since listing, one of those two occurrences, EO 25 from the Carroll Canyon Business Park (CNDDB 2011a), has been extirpated due to construction activities. Additionally, EO 14 in Murphy Canyon was believed extirpated after listing due to lingering impacts from construction activity near Highway 15 (CNDDB 2011a).

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 designates lands to be set aside for biological preserves. However, 10 percent of habitat for *M. viminea* occurs on privately owned land outside of the reserve areas. This land includes areas in the City of Santee outside of the purchased reserve land, and one of the four transplanted occurrences in Carroll Canyon within the boundaries of the City of San Diego (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 2003a, pp. 1–23), although the project has been put on hold due to bankruptcy issues, and no development is currently scheduled (San Diego Business Journal 2011, pp. 1–3).

Another potential impact of increased urbanization is habitat fragmentation. As noted in the *New Information on Occurrences of* Monardella viminea *and* Monardella stoneana section above, 11 occurrences of *Monardella viminea* have been extirpated since listing. To some extent, *M. viminea* evolved in a naturally fragmented landscape, as it occurs in individual drainages. In natural conditions, some habitat connectivity could be provided through pollinator movement between occurrences in close proximity to each other. Uninterrupted habitat within canyons is also important for maintaining the downstream flows that create secondary benches and sandbars upon which *M. viminea* grows, and for scouring nonnative grasses from those areas. Thus, under unaltered conditions, habitat fragmentation is not a threat to

M. viminea. However, urbanization (particularly in areas surrounding occurrences of *M. viminea* in Carroll and Lopez Canyons) interrupts pollinator movement and natural streamflow in the canyons, and urbanization could prevent movement and decrease genetic diversity of the species. Additionally, in San Clemente Canyon, the Sim J. Harris aggregate mine acts as a barrier to the physical and biotic continuity, and as a barrier to natural water flow between the east and west halves of the canyon, although natural habitat for pollinators remains.

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 most remaining large occurrences (with more than 100 clumps of *M. viminea*) are found on MCAS Miramar, with the exception of Spring Canyon (CNPS 2011, p. 7). All *M. viminea* on MCAS Miramar occurs within Level I or II management areas (see Exemptions below for explanation of the two levels of management). Management areas on MCAS Miramar provide a guide for mitigation actions for development on the base, and are organized based ''on differing resource conservation requirements and management concerns'' (Gene Stout and Associates *et al.* 2011, p. 5–2). Level I and II management areas are those that contain sensitive species. Specific mitigation measures within Level I and II management areas depend on the surrounding habitat type. For temporary habitat loss in riparian corridors, all actions must include measures to minimize direct impact to the habitat, decrease erosion and runoff, and provide for a 2:1 ratio of habitat enhancement and restoration for endangered and threatened plants. For permanent habitat loss within riparian areas where listed species are present, the following actions occur: Creation of a corridor for wildlife movement of 500 feet (ft) (150 meters (m)) or less, assurance of no net loss of wetland habitat, and suitable compensation for occupied habitat at a 2:1 ratio (Gene Stout and Associates *et al.* 2011, Tables 6.2.2.2a, 6.2.2.2b). Therefore, although urbanization does threaten some occurrences of *Monardella viminea,* and effects from habitat fragmentation may occur on the edge of the species' range, the threat to the species' habitat is not significant across the range of the species.

Sand and Gravel Mining

Sand and gravel mining was identified at the time of listing as adversely affecting *Monardella linoides* ssp. *viminea* (63 FR 54938, October 13, 1998). Sand and gravel mining has broad-scale disruptive qualities to native ecosystems (Kondolf *et al.* 2002, p. 56). The larger (340 individuals) of two occurrences found on private land at the time of listing was identified as being threatened by sand and gravel mining, which 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 been extirpated, either by altered drainage patterns or construction unrelated to mining operations (CNDDB 2011a, EOs 3 and 25). Currently, we are not aware of any ongoing mining activities or 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 be a threat to *M. viminea* now or in the future.

Altered Hydrology

The original listing rule identified altered hydrology as a threat to *Monardella linoides* ssp. *viminea,* particularly in those 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 and deposit material for the secondary benches and streambeds on which the species grows (Scheid 1985, pp. 30–31, 34–35). Upstream development can disrupt this regime, increasing storm runoff that can erode, rather than establish, the sandy banks and secondary benches upon which *M. viminea* grows. White and Greer (2006, p. 131) found that streamflow conditions in the Los Peñasquitos Creek system, which includes *M. viminea* occurrences in Carroll and Lopez Canyons, have changed drastically from historical conditions. Their study estimated that urbanization of the area increased from 9 percent in 1973, to 37 percent in 2000, and that, correspondingly, runoff in the canyons increased by 200 percent over that same period (White and Greer 2006, p. 134). Further, strong floods within the watershed have increased from 350 to 700 percent over the same time period, with no corresponding increase in rainfall (White and Greer 2006, pp. 134–135). Such watershed changes can alter the riparian vegetation community through changes in median and minimum daily discharges, dry season runoff, and flood magnitudes (White and Greer 2006, pp. 133–136). Increased strong floods also have the potential to wash away plants as large as or larger than *M. viminea,* as has occurred in Lopez Canyon during heavy runoff following winter storms (Kelly and Burrascano 2001, pp. 2–3), where flooding severely impacted the *M. viminea* occurrences (Kelly and Burrascano 2006, pp. 65–69).

Additionally, increases in surface and subsurface soil moisture (via direct effects to the water table associated with watershed urbanization), and changes in streamflow from ephemeral to perennial, adversely affect native plants, such as *Monardella viminea,* that are adapted to a drier Mediterranean climate (cool moist winters and hot dry summers). *Monardella viminea* has been unable to adapt to the increased soil moisture and nonnative species incursion has been exacerbated by the changing water regime (underground hydrology) (Burrascano 2007, pers. comm.). Nonnative species can smother seedling and mature plants and prevent natural growth of *M. viminea* (Rebman and Dossey 2006, p. 12).

Since listing, three occurrences have been extirpated due to altered hydrological patterns: Cemetery Canyon, Carroll Canyon, and western San Clemente Canyon (CNDDB 2011a, EOs 3, 4, 11). All three of these occurrences are on city-owned or private land. On MCAS Miramar, watersheds on the undeveloped eastern half of the base, where over 80 percent of *Monardella viminea* plants are found, appear to have retained their natural hydrological regime (Rebman and Dossey 2006, p. 37).

Considering the 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 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 habitats 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 occur can be catastrophic, yet re-introduction of fire (either accidentally or purposefully) is also undesirable, because such fire often becomes catastrophic (megafire) as a result of high fuel loads due to previous lack of fire. This paradox has resulted from a disruption of the natural fire regime.

Fire frequency has increased in North American Mediterranean shrublands since about the 1950s, and studies indicate that southern California has the greatest increase in wildfire ignitions, primarily due to an increase in population density beginning in the 1960s, thus increasing the number of human-caused fires (Keeley and Fotheringham 2003, p. 240). Increased wildfire frequency and decreased fire return 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 2003b, 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).

Threats to the habitat from fire exclusion, which impact processes that historically created and maintained suitable habitat for *Monardella viminea,* may make the species 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 those at locations in the Rocky, Cascade, and Sierra Nevada mountain ranges (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 (soil property alteration) (Keane *et al.* 2002, p. 8). Where naturally occurring fire is excluded, species adapted to fire (such as *M. viminea*) are often replaced by nonnative invasive species better suited to the new fire regime (Keane *et al.* 2002, p. 9).

Some fire management is provided by California Department of Forestry and Fire Protection (CAL FIRE), which is both an emergency response and resource protection agency. Though CAL FIRE has signed a document to assist in management of backcountry areas in San Diego County, including Sycamore Canyon Preserve with its *Monardella viminea* occurrence (Department of Parks and Recreation (DPR) 2009, p. 14; County of San Diego 2011a, p. 1), the land protected under this agreement makes up only 2 percent of all *M. viminea* habitat. Therefore, although CAL FIRE provides a benefit to Sycamore Canyon Preserve and *M. viminea* habitat, it does not alleviate the threat to the species from type conversion due to frequent fire.

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 habitat supporting *Monardella viminea* both now and in the 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 that negatively impact *M. viminea* by washing away plants, increasing erosion of sandbars and secondary benches where *M. viminea* grows, and increasing nonnative plant establishment. Habitat of this species is also threatened by an unnatural fire regime resulting from manmade disturbances and activities, which in turn can accelerate invasion of the area by nonnative plants. Of the eight natural and four transplanted occurrences of *M. viminea,* those in areas where continued development is anticipated may experience further alterations to their hydrology and unnatural fire regimes. These threats to *M. viminea* habitat are occurring now and are expected to continue into the future.

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

To our knowledge, no commercial use of *Monardella viminea* exists. 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 future.

C. Disease or Predation

Neither disease nor predation was known to be a threat affecting *Monardella linoides* ssp. *viminea* at the time of listing (63 FR 54938, October 13, 1998). Volunteers have since noted browsing impacts to occurrences of *M. viminea* in Lopez Canyon by rabbits and deer (Kelly and Burrascano 2001, p. 5). Monitors at MCAS Miramar reported heavy herbivory in multiple canyons later in the season after much of the species' growth had occurred (AMEC 2011, p. 4–9). Many or most seed heads were consumed by herbivores in Spring Canyon. However, as *M. viminea* resprouts from perennial root crowns each year, herbivory is not likely to impact its survival or vigor (AMEC 2011, p. 5–1). Therefore, based on the best available scientific and commercial information, neither disease nor herbivory constitutes a threat to *M. viminea* now or in the 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 now apply to *M. 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) conservation plans pursuant to California's Natural Community Conservation Planning (NCCP) Act; (5) land acquisition and management by Federal, State, or local agencies, or by private groups and organizations; (6) The Clean Water Act (CWA); and (7) 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 HCPs approved under section 10 of the Act and Natural Community Conservation Plans (NCCPs) approved by 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 1969 (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 that 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.

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 *Monardella viminea* and its habitat.

Approximately 70 percent of the remaining habitat for *Monardella viminea* occurs within MCAS Miramar. The Marine Corps completed an INRMP (2011–2015) with input from the Service (Gene Stout and Associates *et al.* 2011, p. ES–2). This new INRMP, which replaces the 2006–2010 version, 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 Level I or II management areas, where conservation of listed species, including *M. viminea,* is a priority (Gene Stout and Associates *et al.* 2011, pp. 5–2, Table 5–1). It should also be noted that Table 5–1 states that only 85 percent of areas identified as essential habitat in the 2006 critical habitat rule for *M. viminea* (71 FR 65662, November 8, 2006) fall within Level I and Level II management areas; however, this may be due to mapping techniques used by the Service in that rule. We acknowledge that MCAS Miramar does protect virtually all known occurrences in Level I or II management areas and that our mapping techniques occur on a broad scale. Further, we believe our revised critical habitat boundaries described in this rule better represent habitat essential to *M. viminea* (see *Criteria Used to Identify Critical Habitat* below).

MCAS Miramar manages invasive species, a significant threat to *Monardella viminea,* in compliance with Executive Order 13112, which states that Federal agencies must provide for the control of invasive species (Gene Stout and Associates *et al.* 2011, 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 *et al.* 2011, p. 7–8). 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 2011, pp. 7–9–7–10). As a result, MCAS Miramar is addressing threats related to the potential stress of fire on individual plants (see Factor E discussion, below). Despite the benefits to *M. viminea* provided through the INRMP, the species continues to decline on MCAS Miramar, likely due to the synergistic effects of flood, reduced shrub numbers, and exotic species encroachment (type conversion) following the 2003 Cedar Fire (Tierra Data 2011, p. 26).

Clean Water Act (CWA)

Under section 404 of the CWA (33 U.S.C. 1251 *et seq.*), the U.S. Army Corps of Engineers (Corps) regulates the discharge of fill material into waters of the United States, which include navigable and isolated waters, headwaters, and adjacent wetlands (33 U.S.C. 1344). In general, the term ''wetlands'' refers to areas meeting the Corps' criteria of hydric soils, hydrology (either sufficient annual flooding or water on the soil surface), and hydrophytic vegetation (plants specifically adapted to growing in wetlands). *Monardella viminea* occurs exclusively in ephemeral streambeds, which episodically experience seasonal flows that typically create the conditions that meet the Corps' criteria for wetlands.

Any human activity resulting in discharge of dredged or fill material into waters of the United States, including wetlands, requires a permit from the Corps. These include individual permits that are issued following a review of an individual application and general permits that authorize a category or categories of activities in a specific geographical location or nationwide (33 CFR parts 320–330). As *Monardella viminea* requires a natural hydrological regime to grow and persist, the regulation of discharge could prevent those flows from being interrupted or altered, thus providing a benefit to the species and its habitat.

State and Local Regulations

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

Under provisions of the California Native Plant Protection Act (NPPA) (California Fish and Game (CFG) Code, division 2, chapter 10, section 1900 *et seq.*) and CESA (CFG code, division 3, chapter 1.5, section 2050 *et seq.*), 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 CESA and NPPA include prohibitions forbidding the ''take'' of State endangered and threatened species (CFG code, chapter 10, section 1908 and chapter 1.5, section 2080). Under NPPA, landowners are exempt from this prohibition for take of plants 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 (ITPs) 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 NPPA and CESA has not been clearly defined under State law. NPPA, which has been characterized as an exception to the take prohibitions of CESA, exempts a number of activities from regulation, including clearing land for agricultural practices or fire control measures; removing 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 changing land use 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 or urbanization, altered hydrology, or fuel modification.

California Environmental Quality Act (CEQA)

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. CEQA applies to projects proposed to be undertaken or requiring approval by State and local government agencies. 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 about 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 CDFG or the Service; or any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFG or the 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 deciding 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 document identifies and provides for the regional or areawide 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 regional HCP and NCCP that has been in place for over 14 years. Under the umbrella of the MSCP, each of the 12 participating jurisdictions, including the City of San Diego and the County of San Diego, is required to prepare a subarea plan that implements the goals of the MSCP within that particular jurisdiction. The 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* (referred to as *M. linoides* ssp. *viminea*) as a covered species. Furthermore, the most recent revision of the rare plant monitoring review lists *M. viminea* as a recognized narrow endemic (McEachern *et al.* 2007, p. 33). The changes mentioned in that report have been adopted into the City of San Diego's monitoring plan. The City of San Diego Subarea Plan affords additional protections to narrow endemic species beyond those provided generally for all covered species (City of San Diego 1997, p. 100). Impacts to

narrow endemic species within the plan's Multi-Habitat Planning Area (MHPA) are avoided, while outside the MHPA, impacts to narrow endemic species are addressed through avoidance, management, enhancement, or transplantation to areas identified for preservation (City of San Diego 1997, p. 100). The MHPA was developed by the City of San Diego in cooperation with partners to target core biological resource areas for conservation (City of San Diego 1997, p. 1). Currently, all *M. viminea* occurrences within the City of San Diego, with the exception of one transplanted occurrence, are within the boundaries of the MHPA. However, 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 extant occurrences of *Monardella viminea* are on lands owned by MCAS Miramar, with small numbers of clumps occurring on private and county-owned lands. Occurrences in Lopez and Sycamore Canyons have been protected in MSCP reserves and are annually monitored (City of San Diego 2010a, 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 *M. viminea* are not in place for all areas where the species occurs. A draft plan was previously created for West Sycamore Canyon, and a draft plan for Spring Canyon is currently in development. The plan for West Sycamore Canyon was not finalized because construction and subsequent impacts did not take place. Should construction go forward, which is not anticipated at this time, the same restrictions would still apply and assist in reducing any impacts posed by construction activities. Additionally, a Natural Resource Management Plan has been finalized for Los Peñasquitos Canyon Preserve (EO 1) (City of San Diego 1998). However, even though this plan and the monitoring reports frequently identify management needs for *M. viminea,* the actions are not carried out on a regular basis to decrease threats to the plants such as nonnative vegetation encroachment and altered hydrology.

Within the City of San Diego MSCP Subarea Plan, further protections are afforded by the Environmentally Sensitive Lands (ESL) ordinance. 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 as an implementing tool for the City of San Diego Subarea Plan (City of San Diego 1997, p. 98).

A monitoring plan was developed for the city-owned land within West Sycamore Canyon. This land, a total of 21 ac (9 ha), was included in the Sycamore Estates development project. This plan included monitoring of *Monardella viminea* occurrences within West Sycamore Canyon and provisions to prevent altered hydrology to areas containing *M. viminea* through construction of 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 yet in West Sycamore Canyon. Therefore, the plan addressing construction on Sycamore Estates is not currently protecting *M. viminea.*

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 2 percent of *Monardella viminea* habitat occurs on lands within the boundaries of the County of San Diego Subarea Plan. 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 (County of San Diego 2011b, pp. 4–5). 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 analyzed 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 that provides a benefit to *M. viminea* by protecting these occurrences (see discussion under Factor E), and addressing threats from type conversion due to increased fire frequency from historical conditions (see discussion under Factor A). However, notwithstanding the benefit to *M. viminea* provided by the INRMP, the synergistic effects of flood, reduced shrub numbers, increased fire frequency, and nonnative species encroachment are resulting in a decline of *M. viminea* on the base (see discussion under Factor E). While the INRMP does not eliminate threats to the species from megafire, we do not believe that megafire can be eliminated through regulatory mechanisms.

The majority of *Monardella viminea* occurrences outside of MCAS Miramar are located on land owned by the City of San Diego and receive protection under the City of San Diego Subarea Plan under the MSCP, which was approved under CESA and the NCCP Act. The City of San Diego 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. 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 Subarea Plan has not developed final monitoring and management plans for *Monardella 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 from nonnative species and alteration of hydrology are not actively being implemented because the management plans are not yet in place. With regard to lands covered by the County of San Diego Subarea Plan (2 percent of the species' habitat), regulatory mechanisms are in place to conserve and manage *M. viminea.*

Despite the protections afforded to *Monardella viminea* under the Sikes Act through the INRMP for MCAS Miramar and the protections afforded by the City and County of San Diego Subarea plans under the MSCP, 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 species' habitat. Monitors have noted impacts to *M. viminea* in Spring Canyon from hikers and off-road vehicles (Friends of Los Peñasquitos Canyon Preserve, Inc. 2011, p. 4), and from mountain bike trails (AMEC 2011, p. 2–5). However, these reports are only from Spring Canyon, and there is no evidence that this threat is impacting the species on a population level. Therefore, we do not consider trampling to be a significant threat across the range of the species now or into the future.

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 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 2006, 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 the frequency, size, and intensity of fires, including flame duration and length, soil temperature during a fire, and after-effects of long-term porosity and soil glassification (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 Fiedler 2005, p. 19).

When natural disturbance processes, such as fire regime and storm flow events, are altered, native and nonnative plants can overcrowd 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 by native and nonnative plant species (CNDDB 2011a; EOs 11, 12, 13, and 15). Nonnative plants are present throughout all canyons on MCAS Miramar where *M. viminea* occurs, occupying areas that could 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, and areas that support adult plants have been reduced in size after the encroachment of nonnative species (Tierra Data 2011, p. 29). Additionally, an area where one occurrence monitored by the City of San Diego is located has undergone a rapid increase in nonnative plant cover from 26 percent in 2008, to 71 percent in 2010 (City of San Diego 2008, p. 1; City of San Diego 2010a, p. 11).

A recent study found that seedling establishment was highest in areas where nonnative vegetation was reduced through management, demonstrating that increased nonnative ground cover can prevent the establishment of *Monardella viminea* seedlings (AMEC 2011, p. ES–1).

Due to the absence or alteration of natural disturbance processes within the range of *Monardella viminea* resulting in 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 future.

Small Population Size and Restricted Range

The listing rule identifies the restricted range and small population size of *Monardella linoides* ssp. *viminea* as threats (63 FR 54938, October 13, 1998). These conditions increase the possibility of extinction due to stochastic (random) events that are beyond the natural variability of the ecosystem, such as floods, fires, or drought (Lande 1993, p. 912; 60 FR 40549, August 9, 1995). Chance or stochastic events have occurred in the range of *M. viminea,* and may continue to make *M. viminea* vulnerable to extinction due to its 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 those smallest 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 2011a). As stated earlier, only eight occurrences remain. Currently, despite their protection on reserve lands, many of the largest occurrences with multiple clumps and the healthiest-looking leaves and flowers continue to decline in number.

In particular, small population size makes it difficult for *Monardella viminea* to persist while sustaining the impacts of fire, altered hydrological 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 2006, p. 14). Since the 2006 surveys by Rebman and Dossey at MCAS Miramar, plants damaged in the 2003 Cedar 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), although some of this decline may be attributed to changes in survey methods (Tierra Data 2011, pp. 20, 22). No empirical information is readily available to estimate the rate of population decrease or time to extinction for *M. viminea;* however, both its habitat and population have decreased in size 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 (such as periodic fire and scouring floods) to reset succession processes, 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 (water repellent) conditions, resulting in plants receiving an inadequate amount of water (Agee 1996, pp. 157–158; Keeley 2001, p. 87; Keane *et al.* 2002, p. 8; 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 due to climate change. A model by Snyder *et al.* (2002, p. 9–3) predicts 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 low-intensity fires to reduce fuels, invasive vegetation, and inadequate wildfire control or prevention. For example, the October 2007 Harris Fire in San Diego County burned 20,000 ac (8,100 ha) within 4 hours of ignition (California Department of Forestry 2007, p. 57). Another fire near Orange, California, turned into a large 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, burned over 3,000 ac (1,200 ha) (USDA 2007, p. 1).

A narrow endemic (a species that occurs only in a very limited geographic region), 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 *M. viminea* occurrences on MCAS Miramar and portions of the privately owned occurrences 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 was not as severe as initially expected, as plants were later able to resprout from the root. Additionally, new juveniles and seedlings occurred primarily on lands burned by the 2003 Cedar Fire (Tierra Data 2011, p. 16).

Given the increased frequency of megafire within southern California ecosystems, and the inability of regulatory mechanisms to prevent or control these fires, we find that megafire has 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 fire, we do not find that megafire is a significant threat to individual *M. viminea* plants now, nor is it likely to become a significant threat in the future. However, as noted in the Factor A discussion above, we do find that type conversion due to altered fire regime and megafire is a threat to the habitat that supports *M. viminea.*

Climate Change

Consideration of climate change is a component of our analyses under the Act. In general terms, ''climate'' refers to the mean and variability of various weather conditions such as temperature or precipitation, over a long period of time (e.g., decades, centuries, or thousands of years). The term ''climate change'' thus refers to a change in the state of the climate (whether due to natural variability, human activity, or both) that can be identified by changes in the mean or variability of its properties and that persists for an extended period—typically decades or longer (Intergovernmental Panel on Climate Change (IPCC) 2007a, p. 78).

