DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS–R8–ES–2013–0049]

[4500030113]

RIN 1018-AZ33

Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for *Diplacus vandenbergensis* (Vandenberg Monkeyflower)

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), designate critical habitat

for *Diplacus vandenbergensis* (Vandenberg monkeyflower) under the Endangered Species Act (Act). In total, approximately 5,755 acres (2,329 hectares) in Santa Barbara County, California, fall within the boundaries of the critical habitat designation. The effect of this regulation is to designate critical habitat for Vandenberg monkeyflower under the Act.

DATES: This rule is effective on [INSERT DATE 30 DAYS AFTER DATE OF FEDERAL REGISTER PUBLICATION].

ADDRESSES: This final rule is available on the Internet at *http://www.regulations.gov* and at *http://www.fws.gov/ventura/*. Comments and materials we received, as well as some supporting documentation we used in preparing this rule, are available for public inspection at *http://www.regulations.gov*. Comments, materials, and documentation that we considered in this rulemaking will be available by appointment, during normal business hours at: U.S. Fish and Wildlife Service, Ventura Fish and Wildlife Office, 2493 Portola Road, Suite B, Ventura, CA 93003; telephone 805–644–1766; facsimile 805–644–3958.

The coordinates or plot points or both from which the maps are generated are included in the decision record for this critical habitat designation and are available at *http://www.regulations.gov* at Docket No. FWS–R8–ES–2013–0049, and at the Ventura Fish and Wildlife Office (*http://www.fws.gov/ventura*) (see **FOR FURTHER INFORMATION CONTACT**). Any additional tools or supporting information that we

developed for this critical habitat designation will also be available at the Field Office set out above, and may also be included in the preamble and at *http://www.regulations.gov*.

FOR FURTHER INFORMATION CONTACT: Stephen P. Henry, Field Supervisor, U.S. Fish and Wildlife Service, Ventura Fish and Wildlife Office, 493 Portola Road, Suite B, Ventura, CA 93003; telephone 805–644–1766; facsimile 805–644–3958. Persons who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 800–877–8339.

SUPPLEMENTARY INFORMATION:

Executive Summary

Why we need to publish a rule. Under the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.) (Act), any species that is determined to be an endangered or threatened species requires critical habitat to be designated, to the maximum extent prudent and determinable. Designations and revisions of critical habitat can only be completed by issuing a rule.

On August 26, 2014, we published in the **Federal Register** the final rule to list Vandenberg monkeyflower as an endangered species under the Act (79 FR 50844). This is a final rule to designate critical habitat for Vandenberg monkeyflower. The critical habitat areas we are designating in this rule constitute our current best assessment of the

areas that meet the definition of critical habitat for Vandenberg monkeyflower. In total, we are designating as critical habitat approximately 5,755 acres (ac) (2,329 hectares (ha)) of land in four units for the species.

We have prepared an economic analysis of the designation of critical habitat. In order to consider economic impacts, we prepared an incremental effects memorandum (IEM) and screening analysis, which, together with our narrative and interpretation of effects, we consider our draft economic analysis (DEA) of the proposed critical habitat designation and related factors (Industrial Economic, Incorporated (IEc) 2014, entire). The analysis, dated March 19, 2014, was made available for public comment from May 6, 2014, through June 5, 2014 (79 FR 25797). The DEA addressed probable economic impacts of critical habitat designation for Vandenberg monkeyflower. Following the close of the comment period, we reviewed and evaluated all information submitted during the comment period that may pertain to our consideration of the probable incremental economic impacts of this critical habitat designation. We have incorporated comments received into this final determination.

Peer review and public comment. We sought comments from independent specialists to ensure that our designation is based on scientifically sound data and analyses. We requested opinions from three knowledgeable individuals with scientific expertise to review our technical assumptions and analysis, and whether or not we had used the best available information. We received comments from two of the peer reviewers on the proposed critical habitat rule. These peer reviewers generally concurred

with our methods and conclusions and provided additional information, clarifications, and suggestions to improve this final rule. Information we received from peer review is incorporated in this final revised designation. We also considered all comments and information we received from the public during the comment period.