Changes in climate are occurring. The global mean surface air temperature is the most widely used measure of climate change, and based on extensive analyses, the IPCC concluded that warming of the global climate system over the past several decades is ''unequivocal'' (IPCC 2007a, p. 2). Other examples of climate change include substantial increases in precipitation in some regions of the world and decreases in other regions (for these and other examples, see IPCC 2007a, p. 30; Solomon *et al.* 2007, pp. 35–54, 82–85). Various environmental changes are occurring in association with changes in climate (for global and regional examples, see IPCC 2007a, pp. 2–4, 30–33; for U.S. examples, see Global Climate Change Impacts in the United States by Karl *et al.* 2009, pp. 27, 79–88).

Most of the observed increase in global average temperature since the mid-20th century cannot be explained by natural variability in climate, and is very likely due to the observed increase in greenhouse gas concentrations in the atmosphere as a result of human activities, particularly emissions of carbon dioxide from fossil fuel use (IPCC 2007a, p. 5 and Figure SPM.3; Solomon *et al.* 2007, pp. 21–35). Therefore, to project future changes in temperature and other climate conditions, scientists use a variety of climate models (which include consideration of natural processes and variability) in conjunction with various scenarios of potential levels and timing of greenhouse gas emissions (e.g., Meehl *et al.* 2007 entire; Ganguly *et al.* 2009, pp. 11555, 15558; Prinn *et al.* 2011, pp. 527, 529).

The projected magnitude of average global warming for this century is very similar under all combinations of models and emissions scenarios until about 2030. Thereafter, the projections show greater divergence across scenarios. Despite these differences in projected magnitude, however, the overall trajectory is one of increased warming throughout this century under all scenarios, including those which assume a reduction of greenhouse gas emissions (Meehl *et al.* 2007, pp. 760–764; Ganguly *et al.* 2009, pp. 15555–15558; Prinn *et al.* 2011, pp. 527, 529). Some of the IPCC's other key global climate projections, which they expressed using a framework for treatment of uncertainties (e.g., ''very likely'' is >90 percent probability; see Solomon *et al.* 2007, pp. 22–23) include the following: (1) It is virtually certain there will be warmer and more frequent hot days and nights over most of the earth's land areas; (2) it is very likely there will be increased frequency of warm spells and heat waves over most land areas; (3) it is very likely that the frequency of heavy precipitation events, or the proportion of total rainfall from heavy falls, will increase over most areas; (4) it is likely the area affected by droughts will increase, that intense tropical cyclone activity will increase, and that there will be increased incidence of extreme high sea level (IPCC 2007b, p. 8, Table SPM.2).

Various types of changes in climate can have direct or indirect effects on species, and these may be positive or negative depending on the species and other relevant considerations, including interacting effects with habitat fragmentation or other non-climate variables (e.g., Franco *et al.* 2006; Forister *et al.* 2010; Galbraith *et al.* 2010; Chen *et al.* 2011). Scientists are projecting possible impacts and responses of ecological systems, habitat conditions, groups of species, and individual species related to changes in climate (e.g., Deutsch *et al.* 2008; Berg *et al.* 2009; Euskirchen *et al.* 2009; McKechnie and Wolf 2009; Williams *et al.,* 2009; Sinervo *et al.* 2010; Beaumont *et al.* 2011). These and many other studies generally entail consideration of information regarding the following three main components of vulnerability to climate change: Exposure to changes in climate, sensitivity to such changes, and adaptive capacity (IPCC 2007a, p. 89; Glick *et al.* 2011, pp. 19–22). Because aspects of these components can vary by species and situation, as can interactions among climate and non-climate conditions, there is no single way to conduct our analyses. We use the best scientific and commercial data available to identify potential impacts and responses by species that may arise

in association with different components of climate change, including interactions with non-climate conditions as appropriate.

Projected changes in climate and related impacts can vary substantially across and within different regions of the world (e.g., IPCC 2007a, pp. 8–12). Thus, although global climate projections are informative and in some cases are the only or the best scientific information available, to the extent possible we use ''downscaled'' climate projections that provide higher-resolution information that is more relevant to the spatial scales used to assess impacts to a given species (see Glick *et al.* 2011, pp. 58–61 for a discussion of downscaling). With regard to the area of analysis for *Monardella viminea,* downscaled projections are not available, 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. 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 (SDCWA) 2011, p. 2) has created unusually dry habitat conditions. From 2001 to 2010, at one of the closer precipitation gauges to the species' range (Lindberg Field, San Diego County, California), 7 of 10 years had precipitation significantly below normal (SDCWA 2011, 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 climate change's effects on particular species, including *Monardella viminea.* Therefore, we do not consider global climate change a threat to *M. viminea,* now or in the 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 find 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 find no evidence that trampling or other natural or manmade factors pose a significant threat to *M. viminea,* either now or into the 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 change poses a significant threat to the species either now or in the future.

Cumulative Impacts

Several of the threats discussed in this finding have the potential to work in concert with each other. For example, as discussed under Factor A, increased fire frequency in habitats supporting *Monardella viminea* can lead to an increased density of nonnative vegetation. Furthermore, nonnative density can become more severe if natural flows within a hydrological system decrease to the point where they no longer scour nonnative grasses from secondary benches and sandbanks. We find that the synergistic effects of these threats combined with reduced shrub numbers have resulted in a population decline across the range of *Monardella viminea* and the continued population decline on MCAS Miramar. Therefore, the cumulative impacts of these threats may be even greater than the sum of their individual impacts and are a likely factor in the decline of this species.

Determination

We have carefully assessed the best scientific and commercial information available regarding the past, present, and future threats to *Monardella viminea.* In our analysis, we find that threats attributable to Factor A (The Present or Threatened Destruction, Modification, or Curtailment of Its Habitat or Range) pose significant threats to the species, particularly through severe alteration of hydrology in Carroll Canyon, Lopez Canyon, and western portions of San Clemente Canyon. Type conversion and habitat degradation due to frequent fire represent significant and immediate threats to the species across its range. 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, particularly 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. Finally, despite protections afforded to *M. viminea* by the City and County of San Diego Subarea Plans under the MSCP and the INRMP at MCAS Miramar, we find that other existing regulatory mechanisms as described under Factor D (The Inadequacy of Existing Regulatory Mechanisms) would not provide protections adequate to alleviate threats to *M. viminea* in the absence of the Act. We find no threats attributable to Factor B (Overutilization for Commercial, Recreational, Scientific, or Educational Purposes), or Factor C (Disease or Predation) impacting the species.

All threats impacting the species could be exacerbated by the ongoing decline of the species and the small size of the few occurrences that remain. Since the recent taxonomic revision of *Monardella linoides* ssp. v*iminea* into two separate species, we now know that both the number of clumps and the

limited geographic range of *M. viminea* are substantially smaller than originally thought, as two occurrences known at the time of listing are now considered to be *M. stoneana.* Natural occurrences of *M. viminea* now occur in only six watersheds in a very limited area of San Diego County.

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 immediacy and magnitude of continuing significant threats, the rapid population decline (particularly the decline of approximately 45 percent of the population on MCAS Miramar since 2002), and the species' limited range and small population size, we find that *Monardella viminea* continues to be in danger of extinction throughout its range. Therefore, *M. viminea* will continue to be listed as an endangered species under the Act.

Significant Portion of Range

The Act defines ''endangered species'' as any species which is ''in danger of extinction throughout all or a significant portion of its range,'' and ''threatened species'' as any species which is ''likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.'' The definition of ''species'' is also relevant to this discussion. The Act defines the term ''species'' as follows: ''The term 'species' includes any subspecies of fish or wildlife or plants, and any distinct population segment [DPS] of any species of vertebrate fish or wildlife which interbreeds when mature.'' The phrase ''significant portion of its range'' (SPR) is not defined by the statute, and we have never addressed in our regulations: (1) The consequences of a determination that a species is either endangered or likely to become so throughout a significant portion of its range, but not throughout all of its range; or (2) what qualifies a portion of a range as ''significant.'' In this rule, we list *Monardella viminea* throughout its entire range; therefore, a discussion of significant portion of its range is unnecessary.

Summary of Factors Affecting *Monardella stoneana*

As stated above in the Summary of Factors Affecting Monardella viminea section, the original listing rule for *M. linoides* ssp. *viminea* contained a discussion of these five factors, as did the 2008 5-year review. However, 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.*

Within the United States, *Monardella stoneana* occurs almost entirely on publicly owned land managed by the Bureau of Land Management (BLM) (approximately 34 percent), CDFG (approximately 55 percent), and the City of San Diego (approximately 7 percent). The last 4 percent (6 acres (2 hectares)) of habitat supporting *M. stoneana* is privately owned land within the boundaries of the County of San Diego's MSCP subarea plan and is slated for inclusion in the Otay Ranch Preserve. These occurrences are collectively protected from habitat destruction or modification due to urban development because they are conserved and managed within the BLM's Otay Mountain Wilderness and the City of San Diego's or CDFG's preserves under the MSCP, or they will be conserved as part of the Otay Ranch Preserve under the County of San Diego's MSCP subarea plan. This situation contrasts with *M. viminea* occurrences conserved by the City of San Diego that do not have management plans (see also Factor D discussion for *M. stoneana* below and Factor D discussion for *M. viminea* above). We have no information about the distribution, land ownership, or status of *M. stoneana* populations in Mexico.

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 or in the 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 there.

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 regime 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 the stream banks and rocky cobble upon which *M. stoneana* grows. Floods also have the potential to wash away plants as large as and 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 2006, 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. Monardella 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 future, and thus is 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 megafire 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 resilient to the effects of frequent fire than coastal sage scrub, due to strong recruitment and effective germination after repeated fire events (Keeley 1987, p. 439; Tyler 1995, p. 1009). According to Keane *et al.* (2008, p. 702), chaparral is considered a crown-fire ecosystem, meaning an ecosystem that has ''mechanisms for recovery that include resprouting from basal burrs and long-lived seed banks that are stimulated to germinate by fire.'' 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 been altered by the fire suppression activities that have occurred in the United States. Some researchers claim that the chaparral habitat in Baja California is thus not affected by megafires that result from fire suppression activities (Minnich and Chou 1997, pp. 244–245; Minnich 2001, pp. 1549–1552). Nevertheless, Keeley and Zedler (2009, p. 86) believe that the fire regime in Baja California 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 those 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 of 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, and when fire occurs more frequently than the natural historic regime, nonnative grasses have a greater chance to become established and outcompete native vegetation (Keeley 2001, pp. 84–85).

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 paths created and used by illegal immigrants (City of San Diego 2006, p. 8). This occurrence was lost after the 2006 survey, as described in the *New Information on Occurrences* of Monardella viminea *and* Monardella stoneana section of this final rule. Although the 2008 and 2010 survey reports for the Otay Lakes site describe habitat disturbances such as type conversion due to increased fire frequency and invasive species (particularly nonnative grasses) (City of San Diego 2008, p. 2; City of San Diego 2010a, p. 5), the surveys also indicate that the percent cover of native species has increased from 2008 to 2010 (from 23 to 42 percent) and the percent cover of nonnative species has increased (from 30 to 44 percent) (City of San Diego 2008, p. 1; City of San Diego 2010a; p. 5). The most recent survey report (2010) described the habitat at this site as ''fair to good'' (City of San Diego 2010a, 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; survey results from 2008 to 2010 were unchanged (City of San Diego 2010b, p. 2). Habitat at the Marron Valley site was characterized as ''fair to good'' from 2008 through 2010 (City of San Diego 2008, p. 2; City of San Diego 2010a, p. 11), and improving to ''good to very good'' in 2011 (City of San Diego 2011a, p. 217). As with the Otay Lakes location, type conversion due to frequent fire (as described in Factor A) and invasion of nonnative grasses was described as a disturbance or 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 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 ground cover by nonnative species has also increased (from 15 to 22 percent) (City of San Diego 2008, p. 1; City of San Diego 2010a, 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 (San Diego Association of Government (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, such as *Monardella stoneana,* given 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 [sic] and then gradually decline as the cover of shrub and subshrubs inceases [sic].'' Additionally, monitoring data for *M. stoneana* have 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.

Illegal immigration is another potential source of fire within *Monardella stoneana* habitat. However, the Otay Mountain area is predominantly wilderness area and preserve, and is unlikely to receive an increase in visitors. Furthermore, in 2007, construction of the fence along the U.S. and Mexico border and other enforcement activities in the Otay Mountain Wilderness area have reduced illegal immigrant activity in this area to near zero (Ford 2011, pers. comm.), thereby reducing the likelihood of fire ignition by this source. Therefore, fire ignition due to illegal immigrant activities is not a significant threat to *M. stoneana* now, nor is it likely to become so in the future.

Fire remains a stressor to *Monardella stoneana* habitat and many other sensitive habitats throughout southern California. 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's mission is the protection of lives, property, and natural resources from fire, and the preservation of timberlands, wildlands, and urban forests. CAL FIRES's protection strategies incorporate concepts of the National Fire Plan, the California Fire Plan, individual CAL FIRE Unit Fire Plans, and Community Wildfire Protection Plans (CWPPs). Fire Protection Plans outline the fire

situation within each CAL FIRE Unit with descriptions of water supplies, fire safety, and vegetation management, while CWPPs make the same assessment on the community level (CAL FIRE 2011, p. 1; County of San Diego Fire Safe Council, 2011). Planning includes other State, Federal, and local government agencies as well as Fire Safe Councils (CAL FIRE 2011, p. 1). CAL FIRE typically takes the lead with regard to planning for megafire prevention, management, and suppression, and 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 2011a, 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 *Monardella stoneana.*

Therefore, based on the best available scientific and commercial information, type conversion due to more frequent fire does not pose a threat to *Monardella stoneana* or its associated plant communities now or in the future. The potential threat 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;* these impacts are discussed below under Factor E.

Summary of Factor A

We evaluated several factors that have the potential to destroy, modify, or curtail habitat or range of *Monardella stoneana,* including urban development, sand and gravel mining, altered hydrology, and type conversion due to frequent fire. 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 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 *M. 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 future.

C. Disease or Predation

Neither disease nor predation was known to be a threat affecting *Monardella linoides* ssp. *viminea* at the time of listing (63 FR 54938, October 13, 1998). Data from the CNDDB (CNDDB 2011b) list herbivory as a potential threat to the *M. stoneana* occurrence located on the Otay Ranch Preserve (EO 4). However, we have no other information quantifying the extent of this herbivory or its impact on the *M. stoneana* occurrence. Like *M. viminea, M. stoneana* resprouts from a perennial root crown each year, a trait that allows it to persist through herbivory events (AMEC 2011, p. 5–1). Therefore, based on the best available scientific and commercial information, neither disease nor herbivory constitutes a threat to *M. stoneana.*

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) CESA, as the species was listed as endangered in California in 1979; (3) CEQA; (4) conservation plans pursuant to California's NCCP Act; (5) land acquisition and management by Federal, State, or local agencies, or by private groups and organizations; (6) local laws and regulations; (7) CWA; and (8) 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 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 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 NEPA 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.

Clean Water Act (CWA)

Under section 404 of the CWA, the U.S. Army Corps of Engineers (Corps) regulates the discharge of fill material into waters of the United States, which include navigable and isolated waters, headwaters, and adjacent wetlands (33 U.S.C. 1344). In general, the term ''wetlands'' refers to areas meeting the Corps' criteria of hydric soils, hydrology (either sufficient annual flooding or water on the soil surface), and hydrophytic vegetation (plants specifically adapted to growing in wetlands). *Monardella stoneana* occurs exclusively in ephemeral streambeds, which episodically experience seasonal flows that typically create the conditions that meet the Corps' criteria for wetlands.

Any human activity resulting in discharge of dredged or fill material into waters of the United States, including wetlands, requires a permit from the Corps. These include individual permits that are issued following a review of an individual application and general permits that authorize a category or categories of activities in a specific geographical location or nationwide (33 CFR parts 320–330). As *Monardella*

stoneana requires a natural hydrological regime to grow and persist, the regulation of discharge could prevent those flows from being interrupted or altered, thus providing a benefit to the species and its habitat.

Wilderness Act and Federal Land Policy and Management Act

Monardella stoneana is a BLM-designated sensitive species (BLM 2010, pp. 29–30). BLM-designated sensitive species are those species that require 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, where 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 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 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 BLM has a multiple-use mandate under the FLPMA, which allows for grazing, mining, and off-road vehicle use, BLM also has the ability under the FLPMA to establish and implement special management areas such as Areas of Critical Environmental Concern, wilderness areas, and research areas. BLM's South Coast Resource Management Plan (SCRMP) 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* occurrences within the Otay Mountain Wilderness. The Otay Mountain Wilderness Act provides that the Otay Mountain designated wilderness area (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, chainsaw use, 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 (see 43 CFR 6301–6305).

The memorandum of understanding (MOU) between the Service, BLM, the County of San Diego, the City of San Diego, SANDAG, and 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). The Otay Mountain Wilderness 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 *Monardella stoneana* (see *City and County of San Diego Subarea Plans under the Multiple Species Conservation Plan (MSCP)* 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 they will 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 *City and County of San Diego Subarea Plans under the Multiple Species Conservation Plan (MSCP)* section below) also apply to the Otay Mountain Wilderness.

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

BLM is collaborating with the Service to revise the SCRMP, 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 2009, pp. 4–171—4–172). We believe the management regime undertaken by BLM under both the current and the draft 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. Although not listed under CESA, CDFG does recognize *M. stoneana* as a rare and imperiled plant (lists S1.2 and 1B.2). Researchers working on plants identified on these lists must apply to CDFG's Rare Plant Program to receive research permits to study or collect rare plants.

California Environmental Quality Act (CEQA)

CEQA (Public Resources Code 21000–21177) and the CEQA Guidelines (California Code of Regulations (CCR) title 14, division 6, chapter 3, sections 15000–15387) require State and local agencies to identify the significant environmental impacts of their actions and avoid or mitigate those impacts, if feasible. CEQA applies to projects proposed to be undertaken or requiring approval by State and local government agencies. 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 CDFG or the Service; or any riparian habitat or other sensitive

natural community identified in local or regional plans, policies, regulations, or by CDFG or the 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 deciding 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 accordance with California Administrative Code 14 CCR S 630 (Nelson 2011, pers. comm.), which prohibits development and includes protection of resources, including prohibitions against take of plants, introduction of nonnative species, and use of pesticides. Such management prevents *M. stoneana* from mortality due to increased density of nonnative species (see Factor E discussion below).

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 document identifies and provides for the regional or areawide 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 and County of San Diego Subarea Plans Under the Multiple Species Conservation Plan (MSCP)

As discussed under Factor D for *Monardella viminea,* the MSCP is a regional HCP and NCCP that has been in place for over 14 years. 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. *Monardella linoides ssp. viminea* is a covered species under the San Diego MSCP (City of San Diego 1997, Table 3–5). The most recent revision of the rare plant monitoring review lists *M. stoneana* as a recognized narrow endemic (McEachern *et al.* 2007, p. 33). The changes mentioned in this report have been adopted into the City of San Diego's monitoring plan. The City of San Diego Subarea Plan affords additional protections to narrow endemic species beyond those provided for all covered species (City of San Diego 1997, p. 100). Impacts to narrow endemic species within the MHPA are avoided, while outside the MHPA, impacts to narrow endemic species are addressed through avoidance, management, enhancement, or transplantation to areas identified for preservation (City of San Diego 1997, p. 100). Currently, all *M. stoneana* occurrences within the City of San Diego are within the boundaries of the MHPA.

Two known occurrences of *Monardella stoneana* are located within the City of San Diego Subarea Plan under the MSCP. These 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). These two occurrences make up a total of 7 percent of the habitat for *M. stoneana,* and the City of San Diego Subarea Plan requires preservation of 100 percent of this habitat. As discussed above, additional impact avoidance and other measures under the City's Subarea Plan will protect narrow endemic species such as *M. stoneana.* The subarea plan also includes area-specific management directives designed to maintain long-term survival of narrow endemics (Service 1997, pp. 104–105). Additionally, the City has completed a fire management plan for the Marron Valley area. This plan includes addressing unnaturally short fire return intervals as a major goal. 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 under the San Diego MSCP 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). A total of 6 ac (2 ha) of privately owned land occupied by *Monardella stoneana* occurs within the County on lands covered by the County's MSCP subarea plan. 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. 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 (1997) and County of San Diego Biological Mitigation Ordinance (Ord. Nos. 8845, 9246) 2007). The BMO requires that all impacts to narrow endemic plant species, including *M. stoneana,* be avoided to the maximum extent practicable (County of San Diego 2010, 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.

Apart from the coverage provided by the County of San Diego Subarea Plan, the 6 ac (2 ha) of private land on Otay Mountain where *Monardella stoneana* is known to occur is part of Otay Ranch, which is zoned as ''Open Space'' by the County of San Diego and identified as part of the County preserve for the MSCP. Additionally, this land is covered by the Otay Ranch Phase 2 Resource Management Plan (Otay Ranch 2002), which was approved by the County in 2002, and 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, providing additional protection beyond that already provided by the County of San Diego Subarea Plan (Otay Ranch 2002, p. 144). The plan includes provisions to manage *M. stoneana* habitat in a way that will benefit this

species (Otay Ranch 2002, pp. 18–19, 52–53).

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 are necessary to support a viable population of sensitive species (such as *Monardella 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). These 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 RPO, the BMO, and the Subarea Plans for the City and County of San Diego provide adequate mechanisms to conserve *M. stoneana* in association with new development or other proposed projects, and for the creation of biological reserves. The County of San Diego Subarea Plan provides protection from new development or other proposed projects for the small percentage of *M. stoneana* on private land, and includes provisions for monitoring and management through development of location-specific management plans. 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, 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, 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 CDFG and BLM, which includes approximately 89 percent of all occurrences of *Monardella stoneana,* fire management is provided by CAL FIRE. Further protection of natural resources on State lands is provided by management consistent with the Wilderness Act.

Based on our review of the best available scientific and commercial information, we conclude that *Monardella stoneana* is not threatened by inadequate existing regulatory mechanisms. Federal, State, and local regulatory mechanisms help reduce wildfire impacts, primarily to property and human safety, but they do not adequately protect *M. stoneana* from direct mortality caused by megafire, as discussed below under Factor E. However, the impact of megafire on wildlands is not a threat that can be eliminated by regulatory mechanisms. Therefore, we do not find existing regulations inadequate to protect *M. stoneana,* now or in the 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 due to illegal immigrant activity as major management issues (City of San Diego 1997, p. 52). All *M. stoneana* clusters occur in close proximity to the Mexico border, where historically many illegal immigrants crossed 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 2011, pers. comm.) and thus potential impacts of trampling at the Otay Lakes, Marron Valley, and Otay Mountain locations. While there may be some impacts from trampling to individual plants, it is unlikely to occur at levels that would affect the status of the species as a whole. 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 future.

Nonnative Plant Species

The listing rule identified 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 2006, 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 as has occurred in the vicinity of *M. viminea.* As discussed under Factor A, the ground cover of both 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 2010a, p. 11). These observations are consistent with those of Minnich and Bahre (1995, p. 17), who found that ground cover of all herbaceous plants, including nonnative grasses, was generally absent or consisted of thinly scattered plants within the chaparral along the California-Baja California boundary. 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 because it increases the possibility of extinction due to chance events, such as floods, fires, or drought, outside the natural variability of the ecosystem (Lande 1993, p. 912; 63 FR 54938, October 13, 1998). 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. Additionally, 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 because 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* there, 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, currently, approximately eight occurrences of *M. stoneana* are known in the Otay Mountain area (CNDDB 2011b). 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 have not been formally surveyed (EOs 7 and 8). Additionally, the most recent survey for this area was in 2005 (CNDDB 2011b), so the continued existence of the Mexico occurrences and number of clumps present cannot be confirmed.

Any decrease in occurrences may result in decreased reproductive opportunities due to decreased pollination events, and thus decreased genetic exchange between canyons. 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 population size alone to be a threat. For example, the habitat supporting *Monardella viminea* faces significant threats from the impacts of fire, altered hydrological regimes, and competition with nonnative plants. As discussed above, *M. stoneana* does not face such threats. 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 2 decades in the two occurrences known since the 1970s and 1980s, respectively (CNDDB 2011b; 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 of *M. stoneana* were discovered in 2003 or later, so long-term data are not available for this species. One of those seven occurrences (EO 5) was considered extirpated after the 2007 Harris Fire, but has since resprouted (City of San Diego 2011a, p. 229). *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, although the other occurrence (EO 5) containing one clump was extirpated (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 *M. stoneana* is rare and has small populations does not indicate that it is in danger of extinction now or in the future. Therefore, although small population size may have the potential to pose a threat to *M. stoneana,* we do not find it to be a threat now or in the 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 was not as severe as initially thought. 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, *Monardella 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, eight of nine EOs burned two or more times, and four 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 2011b). In the event of a fire that 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 shows that individuals are recovering from 98 percent of the occurrences on MCAS Miramar being burned in the 2003 Cedar Fire.

Given the increased frequency of megafire 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 fire, we do not expect that megafire is a significant threat to individual *M. stoneana* plants now, nor is it likely to become a threat in the future.

Climate Change

Please see discussion above in Factor E for *Monardella viminea* regarding background on how the Service evaluates the possible threat of climate change. With regard to the area of analysis for *Monardella stoneana,* downscaled projections are not available, 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 (SDCWA 2011, p. 2) created unusually dry habitat conditions. From 2001 to 2010, at one of the precipitation gauges close to the *Monardella stoneana* occurrences (Lindberg Field, San Diego County, California), precipitation measured significantly below normal in 7 out of 10 years (SDCWA 2011, 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). However, 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 on chaparral, the plant community associated with *Monardella stoneana,* is not known. 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. Despite these differences in the present fire regimes between chaparral in California and Mexico, Minnich and Bahre (1997, p. 20) found that ''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. Therefore, 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 impacts to listed species and their habitats, the best available scientific data do not give specific evidence for us to formulate accurate predictions regarding the effects of climate change on particular species, including *M. stoneana,* at this time. Therefore, at this time we do not consider climate change a current threat to *M. stoneana,* either now or in the future.

Summary of Factor E

We found no evidence that other natural or manmade factors pose a significant threat to *Monardella stoneana.* Based on a review of the best available scientific and commercial data, trampling and nonnative invasive plant species are not significant threats. 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 change poses a significant threat to the species now or in the future.

Cumulative Impacts

As discussed in the Cumulative Impacts analysis for *Monardella viminea,* type conversion due to frequent fire, nonnative grasses, and altered hydrological regimes can work in concert to result in the decline of the species. However, based on the best available scientific information, we did not find that invasion by nonnative grasses or type conversion due to frequent fire are occurring in habitats that support *M. stoneana,* nor did we find that hydrology was altered from its natural regime to the point where it threatens the continued survival of the species. Therefore, we do not find evidence that any of the potential threats discussed in this finding pose additional stress to *M. stoneana* by acting in concert with one another.

Determination

We have carefully assessed the best scientific and commercial information available regarding the past, present, and future threats to *Monardella stoneana.* We found no significant threats to *M. stoneana* related to Factors A, B, C, D, or E, as described above. After an assessment of potential threats including urban development, altered hydrology, and type conversion due to frequent fire as attributable to Factor A (The Present or Threatened Destruction, Modification, or Curtailment of Its Habitat or Range), we find that none poses a significant threat to the species. 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 *M. stoneana* as endangered or threatened under the Act is not warranted. 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 future. Additionally, we have no information to demonstrate that predicted climate change or megafire will result in a significant threat to the species now or in the future.

Although *Monardella stoneana* has a similar life history to *M. viminea,* based on differences in location, land ownership and use, and habitat type, we find that potential threats impact the species differently. *Monardella stoneana* does face some stressors; however, the species is found primarily on protected (i.e., Federal and State) lands. To the extent that the species may be experiencing localized impacts, analysis of recent and current surveys of *M. stoneana* habitat in the Otay Mountain locations indicates that its habitat is under protective status and remains in relatively good condition. Furthermore, unlike *M. viminea, M. stoneana* has not undergone a documented 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. Finally, we do not consider *M. stoneana's* small population size in and of itself a threat such that the species warrants listing, now or in the 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 (endangered), or likely to become endangered (threatened) throughout its range now or within the foreseeable future. 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.*

Significant Portion of Range

The Act defines ''endangered species'' as any species which is ''in danger of extinction throughout all or a significant portion of its range,'' and ''threatened

species'' as any species which is ''likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.'' The definition of ''species'' is also relevant to this discussion. The Act defines the term ''species'' as follows: ''The term 'species' includes any subspecies of fish or wildlife or plants, and any distinct population segment [DPS] of any species of vertebrate fish or wildlife which interbreeds when mature.'' The phrase ''significant portion of its range'' (SPR) is not defined by the statute, and we have never addressed in our regulations: (1) The consequences of a determination that a species is either endangered or likely to become so throughout a significant portion of its range, but not throughout all of its range; or (2) what qualifies a portion of a range as ''significant.''

Two recent district court decisions have addressed whether the SPR language allows the Service to list or protect less than all members of a defined ''species'': *Defenders of Wildlife* v. *Salazar,* 729 F. Supp. 2d 1207 (D. Mont. 2010), concerning the Service's delisting of the Northern Rocky Mountain gray wolf (74 FR 15123, April 2, 2009); and *WildEarth Guardians* v. *Salazar,* 2010 U.S. Dist. LEXIS 105253 (D. Ariz. Sept. 30, 2010), concerning the Service's 2008 finding on a petition to list the Gunnison's prairie dog (73 FR 6660, February 5, 2008). The Service had asserted in both of these determinations that it had authority, in effect, to protect only some members of a ''species,'' as defined by the Act (i.e., species, subspecies, or DPS), under the Act. Both courts ruled that the determinations were arbitrary and capricious on the grounds that this approach violated the plain and unambiguous language of the Act. The courts concluded that reading the SPR language to allow protecting only a portion of a species' range is inconsistent with the Act's definition of ''species.'' The courts concluded that once a determination is made that a species (i.e., species, subspecies, or DPS) meets the definition of ''endangered species'' or ''threatened species,'' it must be placed on the list in its entirety and the Act's protections applied consistently to all members of that species (subject to modification of protections through special rules under sections 4(d) and 10(j) of the Act).

Consistent with that interpretation, and for the purposes of this rule, we interpret the phrase ''significant portion of its range'' in the Act's definitions of ''endangered species'' and ''threatened species'' to provide an independent basis for listing; thus there are two situations (or factual bases) under which a species would qualify for listing: (1) A species may be endangered or threatened throughout all of its range; or (2) a species may be endangered or threatened in only a significant portion of its range. If a species is in danger of extinction throughout an SPR, it, the species, is an ''endangered species.'' The same analysis applies to ''threatened species.'' Therefore, the consequence of finding that a species is endangered or threatened in only a significant portion of its range is that the entire species will be listed as endangered or threatened, respectively, and the Act's protections will be applied across the species' entire range.

We conclude, for the purposes of this rule, that interpreting the SPR phrase as providing an independent basis for listing is the best interpretation of the Act because it is consistent with the purposes and the plain meaning of the key definitions of the Act; it does not conflict with established past agency practice (i.e., prior to the 2007 Solicitor's Opinion), as no consistent, long-term agency practice has been established, and it is consistent with the judicial opinions that have most closely examined this issue. Having concluded that the phrase ''significant portion of its range'' provides an independent basis for listing and protecting the entire species, we next turn to the meaning of ''significant'' to determine the threshold for when such an independent basis for listing exists.

Although there are potentially many ways to determine whether a portion of a species' range is ''significant,'' we conclude, for the purposes of this rule, that the significance of the portion of the range should be determined based on its biological contribution to the conservation of the species. For this reason, we describe the threshold for ''significant'' in terms of an increase in the risk of extinction for the species. We conclude that a biologically based definition of ''significant'' best conforms to the purposes of the Act, is consistent with judicial interpretations, and best ensures species' conservation. Thus, for the purposes of this rule, a portion of the range of a species is ''significant'' if its contribution to the viability of the species is so important that, without that portion, the species would be in danger of extinction.

We evaluate biological significance based on the principles of conservation biology using the concepts of resiliency, redundancy, and representation. *Resiliency* describes the characteristics of a species that allow it to recover from periodic disturbance. *Redundancy* (having multiple populations distributed across the landscape) may be needed to provide a margin of safety for the species to withstand catastrophic events. *Representation* (the range of variation found in a species) ensures that the species' adaptive capabilities are conserved. Redundancy, resiliency, and representation are not independent of each other, and some characteristic of a species or area may contribute to all three. For example, distribution across a wide variety of habitats is an indicator of representation, but it may also indicate a broad geographic distribution contributing to redundancy (decreasing the chance that any one event affects the entire species), and the likelihood that some habitat types are less susceptible to certain threats, contributing to resiliency (the ability of the species to recover from disturbance). None of these concepts is intended to be mutually exclusive, and a portion of a species' range may be determined to be ''significant'' due to its contributions under any one of these concepts.

For the purposes of this rule, we determine if a portion's biological contribution is so important that the portion qualifies as ''significant'' by asking whether, *without that portion,* the representation, redundancy, or resiliency of the species would be so impaired that the species would have an increased vulnerability to threats to the point that the overall species would be in danger of extinction (i.e., would be ''endangered''). Conversely, we would not consider the portion of the range at issue to be ''significant'' if there is sufficient resiliency, redundancy, and representation elsewhere in the species' range that the species would not be in danger of extinction throughout its range if the population in that portion of the range in question became extirpated (extinct locally).

We recognize that this definition of ''significant'' establishes a threshold that is relatively high. On the one hand, given that the consequences of finding a species to be endangered or threatened in an SPR would be listing the species throughout its entire range, it is important to use a threshold for ''significant'' that is robust. It would not be meaningful or appropriate to establish a very low threshold whereby a portion of the range can be considered ''significant'' even if only a negligible increase in extinction risk would result from its loss. Because nearly any portion of a species' range can be said to contribute some increment to a species' viability, use of such a low threshold would require us to impose restrictions and expend conservation resources disproportionately to conservation benefit: listing would be rangewide,

even if only a portion of the range of minor conservation importance to the species is imperiled. On the other hand, it would be inappropriate to establish a threshold for ''significant'' that is too high. This would be the case if the standard were, for example, that a portion of the range can be considered ''significant'' only if threats in that portion result in the entire species' being currently endangered or threatened. Such a high bar would not give the SPR phrase independent meaning, as the Ninth Circuit held in *Defenders of Wildlife* v. *Norton,* 258 F.3d 1136 (9th Cir. 2001).

The definition of ''significant'' used in this rule carefully balances these concerns. By setting a relatively high threshold, we minimize the degree to which restrictions will be imposed or resources expended that do not contribute substantially to species conservation. But we have not set the threshold so high that the phrase ''in a significant portion of its range'' loses independent meaning. Specifically, we have not set the threshold as high as it was under the interpretation presented by the Service in the *Defenders* litigation. Under that interpretation, the portion of the range would have to be so important that current imperilment there would mean that the species would be *currently* imperiled everywhere. Under the definition of ''significant'' used in this final rule, the portion of the range need not rise to such an exceptionally high level of biological significance. (We recognize that if the species is imperiled in a portion that rises to that level of biological significance, then we should conclude that the species is in fact imperiled throughout all of its range, and that we would not need to rely on the SPR language for such a listing.) Rather, under this interpretation we ask whether the species would be endangered everywhere without that portion, *i.e.,* if that portion were completely extirpated. In other words, the portion of the range need not be so important that even being in danger of extinction in that portion would be sufficient to cause the species in the remainder of the range to be endangered; rather, the *complete extirpation* (in a hypothetical future) of the species in that portion would be required to cause the species in the remainder of the range to be endangered.

The range of a species can theoretically be divided into portions in an infinite number of ways. However, there is no purpose to analyzing portions of the range that have no reasonable potential to be significant *and* threatened or endangered. To identify only those portions that warrant further consideration, we determine whether there is substantial information indicating that: (1) The portions may be ''significant,'' and (2) the species may be in danger of extinction there or likely to become so within the foreseeable future. Depending on the biology of the species, its range, and the threats it faces, it might be more efficient for us to address the significance question first or the status question first. Thus, if we determine that a portion of the range is not ''significant,'' we do not need to determine whether the species is endangered or threatened there; if we determine that the species is not endangered or threatened in a portion of its range, we do not need to determine if that portion is ''significant.'' In practice, a key part of the portion status analysis is whether the threats are geographically concentrated in some way. If the threats to the species are essentially uniform throughout its range, no portion is likely to warrant further consideration. Moreover, if any concentration of threats applies only to portions of the species' range that clearly would not meet the biologically based definition of ''significant'', such portions will not warrant further consideration.

As described in the Determination section above, we find that the stressors affecting *Monardella stoneana* are not of sufficient imminence, intensity, magnitude, or geographic concentration such that *M. stoneana* warrants listing under the Act. The stressors affecting *M. stoneana,* including megafire, occur across the species' entire range. Additionally, factors that might be limited to individual drainages, such as altered hydrology or urban development, do not threaten *M. stoneana.* Therefore, because *M. stoneana* has no geographical concentration of threats, it does not qualify for listing based on threats to the species in a significant portion of its range.

Decisions by the Ninth Circuit Court of Appeals in *Defenders of Wildlife* v. *Norton,* 258 F.3d 1136 (2001) and *Tucson Herpetological Society* v. *Salazar,* 566 F.3d 870 (2009) found that the Act requires the Service, in determining whether a species is endangered or threatened throughout a significant portion of its range, to consider whether lost historical range of a species (as opposed to its current range) constitutes a significant portion of the range of that species. While this is not our interpretation of the statute, we will consider whether the lost historical range might qualify as an SPR for *Monardella stoneana.*

We evaluated whether the best available information indicates that the range of *Monardella stoneana* has contracted over time. We have little information on the historical range of *M. stoneana.* However, unlike *M. viminea, M. stoneana* has not undergone a dramatic decline in population size. *Monardella stoneana* appears to have persisted for over 2 decades in the two occurrences known in the United States since the 1970s and 1980s, respectively (see proposed rule at 76 FR 33880, June 9, 2011). The other seven occurrences of *M. stoneana* in the United States were discovered in 2003 or later, so long-term data on *M. stoneana* are not available; only one of those seven occurrences has since been extirpated. We have almost no information about the range of *M. stoneana* in Mexico other than observations of plants directly across the Mexican border from occurrences in the United States. Because the best available information indicates that *M. stoneana* has not experienced a significant population decline, nor have multiple occurrences been extirpated within its known range, we are unable to find that a significant amount of historical range has been lost. Therefore, we conclude that there has not been a loss of historical habitat that represents a significant portion of the range of *M. stoneana.*

Critical Habitat

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 *Procedural Aspects of this Rule* section above), and due to our conclusion that *M. viminea* is endangered, we are designating critical habitat for *M. viminea.* Because we have determined that *M. stoneana* does not meet the definition of endangered or threatened under the Act, we are not designating critical habitat for this species.

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) Which 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 ensure, 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 requests Federal agency funding or authorization for an action that may affect a listed species or critical habitat, the consultation requirements of section 7(a)(2) of the Act would apply, but even in the event of a destruction or adverse modification finding, the 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.

Under the first prong of the Act's definition of critical habitat, areas within the geographical area occupied by the species at the time it was listed are included in a critical habitat designation if they contain physical or biological features (1) which are essential to the conservation of the species and (2) which may require special management considerations or protection. For these areas, critical habitat designations identify, to the extent known using the best scientific and commercial data available, those physical or biological features that are essential to the conservation of the species (such as space, food, cover, and protected habitat). In identifying those physical or biological features within an area, we focus on the principal biological or physical constituent elements (primary constituent elements such as roost sites, nesting grounds, seasonal wetlands, water quality, tide, soil type) that are essential to the conservation of the species. Primary constituent elements are the elements of physical or biological features that are essential to the conservation of the species.

Under the second prong of the Act's definition of critical habitat, 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. For example, an area currently occupied by the species but that was not occupied at the time of listing may be essential to the conservation of the species and may be included in the critical habitat designation. We designate critical habitat in areas outside the geographical area occupied by a species at the time of listing when a designation limited to the geographical area occupied at the time of listing would be inadequate to ensure the conservation of the species.

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

When we are determining which areas should be designated as critical habitat, our primary source of information is generally the information developed during the listing process for the species. Additional information sources may include the recovery plan for the species, articles in peer-reviewed journals, conservation plans developed by States and counties, scientific status surveys and studies, biological assessments, other unpublished materials, or experts' opinions or personal knowledge.

Habitat is dynamic, and species may move from one area to another over time. 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 needed 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.

Physical or Biological Features

In accordance with section 3(5)(A)(i) and 4(b)(1)(A) of the Act and regulations at 50 CFR 424.12, in determining which areas within the geographical area occupied by the species at the time of listing to designate as critical habitat, we consider the physical or biological features essential to the conservation of the species and 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 or biological features essential for *Monardella viminea* from studies of this species' habitat, ecology, and life history as described in the Critical Habitat section of the proposed rule to designate critical habitat published in the **Federal Register** on June 9, 2011 (76 FR 33880), and in the information presented 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; 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). We have determined that *M. viminea* requires the physical or 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 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 the 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 2006, pp. 5–6). The 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 2006, p. 6).

Cover or Shelter

Monardella viminea requires open to semi-open, foliar (canopy) cover consisting 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 herbaceous cover (Scheid 1985, pp. 32, 37–38). The species is most commonly associated with *Eriogonum fasciculatum* (California buckwheat) and *Baccharis sarothroides (*Scheid 1985, pp. 38–39; Rebman and Dossey 26, p. 22; Ince 2010, p. 3*).* 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 2006, 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 has its own habitat requirements; 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 (Andrenidae family) nest in upland areas (Kelly and Burrascano 2001, p. 8). Native bees typically are more efficient pollinators than introduced European honeybees (*Apis mellifera*) (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, so adequate habitat should be preserved for pollinators in addition to the habitat necessary for *M. viminea* plants. In this final critical habitat rule, 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 hydrological 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 is 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, including the floodplains, benches, and sandbars where *M. viminea* grows. Characteristics of riparian channels and seasonal streamflow 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 2006, 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 for *Monardella viminea*

Under the Act and its implementing regulations, we are required to identify the physical or biological features essential to the conservation of *Monardella viminea* in areas occupied at the time of listing, focusing on the features' primary constituent elements (PCEs). We consider PCEs to be the specific elements of physical or biological features that provide for a species' life-history processes and 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 PCE specific to *Monardella viminea* is riparian channels with ephemeral drainages and adjacent floodplains:

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

(1) Water flows only after peak seasonal rainstorms;

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

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

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

(1) Little or no herbaceous understory;

(2) Little to no canopy cover;

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

(4) Some shrub cover; and

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

(c) That contain ephemeral drainages that:

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

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

(d) 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.

All units designated as critical habitat are currently occupied by *Monardella viminea* and contain the PCE.

Special Management Considerations or Protection

When designating critical habitat, we assess whether the physical or 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 areas designated as critical habitat will require some level of management or protection to address the current and future threats to the physical or 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 features essential to the conservation of *Monardella 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.

Special management considerations or protection are required within critical habitat areas to address these threats. Management activities that could ameliorate 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. 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 *Monardella viminea*), although these dams must be of adequate size and strength to withstand increased storm flow caused by urbanization.

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 designating 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 final 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 critical habitat designation. This final 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 in the proposed rule that was published on June 9, 2011 (76 FR 33880).

The areas in this final 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 or biological features identified in the PCE that are essential to the conservation of the species and which may require special management considerations or protection. For this final 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,* and areas that are exempt from critical habitat under section 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 on *M. viminea;* (b) monitoring reports from MCAS Miramar; and (c) monitoring reports from private 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 eight occurrences are currently extant. Based on data from the CNDDB, we confirmed that all eight 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 accomplished 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 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) located 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 were likely to occur, indicating that they were poor predictors for areas that contain the physical or 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 delineating 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 or 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 or biological features essential to the conservation of *Monardella 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 are located in an area that appears to be a remnant habitat wash at the end of West Sycamore Canyon, which likely received additional streamflow during storm events longer 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 or significantly contribute to population persistence.

The conservation of *Monardella viminea* depends on preservation of habitat containing the physical or 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 2006, p. 24, no EO number). We considered that the habitat areas outlined using the method described above will capture only the habitat that contains the physical or biological features essential to the conservation of *M. viminea.* We determined the distance of 490 ft (150 m) was appropriate to capture areas surrounding occupied streambeds that contain the physical or 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 or biological features essential to the conservation of the species. *Monardella viminea* requires all components of the PCE for growth and reproduction; thus, only areas that contained all components 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 that wash away sandbars rather than scouring them of vegetation. Further discussion of why we did not include these occurrences as critical habitat appears in the Summary of Changes from Previously Designated Critical Habitat section in the proposed rule to designate critical habitat (76 FR 33880, June 9, 2011). We also removed areas within the boundaries of MCAS Miramar for this final rule because these areas are exempt from critical habitat designation under section 4(a)(3)(B)(i) of the Act (see Exemptions section below).

When determining critical habitat boundaries within this final rule, we made every effort to avoid including developed areas, such as lands covered by buildings, pavement, and other structures, because such lands lack physical or biological features for *Monardella viminea.* The scale of the maps we prepared under the parameters for publication in the Code of Federal Regulations may not reflect the exclusion of such developed lands. Any such lands inadvertently left inside critical habitat boundaries shown on the maps of this final rule have been excluded by text in the rule and are not designated as critical habitat. Therefore, a Federal action involving these lands will 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 or biological features in the adjacent critical habitat.