Previous Federal Actions

The proposed listing rule for Vandenberg monkeyflower (78 FR 64840; October 29, 2013) contains a detailed description of previous Federal actions concerning this species.

On October 29, 2013, we published in the **Federal Register** a proposed critical habitat designation for Vandenberg monkeyflower (78 FR 64446). On May 6, 2014, we revised the proposed critical habitat designation and announced the availability of our draft economic analysis (DEA) (79 FR 25797).

From October 29, 2013, Proposed Rule

In this final critical habitat designation, we first make final the minor changes that we proposed in the document that published in the **Federal Register** on May 6, 2014 (79 FR 25797). At that time, we proposed to increase the designation (from that proposed on October 29, 2013 (78 FR 64446)), by approximately 24 ac (10 ha. This increase occurred in Unit 3 (Encina) as a result of new information received from several commenters who

pointed out that we had omitted a portion of a parcel along the boundaries of this unit that contained the physical or biological features essential to the conservation of the species.

Second, in coordination with the U.S. Bureau of Prisons Federal Penitentiary Complex at Lompoc (Lompoc Penitentiary), we conducted a visual inspection of the vegetation communities and existing land uses within proposed critical habitat Unit 1 (Vandenberg). Subsequently, we have reduced the size of this unit because we found that a portion of the proposed critical habitat area did not contain the physical or biological features essential to the conservation of Vandenberg monkeyflower. Unit 1 occurs exclusively on lands owned and managed by the Department of Justice. As a result of our evaluation, Unit 1 has decreased by 54 ac (22 ha) from 277 ac (112 ha) proposed as critical habitat on October 29, 2013 (78 FR 64446), to 223 ac (90 ha) as described in this final rule. Specifically, we eliminated:

(1) Flat lands in the eastern portion of the unit (i.e., lands east of a drainage that separates the eastern and western areas in this unit) at the break in slope and below 100 feet (ft) (30 meters (m)) in elevation.

(2) Flat lands in the western portion of the unit below 100 ft (30 m) in elevation (noting that the eastern and western portions are divided by a drainage), with the exception of the extreme western portion of the unit where we eliminated lands below 160 ft (49 m) in elevation where there is a break in slope, because the topography below 160 ft (49 m) flattens out in an alluvial floodplain that is used as a cattle pasture.

We are also recognizing other changes and clarifications recommended by one

peer reviewer and the public specifically related to two aspects of the species' biology: seed dispersal and pollinator foraging distances. Both of these discussions are revised in full and described in the "*Physical or Biological Features*—Contiguous Chaparral Habitat" and "*Criteria Used to Identify Critical Habitat*" sections of this rule.

Critical Habitat

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 (PCEs) 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 those specific elements of the physical or biological features that provide for a species' life-history processes and 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 only when a designation limited to its present range would be inadequate to ensure the conservation of the species.

Section 4 of the Act requires that we designate critical habitat on the basis of the best scientific and commercial data available. Further, our Policy on Information

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

When we are determining which areas should be designated as critical habitat, our primary source of information is generally the information developed during the listing process for the species. Additional information sources may include 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) with respect to wildlife, section 9 of the Act's prohibitions on taking any individual of the species, including taking caused by actions that affect habitat. 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 sections 3(5)(A)(i) and 4(b)(1)(A) of the Act and regulations at 50 CFR 424.12, in determining which areas within the geographical area occupied 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 Vandenberg monkeyflower 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 October 29, 2013 (78 FR 64446), and in the information presented below. Additional information can be found in the final listing rule published on August 26, 2014, in the **Federal Register** (79 FR 50844). We have determined that Vandenberg monkeyflower requires the following physical or biological features:

Canopy Openings

Vandenberg monkeyflower only occurs in sandy openings (canopy gaps) within dominant vegetation consisting of Burton Mesa chaparral (see the "Background" section in the proposed listing rule published October 29, 2013 (78 FR 64840), in the **Federal Register**). The sunny openings provide the space needed for individual and population growth, including sites for germination, reproduction, seed dispersal, seed banks, and pollination.