We are designating as critical habitat lands that we have determined are occupied at the time of listing and that contain sufficient physical or biological features to support the life-history processes essential for the conservation of the species. All units contain the PCE essential to support *Monardella viminea* life processes.

Final Critical Habitat Designation

In the proposed rule published June 9, 2011 (76 FR 33880), we proposed designating five units as critical habitat for *Monardella viminea.* Within the five proposed units, we identified essential habitat located on MCAS Miramar that is exempt from designation under 4(a)(3)(B)(i) of the Act. Based on the updated boundaries of MCAS Miramar (see Summary of Changes from Proposed Rule above and *Application of Section 4(a)(3) of the Act* below), we have determined that additional portions of Units 3 and 4, and all of Unit 5 are exempt under section 4(a)(3)(B)(i) of the Act. We are excluding the remaining portions of Unit 3 and Unit 4 under section 4(b)(2) of the Act (see Summary of Changes from Proposed Rule above and *Application of Section 4(b)(2) of the Act* below). Thus, in this final rule, we designate two critical habitat units. The critical habitat identified in each unit is shown in Table 3, and the changes of ownership due to the changed MCAS Miramar boundaries are shown in Table 4.

TABLE 3—COMPARISON OF THE 2006 FINAL CRITICAL HABITAT DESIGNATION FOR *Monardella linoides* SSP. *Viminea,* THE 2011 PROPOSED CRITICAL HABITAT DESIGNATION FOR *M. viminea,* AND THE 2012 FINAL CRITICAL HABITAT DESIGNATION FOR *M. viminea*

[**Note:** This table does not include the 255 ac (103 ha) of habitat now identified as occupied by *M. stoneana.* Further details on land ownership, exclusions and exemptions in this final rule are given in Tables 4 and 5]

Location	2006 Final critical habitat		2011 Proposed critical habitat		2012 Final critical habitat	
	Unit name	Area containing essential features ac (ha)	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)	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)	Unit 2 Partial 4(a)(3)(B)(i) exemption.	577 (234).
Spring Canyon		245 (99)	Unit 3 Partial 4(a)(3)(B)(i) exemption.	273 (111)	No name; all acres exempt or excluded.	273 (111).
East San Clemente Canyon.		638 (258)	Unit 4 Partial 4(a)(3)(B)(i) exemption.	467 (189)	No name; all acres exempt or excluded.	467 (189).
West San Clemente Canyon.		114 (46)	Unit 5 Partial 4(a)(3)(B)(i) exemption.	227 (92)	No name; complete exemption.	227 (92).
Lopez Canyon		77 (31)		0 (0)		0 (0).
Elanus Canyon		82 (33)		0 (0)		0 (0).
Rose Canyon		185 (75)		0 (0)		0 (0).
Total Habitat Containing Essential Features**.		2,242 (907)		1,894 (767)		1,894 (767).
Total Exempt		1,863 (754)		1,546 (626)		1,563 (633)
Total Excluded**.		306 (124) (excluded in 2006).		208 (84) (considered for exclusion).		210 (85) (excluded).
Total Critical Habitat.		73 (30) Designated.		348 (141) Proposed.		122 (50) Designated.

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

The critical habitat areas described below constitute our best assessment at this time of areas that meet the definition of critical habitat. The two units we are designating as critical habitat are: (1) Sycamore Canyon, and (2) West Sycamore Canyon. Both units are currently occupied by the species. Both units are also specific areas within the geographic area occupied by the species at the time it was listed. The approximate area of each critical habitat unit is shown in Table 4, along with ownership acreages for all of the units described in the proposed rule and acreages exempt or excluded in this final rule.

TABLE 4—CRITICAL HABITAT UNITS FOR *Monardella viminea,* SHOWING ESTIMATED AREA IN ACRES (HECTARES), LAND OWNERSHIP, AREAS EXCLUDED UNDER SECTION 4(b)(2) OF THE ACT, AND AREAS EXEMPT UNDER SECTION 4(a)(3)(B)(i) OF THE ACT

Location	Federal ac (ha)	State and local ac (ha)	Private ac (ha)	Total area containing essential features ac (ha)	Area excluded ac (ha) **	Areas exempt ac (ha)	Final critical habitat ac (ha)
Unit 1. Sycamore Canyon	153 (62)	22 (9)	175 (71)	350 (142)	80 (32)	153 (62)	118 (48)
Unit 2. West Sycamore Canyon	551 (222)	26 (11)	0 (0)	577 (234)	22 (9)	551 (222)	4 (2)
Unit 3. Spring Canyon	170 (69)	5 (2)	98 (40)	273 (111)	103 (42)	170 (69)	0 (0)
Unit 4. East San Clemente Canyon	462 (187)	5 (2)	0 (0)	467 (189)	5 (2)	462 (187)	0 (0)
Unit 5. West San Clemente Canyon	227 (92)	0 (0)	0 (0)	227 (92)	0 (0)	227 (92)	0 (0)
Total Habitat Area	1,563 (633)	57 (23)	273 (111)	1,894 (767)	210 (85)	1,563 (633)	122 (50)

Note: Values in this table may not sum due to rounding.
** See Exclusions section for details of acreages excluded in each unit.

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

Unit 1: Sycamore Canyon

Unit 1 consists of 118 ac (48 ha), and is located in Sycamore Canyon at the northeastern boundary of MCAS Miramar, north of Santee Lakes in San Diego County, California. These acres fall within the boundaries of the City of Santee, which has no approved MSCP. 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 2006, p. 23). Sycamore Canyon is essential to the recovery of the species because it supports over 350 individual plants, or approximately 18 percent of the species' total population (City of San Diego 2010a, p. 257; Tierra Data 2011, p. 12), meaning this is an important unit that supports genotypes and diversity not found among the more impoverished occurrences. Additionally, this canyon is one of few that contains seedlings and juveniles (Tierra Data 2011, pp. 16–17), demonstrating that reproduction is occurring and the habitat in this unit is currently suitable to support all life-history phases of this declining species. The habitat in this unit provides redundancy and resiliency for *M. viminea* and, since there are areas of suitable habitat 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 or biological features essential to the conservation of *M. viminea,* including riparian channels with a natural hydrological regime, ephemeral drainages made up of rocky or sandy alluvium, sandy soil with sediment and cobble deposits, and surrounding vegetation that provides semi-open foliar cover. The PCE 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* section of this final rule for a discussion of the threats to *M. viminea* habitat and potential management considerations.

Unit 2: West Sycamore Canyon

Unit 2 consists of 4 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* because it contains the largest number of *M. viminea* individuals of any canyon in the species' range and over 25 percent of the species' total population (Tierra Data 2011, p. 12), meaning this is an important unit that supports genotypes and diversity not found among the more impoverished occurrences. Additionally, this canyon is one of few that contains seedlings and juveniles (Tierra Data 2011, pp. 16–17), demonstrating that reproduction is occurring and the habitat in this unit is currently suitable to support all life-history phases of this declining species. The plants in this canyon were recently observed to be in good health with little to no pressure from herbivores, in contrast to many other areas such as San Clemente or Carroll Canyon, where individuals are declining or are in poor health (Tierra Data 2011, p. 25; Ince 2010, Table 3). The habitat in this unit provides redundancy and resiliency for *M. viminea,* and because there are areas of suitable habitat 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 critical habitat for *M. viminea* in that portion of West Sycamore Canyon located outside of MCAS Miramar, includes the physical or biological features essential to the conservation of *M. viminea,* including riparian channels with a natural hydrological regime, ephemeral drainages made up of rocky or sandy alluvium, sandy soil with sediment and cobble deposits, and surrounding

vegetation that provides semi-open foliar cover. 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* section of this final rule for a discussion of the threats to *M. viminea* habitat and potential management considerations.

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 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 Federal action may affect a listed species or its critical habitat, the responsible Federal agency (action agency) must enter into consultation with us. Examples of actions that are subject to the section 7 consultation process are actions on State, tribal, local, or private lands that require 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 the Service under section 10 of the Act) or that involve some other Federal action (such as funding from the Federal Highway Administration, Federal Aviation Administration, or the Federal Emergency Management Agency). Federal actions not affecting listed species or critical habitat, and actions on State, tribal, local, or private lands that are not federally funded or authorized, do not require section 7 consultation.

As a result of section 7 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, or 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 with discretionary involvement or control may affect subsequently listed species or designated critical habitat.

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 or 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, when carried out, funded, or authorized by a Federal agency, should result in consultation for *Monardella viminea.* 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 affect pollinator abundance or efficacy, directly or indirectly, 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,* including coastal sage scrub, riparian scrub, and (in some areas) riparian oak woodland. These activities may include large-scale application of herbicides, release of chemicals or other toxic substances, or activities that increase the possibility of accidental sewage outflows. 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 could appreciably reduce the value of the critical habitat for 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 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 *et al.* 2011) that addresses *Monardella viminea,* and the Marine Corps has committed to working closely with the Service 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 1,563 ac (633 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 are 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 determined that essential habitat on MCAS Miramar is exempt from the designation of critical habitat (71 FR 65662, November 8, 2006), and we do so again in this revised designation. We base 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 April 2011 (Gene Stout and Associates *et al.* 2011). We determined that conservation efforts identified in the INRMP provide a benefit to *M. viminea* on MCAS Miramar (Gene Stout and Associates *et al.* 2011, section 7–19). 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 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 suitable habitat for *M. viminea* is managed as specified for Level I or Level II 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.* 2011, p. 7–19).

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 *Monardella 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 1,563 ac (633 ha) of habitat in this 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 shall 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.

In considering whether 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 avoid concentrated economic impacts or impacts to national security, or whether exclusion may result in conservation; the continuation, strengthening, or encouragement of partnerships; or the implementation of a management plan that provides equal to or more conservation than a critical habitat designation would provide, among other factors. For example, we consider our continued ability to seek new partnerships with future plan participants including the State, counties, local jurisdictions, conservation organizations, and private landowners, which together can implement conservation actions that we would be unable to accomplish otherwise. If lands within approved management plan areas are designated as critical habitat, it would likely have a negative effect on our existing partnerships and negatively affect our ability to establish new partnerships to develop and implement these plans, particularly plans that address landscape-level conservation of species and habitats. By excluding these lands, we preserve our current partnerships, promote future partnerships, and encourage additional conservation actions in the future.

When we evaluate conservation plans when considering the benefits of exclusion, we consider a variety of factors. We consider the benefits of working relationships we have formed with Federal, State, local and private entities and potential conservation agreements that may stem from those partnerships. Additionally, we consider factors including, but not limited to, whether the plan is finalized, how it provides for the conservation of the essential physical or 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. If the benefits of exclusion outweigh the benefits of inclusion and exclusion will not result in extinction, the Secretary may exercise his discretion to exclude the area.

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 prepared a draft economic analysis of the proposed critical habitat designation and related factors (Industrial Economics Inc., 2011). The draft analysis, dated August 25, 2011, was made available for public review from September 28, 2011, through October 28, 2011 (76 FR 59990). Following the close of the comment period, a final analysis of the potential economic effects of the designation was developed, taking into consideration the public comments and any new information (Industrial Economics Inc., 2012).

The intent of the final economic analysis (FEA) is to identify and analyze the potential economic impacts of designating critical habitat for *Monardella viminea.* Some of these costs will likely be incurred regardless of whether we designate critical habitat (baseline). The economic impact of the final critical habitat designation is analyzed by comparing scenarios both ''with critical habitat'' and ''without critical habitat.'' The ''without critical

habitat'' scenario represents the baseline for the analysis, considering protections already in place for the species (for example, under the Federal listing and other Federal, State, and local regulations). The baseline, therefore, represents the costs incurred regardless of whether critical habitat is designated. The ''with critical habitat'' scenario describes the incremental impacts specifically associated with the designation of critical habitat for the species. The incremental conservation efforts and associated impacts are those not expected to occur absent the designation of critical habitat for the species. In other words, the incremental costs are those attributable solely to the designation of critical habitat above and beyond the baseline costs; these are the costs we consider in the final designation of critical habitat. The analysis looks retrospectively at baseline impacts incurred since the species was listed, and forecasts both baseline and incremental impacts likely to occur with the designation of critical habitat.

The FEA also addresses how potential economic impacts are likely to be distributed, including an assessment of any local or regional impacts of habitat conservation and the potential effects of conservation activities on government agencies, private businesses, and individuals. The FEA measures lost economic efficiency associated with residential and commercial development and public projects and activities, such as economic impacts on water management and transportation projects, Federal lands, small entities, and the energy industry. Decisionmakers can use this information to assess whether the effects of the designation might unduly burden a particular group or economic sector. Finally, the FEA looks retrospectively at costs that have been incurred since the species was listed in 1998 (63 FR 54938, October 13, 1998), and considers those costs that may occur in the 19 years following the designation of critical habitat. This 19-year period was determined to be appropriate as it encompassed the available planning information for one of the two entities involved in the analysis, (its activities are forecast to the year 2030), and because limited planning information was available for most activities to forecast activity levels for projects beyond a 19-year timeframe (Industrial Economics Inc. 2011, p. 2–14). The FEA quantifies economic impacts of *Monardella viminea* conservation efforts associated with the following categories of activity: Transportation and construction.

The FEA determined that only minor economic impacts are likely to result from critical habitat designation. This conclusion stems from the following factors: (1) In the proposed rule, we identified 210 ac (85 ha) of lands covered by HCPs that protect the species and its habitat within the City of San Diego and County of San Diego MSCP Subarea Plans, and these 210 acres (85 ha) have been excluded in this final rule from critical habitat due to conservation partnerships (see *Exclusions Based on Other Relevant Impacts* below)); (2) as all critical habitat units are occupied, consultation would occur regardless of the designation of critical habitat; and (3) modifications to the project to avoid jeopardy to *Monardella viminea* and those to avoid adverse modification of critical habitat are indistinguishable (Industrial Economics Inc. 2012, p. ES–2). Further, those administrative costs resulting from critical habitat designation are minor (total undiscounted costs of $10,000) (Industrial Economics Inc. 2012, Table ES–1). Consequently, the Secretary has determined not to exercise his discretion to exclude any areas from this designation of critical habitat for *Monardella viminea* based on economic impacts.

A copy of the FEA with supporting documents may be obtained by contacting the Carlsbad Fish and Wildlife Office (see **ADDRESSES**) or by downloading from the Internet at *http://www.regulations.gov.*

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 rule, we have exempted from the designation of critical habitat those lands on MCAS Miramar because the base has an approved INRMP that the Marine Corps is implementing and that we have concluded provides a benefit to *Monardella viminea.*

In this final rule, we have determined that there are no other lands within the 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 exercising his discretion to exclude any areas from this 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

Based on the information provided by entities seeking exclusion, as well as any additional public comments we received, we evaluated whether certain lands covered by existing HCPs in the critical habitat units were appropriate for exclusion from this final designation pursuant to the ''other relevant factor'' criterion of section 4(b)(2) of the Act. For the reasons summarized below, the Secretary determined to exercise his discretion to exclude essential habitat covered by the City of San Diego Subarea Plan and the County of San Diego Subarea Plan under the MSCP from the revised critical habitat designation for *Monardella viminea.* Table 5 provides approximate areas (ac, ha) of lands that meet the definition of critical habitat but are excluded under section 4(b)(2) of the Act from the final critical habitat rule.

TABLE 5—AREAS EXCLUDED UNDER SECTION 4(b)(2) OF THE ACT FROM THIS FINAL CRITICAL HABITAT DESIGNATION FOR *Monardella Viminea*

Unit **	Area covered by City of San Diego Subarea Plan (ac (ha))	Area covered by County of San Diego Subarea Plan (ac (ha))
1. Sycamore Canyon	47 (19)	32 (13)
2. West Sycamore Canyon	22 (9)	0 (0)
3. Spring Canyon	103 (42)	0 (0)
4. East San Clemente Canyon	5 (2)	0 (0)
Total ***	177 (72)	32 (13)

Note: Values in this table may not sum due to rounding.
** The areas being excluded that are noted in this table are included in Tables 3 and 4 above.
*** All areas covered by HCPs (City of San Diego Subarea Plan under the MSCP and County of San Diego Subarea Plan under the MSCP) are excluded.

In evaluating whether to exclude areas covered by a current land management or conservation plan (HCPs as well as other types), we consider whether:

(1) The plan is complete and provides a level of protection from adverse modification or destruction similar to or greater than that provided through 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.

In the case of plant species such as *Monardella viminea,* we also consider that including conservation measures to protect listed plant species and their habitats in an HCP or other conservation plan is voluntary. In contrast to listed wildlife species, the Act does not prohibit take of listed plant species. Further, an incidental take permit (ITP) under section 10 of the Act is not required to authorize impacts to listed plants. For this reason, the Service actively supports and encourages the voluntary inclusion of measures to protect listed plants and their habitats in an HCP or other conservation plan by plan proponents. The prospect of potentially avoiding a designation of critical habitat for a plant species provides a meaningful incentive to plan proponents to extend protections for plants and their habitat under a conservation plan. Achieving comprehensive, landscape-level protection for plant species, particularly narrow endemic plant species such as *M. viminea,* through their inclusion in regional conservation plans, provides a key conservation benefit for such species. Our consideration of the City of San Diego and County of San Diego Subarea Plans under section 4(b)(2) of the Act acknowledges the voluntary, proactive conservation measures undertaken by the City and County to protect *M. viminea* under these plans.

Taking into account all of the above factors, we conclude that essential habitat covered by the City of San Diego Subarea Plan and the County of San Diego Subarea Plan under the San Diego MSCP warrants exclusion from revised critical habitat for *Monardella viminea,* and we are excluding non-Federal lands covered by these plans.

The MSCP is a comprehensive habitat conservation planning program that encompasses 582,243 ac (235,626 ha) 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 (County of San Diego 1998, pp. 2–1, 4–2–4–4). Conservation of *Monardella viminea* is addressed in the subregional plan, and in the City and County of San Diego Subarea Plans. The City and County Subarea Plans identify areas where mitigation activities should be focused to create its preserve areas (Multi-Habitat Planning Area (MHPA) or Pre-Approved Mitigation Area (PAMA)). Those areas of the MSCP preserve that are already conserved, as well as those designated for inclusion in the preserve under the plan, are referred to as the ''preserve area'' in this final critical habitat designation. When completed at the end of the 50-year permit term, the public sector (Federal, State, and local government, and the 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, 4–2—4–4).

The City and County Subarea Plans include multiple conservation measures that provide benefits to *Monardella viminea.* To date, the City of San Diego has conserved within the boundaries of the MHPA 100 percent of *M. viminea* major occurrences and 100 percent habitat for *M. viminea* that we identified as essential in our critical habitat analysis (see the *Criteria Used to Identify Critical Habitat* section above). Additionally, 100 percent of *M. viminea* occurrences and 100 percent of essential habitat for *M. viminea* within the boundaries of the County subarea plan (a total of 2 percent of all *M. viminea* habitat) has been conserved in the Sycamore Canyon Preserve.

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 for both the City and the County are in place. The County of San Diego has also developed a site-specific management plan for the one area under its ownership that contains *Monardella viminea* (Sycamore Canyon), which incorporates requirements to monitor and adaptively manage *M. viminea* habitat over time (City of San Diego 1997, p. 127). The City has not yet completed site-specific management plans for some preserve lands containing *M. viminea,* including lands we proposed for revised critical habitat designation on June 9, 2011 (76 FR 33880). However, the City is in the process of drafting a management plan for the Mission Trails area, which includes *M. viminea* occurrences in Spring Canyon (EO 26) (Miller 2011, pers. comm.). 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). The City of San Diego has also completed a natural resource management plan for the Los Peñasquitos Canyon Preserve, which covers *M. viminea* habitat (EO 1) that does not meet the definition of essential habitat (see the *Criteria Used to Identify Critical Habitat* section above).

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. Currently, the County of San Diego does not monitor the one occurrence of *M. viminea* in its jurisdiction, but anticipates that monitoring will begin in 2013 (City of San Diego 2011b, pp. 4–5). The City of San Diego monitors its occurrences in Sycamore Canyon and Lopez Canyon on an annual basis, although no monitoring has yet been completed at other locations including Spring Canyon (EO 26). 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 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 32 ac (13 ha) of land. We are also exercising our delegated discretion to exclude from critical habitat portions of Units 1–4 covered by the City of San Diego Subarea Plan under section 4(b)(2) of the Act. This area encompasses 177 ac (72 ha) of land. All essential habitat on non-federal lands covered by HCPs (City of San Diego Subarea Plan under the MSCP and County of San Diego Subarea Plan under the MSCP) are excluded from the final critical habitat designation.

Benefits of Inclusion—City of San Diego Subarea Plan and the County of San Diego Subarea Plan Under the San Diego MSCP

The principal benefit of including an area in a critical habitat designation is the creation of a Federal nexus through section 7(a)(2) of the Act. This section upholds the requirement for Federal agencies to ensure actions they fund, authorize, or carry out are not likely to result in the destruction or adverse modification of any designated critical habitat. Section 7(a)(2) also requires that Federal agencies must consult with us on actions that may affect a listed species and refrain from undertaking actions that are likely to jeopardize the continued existence of such species.

The benefits of inclusion of habitat within the critical habitat involves, in part, identifying the regulatory benefit of critical habitat. Determining these benefits is not always straightforward. The analysis of effects of a proposed project on critical habitat is both separate from and different from that of the effects of a proposed project on the species itself. The jeopardy analysis evaluates the action's impact to survival and recovery of the species, while the destruction or adverse modification analysis evaluates how the action could affect the value of critical habitat to the listed species. Therefore, the difference in outcomes of these two analyses represents the regulatory benefit of critical habitat. The addition of this regulatory benefit will, in many instances, lead to different results and give rise to different regulatory requirements that will then apply to the proposed project. Thus, critical habitat designations may provide greater benefits to the recovery of a species than would be provided by listing alone.

However, for some species, and in some locations, the outcome of these analyses will be similar because effects to habitat will often also result in effects to the species. Though a jeopardy and adverse modification analysis must satisfy two different standards, any modifications to proposed actions resulting from a section 7 consultation to minimize or avoid impacts to *Monardella viminea* will be habitat-based. Because *M. viminea* requires properly functioning ephemeral streams, drainages, and floodplains, any alteration of that system will also likely be detrimental to the individual plants located in that system. Additionally, all lands considered for exclusion are currently considered occupied by *M. viminea* and will be subject to the consultation requirements of the Act in the future regardless of critical habitat designation. Thus, it is difficult to differentiate measures implemented solely to minimize impacts to the critical habitat from those implemented to minimize impacts to *M. viminea.* Therefore, in the case of *M. viminea,* we believe any additional regulatory benefits of critical habitat designation would be minimal because the regulatory benefits from designation are essentially indistinguishable from the benefits of listing.

Another possible benefit of including lands in a critical habitat designation is that the designation can serve to educate landowners and the public regarding the potential conservation value of an area, and may help focus conservation efforts on areas of high conservation value for certain species. Any information about *Monardella viminea* and its habitat that reaches a wide audience, including parties engaged in conservation activities, is valuable. In the case of *M. viminea,* however, there have already been multiple occasions when the public has been educated about the species. The framework regional San Diego MSCP was developed over a 7-year period, while the City and County Subarea plans have been in place for over a decade. Implementation of the subarea plans is formally reviewed yearly through publicly available annual reports and a public meeting, again providing extensive opportunity to educate the public and landowners about the location of, and efforts to conserve, essential *M viminea* habitat. As discussed above, the permit holders of the City and County Subarea Plans are aware of the value of these lands to the conservation of *M. viminea,* and conservation measures are already in

place to protect essential *M. viminea* and its habitat.

Furthermore, essential habitat covered by the City and County Subarea plans was included in the proposed designation published in the **Federal Register** on June 9, 2011 (76 FR 33880). This publication was announced in a press release and information was posted on the Service's Web site, which ensured that the proposal reached a wide audience. Therefore, the educational benefits of critical habitat designation (such as providing information to the City and other stakeholders on areas important to the long-term conservation of this species) have already been realized through development and ongoing implementation of the City and County Subarea plans, by proposing these areas as critical habitat, and through the Service's public outreach efforts.

Critical habitat designation can also result in ancillary conservation benefits to *Monardella viminea* by triggering additional review and conservation through other Federal and State laws. The primary State laws that might be affected by critical habitat designation are CEQA and CESA. However, essential habitat within the City and County has been identified in the Subarea plans and is either already protected or targeted for protection under the plans. Thus review of development proposals affecting essential habitat under CEQA by the City and County already takes into account the importance of this habitat to the species and the protections required for the species and its habitat under the Subarea plans. Similarly, because *M. viminea* is a State-listed endangered species under CESA, and CDFG is a signatory to the MSCP and City and County Subarea plans under the NCCP Act, the designation of critical habitat within the City and County would not result in additional conservation for the species and its habitat than currently exists under State law. The Federal law most likely to afford protection to designated *M. viminea* habitat is the Clean Water Act (CWA). Projects requiring a permit under the CWA, such as a fill permit under section 404 of the CWA, and that are located within critical habitat or are likely to affect critical habitat would trigger section 7 consultation under the Act. However, as discussed above, we conclude the potential regulatory benefits resulting from designation of critical habitat would be negligible because the outcome of a future section 7 consultation would not result in greater conservation for essential *M. viminea* habitat than currently is provided for under the City and County Subarea plans.

Based on the above discussion, we believe section 7 consultations for critical habitat designation conducted under the standards required by the Ninth Circuit Court in the *Gifford Pinchot Task Force* v. *U.S. Fish and Wildlife Service* decision would provide little conservation benefit and would be largely redundant with those benefits already provided by the City and County Subarea Plans. Therefore, we determine the regulatory benefits of designating those acres as *Monardella viminea* critical habitat, such as protection afforded through the section 7(a)(2) consultation process, are minimal. We also conclude that the educational and ancillary benefits of designating essential habitat covered by the City and County Subarea plans would be negligible because the location of essential habitat for this species within the City and County and the importance of conserving such habitat is well known through development and implementation of the Subarea plans and the independent regulatory protection already provided under CEQA, CESA, and the City and County Subarea plans.

Benefits of Exclusion—City of San Diego Subarea Plan and the County of San Diego Subarea Plan Under the San Diego MSCP

The benefits of excluding from designated critical habitat the approximately 177 ac (72 ha) of land within the boundaries of the City of San Diego Subarea Plan and 32 ac (13 ha) of land within the County of San Diego Subarea Plan are significant. The benefits of excluding essential habitat covered by these plans include: (1) Continuance and strengthening of our effective working relationships with all MSCP jurisdictions and stakeholders to promote the voluntary conservation of *Monardella viminea* and its habitat; (2) allowance for continued meaningful collaboration and cooperation in working toward recovering this species, including conservation benefits that might not otherwise occur; (3) encouragement of other jurisdictions with completed subarea plans under the MSCP to amend their plans to cover and benefit *M. viminea* and its habitat; (4) encouragement of other jurisdictions to complete subarea plans under the MSCP (including the cities of Poway and Santee) that cover or are adjacent to *M. viminea* habitat; and (5) encouragement of additional HCP and other conservation plan development in the future on other private lands that include *M. viminea* and other federally listed plant species.

We developed close partnerships with the City and County of San Diego and several other stakeholders through the development of the City and County Subarea Plans, which voluntarily incorporate appropriate protections and management for *Monardella viminea,* its habitat, and the physical or biological features essential to the conservation of this species. Those protections are consistent with statutory mandates under section 7 of the Act to avoid destruction or adverse modification of critical habitat. Furthermore, these plans go beyond that requirement by including active management and protection of essential habitat areas. By excluding the approximately 177 ac (72 ha) of land within the boundaries of the City of San Diego Subarea Plan and 32 ac (13 ha) within the County of San Diego Subarea Plan from critical habitat designation, we are eliminating a redundant layer of regulatory review for projects covered by the City and County Subarea Plans and encouraging new voluntary partnerships with other landowners and jurisdictions to protect *M. viminea* and other listed plant species. As discussed above, the prospect of potentially avoiding a future designation of critical habitat provides a meaningful incentive to plan proponents to extend voluntary protections to endangered and threatened plants and their habitat under a conservation plan. Achieving comprehensive, landscape-level protection for plant species, particularly narrow endemic plant species such as *M. viminea,* through their inclusion in regional conservation plans, provides a key conservation benefit for such species. Our ongoing partnerships with the City and County, the larger regional MSCP participants, and the landscape-level multiple species conservation planning efforts they promote, are essential to achieve long-term conservation of *M. viminea.*

As noted earlier, some HCP permittees have expressed the view that designation of lands covered by an HCP devalues the conservation efforts of plan proponents and the partnerships fostered through the development and implementation of the plans and would discourage development of additional HCPs and other conservation plans in the future. Where an existing HCP provides for protection for a species and its essential habitat within the plan area, particularly with regard to a listed plant species, or where the existence of a Federal nexus for future activities is uncertain, the benefits of preserving existing partnerships by excluding the

covered lands from critical habitat are most significant. Excluding lands owned by or under the jurisdiction of the permittees of an HCP, under these circumstances, promotes positive working relationships and eliminates impacts to existing and future partnerships while encouraging development of additional HCPs for other species.

Large-scale HCPs, such as the regional MSCP and subarea plans issued under its framework, take many years to develop and foster an ecosystem-based approach to habitat conservation planning, by addressing conservation issues through a coordinated approach. If local jurisdictions were to require landowners to obtain ITPs under section 10 of the Act individually prior to the issuance of a building permit, the local jurisdiction would incur no costs associated with the landowner's need for an ITP. However, this approach would result in uncoordinated, ''patchy'' conservation that would be less likely to achieve listed species recovery and almost certainly would result in less protection for listed plant species, which do not require an ITP. We, therefore, want to continue to foster partnerships with local jurisdictions to encourage the development of regional HCPs that afford proactive, landscape-level conservation for multiple species, including voluntary protections for covered plant species. We believe the exclusion from critical habitat of covered lands subject to protection and management under such plans will promote such partnerships and result in greater protection for listed species, particularly plant species, than would be achieved through section 7 consultation.

The Benefits of Exclusion Outweigh the Benefits of Inclusion—City of San Diego Subarea Plan and the County of San Diego Subarea Plan Under the San Diego MSCP

We reviewed and evaluated the exclusion of approximately 177 ac (72 ha) of land within the boundaries of the City of San Diego Subarea Plan and 32 ac (13 ha) within the County of San Diego Subarea Plan from our revised designation of critical habitat, and we determined the benefits of excluding these lands outweigh the benefits of including them. The benefits of including these lands in the designation are small because the regulatory, educational, and ancillary benefits that would result from critical habitat designation are almost entirely redundant with the regulatory, educational, and ancillary benefits already afforded through the City and County Subarea Plans and under State and Federal law. In contrast to the minor benefits of inclusion, the benefits of excluding lands covered by the City and County Subarea Plans from critical habitat are significant. Exclusion of these lands from critical habitat will help preserve the partnerships we developed with local jurisdictions and project proponents through the development and ongoing implementation of the MSCP and the City and County Subarea Plans, and aid in fostering future partnerships for the benefit of listed species. Designation of lands covered by the City and County Subarea Plans may discourage other partners from seeking, amending, or completing subarea plans under the MSCP framework plan or from pursuing other HCPs that cover *M. viminea* and other listed plant species. Designation of critical habitat does not require that management or recovery actions take place on the lands included in the designation. The City and County Subarea Plans, however, will provide for significant conservation and management of *Monardella viminea* habitat and help achieve recovery of this species through habitat enhancement and restoration, functional connections to adjoining habitat, and species monitoring efforts. Additional HCPs or other species-habitat plans potentially fostered by this exclusion would also help to recover this and other federally listed species. Therefore, in consideration of the relevant impact to current and future partnerships, as summarized in the *Benefits of Exclusion* section above, we determined the significant benefits of exclusion outweigh the minor benefits of critical habitat designation.

Exclusion Will Not Result in Extinction of the Species—City of San Diego Subarea Plan and the County of San Diego Subarea Plan Under the San Diego MSCP

We determined that the exclusion of 177 ac (72 ha) of land within the boundaries of the City of San Diego Subarea Plan and 32 ac (13 ha) of land within the boundaries of the County of San Diego Subarea Plan from the designation of critical habitat for *Monardella viminea* will not result in extinction of the species. The jeopardy standard of section 7 of the Act and routine implementation of conservation measures through the section 7 process due to *M. viminea* occupancy and protection provided by the City and County Subarea Plans provide assurances that this species will not go extinct as a result of excluding these lands from the critical habitat designation. Therefore, based on the above discussion, the Secretary is exercising his discretion to exclude 177 ac (72 ha) of land within the boundaries of the City of San Diego Subarea Plan and 32 ac (13 ha) of land within the boundaries of the County of San Diego Subarea Plan from this final critical habitat designation.

Summary of Comments and Recommendations

We requested written comments from the public, during two comment periods, on: the proposed retention of the listing status of *Monardella viminea* as endangered; the proposed removal of protections afforded by the Act from those individual plants now recognized as a separate species, *M. stoneana;* and the proposed critical habitat for *M. viminea.* The first comment period associated with the publication of the proposed rule (76 FR 33880) opened on June 9, 2011, and closed on August 8, 2011. We also requested comments on the proposed critical habitat designation and associated draft economic analysis during a comment period that opened on September 28, 2011, and closed on October 28, 2011 (76 FR 59990). We did not receive any requests for a public hearing. We also contacted appropriate Federal, State, and local agencies; scientific organizations; and other interested parties and invited them to comment on the proposed rule and draft economic analysis during these comment periods.

During the first comment period, we received six comment letters directly addressing the actions described in the proposed rule. During the second comment period, we received no comment letters addressing the actions described in the proposed rule or the draft economic analysis. All substantive information provided during these comment periods has either been incorporated directly into this final determination or addressed below. Comments we received were grouped into three general issue categories specifically relating to: the proposed retention of the listing status of *Monardella viminea* as endangered; the proposed removal of protections afforded by the Act from those individuals now recognized as a separate species, *M. stoneana;* and the proposed critical habitat for *M. viminea.* These are addressed in the following summary and incorporated into the final rule as appropriate.

Peer Review

In accordance with our peer review policy published on July 1, 1994 (59 FR 34270), we solicited expert opinions

from three knowledgeable individuals with scientific expertise that included familiarity with the species, the geographic region in which the species occurs, and conservation biology principles. We received a response from one of the peer reviewers.

We reviewed all comments received from the peer reviewer for substantive issues and new information regarding the actions described in this proposed rule. While the peer reviewer supported the determinations made by the rule, the reviewer requested clarification on critical habitat designation and threats to *Monardella viminea* and *M. stoneana.* The peer reviewer also provided suggestions on additional information and analysis to add to the rule. Peer reviewer comments are addressed in the following summary and incorporated into the final rule as appropriate.

Peer Reviewer Comments

Comments About *Monardella viminea*

(1) *Comment:* The peer reviewer was supportive of the proposed rule. The reviewer stated that the proposed designation of critical habitat is important to the conservation of *Monardella viminea,* and that the Service had presented a thorough review of scientific literature related to the taxonomic split of *M. linoides* ssp. *viminea.*

Our Response: We appreciate the peer reviewer's comment.

(2) *Comment:* The peer reviewer recommended that we provide further discussions of hydrological regime in watersheds where Monardella viminea is found, and its influence on habitat dynamics for the species.

Our Response: We have updated the Factor A analysis to include information on changing watershed conditions in the range of *Monardella viminea.* However, we were only able to find information on the Los Peñasquitos watershed, containing Lopez and Carroll Canyons, and only information current to the year 2000. We invite anyone with additional or more recent detailed information on hydrological regimes relating to *M. viminea* to submit it to our Carlsbad Fish and Wildlife Office (see the **FOR FURTHER INFORMATION CONTACT** section above).

(3) *Comment:* The peer reviewer noted the dual role of scouring floods within drainages containing *Monardella viminea;* floods have the potential to destroy sandbars hosting *M. viminea* occurrences, but also can create new habitat and remove nonnative vegetation. The reviewer recommends discussing this aspect of the hydrological regime both in the five-factor analysis and in the description of the PCE.

Our Response: In the description of physical or biological features for the proposed rule and this final rule, we included a description of the importance of a natural hydrological regime in creating habitat and removing nonnative vegetation (see the *Physical or Biological Features* section above). Additionally, we include the dual role of scouring floods in the PCE (see the Primary Constituent Elements for *Monardella viminea* section above). Further, in the Factor A analysis for both species, we stated that ''*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). 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 2006, p. 12). We believe this adequately covers the dual role of flood regime in *M. viminea* and *M. stoneana* habitat.

(4) *Comment:* The peer reviewer recommended addressing any efforts to discover previously unknown *Monardella viminea* occurrences and an evaluation of the likelihood that other unknown occurrences may exist.

Our Response: Researchers at MCAS Miramar regularly survey all suitable habitat on the base for *Monardella viminea.* The Service is also aware of recent surveys conducted within previously unsurveyed side channels of Spring Canyon. New *M. viminea* plants were found during this survey (Friends of Los Peñasquitos Canyon Preserve, Inc. 2011, p. 11). Surveys have been conducted by species experts across the current range of the species, but have not confirmed any new occurrences, although a few unsurveyed canyons outside the currently occupied range of the species do remain (Burrascano 2011, pers. comm.; Kelly 2011, pers. comm.). Otherwise, most yearly monitoring focuses on known occurrences.

The species is distinctive in appearance and not easily confused with other plants when in bloom; however, during the fall, the plant dies back and could be overlooked, particularly within areas with high nonnative plant density. Therefore, we consider the discovery of previously unknown *Monardella viminea* occurrences to be possible, but we have no further survey information than what is presented here, which is the best available scientific information.

(5) *Comment:* The peer reviewer requested more information on the statement that ''all canyon areas on the base are protected from development.'' Three comment letters addressed the same sentence, noting that it was in error.

Our Response: We acknowledge that our phrasing did not accurately convey the state of protections afforded by the INRMP. We have clarified the text within the Factor D analysis for *Monardella viminea* with language from the updated INRMP that better explains land management within canyons on MCAS Miramar. The Level 1 or Level II management areas where almost all *M. viminea* occurrences are found provide measures to maintain and enhance habitat for sensitive species, such as *M. viminea,* while maintaining maximum compatible use for operational requirements. Management measures include minimizing the effects of planned actions on endangered species, posting signs identifying sensitive habitats, and avoiding threats such as trampling.

(6) *Comment:* The peer reviewer asked if protections in the canyons on MCAS Miramar extended upstream and would thus protect the plant from altered hydrology.

Our Response: As discussed under Factor A for *Monardella viminea,* all riparian areas on the base fall within Level I or Level II management areas. Furthermore, the INRMP requires all construction in riparian areas to contain measures for impact avoidance, minimization, and compensation, including measures to reduce stormwater runoff and erosion (Gene Stout and Associates *et al.* 2011, Tables 6.2.2.2a and 6.2.2.2b). Therefore, the protections do extend upstream and provide measures to counter altered hydrology that could impact *M. viminea.*

(7) *Comment:* The peer reviewer recommended adding a discussion of threats to *Monardella viminea* and its habitat due to habitat fragmentation and edge effects. Specifically, the commenter recommended discussing: Barriers to seed or pollen dispersal; trampling; introduction of nonnative species; runoff from pesticides, herbicides, and fertilizers; and other results of human land use.

Our Response: During the first open comment period, we received additional information on trampling and weed introductions, and we have added it to the rule (see the Factor E analyses for both species).

In regard to edge effects, we do not consider edge effects in and of themselves as a threat, but rather as a

portion of fragmented habitat where threats are more likely to occur. One consequence of edge effects, an increased presence of nonnative species, is discussed in both the Factor A and Factor E analyses for *Monardella viminea.* With regard to habitat fragmentation, we have added a discussion of threats due to habitat fragmentation to the Factor A analysis for *M. viminea.*

With regard to runoff from pesticides, herbicides, and fertilizers, we have not reviewed any information that shows impacts from those factors on *Monardella viminea* or *M. stoneana.* We have listed runoff as an action that may require section 7 consultation in the *Application of the ''Adverse Modification'' Standard* section in our inclusion of activities that could ''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.'' These activities may include large-scale application of herbicides, release of chemicals or other toxic substances, or activities that increase the possibility of accidental sewage outflows.'' However, the best available scientific information does not currently demonstrate that runoff is, or has previously been, a threat impacting either of the two species.

Comments About *Monardella stoneana*

(8) *Comment:* The peer reviewer and three commenters requested a further clarification to the discussion of small population size as it relates to *Monardella stoneana,* including demographic and genetic consequences of reducing small populations into smaller, increasingly isolated populations. Two commenters further noted that a population the size of *M. stoneana* would be vulnerable to stochastic risks. Additionally, the peer reviewer thought the current discussion on small population size would be stronger if it included an expanded discussion of *M. stoneana's* habitat and demographic stability, and provided more specific statements on which traits may allow it to persist despite its small population size.

Our Response: In regard to the peer reviewer's request to further discuss habitat and demographic stability, we reiterate that very limited information exists on habitat preferences for *Monardella stoneana.* We believe that our current analysis of known habitat characteristics of *M. stoneana* and information presented in the proposed rule (76 FR 33880, June 9, 2011) represent an analysis of the best available scientific information and all known habitat characteristics of the species. With regard to the peer reviewer's request for a discussion of traits that would allow *M. stoneana* to persist, despite its small population size, we note that one important trait that likely allows *M. stoneana* to persist is its demonstrated ability to resprout after fire (City of San Diego 2011a, p. 229; Miller 2011, pers. comm.). While the best available scientific and commercial information does not provide further details on how *M. stoneana* might be well adapted to small population size, we reiterate that *M. stoneana* has not undergone a documented recent decline. The best available scientific information indicates that this species has persisted as a narrow endemic, and that it will continue to do so in the future. Recent genetic analysis has shown that *M. stoneana* has comparable genetic diversity to other rare perennial plant species, which provides evidence that this species has not undergone a recent genetic bottleneck (Prince 2009, p. 20).

With regard to the request for a discussion of small population size, we do not consider rarity, in and of itself, to be a threat. However, we acknowledge that small population size can exacerbate existing threats to a species. As discussed in the five-factor analysis for *Monardella stoneana,* we concluded that stressors do not impact the species to the extent that they pose a threat to the current status of the species. See our response to comment 36 below for further discussion of small population size and the consequences of the split of *M. linoides* ssp. *viminea* into two entities.

Further, we note that *Monardella stoneana* shows little evidence of fragmenting into smaller, more isolated populations. We acknowledge that one occurrence has undergone a decline (CNDDB 2011b, EO 4); however, we have no other data demonstrating a decrease in population size, and one occurrence previously thought to be extirpated has resprouted after fire (Miller 2011, pers. comm.).

(9) *Comment:* The peer reviewer stated that a discussion of differing fire regimes between the Mexico and U.S. populations of *Monardella stoneana* is unnecessary given that all known occurrences are found directly across the border.

Our Response: We respectfully disagree with the peer reviewer's comment. While it is true that all known occurrences of *Monardella stoneana* occur within sight of the Mexican border, we believe that there may be other unknown occurrences of *M. stoneana* farther south in Baja California. Further, an analysis found that significant differences in fire frequency exist immediately across the border (Keeley and Fotheringham 2001, p. 1540 and Figure 1b). Therefore, we believe that the discussion of differing fire frequency is both warranted and necessary.

(10) *Comment:* The peer reviewer recommended a more detailed discussion of the possible effects of U.S. Border Patrol and illegal immigrant activities in areas occupied by *Monardella stoneana,* such as changing economic conditions that could cause the border fence to fall into disrepair. The peer reviewer also requested a discussion of any programs the Service is aware of to monitor those potentially changing conditions and their specific effects on occurrences of *M. stoneana.*

Our Response: We appreciate the peer reviewer's critical review. We have added an expanded discussion of the effects of U.S. Border Patrol and illegal immigrant activities to the Factor A and Factor E discussions for *Monardella stoneana* above, and we added information submitted by public commenters (see comments 40 and 41 below). However, we do not have adequate information to make a determination on how changing economic conditions might affect the status of the border fence. It is worth noting that construction of the border fence occurred during times of poor economic conditions in the United States, so economic circumstances may not be a reliable basis upon which to judge public or political interest in border protection or the likelihood the border fence will fall into disrepair.

With regard to the peer reviewer's query about border monitoring, of the four land managers who own land where *Monardella stoneana* occurs (BLM, the State of California, the County of San Diego, and the City of San Diego), the only regular monitoring we are aware of is conducted by the City of San Diego at their two occurrences (EOs 1 and 4). Temporary monitoring occurred during the construction of the border fence, with surveys conducted before construction for rare species, including *Monardella stoneana* (e^2M 2008, p. 1; e^2M 2009, p. 1). We encourage all agencies and members of the public to submit any information on changing conditions along the border and the consequent impact on *M. stoneana* to our office (see the **FOR FURTHER INFORMATION CONTACT** section above).

(11) *Comment:* The peer reviewer recommended discussing any potential changes for MSCP treatment of *Monardella stoneana* given the removal

of protections under the Act. First, how it would affect the continued protection of the species itself if *M. stoneana* were no longer included in the listed entity, and whether it would retain its status as a narrow endemic. Second, the reviewer recommended discussing impacts on lands specifically set aside for *M. linoides* ssp. *viminea* that are now determined to be occupied by plants identified as *M. stoneana,* and whether they could potentially be available for future development or other land use changes.