Canopy gaps are important for seed germination and seedling establishment, and for maintaining the seed banks of many chaparral species (Davis *et al.* 1989, pp. 60–64; Zammit and Zedler 1994, pp. 11–13). As the canopy closes and grows in height, the understory is generally bare, with most herbs restricted to remaining canopy gaps (Van Dyke *et al.* 2001, p. 9). Because gaps receive more light, soil temperatures may be as much as 23 ^{o}C (73 ^{o}F) higher than under the surrounding shrub canopy (Christensen and Muller 1975b, p. 50). Such temperatures are high enough to stimulate seed germination in many species (for example, *Helianthemum scoparium* (rush-rose)) (Christensen and Muller 1975a, p. 77). Additionally, herbivory is less pronounced in openings than under or near the canopy (Halligan 1973, pp. 430–432; Christensen and Muller 1975b, p. 53; Davis and Mooney 1985, p. 528). Furthermore, allelopathic (biochemical) effects of the shrub canopy are probably reduced in openings (Muller *et al.* 1968, pp. 227–230).

Numerous studies have recognized canopy gaps in mature chaparral as important microhabitats where some subshrubs and herbs (such as Vandenberg monkeyflower) persist between fires (Horton and Kraebel 1955, pp. 258–261; Vogl and Schorr 1972, pp. 1182–1187; Keeley *et al.* 1981, pp. 1615–1617; Davis *et al.* 1989, p. 64). Additionally, many chaparral plants have characteristics that promote reestablishment after fires. Thus, fire plays a significant role in maintaining chaparral community heterogeneity and in nutrient cycling, and its role has been extensively documented (see Christensen and Muller 1975a, b; Keeley 1987) (See "Factor A—Anthropogenic Fire" section in the proposed listing rule (78 FR 64840; October 29, 2013).

When fire occurs, it clears out aboveground living vegetation and dead wood, deposits nutrient-rich ash, and makes space and sunlight available for seedling establishment. High numbers of herbaceous annuals and perennials appear shortly after fire has cleared away the tall, dense shrubs (Gevirtz *et al.* 2007, p. 58). Many of these fire-followers decline over time after a fire, although some persist in small numbers for decades after their peak post-fire densities (Gevirtz *et al.* 2007, p. 103). In the first few years, habitat may appear as coastal scrub rather than chaparral, both in structure and in the species present (e.g., (*Salvia mellifera*) black sage, (*Artemisia californica*) California sagebrush, (*Frangula californica*) coffee berry, (*Baccharis pilularis*) coyote brush, *Toxicodendron diversilobum* (poison oak)). Gradually, however, (*Arctostaphylos* spp.) manzanita, (*Ceanothus* spp.) ceanothus, (*Adenostoma fasciculatum*) chamise, and other species overtop the early species and come to dominate the landscape. The response of Vandenberg monkeyflower to fire is not currently known; however, because this species occurs within maritime chaparral, it is likely adapted to a naturally occurring fire regime of the Burton Mesa. Because Vandenberg monkeyflower occurs within the canopy gaps of Burton Mesa chaparral, these gaps are important for the plants' persistence between fire events. As the canopy closes with dominant vegetation, the gaps provide the space for annuals small in stature, such as Vandenberg monkeyflower, to grow and reproduce. Therefore, we identify canopy gaps to be a physical or biological feature for Vandenberg monkeyflower.

Loose Sandy Soils

The gaps in the canopy where this species occurs consist of loose, sandy soils. The Burton Mesa dune sheet is comprised of layers of wind-blown sand, each of which was deposited during different geologic time periods. The oldest dune deposits are referred to as the Orcutt "paleodunes," and were deposited in the Santa Maria Basin during the mid-Pleistocene era up to 200,000 years ago (Johnson 1983 in Hunt 1993, p. 14). These dunes are old enough to have developed a soil profile, classified as Tangair and Narlon soils (Soil Conservation Service 1972). Subsurface soils are typically hardened by iron oxides, though surface exposures, where they occur, are commonly composed of loose sand (Hunt 1993, p. 15).