Our Response: Currently, *Monardella stoneana* is identified as a narrow endemic species by the City of San Diego Subarea Plan under the MSCP (McEachern *et al.* 2007, Appendix A). The plan defines narrow endemic species as those with ''very limited geographic range'' and states that protections for narrow endemics will ''require additional conservation measures to assure their long-term survival'' beyond those afforded to covered species not recognized as narrow endemics (City of San Diego 1997, p. 100). Identification of a species as a narrow endemic is based on distribution, not on listing status; therefore, we do not expect the removal of *M. stoneana* from the listed entity to affect the protections afforded to it by the MSCP as a narrow endemic.

With regard to the peer reviewer's question about protections on lands set aside for *Monardella linoides* ssp. *viminea,* 100 percent of habitat currently occupied by *M. stoneana* within lands covered by the City of San Diego Subarea Plan is within the MHPA (Multi-Habitat Planning Area), and all 6 ac (2 ha) on land covered by the County of San Diego MSCP subarea plan is within the PAMA. All areas identified for conservation in the MHPA and PAMA were determined based on a combination of factors, including conservation of covered species. No lands were identified and specifically set aside for one particular species, including *Monardella linoides* ssp. *viminea.* Lands on which the species occurs today will remain unavailable for future development regardless of the listing status of any species that occurs within their boundaries. Furthermore, *M. stoneana* habitat within the County of San Diego will also be conserved as part of the Otay Ranch Preserve. Therefore, we do not anticipate that *M. stoneana* or the lands on which it occurs will lose any protection as a result of the split of the species.

(12) *Comment:* The peer reviewer found the June 9, 2011, proposed rule's statement ''a species like *Monardella 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'' to be too general and recommended deleting it. Additionally, the peer reviewer found that the statement ''though small population size may pose a threat to *M. stoneana,* it is alone not enough to cause the extinction of the species within the foreseeable future'' seemed primarily directed at the Act's criterion for listing as endangered, and that we may wish to re-evaluate the threat of small population size in terms of threatened status, as defined in the Act.

Our Response: We appreciate the peer reviewer's critical review, and we have made the suggested changes and re-evaluation.

Comments About Critical Habitat

(13) *Comment:* The peer reviewer recommended designating areas upstream of *Monardella viminea* occurrences in order to preserve natural hydrological regimes.

Our Response: We agree that natural hydrological regimes are important to the conservation of *Monardella viminea.* We made the decision not to designate upstream areas because there are no data to suggest that a quantifiable measure of land upstream would be necessary to preserve the natural hydrological regime specific to the needs of *M. viminea.* No data exist to accurately measure what impacts upstream would begin to affect this species downstream, nor do we know at what distance from the occurrences of essential habitat these activities begin to impact survival and recovery. We believe the areas we have designated as critical habitat in this final rule are sufficient for the conservation of *M. viminea.*

Critical habitat creates a Federal nexus; thus, under section 7(a)(2) of the Act, agencies must ensure that any action is not likely to jeopardize the continued existence of any endangered species or result in the destruction or adverse modification of its critical habitat. As factors supporting a natural hydrological regime are included in the physical or biological factors necessary for the conservation of the species, agencies must consult on any action that could impact or adversely modify critical habitat. The critical habitat boundaries we are finalizing in this rule are based upon the best available scientific information.

(14) *Comment:* The peer reviewer and two public commenters acknowledged the benefits that MCAS Miramar has provided to *Monardella viminea.* However, they also pointed out that, despite those protections, *M. viminea* occurrences on MCAS Miramar have still declined. All three comment letters suggested that designation of critical habitat on the base could result in improved management for *M. viminea,* and that the INRMP is inadequate to protect the species. The peer reviewer further requested a legal analysis of the possibility of designating critical habitat on the base, and whether such designation could indeed result in increased management.

Our Response: 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 states: ''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 [INRMP] 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'' (see *Application of Section 4(a)(3) of the Act* section above for further discussion). We determined the INRMP for MCAS Miramar (Gene Stout and Associates *et al.* 2011) provides a benefit to *Monardella viminea;* therefore, the Act mandates we exempt this military base from critical habitat designation (see *Application of Section 4(a)(3) of the Act* section above for further discussion).

As to the commenters' question as to whether designation of critical habitat on the base would improve management, we note that critical habitat does not create a requirement for management or monitoring. The primary benefit of a critical habitat designation is that it creates a Federal nexus through which Federal agencies consult with the Service under section 7(a)(2) of the Act. A Federal nexus already exists on military-owned lands, and the military consults with us on all actions that could impact listed species. Therefore, critical habitat designation on military-owned lands would not improve management of *Monardella viminea.*

Comments From Federal Agencies

(15) *Comment:* A representative from MCAS Miramar stated that the proposed revised critical habitat and taxonomic change is a well-written overview both of the known information acquired for *Monardella viminea* and of the critical habitat regulatory requirement.

Our Response: We appreciate the commenter's feedback.

(16) *Comment:* The commenter requested more information on the geographical location of extirpated occurrences in Sycamore Canyon, San Clemente Canyon, and ''Miramar NAS.'' The commenter stated that MCAS Miramar currently has occurrences within all the canyon drainages except Murphy Canyon, and asked us to clarify if the extirpated occurrences in the proposed rule's Table 1 were inside or outside the border of MCAS Miramar.

Our Response: Regarding the occurrence named ''Miramar NAS'' in the CNDDB, the presence of plants there was never confirmed, as discussed in the *New Information on Occurrences of Monardella viminea and Monardella stoneana* section above. The CNDDB gives its location as ''Miramar Naval Air Station, west of bend in I–15, 0.3 km northwest of Benchmark 462'' (CNDDB 2011a, EO 31). As recent surveys have not found any plants in that location, we consider the occurrence to be extirpated. As for the occurrences in San Clemente Canyon, all extirpated occurrences are west of the boundary of MCAS Miramar. Regarding the commenter's assertion that the proposed rule's Table 1 listed an occurrence in Sycamore Canyon as extirpated, there is no such occurrence listed in the table. All occurrences in Sycamore Canyon are currently extant.

(17) *Comment:* The commenter was concerned that we had placed too much emphasis on the role of coastal sage scrub for *Monardella viminea* habitat, when many different habitat types support the species. The commenter further noted that hydrology and soil texture appear to be the most important constituent elements for the species, and that so much focus on habitat could be misleading.

Our Response: We agree that *Monardella viminea* is not limited to coastal sage scrub habitats, and that it can prosper in a wide variety of habitats. In our *Criteria Used To Identify Critical Habitat* section above, we noted that mapped polygons of coastal sage scrub were relatively large and did not correspond well with the drainage areas where *M. viminea* and its PCE were likely to occur. We believe this indicates that coastal sage scrub habitat is a poor predictor for areas that contain the physical or biological features essential to the conservation of *M. viminea.*

However, despite the fact that coastal sage scrub may be a poor predictor for where *Monardella viminea* occurs, our vegetation mapping showed that 45 percent of *M. viminea* habitat occurs within coastal sage scrub (SANDAG 1995). The second most common habitat type, chaparral, makes up only 14 percent of *M. viminea* habitat, with southern mixed chaparral and non-vegetated channel at 12 percent. Therefore, we judged that, for the purposes of the five-factor analysis, coastal sage scrub was the best representative of habitats supporting *M. viminea.*

We agree with the commenter that a natural hydrological regime is crucial to the survival and recovery of the species. We identify a natural hydrological regime as one of the physical or biological features essential to the conservation of *Monardella viminea,* and an altered hydrological regime as a threat to *M. viminea* (see the Summary of Factor A section for *M. viminea* above). Therefore, we do not believe that we have put undue emphasis on coastal sage scrub as habitat for *M. viminea.*

(18) *Comment:* The commenter requested clarification of the statement in the proposed rule that ''two occurrences at MCAS Miramar have been partially destroyed by road construction since the time of listing.'' The commenter stated that no impacts to *Monardella viminea* from road construction have occurred on MCAS Miramar.

Our Response: Upon further review, we agree that the statement was incorrect, and we have removed it from this final rule.

(19) *Comment:* The commenter stated that drought has been one of the most significant factors impacting *Monardella viminea* occurrences on MCAS Miramar, and that drought has resulted in the loss of plants in Murphy Canyon, poor success of seedlings, and difficulty of *M. viminea* in competing for resources. The commenter stated that drought should be more heavily evaluated as a threat to *M. viminea.*

Our Response: We have evaluated the best information available on the impacts of drought on *Monardella viminea,* which we present in the Factor E discussion for *M. viminea.* The impact of drought on riparian vegetation in general is well documented, including increased invasion of more drought-tolerant nonnative species, decreased health of native riparian vegetation, and decreased seedling survival (McBride and Strahan 1984, p. 243; Stromberg 2001, p. 18; Gitlin *et al.* 2006, p. 1479). However, we were unable to find additional specific information relating to the potential effects of drought specific to *M. viminea* apart from what we presented in the proposed rule. Further, as we discuss in the Factor E analysis for *M. viminea,* although we expect that climate change may cause an increased frequency of drought, we do not have enough information to accurately forecast its effects.

We appreciate the information submitted by the commenter, and invite anyone with detailed information on the impact of drought on *Monardella viminea* to submit it to our Carlsbad Fish and Wildlife Office (see **ADDRESSES**).

(20) *Comment:* The commenter suggested analyzing the Clean Water Act in Factor D to assess any protections it may provide to Monardella viminea and M. stoneana.

Our Response: We have added an assessment of the protections afforded by the Clean Water Act to the Factor D analyses for both species.

(21) *Comment:* The commenter noted that, in the proposed rule, we had highlighted ''frequent'' fire as occurring on MCAS Miramar in the *Summary of Factor D* for *Monardella viminea.* The commenter disagreed that fires have occurred frequently within *M. viminea* habitat within the boundaries of MCAS Miramar and requested that we remove that wording.

Our Response: The phrase that the commenter refers to was not meant to imply that uncontrolled fire was common on MCAS Miramar. Rather, we were attempting to make a distinction between habitat-based changes due to fire and threats to individual plants. In order to avoid confusion, we have revised the phrase ''frequent fire'' to ''increased fire frequency from historical conditions.''

(22) *Comment:* The commenter pointed out that the updated INRMP will be available from 2011 to 2015, not 2014 as stated, and that it is awaiting agency letters to complete the process, not publication processes.

Our Response: We appreciate the commenter's critical review. Since the publication of the proposed rule and the closing of the first comment period, the new INRMP was signed. We have updated this final rule with information from the new INRMP.

(23) *Comment:* The commenter reported that MCAS Miramar would soon complete a 3-year study addressing habitat factors that promote the survival of seedling and juvenile *Monardella viminea,* and stated that they would send this study to us when it is completed.

Our Response: We appreciate the additional information. Our office received the study during the second open comment period. We have updated this rule with the information submitted in the new report (see the Summary of

Changes from Proposed Rule section above).

(24) *Comment:* The commenter found our criteria for drawing critical habitat boundaries was ''the most accurate delineation identification method offered to date.'' However, the commenter also worried that the strict delineation of 490 ft (150 m) may miss some essential habitat and include non-essential habitat elsewhere, that it may include too much upland habitat in narrower canyons, and that it ''leaves out drainages without trees.'' The commenter recommends that we examine each drainage individually, and worries that otherwise landowners may regard the 490 ft (150 m) as a ''magic habitat area tool.''

Our Response: We appreciate the commenter's feedback. In reference to the commenter's assertion that critical habitat ''leaves our drainages without trees,'' we believe the commenter may have misunderstood our methodology. In drawing our critical habitat boundaries, we applied the 490-ft (150-m) guideline to all watersheds, even those that contained no southern sycamore-alder riparian woodland. Southern sycamore-alder riparian woodland, and riparian woodland in general, are very rare in canyons containing *Monardella viminea.*

However, as described in the *Criteria Used to Identify Critical Habitat* section above, we found that where southern sycamore-alder riparian woodland co-occurred with *Monardella viminea,* the two occupied nearly identical portions of the canyons. This was the case even though, as mentioned above, the habitat type is quite rare in canyons containing *Monardella viminea.* Therefore, this habitat width appeared to be an accurate predictor for areas containing the physical or biological features necessary for the conservation of *M. viminea.*

In regard to drainage width, although we agree with the commenter that individually based drainage assessments have the potential to very accurately capture the PCE for *Monardella viminea,* the literature on the species does not present any information on topography necessary for the conservation of the species. We lack the GIS data on which to base individual evaluation at each site. We are unable to visit every site ourselves for individual evaluation, particularly as some areas contain private land that we do not have permission to access (for example, Spring Canyon). Further, critical habitat lines must be unambiguous and the methods clearly defined for later evaluation of project effects and consultations, and we believe this habitat delineation method provides a clear guide to measure impacts to habitat supporting *M. viminea.*

As to the commenter's question regarding upslope habitat, we note that although the basis for critical habitat was vegetation, we wanted to include habitat for all necessary physical or biological features, including habitat that supports pollinators. Although we lack data to provide a quantifiable estimate of how much habitat is needed by the diverse species suspected to pollinate *Monardella viminea,* we believe that including the projected stream width will support pollinators necessary for *M. viminea.*

As to the commenter's concern that this number might become a ''magic habitat area tool,'' we do not believe that this will be the case. We believe this rule contains adequate explanation and documentation of our methodology so that land managers will understand how we reached our habitat delineation methods.

Therefore, we believe that our critical habitat lines are based on the best available scientific information, provide a clear and understandable boundary for projects, and provide for the conservation of *Monardella viminea.*

(25) *Comment:* The commenter was concerned about listing fire retardant or herbicide application as an activity that could require section 7 consultation. The commenter has found no negative effects on *Monardella viminea* following fire retardant use. Additionally, spot herbicide application is frequently used for weed control on *M. viminea* with great success.

Our Response: We appreciate the commenter's insights. Indeed, we submit documents for public comment in large part to solicit such pertinent information as provided by the commenter. The section of text to which the commenter refers was meant to relate to widespread general herbicide use upstream of *Monardella viminea* occurrences. However, we acknowledge that the language could be confusing, and have revised this rule to clarify this issue. We have also highlighted the use of spot application of herbicides within the *Special Management Considerations or Protection* section.

Comments From Local Agencies

(26) *Comment:* The City of San Diego requested an exclusion from critical habitat. They stated that their annual monitoring reports demonstrate that the MSCP is functioning properly and that it provides appropriate protection for *Monardella viminea.* They also stated that the City would continue to implement the MSCP by acquiring habitat and ensuring that all projects conform to MSCP requirements.

Our Response: We value our partnership with the City of San Diego and appreciate their efforts to protect *Monardella viminea.* With regard to the commenter's assertion that lands owned or under the jurisdiction of the City of San Diego Subarea Plan under the MSCP should be excluded because the HCP provides adequate protection for the species, the adequacy of an HCP to protect a species and its essential habitat is one consideration taken into account in our evaluation under section 4(b)(2) of the Act. Exclusion of an area from critical habitat is based on our determination that the benefits of exclusion outweigh the benefits of inclusion, and that exclusion of an area will not result in extinction of a species, which is a more complex analysis process. We have examined the protections afforded to *M. viminea* by the City of San Diego Subarea Plan under the MSCP during our exclusion analysis in this critical habitat designation, and have determined that the benefits of excluding areas owned by or under the jurisdiction of the City of San Diego Subarea Plan under the MSCP outweigh the benefits of including these areas, including fostering our ongoing conservation partnership with the City of San Diego.

(27) *Comment:* The County of San Diego requested an exclusion from critical habitat, given that the Sycamore Canyon Preserve adequately supports and manages *Monardella viminea* in accordance with the MSCP, and that the lands will be designated in perpetuity.

Our Response: We value our partnership with the County of San Diego and appreciate their efforts to protect *Monardella viminea.* With regard to the commenter's assertion that lands owned or under the jurisdiction of the County of San Diego under the MSCP should be excluded because the HCP provides adequate protection for the species, the adequacy of an HCP to protect a species and its essential habitat is one consideration taken into account in our evaluation under section 4(b)(2) of the Act. Exclusion of an area from critical habitat is based on our determination that the benefits of exclusion outweigh the benefits of inclusion, and that exclusion of an area will not result in extinction of a species, which is a more complex analysis process. We have examined the protections afforded to *M. viminea* by the County of San Diego Subarea Plan under the MSCP during our exclusion analysis in this critical habitat designation, and have determined that the benefits of excluding areas owned

by or under the jurisdiction of the County of San Diego under the MSCP outweigh the benefits of including these areas, including fostering our continuing conservation partnership with the County of San Diego.

(28) *Comment:* One commenter stated that the proposed rule's Figure 1, which shows the geographic location of *Monardella viminea* and *M. stoneana,* was not included in the proposed rule. The commenter requested that the figure be included in the final rule.

Our Response: Figure 1 was published on page 33885 of the proposed rule (76 FR 33880, June 9, 2011). It is included in this final rule as well. However, we have altered the figure for clarity and ease of distinguishing the range of the two species.

(29) *Comment:* The SDCWA expressed concern that the designation of critical habitat might interfere with maintenance of existing facilities and construction of new facilities that enable the delivery of water to San Diego County. SDCWA requested that ''provisions should be made in the designation to address existing activities and operations of the Water Authority to fulfill the mission to provide a safe and reliable water source.'' Specifically, the commenter requested exclusions or textual exemptions to address existing activities and operations of the SDCWA.

Our Response: Sections 4(b)(2) and its implementing regulations (50 CFR 424.12) govern exclusions under the Act. The Secretary may exclude an area—not activities—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 (see Exclusions section above). We do not exclude or exempt specific activities from critical habitat designation. Furthermore, SDCWA has prepared a Subregional Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP; Plan) in support of an application for an incidental take permit pursuant to section 10(a)(1)(B) of the Act. We completed an intra-Service formal section 7 consultation for issuance of a section 10(a)(1)(B) incidental take permit under the Act for the Plan. In our ''Conference Opinion'' for the section 10(a)(1)(B) permit, we determined that the activities proposed by the SDCWA in their NCCP/HCP will not result in the destruction or adverse modification of proposed critical habitat for *Monardella viminea* (Service 2011, pp. 284–286). The NCCP/HCP was signed on December 20, 2011. Therefore, the designation should not impede the existing activities, operations, or the ability of the SDCWA to fulfill the mission to provide a safe and reliable water source.

Public Comments

During the first comment period, we received two public comments submitted by species experts on *Monardella viminea* and *M. stoneana.* Overall, both commenters recommended endangered status and designation of critical habitat for *M. stoneana.* Both commenters also supported the recognition by the Service of the taxonomic split of *M. linoides* ssp. *viminea.* We have organized the comments into four sections: those regarding the taxonomic split, those regarding *M. viminea,* those regarding *M. stoneana,* and those pertaining to the critical habitat designation for *M. viminea.*

Comments Regarding the Taxonomic Split of *Monardella linoides* ssp. *viminea*

(30) *Comment:* Two commenters referenced previous listing rules and candidate assessments where previously listed entities were split: the spotted frog (*Rana pretiosa*), the flatwoods salamander (*Ambystoma cingulatum*), and the Uinta Basin hookless cactus (*Sclerocactus glaucus*). In each case, all species were given the same status as the original listed entity as threatened, were uplisted to endangered status, or both recognized as candidate species. One commenter argued that, based on these precedents, the Service did not appear to be consistent in its treatment of split taxon.

Our Response: We respectfully disagree that a decision not to list *Monardella stoneana* is inconsistent with previous rules. In our evaluation of the stressors impacting *M. viminea* and *M. stoneana,* we conducted a thorough review of all available scientific and commercial data. Section 4(b)(1)(A) of the Act requires us to make listing decisions for each species based solely on the best scientific and commercial data available, and not on previous actions taken by the Service. We believe our consistency comes from constantly upholding this standard as our method for determining listing status.

In the case of *Monardella viminea,* we determined that listing as endangered was warranted, because we found that threats were likely to cause the species to become extinct in the foreseeable future. In contrast, we did not find that *M. stoneana* is currently endangered, and we did not find that it is likely to become endangered in the foreseeable future. Please see our Summary of Factors sections above for further details on the potential threats impacting each species, and Comment 37 below for a further analysis of our treatment of potential threats impacting each species.

Comments Regarding *Monardella viminea*

(31) *Comment:* One commenter disagreed with our assessment that climate change is not threatening *Monardella viminea* or *M. stoneana.* The commenter stated that although the current reason for the decline of the two species is unknown, impacts associated with climate change would cause a future increase of altered hydrology and increasing fire risk. The commenter then requested an explanation of declining occurrences in drainages without development (for example, MCAS Miramar) if climate change is not occurring.

Our Response: While we recognize that climate change is an important issue with potential effects to listed species and their habitats, we lack adequate information to make accurate projections regarding its effects to *Monardella viminea* or *M. stoneana* at this time.

We acknowledge that the decline of *Monardella viminea* in undeveloped drainages is not well understood. However, as we stated in the Cumulative Impacts section above, based on our review of the best available scientific information, we believe that in the case of *M. viminea* there is strong evidence that the synergistic effects of increased fire frequency, megafire, and invasive grasses are causing the decline of the species, including on MCAS Miramar. We believe that section summarizes the best available scientific information, and that the threats strongly support the continued listing of *M. viminea* as endangered.

With regard to *Monardella stoneana,* we do not believe that the best available scientific information shows a decline in species numbers across all or a significant portion of the range. Again, we do not have adequate information to determine the potential future impacts of climate change on *M. stoneana.* Further discussion of this issue can be found in the Factor E discussion of *M. stoneana.*

(32) *Comment:* Two commenters provided new information related to *Monardella viminea.* One commenter submitted unpublished data from a recent survey for *M. viminea* in Spring Canyon and provided information about additional threats to the species there, including trampling and off-road vehicle use. Another commenter provided insight on lack of recruitment of *M. viminea,* and stated that seed germination has appeared to be good for

the species, but that seed head predation was occurring across the range of *M. viminea.*

Our Response: We appreciate receiving these results. We have incorporated the survey reports into our database and added the information on threats to our five-factor analysis for *Monardella viminea.*

(33) *Comment:* One commenter believed that a pollination study for *Monardella viminea* had been conducted by MCAS Miramar and recommended that we request it.

Our Response: We contacted MCAS Miramar to inquire about the existence of such a report. A biologist at MCAS Miramar reported that, although data related to pollinators has been gathered throughout the years, no such study has been completed (Kassebaum 2011a, pers. comm.).

(34) *Comment:* One commenter requested a discussion of lack of seedling recruitment, as very few seedlings are seen in the species' range and the reasons behind low seedling establishment are not well understood. The commenter requested that we evaluate this as a threat, stating that, ''The ability to reproduce in an ephemeral drainage subject to rapid water flow seems to be a critical factor given that this species occurs in braided channels.''

Our Response: We agree that a strong understanding of factors influencing seedling establishment could be a crucial factor in the recovery of *Monardella viminea* and the continued persistence of *M. stoneana.* Based on information in the report submitted by MCAS Miramar during the second open comment period, we added details about seedling recruitment to the five-factor analysis. However, upon review of the report, we concluded that there was not enough information on seedling recruitment to discuss it as distinct from other effects, although we discussed the influence that other factors (such as nonnative grasses) could have on *M. viminea* or *M. stoneana.*

We further acknowledge that seedlings are very rare in *Monardella viminea.* As discussed in the Summary of Changes from Proposed Rule section above, we received a study on seedling establishment from MCAS Miramar during the second open comment period and have added information from that report to this final rule.

(35) *Comment:* One commenter noted that lack of recruitment in drainages may be due to nonnative plants taking up suitable habitat where seedlings might otherwise grow. The commenter further recommends managing nonnative species on a habitat-wide basis, rather than managing for individual plants.

Our Response: We agree with the commenter's assertion, and have updated the *Special Management Considerations and Protection* section of this rule to reflect this idea.

Comments Regarding *Monardella stoneana*

(36) *Comment:* Two commenters noted that it seems illogical to delist a portion of the original listed entity when *Monardella linoides ssp. viminea* was originally listed in part due to small population size, and when the 2008 5-Year Review stated that, ''In particular, small population size makes it difficult for this subspecies to persist while sustaining the impacts of fire, flooding, and competition with invasive plants. Because *M. linoides* subsp. *viminea* is found in small and declining populations, immediate action to conserve the subspecies may be inadequate as the extinction threshold (vortex) for the subspecies may already have been reached.''

One commenter further noted that plants with both more occurrences and more individual plants are protected or federally endangered, and that it therefore does not make sense that *Monardella stoneana* does not warrant such protections.

Our Response: As discussed in the Factor E analyses for both species, rarity is not in itself a threat, although we acknowledge that small population size can exacerbate other potential threats to a species. Further, as discussed in the Determination section for *Monardella stoneana,* the best available scientific information does not allow us to conclude that fire, flooding, or invasive plants are impacting *M. stoneana* and its habitat to the extent that the species is endangered now, or likely to become so in the foreseeable future. Therefore, the factors mentioned by the commenter that were believed at the time of the 5-year review to be exacerbating the small population size of *M. linoides* ssp. *viminea* are not present in the range of what is now *M. stoneana.* Further, in regard to the quoted text about the ''extinction vortex,'' new information reviewed since the publication of that document has shown that this effect may not be applicable to *M. stoneana.* Specifically, although information exists on the possible effect of a declining spiral in population size on animals, no such empirical evidence exists for plant species (Matthies *et al.* 2004, p. 482).

With regard to the issue of other listed species that have more occurrences and more individuals than *Monardella stoneana,* as we discussed in comment 30 above, we make decisions on listing status based solely on the best scientific and commercial information available at the time. This listing is based on threats applicable to an individual species, and not made in comparison to other listed species. Therefore, the population size of other listed species is not relevant to the consideration of listing status for *M. viminea* or *M. stoneana.*

(37) *Comment:* One commenter stated that the analysis of threats for *Monardella viminea* and *M. stoneana* was not consistent. For example, the commenter stated that altered hydrology also exists in the habitat for *M. stoneana,* caused by border security, road construction, higher local rainfall upslope, and excessive runoff following burns. The commenter pointed out that, as *M. stoneana* occurs in connected drainages, a strong rain event in one watershed could impact many occurrences downstream. Additionally, the commenter stated that nonnative plants are an equally strong threat to *M. stoneana,* especially due to type conversion after frequent fire (Factor A). The commenter also added that they believe that trampling is not a threat to the species.

Our Response: We appreciate the commenter's insights and the information on the effects of trampling on *Monardella stoneana.* However, we respectfully disagree with the commenter that we were inconsistent in our treatment of threats for the two species. We used the best available scientific information, including published peer-reviewed papers, survey reports, GIS data, and correspondence with species experts and land managers, to study the differences in the habitat and conditions of the two species. From that review, we found differing habitat conditions, regulatory mechanisms, urbanization, and fire history that impact the two species, all of which we used to analyze the way that threats impact the two species.

In reference to our different determinations for altered hydrological regimes for the two species, we again highlight the different surrounding conditions for *Monardella viminea* and *M. stoneana.* Several *M. viminea* occurrences are found in areas that have been heavily urbanized for many years. *Monardella stoneana* is found almost entirely in wilderness areas or other public lands protected from development. We acknowledge that at the time the proposed rule was published we did not have any information on impacts to hydrology from activities due to Border Patrol and road construction. Based on the information submitted by the

commenters, we have added an analysis of impacts to hydrology as pertaining to *M. stoneana.* However, as discussed in the summary for Factor A, we do not believe that impacts to hydrology stemming from occasional road construction and maintenance impact *M. stoneana's* habitat to the extent that it currently endangers the species or could cause the plant to become endangered within the foreseeable future. While road construction within the area of *M. stoneana* may have some temporary impacts on seasonal streamflows, we have no information that suggests that these flows are substantial enough to wash away the rocky terraces that support *M. stoneana.* Further, the altered hydrology in *M. stoneana* habitat is nowhere near the extent of streamflow changes that have resulted from permanent development and increased pavement cover that has occurred in canyons surrounding *M. viminea.* While the connected nature of the canyons does indeed mean that streamflow in one canyon could impact occurrences found downstream, we do not find that the hydrology of the canyons has been altered to the point that such a flow event is likely to occur.

With regard to nonnative plants impacting *Monardella stoneana,* although we acknowledge that an invasion of nonnative plants could have a detrimental influence on *M. stoneana* and its habitat, we have been unable to find evidence that such an invasion exists, or will exist in the foreseeable future. Further, as discussed in the Factor A analysis, the chaparral vegetation that *M. stoneana* favors is less vulnerable to type conversion following frequent fire than the vegetation types that support *M. viminea.* Additionally, as discussed in the same section, those occurrences of *M. stoneana* that are currently monitored contain lower cover of nonnative vegetation than do occurrences of *M. viminea.*

(38) *Comment:* One commenter asserted that CAL FIRE has, in the past, been unable to mitigate the impacts of large fire on *Monardella viminea,* especially the decline of plants after the 2003 Cedar Fire. Another commenter asked how type conversion of lands has been addressed by current protections. Another stated that CAL FIRE devotes all its resources to protecting homes, not plants, and that CAL FIRE is unlikely in the future to alter the dynamics of fire on Otay Mountain during Santa Ana conditions.

Our Response: As discussed earlier in this rule, on land owned and managed by CDFG and BLM, which contain approximately 88 percent of all occurrences of *Monardella stoneana,* fire management is provided not only by CAL FIRE, but further protection of natural resources on Federal and State lands is provided by management conducted consistent with the Wilderness Act. Furthermore, the first step to preventing damage to homes and natural resources is suppression. It is not clear whether more could be done to protect natural resources once a wildfire becomes large, and the focus must be on human health and safety once the ability to control a wildfire is limited.

Fire management activities occur on Otay Mountain (34 percent of all occurrences of *Monardella stoneana*) as part of the BLM's current (1994) SCRMP. Information provided by BLM summarizes these ongoing management actions: BLM Fire Management provides an initial attack dispatch and agency representative to ensure appropriate actions are taken on a fire incident; fire prevention and law enforcement patrols occur on Otay Mountain; and, on large incidents, several resource specialists may form a team to evaluate fire and fire suppression effects (Howe 2010, pers. comm.). If a determination is made to pursue fire restoration and repair, these specialists work with Burned Area Emergency Response (BAER) Teams to implement appropriate actions.

BLM is further collaborating with the Service to revise the SCRMP, which covers the Otay Mountain Wilderness. In the current draft revised plan, *Monardella stoneana* is identified as a federally listed species and is given conservation priority (BLM 2009, pp. 3–23, 3–54, 4–175). As of this final rule, *M. stoneana* will no longer be considered an endangered species. However, the draft SCRMP also provides protection for BLM-identified sensitive species, which includes *M. stoneana* (BLM 2009, p. 3–50; BLM 2010, pp. 29–30). All special status species are considered as a group for conservation measures (BLM 2010, p. 50), and thus the change in the listing status of *M. stoneana* status would not affect the protections afforded by the draft SCRMP. Moreover, one of BLM's primary objectives in the draft revised plan is improved fire management and collaboration with local communities and agencies to prevent wildfires. The draft revised plan specifically includes a goal of restoring fire frequency to 50 years through fire prevention or suppression and prescribed burns. When 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 2009, pp. 4–171—4–172). Actions implemented under the revised plan, when final, will be designed to promote conservation of *M. stoneana* and its habitat.

Furthermore, it is worth noting that CAL FIRE only has jurisdiction over 2 percent of lands containing *Monardella viminea.* The remainder of the area is managed by MCAS Miramar's fire division or by local fire agencies. Therefore, fire history impacting *M. viminea* does not provide a good comparison for how *M. stoneana* will be managed by CAL FIRE in the future.

(39) *Comment:* One commenter asserted that the current status of *Monardella stoneana* is not known, as only the City of San Diego has surveyed for the species on its smaller piece of the range (two plants) and that, despite the existence of an HCP for these lands, BLM, CDFG, and the Service have not monitored or managed their populations. The commenter stated that ''the decline of the species from historic levels and the current lack of monitoring and management neglect argue for designating this range as Critical Habitat. This designation is needed to raise the status of these lands and to provide leverage for actual management.'' One commenter further asked how type conversion of lands with repeated fire has been addressed for habitat essential to *M. stoneana.*

Our Response: We acknowledge throughout this final rule that monitoring data are lacking for most occurrences of *Monardella stoneana.* However, under section 4(b) of the Act, we are required to make determinations based on the best available scientific and commercial information. We invite any individual or agency with recent monitoring reports on occurrences of *M. stoneana* to submit them to our Carlsbad Fish and Wildlife Office (see the **FOR FURTHER INFORMATION CONTACT** section above).

Furthermore, as we have determined that listing *Monardella stoneana* under the Act as endangered or threatened is not warranted, critical habitat cannot be designated, and a discussion of the potential impact that a hypothetical critical habitat designation would have on BLM or CDFG-owned lands is, therefore, not relevant. We also note that the City of San Diego in fact monitors two occurrences of *M. stoneana.* The first occurrence, Buschalaugh Cove (EO 4) contains one individual plant (City of San Diego 2011a, p. 229). The second occurrence, in Marron Valley, comprises approximately 95 plants (City of San Diego 2010a, p. 238). No *M. stoneana* occurs on lands owned or managed by the Service.

(40) *Comment:* One commenter asserted that, despite *Monardella stoneana's* protected status as a part of the original listed entity, in recent years Border Patrol and other activities on BLM land trump any State, County, or Federal environmental regulations. The commenter stated that because of this situation, the City of San Diego MSCP is unable to adequately protect *M. stoneana.* The commenter then concluded that the HCP could not be considered an adequate regulation if its protections were not fully implemented.

Our Response: On April 3, 2008, the Secretary of Homeland Security published a determination in the **Federal Register** (73 FR 18294) and stated that, due to high amounts of illegal immigrant traffic, he was creating a waiver to allow the Department of Homeland Security to construct barriers to stem the high flow of illegal immigrant traffic. This waiver permitted construction of the border fence without need for consultation under the Act under the authorization of section 102 (c) of the Illegal Immigration Reform and Immigrant Responsibility Act of 1996 (Pub. L. 104–208).

Before construction of the fence, the Border Patrol prepared an environmental stewardship plan (ESP) to examine impacts of construction of the border fence to listed and rare species and sensitive habitats. Prior to the start of the project, surveys were conducted to determine the presence or absence of rare species, including *Monardella stoneana* (Department of Homeland Security *et al.* 2008, p. 8–5). No individuals were found during the surveys, but as these surveys took place in fall when the plant was dormant, subsequent surveys were undertaken during construction of the fence to determine presence or absence of *M. stoneana* (Department of Homeland Security *et al.* 2008, pp. 8–30, 8–34). When plants were documented during the construction period, best management practices were implemented to avoid and minimize impacts to *M. stoneana* (e^2M 2008, p. 1; e^2M 2009, p. 1).

Therefore, despite the waiver that mandated that border fence activities could carry on without environmental oversight, we have no available information suggesting that this project threatened the continued existence of *Monardella stoneana.* The San Diego MSCP continues to be adequately implemented and carried out.

(41) *Comment:* Two commenters stated that Otay Mountain has undergone recent habitat degradation due to increased roads and trails, Border Patrol activities, road construction upstream from *Monardella stoneana* that has altered hydrology, and weeds that have invaded upslope of *M. stoneana.* One commenter stated that ''it is only a matter of time before weeds become a more serious issue on Otay Mountain. Road repair work has to be conducted on a more regular basis. Those factors could easily result in changes to the speed of water flow during peak rainfall periods creating an impact to *M. stoneana.''*

Both commenters reported impacts to EO 7 and EO 8 from construction of an access road by the Department of Homeland Security. The commenters further reported that the roads ''were not revegetated'' in 2010, despite the fact that the area is a Wilderness Area. The commenters reported that in the winter after construction, the road and fence were washed out and both had to be replaced. One commenter added that the effects of the construction are not well known due to lack of monitoring for *Monardella stoneana.*

Our Response: The commenters did not provide information on the hydrology prior to the occurrence, or any data on altered terrain, to support their statements or to allow us to evaluate the extent of altered streamflows that might have directly impacted *Monardella stoneana.* While we acknowledge that any erosion can impact streamflows, we do not believe that construction of dirt roads can have the same level of impact on natural hydrology that occurs in the range of *M. viminea,* where some occurrences are surrounded by urbanized areas and high density of pavement on all sides, all of which result in substantial alterations to hydrology.

Further, while we agree that a landscape with increased nonnative cover could negatively impact *Monardella stoneana,* the best available scientific and commercial information does not show that such an increase in cover is likely to occur in the future. We invite anyone with information on those occurrences or any changing cover of nonnative plants to submit this information to our Carlsbad Fish and Wildlife Office (see the **FOR FURTHER INFORMATION CONTACT** above).

(42) *Comment:* The commenter asserted that *Monardella stoneana* has experienced increased fire frequency due to nonnative plant invasion, which has resulted in weed invasion, habitat conversion, increased sheet runoff of rainfall, and erosion. The commenter further stated that fire was credited with having wiped out the occurrence at Buschalaugh Cove (CNDDB EO5) and caused the location at Otay Lakes to be reduced by 87 percent. Another commenter agreed, and stated that fire frequency could cause increased alteration of hydrology due to increased runoff from slopes that were devegetated by fire. The commenter stated that a task force was created with local agencies to address the fire frequency changes as the numbers of fires on the mountain had increased so dramatically over historical levels.

Our Response: We have not found any evidence, nor did the commenter provide any evidence, that nonnative plants are invading occurrences of *Monardella stoneana* to the degree that they would pose a threat to the species. We are also not aware of any incidences of increased streamflow following fire events. Although we agree that it is possible that such changes could occur, in our Determination section for *M. stoneana* above, we did not find that these factors were currently threatening, or likely to threaten, *M. stoneana* in the future.

It is worth noting that EO 5 consisted of only one plant when it was thought to be extirpated by fire. Since the first open comment period, as discussed above, this plant has now resprouted from the root (City of San Diego 2011a, p. 229).

(43) *Comment:* The commenter highlighted the decrease in occurrences in a protected area monitored by the City of San Diego. The commenter stated that since monitoring began in accordance with the HCP, EO 6 has dropped from 120 plants to 95 plants.

Our Response: We believe that in this case the commenter is suggesting that the protections afforded by the MSCP are inadequate to conserve the species. However, survey data are inconclusive due in large part to changing monitoring methods. *Monardella stoneana* often grows in clumps of one to four individual plants. The number of plants within a clump cannot be reliably distinguished without exposing the roots. In the first 3 years of surveys, clumps of *M. stoneana* were counted, rather than individual plants. In 2003, 113 plants were reported, then 192 in 2004, and 103 plants in 2010 (City of San Diego 2010b, p. 2). Given the difficulty of determining individual plants from clumps of *M. stoneana,* we believe these counts are due to differing methods rather than population fluctuations. The City of San Diego acknowledged this in their 2006 survey report for Marron Valley, saying that ''It should be noted that implementation of the current monitoring method may have been inconsistent from season to season. Monitoring of this species is being analyzed and methods may be revised in order to provide more reliable

data'' (City of San Diego 2006, p. 67). It is worth noting that in all subsequent reports the number of plants has held steady at 95 clumps (City of San Diego 2010b, p. 2). Therefore, the best available scientific information does not allow us to conclude that this occurrence has declined in size since monitoring began.

(44) *Comment:* One commenter asked how lighting associated with a fencing project constructed by the Border Patrol had impacted the insects needed to pollinate *Monardella stoneana.*

Our Response: Surveys conducted prior to the construction of the border fence found no known occurrences of *Monardella stoneana* within the impact corridor of the project, although known occurrences are located in proximity to the construction sites (Department of Homeland Security *et al.* 2008, p. 8–30). Therefore, we do not believe that lighting associated with the construction of the border fence would have affected pollinators. As for future impacts, even though road maintenance is ongoing, road construction typically does not occur during night hours (Ford 2011, pers. comm.)

Critical Habitat for *Monardella viminea*

(45) *Comment:* Two commenters believed that Lopez, Carroll, and Cemetery Canyons should be designated as critical habitat. One commenter further stated that ''Circular logic seems to being [sic] used to state that those two canyons that are supporting plants cannot support the species due to changed hydrology'' and that ''we do agree that the hydrology of both systems has changed but there are still plenty of lands within the braided system that could support plants if they did not support such a large weed load.''

Our Response: We respectfully disagree with the commenters' assertion that areas within Carroll and Lopez Canyons meet the definition of critical habitat. We do agree, however, with the commenter's assertion that Lopez Canyon could support more plants if there were not such a high density of nonnative species. However, as described in the Summary of Changes from Previously Designated Critical Habitat section in the proposed rule (76 FR 33880), our primary reason for not designating those areas was the lack of a natural hydrological regime (all components of the PCE), and not the presence of nonnative species. Thus, the best available scientific information does not lead us to conclude that these two canyons are essential to the conservation of *Monardella viminea,* and, due to the lack of physical and biological features essential to the species, these areas indeed do not meet the definition of critical habitat. We believe the areas identified as essential are sufficient for recovery of the taxon.

In response to the commenter's assertion that we used ''circular logic'' in our determination of critical habitat, we note that section 3(5)(A) of the Act defines critical habitat, in part, as those areas with physical or biological features that are essential to the ''conservation'' of the species. Regulations at 50 CFR 424.02 define conservation as ''the use of all methods and procedures that are necessary to bring any endangered or threatened species to the point at which the measures provided pursuant to the Act are no longer necessary.'' With the language in the Act and its supporting regulations focusing on conservation rather than survival, we are bound to identify those areas with the physical or biological features necessary to achieve species conservation. We also note that features needed for conservation are not necessarily the same as those needed for survival. Therefore, it is not contradictory that *Monardella viminea* clumps can occur in areas without the physical and biological features identified in this rule.

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 also note that, in addition to protections afforded by the MSCP, occupied habitat outside the final revised critical habitat designation will continue to be subject to conservation actions implemented under section 7(a)(1) of the Act, regulatory protections afforded by the section 7(a)(2) jeopardy standard, and the prohibitions of section 9 of the Act.

We also note that under section 4(a)(3)(A) of the Act and regulations at 50 CFR 424.12(g), we may revise critical habitat designations as appropriate and as new data become available. We encourage all members of the public to submit such information to our Carlsbad Fish and Wildlife Office (see the **FOR FURTHER INFORMATION CONTACT** section above).

(46) *Comment:* One commenter asserted that Cemetery Canyon should be designated as critical habitat, as it has the attributes that support *Monardella viminea* and was occupied at the time of listing.

Our Response: In identifying areas that meet the definition of critical habitat, we first identified areas currently occupied and occupied at the time of listing. We acknowledge that Cemetery Canyon was occupied by *Monardella viminea* at the time of listing. However, we respectfully disagree with the commenter that Cemetery Canyon still contains the physical and biological features necessary for the conservation of the species. As discussed in our response to comment 45 above, we found that Cemetery Canyon lacks a natural hydrological regime (all components of the PCE), and therefore does not meet the definition of critical habitat (see the *Criteria Used to Identify Critical Habitat* section above for more details).

(47) *Comment:* Two commenters stated that the proposed rule argues that INRMPs and HCPs afford equal protection to critical habitat, and the commenters disagree with that idea.

Our Response: The City of San Diego and County of San Diego Subarea Plans under the MSCP provide ongoing protection and monitoring for *Monardella viminea* that will benefit the long-term conservation of the species. These protections extend to private lands that otherwise lack a Federal nexus under which consultation could be triggered. The INRMP for MCAS Miramar further provides for management and research into the life history and threats impacting *M. viminea.* Both plans provide monitoring and management of conserved lands important to the survival and recovery of *M. viminea.* These conservation measures provided by the INRMP and the HCPs are typically not addressed through a critical habitat designation, that is, through application of the statutory prohibition on destruction or adverse modification of critical habitat. Therefore, we find that in this case the INRMP and the HCPs provide clear benefits to *M. viminea.*

(48) *Comment:* One commenter stated that it was difficult to understand exclusions for the City of San Diego when management is not occurring, threats from nonnative plants and altered hydrology are increasing, plant numbers are declining, and lands in Spring Canyon have not yet been acquired. Another commenter argued that critical habitat designation is needed to raise the status of these lands and to provide leverage for actual management. Both commenters asserted that exclusions should not be made for the City of San Diego until management begins and species numbers are increasing, and one commenter added, ''the species is continuing to decline partially due to lack of management and that behavior should not be rewarded by

granting exclusions due to purported benefits.'' The commenters further asserted that designation of critical habitat within City of San Diego MSCP lands would greatly increase protections for *Monardella viminea,* spur more active management and protection, and prevent development of lands containing *M. viminea.*

Our Response: We reiterate that conservation measures provided by the INRMP and the HCPs are separate from the prohibition on destruction or adverse modification provided by a critical habitat designation. Critical habitat does not create a requirement for management or monitoring. The primary benefit of a critical habitat designation is that it creates a Federal nexus through which Federal agencies consult with the Service under section 7(a)(2) of the Act. In other words, the Federal agencies are required to not fund, authorize, or carry out actions on designated lands that adversely modify or destroy critical habitat.

We also note that exclusions are not based on the difference between protection measures provided by critical habitat designation or HCPs in isolation, but on how the redundancy of protections provided by an HCP with those provided by critical habitat designation minimizes the overall conservation value of designation, and how the remaining benefits of designation may be negated by the benefits of exclusion (maintaining partnerships and fostering future HCPs). Conservation benefits provided by existing HCPs are not considered a benefit of exclusion because they would remain in place regardless of critical habitat designation; however, they do minimize the benefits of inclusion to the extent that they are redundant with protection measures that would be provided by critical habitat designation.

We assume that the commenters mean that designation of critical habitat would pressure the City to increase management. Again, critical habitat does not create a requirement for management or monitoring, and there is no regulatory mechanism in place that would guarantee such measures. Further, critical habitat does not create a preserve or a refuge. In fact, designating critical habitat within the City's HCP could have a detrimental effect on our conservation partnerships (see Exclusions section above).

Based on the conservation benefits provided by the City of San Diego and County of San Diego Subarea Plans under the MSCP, we believe the additional protection provided to *Monardella viminea's* essential habitat by critical habitat designation would be minimal and are outweighed by the benefits of excluding the habitat. Therefore, we are excluding lands within the plan areas of these HCPs based on the benefits of maintaining our conservation partnerships.

(49) *Comment:* One commenter disagreed with our statement that almost all occurrences in the City of San Diego MSCP Subarea Plan have been protected in MSCP reserves and are annually monitored. The commenter cited large populations of Spring Canyon that are neither monitored nor protected, and lands in Carroll Canyon that are not monitored by the City (although the commenter acknowledged that they are monitored by contractors), transplants in Lopez Canyon that are not monitored, and Sycamore Canyon lands associated with Rancho Encantata that are not monitored.

Our Response: We have updated this rule with the information submitted by the commenter.

(50) *Comment:* Two commenters expressed concern about lands in Spring Canyon being purchased for conservation, as outlined in the MSCP. The commenter claims that the City of San Diego gave up the right to eminent domain in creating the MSCP, and pointed out that lands designated for possible open space acquisition under the City's MSCP retain 25 percent development rights. Finally, the commenter claimed that previous attempts by the City to purchase the Spring Canyon parcels have been unsuccessful. One commenter noted that development would be on the least sensitive parts of the acreage, but that the development would still impact *Monardella viminea* through altered hydrology.

Our Response: We appreciate the commenter's concerns regarding adequate protection of *Monardella viminea* under the City of San Diego Subarea Plan for the MSCP. In the biological opinion issued by the Service, we concluded that the City's Subarea Plan provides a benefit to *M. viminea* because the plan provides for conservation of all major occurrences (Service 1997, p. 83), including all areas we have identified in this rule as essential habitat as well as other occupied areas such as Lopez Canyon. Development within *M. viminea* habitat is restricted to a maximum of 20 percent of the habitat, and, should development occur, in-kind mitigation would be required at a 1:1 to 3:1 ratio, in addition to the protections for riparian habitat, which require no net loss of wetland acreage or function (Service 1997, p. 83).

Additionally, the commenter provided no evidence regarding the failure of the City of San Diego to acquire the parcel of private lands. We invite any individual or agency with information regarding conservation of *Monardella viminea* within the MSCP to submit it to our Carlsbad Fish and Wildlife Office (see the **FOR FURTHER INFORMATION CONTACT** section above).

(51) *Comment:* One commenter stated that the Sycamore Estates occurrence of *Monardella viminea* should be designated as critical habitat. Specifically, the commenter stated that development of this project was stopped due to the economy and bankruptcy, leaving the status of the project uncertain. In addition, the commenter stated that the status of *M. viminea* on the planned open space was also uncertain. Finally, the commenter stated that management of the naturally occurring plants and transplants were put on hold.

Our Response: See our response to comment 48 above. Sycamore Estates falls within the boundaries of the City of San Diego Subarea Plan under the MSCP and, thus, we have decided to exclude it under section 4(b)(2) of the Act (also see Exclusions section above).

(52) *Comment:* Two commenters reported that they were unaware of any management or monitoring actions conducted by the County of San Diego, whose lands host one population of 14 plants at the southern end of the Sycamore Canyon Preserve (corresponding to the southern portion of EO 9). Based on their monitoring efforts, the commenters reported that the occurrence was subject to a high density of nonnative species. They further reported that this occurrence was down to one live plant and a number of dead standing *Monardella viminea* in 2007, and that no live plants were present in 2008. The commenters did not report the date of their most recent survey on County lands, but stated that they considered this occurrence to be extirpated. The commenters stressed that existing conservation measures on County lands were inadequate to protect the species, and that designation of lands would increase the likelihood of management.

Our Response: We appreciate the information submitted by the commenters. Despite the decline of plants on lands within the boundaries of the County of San Diego Subarea Plan, we have decided to exclude lands under the jurisdiction of the County of San Diego Subarea Plan under the MSCP. As discussed in Exclusions section, we found that exclusion of these lands from critical habitat will help preserve the

partnerships we developed with the County and project proponents in the development of the MSCP. Conservation plans such as the County of San Diego Subarea Plan provide landscape-level conservation that can better address threats to *Monardella viminea* habitat, as opposed to the piecemeal conservation approach that could result should private landowners complete individual section 7 consultations.

Comparison of regulatory benefits provided by critical habitat to conservation benefits provided by implementation of HCPs is not straightforward. However, we point out that critical habitat does not create a requirement for management or monitoring, and that the County of San Diego has recently completed a management plan for preserve lands supporting *M. viminea* that includes removal of nonnative vegetation, habitat restoration, and implementation of a managed fire regime with a priority of protecting biological resources including *M. viminea* (DPR 2009, pp. 71, 76–77). We believe that the County of San Diego Subarea Plan under the MSCP provides equivalent or superior benefits to *M. viminea* and its habitat than would result from critical habitat designation.

(53) *Comment:* The commenter listed multiple incidences where MCAS Miramar had previously turned over land to other agencies or private landowners, thus losing protected habitat for the species and degrading drainages and vernal pool habitat for other listed species. One parcel proposed for sale, the Stowe Trail, would connect lands occupied by *Monardella viminea* to the Sycamore Canyon Preserve. The commenter believes critical habitat should be designated in the area to protect it from future development.

Our Response: The most recent information we have received from MCAS Miramar indicates that the station currently has no intent of selling or transferring the property (Kassebaum 2011b, pers. comm.). Therefore, it appears that the land will remain under the ownership of MCAS Miramar and the conservation of the INRMP, and that critical habitat designation is not appropriate.

(54) *Comment:* The commenter noted that critical habitat has previously been designated for military lands, specifically for the critical habitat designation for the southwest Alaska distinct population segment (DPS) of the northern sea otter (*Enhydra lutris kenyoni*), which published October 8, 2009 (74 FR 51988).

Our Response: Critical habitat for the southwest Alaska DPS of the northern sea otter is almost entirely aquatic, consisting of nearshore waters to the mean high tide line. Therefore, this rule did not, in fact, designate critical habitat on military lands. Specifically, we state in that rule that ''there are no Department of Defense lands with a complete INRMP within the critical habitat designation'' (p. 52005, 74 FR 51988, October 8, 2009). Additionally, as stated in our response to comment 30, section 4(b)(1)(A) of the Act requires us to make determinations for each species based solely on the best scientific and commercial data available, and not on previous actions taken by the Service. We determined the INRMP for MCAS Miramar (Gene Stout and Associates *et al.* 2011) provides a benefit to *Monardella viminea,* and, therefore, we have determined that lands on MCAS Miramar are exempt from critical habitat under section 4(a)(3)(B) of the Act.

(55) *Comment:* One commenter referenced a proposed development on MCAS Miramar of a U.S. Army Reserve Center upstream from a drainage with *Monardella viminea.* Although a condition was placed on the project that it not change the hydrology, the commenter had little confidence that could be achieved.

Our Response: Previous projects upstream from *Monardella viminea* occurrences have not impacted *M. viminea* individuals or habitat. Surveys reported no negative effects after the 2007 construction of a rifle range in close proximity to *M. viminea* in San Clemente Canyon (Tierra Data 2011, p. 3). As described in the Factor D analysis for *M. viminea* above, the INRMP for MCAS Miramar provides conservation measures for all riparian areas on the base. Therefore, the Service has confidence that conservation measures will continue to be put in place as demonstrated by previous occasions.

(56) *Comment:* One commenter stated that exemption cannot occur if it will result in the extinction of the species. The commenter noted the large percentage of the population on MCAS Miramar, and the recent decline of the species on the base, and noted that the Act provides a mechanism for dealing with emergencies that would require expedited consultation ''under 50 CFR 40205 [sic].''

Our Response: The regulation and the language within the Act that the commenter refers to is the process of determining exclusions from critical habitat, not exemptions. The commenter is correct in that section 4(b)(2) states that exclusions cannot be granted if the Secretary of the Interior determines, ''that the failure to designate such area as critical habitat will result in the extinction of the species concerned.'' There is no regulation 50 CFR 40205, but 50 CFR 402.05 sets forth regulations that concern expedited consultation in the event of emergency circumstances that mandate that need. Further, 50 CFR 424.19 states that exclusion cannot occur if it will result in the extinction of a species.

Section 4(a)(3)(B)(i) of the Act describes exemptions from critical habitat applying to Department of Defense land. The Secretary has determined that the INRMP for MCAS Miramar provides a benefit to this species and that the lands it covers are therefore exempt from critical habitat designation. Sections 4(a)(3)(B)(ii) and (iii) also note that agencies granted an exemption must still consult under section 7(a)(2) of the Act, and that the Department of Defense must comply with section 9, ''including the prohibition preventing extinction and taking of endangered species and threatened species.'' Thus, although military bases can be exempt from critical habitat, the Act has mechanisms in place to prevent extinction.

As discussed in our response to comment 14 above, the reason for the decline of *Monardella viminea* on MCAS Miramar is poorly understood. However, despite that lack of knowledge, we believe that MCAS Miramar is providing conservation measures and protections that are working to prevent extinction of *M. viminea.*

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 rule under Executive Order 12866. OMB bases its determination upon the following four criteria:

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

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

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

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

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

Under the Regulatory Flexibility Act (RFA; 5 U.S.C. 601 *et seq.*), as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996 (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 the RFA to require Federal agencies to provide a certification statement of the factual basis for certifying that the rule will not have a significant economic impact on a substantial number of small entities. In this final rule, we certify that the critical habitat designation for *Monardella viminea* will not have a significant economic impact on a substantial number of small entities. The following discussion explains our rationale.

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

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

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

In our final economic analysis of the critical habitat designation, we evaluated the potential economic effects on small business entities resulting from conservation actions related to the listing of *Monardella viminea* and the designation of critical habitat. The analysis is based on the estimated impacts associated with the rulemaking as described in Chapters 3 through 5 and Appendix A of the analysis and evaluates the potential for economic impacts related to transportation and construction.

The final economic analysis for *Monardella viminea* found that there are no businesses operating within critical habitat that meet the definition of small entities (Industrial Economics Inc. 2012, p. A–2). Therefore, the final economic analysis found that no small entities will be affected by the designation of critical habitat for *M. viminea.*

In summary, we considered whether this designation will result in a significant economic effect on a substantial number of small entities. Based on the above reasoning and currently available information, we conclude that this rule will not result in a significant economic impact on a substantial number of small entities. Therefore, we certify that the designation of critical habitat for *Monardella viminea* will not have a significant economic impact on a substantial number of small entities, and a regulatory flexibility analysis is not required.

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

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

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. OMB has provided guidance for implementing this Executive Order that outlines nine outcomes that may constitute ''a significant adverse effect'' when compared to not taking the regulatory action under consideration.

The economic analysis finds that none of these criteria are relevant to this analysis and that no modifications to future economic activities are anticipated to result from the designation of critical habitat. Thus, based on information in the economic analysis, energy-related impacts associated with *Monardella viminea* conservation activities within critical habitat are not expected. As such, the designation of critical habitat is not expected to significantly affect energy supplies, distribution, or use. Therefore, this action is not a significant energy action, and no Statement of Energy Effects is required.

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

(2) We do not believe that this rule will significantly or uniquely affect small governments because it will not produce a federal mandate of $100 million or greater in any year; that is, it is not a ''significant regulatory action'' under the Unfunded Mandates Reform Act. Further, the lands we are designating as critical habitat are owned by private individuals, Padre Dam Municipal Water District, the California Department of Transportation. None of these fit the definition of ''small governmental jurisdiction.'' Therefore, a Small Government Agency Plan is not required.

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. As discussed above, the designation of critical habitat affects only Federal actions. Although private parties that receive Federal funding, assistance, or 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. The takings implications assessment concludes that this designation of critical habitat for *M. viminea* does 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 rule does not have significant Federalism effects. A federalism impact summary statement is not required. In keeping with Department of the Interior and Department of Commerce policy, we requested information from, and coordinated development of, this critical habitat designation with appropriate State resource agencies in California. We did not receive any comments from any State resource agencies during the two open comment periods. The designation of critical habitat in areas currently occupied by *Monardella viminea* imposes no additional restrictions to those currently in place and, therefore, has little incremental impact on State and local governments and their activities. The designation may have some benefit to these governments in that the areas that contain the physical or 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 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) will 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), the Office of the Solicitor has determined that the rule does not unduly burden the judicial system and that it meets the applicable standards set forth in sections 3(a) and 3(b)(2) of the Order. We are designating critical habitat in accordance with the provisions of the Act. This final rule uses standard property descriptions and identifies the elements of physical or 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 pursuant to 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)).

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 determined that there are no tribal lands occupied by *Monardella viminea* at the time of listing 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 are not designating critical habitat for *M. viminea* on tribal lands.

References Cited

A complete list of all references cited 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 rulemaking 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.

Regulation Promulgation

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

PART 17—[AMENDED]

■ 1. The authority citation for part 17 continues to read as follows:

Authority: 16 U.S.C. 1361–1407; 16 U.S.C. 1531–1544; 16 U.S.C. 4201–4245; Pub. L. 99–625, 100 Stat. 3500; unless otherwise noted.

■ 2. Amend § 17.12(h) by revising 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 the critical habitat entry 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 map 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:

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

(C) 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.

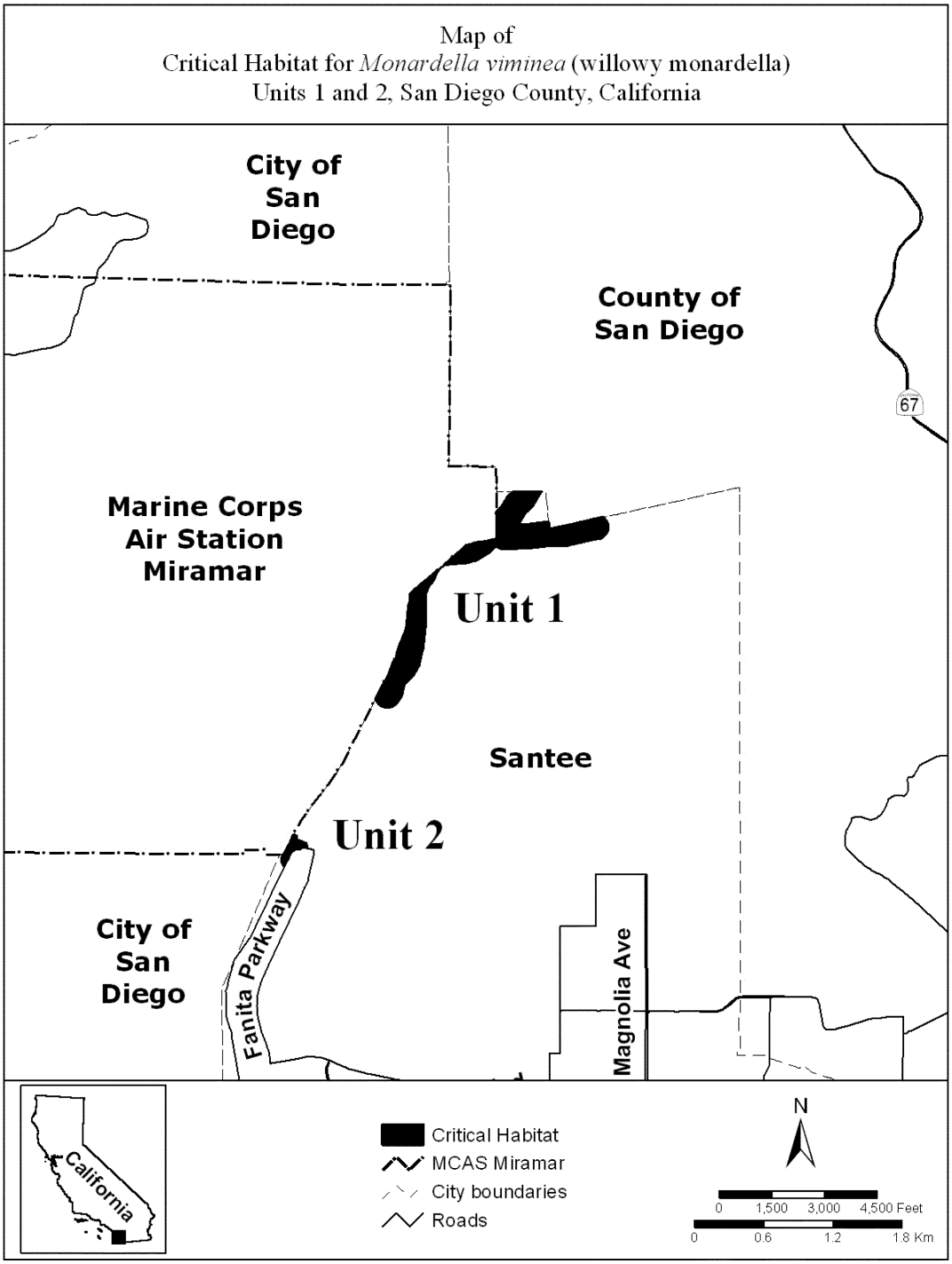
(5) Unit 1: Sycamore Canyon, and Unit 2, West Sycamore Canyon, San Diego County, California.

(i) Unit 1 for *Monardella viminea,* Sycamore Canyon Unit, San Diego County, California. From USGS 1:24,000 quadrangle San Vicente Reservoir, lands bounded by the following UTM NAD83 coordinates (E,N): 501600,3640272; 501581,3640252; 501696,3640253; 501856,3640274; 501861,3640213; 502006,3640245; 502010,3640246; 502330,3640316; 502335,3640312; 502342,3640307; 502348,3640300; 502354,3640294; 502359,3640287; 502363,3640279; 502367,3640271; 502370,3640263; 502372,3640254; 502373,3640246; 502374,3640237; 502374,3640228; 502373,3640220; 502372,3640211; 502370,3640203; 502367,3640195; 502363,3640187; 502359,3640179; 502353,3640172; 502348,3640165; 502342,3640159; 502335,3640154; 502328,3640149; 502320,3640144; 502312,3640141; 502304,3640138; 502296,3640135; 502050,3640081; 502046,3640080; 502030,3640079; 501886,3640076; 501716,3640054; 501704,3640053; 501578,3640052; 501517,3640051; 501460,3640051; 501451,3640051; 501442,3640052; 501433,3640054; 501425,3640057; 501417,3640060; 501409,3640064; 501401,3640069; 501331,3640008; 501315,3639997; 501236,3639953; 501222,3639947; 501215,3639945; 501144,3639925; 501134,3639922; 501123,3639921; 500982,3639912; 500957,3639910; 500973,3639924; 501031,3639974; 501128,3640057; 501149,3640075; 501161,3640078; 501162,3640078; 501242,3640095; 501298,3640107; 501360,3640120; 501388,3640126; 501408,3640130; 501410,3640131; 501407,3640359; 501447,3640402; 501469,3640439; 501495,3640483; 501499,3640490; 501504,3640496; 501509,3640502; 501514,3640507; 501521,3640512; 501527,3640517; 501549,3640531; 501556,3640539; 501603,3640540; 501608,3640540; 501614,3640540; 501792,3640541; 501787,3640534; 501758,3640495; 501737,3640451; 501734,3640444; 501725,3640431; 501695,3640393; 501689,3640387; 501684,3640381; 501677,3640376; 501670,3640371; 501655,3640361; 501614,3640291; 501604,3640277; thence returning to 501600,3640272. Lands bounded by the following UTM NAD83 coordinates (E,N): 500470,3638670; 500462,3638669; 500453,3638669; 500444,3638670; 500436,3638671; 500427,3638673; 500419,3638677; 500411,3638680; 500404,3638685; 500397,3638690; 500390,3638695; 500384,3638701; 500378,3638708; 500373,3638715; 500369,3638723; 500365,3638730; 500365,3638731; 500362,3638739; 500360,3638747; 500360,3638748; 500372,3638771; 500373,3638772; 500409,3638842; 500433,3638889; 500468,3638955; 500498,3639034; 500506,3639052; 500518,3639066; 500534,3639092; 500561,3639193; 500562,3639197; 500607,3639314; 500623,3639355; 500637,3639479; 500646,3639555; 500648,3639573; 500655,3639637; 500657,3639654; 500712,3639701; 500753,3639736; 500764,3639745; 500871,3639837; 500896,3639859; 500881,3639827; 500858,3639781; 500855,3639775; 500845,3639760; 500815,3639724; 500784,3639649; 500790,3639577; 500792,3639546; 500792,3639533; 500792,3639514; 500787,3639424; 500787,3639418; 500759,3639164; 500756,3639148; 500723,3639026; 500721,3639020; 500719,3639013; 500716,3639007; 500712,3639000; 500684,3638955; 500675,3638943; 500674,3638941; 500606,3638863; 500595,3638843; 500583,3638783; 500581,3638776; 500578,3638769; 500576,3638762; 500572,3638755; 500568,3638749; 500564,3638742; 500537,3638708; 500531,3638701; 500525,3638695; 500518,3638689; 500511,3638684; 500504,3638680; 500496,3638676; 500487,3638673; 500482,3638672; 500479,3638671; thence returning to 500470,3638670.

(ii) Unit 2 for *Monardella viminea,* West Sycamore Canyon Unit, San Diego County, California. From USGS 1:24,000 quadrangles Poway and La Mesa, lands bounded by the following UTM NAD83 coordinates (E,N): 499542,3637385; 499559,3637384; 499579,3637426; 499609,3637489; 499642,3637558; 499667,3637544; 499661,3637527; 499661,3637513; 499748,3637481; 499750,3637476; 499754,3637468; 499756,3637459; 499758,3637451; 499759,3637447; 499743,3637451; 499714,3637454; 499703,3637441; 499666,3637441; 499651,3637432; 499620,3637409; 499603,3637382; 499589,3637348; 499572,3637318; 499559,3637293; 499556,3637288; 499554,3637292; 499551,3637300; 499548,3637308; 499546,3637317; 499544,3637325; 499544,3637334; 499544,3637343; 499545,3637351; 499546,3637360; 499549,3637368; 499552,3637379; thence returning to 499542,3637385.

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

BILLING CODE 4310–55–P



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Dated: February 8, 2012.

Rachel Jacobson,

Acting Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 2012–3903 Filed 3–5–12; 8:45 am]

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