These oldest dune deposits have been buried beneath more recent dunes that were wind-deposited approximately 10,000 to 25,000 to as much as 125,000 years ago (Orme and Tchakerian 1986, pp. 155–156; Johnson 1983, in Hunt 1993, p. 15). Contributing to the formation of these vast dune systems was a rapid fall in sea level approximately 18,000 years ago, perhaps as much as 300 ft (91 m) below the present shoreline, which exposed vast quantities of sediment that were later transported miles inland by onshore winds (Hunt 1993, p. 16).

The more recent dune deposits comprise the bulk of the dunes found on Burton Mesa. These newer dunes on Burton Mesa are composed of poorly consolidated to unconsolidated red to yellow sands with a clay-enriched B-horizon profile; the substratum is generally a dense, cemented sand layer (Hunt 1993 p. 16). This cemented layer may contribute to the water-holding capacity of the soil, which in turn affects the

types of plants and vegetation communities observed. Additionally, both the older and newer dune deposits have substrates with significantly higher proportions of fine sands relative to even more recent sand deposits, thus forming a dense soil (Hunt 1993, p. 16). Topsoil in Burton Mesa is uniformly medium sand, but the depth of soil to bedrock varies throughout the mesa, and several soil types are present (Davis *et al.* 1988, pp. 170–171). The most widespread soils are Marina, Tangair, and Narlon sands; however, other soil types, such as Arnold Sand, Botella Loam, Terrace Escarpments, and Gullied Land, are present on Burton Mesa where Vandenberg monkeyflower grows (Soil Conservation Service 1972).

This species appears more closely tied to loose, sandy soil than to a specific soil type. Therefore, because Vandenberg monkeyflower occurs on all soil types listed above, but appears to be more closely associated with loose, sandy soils regardless of the soil type, we identify loose, sandy soils on Burton Mesa as a physical or biological feature for Vandenberg monkeyflower.

Contiguous Chaparral Habitat

The structure of the chaparral habitat on Burton Mesa is a mosaic of maritime chaparral vegetation (which includes maritime chaparral and maritime chaparral mixed with coastal scrub, oak woodland, and small patches of native grasslands (Wilken and Wardlaw 2010, p. 2)) and sandy openings (canopy gaps) that varies from place to place (see *Background—Habitat* in the proposed listing rule (78 FR 64840; October 29, 2013).

The invasion of nonnative plants can directly alter the structure of this habitat by displacing native vegetation, including individuals of Vandenberg monkeyflower (see "Factor A—Invasive, Nonnative Species" section in the proposed listing rule (78 FR 64840; October 29, 2013)). Fragmentation of the habitat (due to invasive, nonnative plants) has negative effects on rare plant populations (Franklin *et al*. 2002, pp. 20–29; Alberts *et al*. 1993, pp. 103–110). Therefore, the presence of contiguous chaparral habitat on Burton Mesa is important for population growth of Vandenberg monkeyflower because it provides available habitat for seed dispersal and establishment.

Seeds of this species are small and light in weight and short-distance dispersal is achieved primarily by gravity but also by wind and water (Fraga *in litt.* 2012; Thompson 2005, p. 130) (see *Life History* section of the final listing rule (79 FR 50844) for additional discussion of literature related to seed dispersal). It is well-accepted that, for most plant species, a small fraction of seed is subject to long-distance dispersal events. While these events occur infrequently, they can be important in dispersing seeds between populations, and from established populations to new sites with suitable habitat. Determining long-distance seed-dispersal distances for any species is challenging, however, because of the difficulty of observing and quantifying rare long-distance dispersal events. On Burton Mesa, the principal wind direction in all seasons is north-northwest (Bowen and Inman 1966, p. 3; Cooper 1967, pp. 73–74; Hunt 1993, p. 27), which could aid local dispersal of Vandenberg monkeyflower seeds after falling from the parent plant. Long-distance seed dispersal of other plant species can occur through high-velocity horizontal winds, as well as wind updrafts (Greene and Johnson 1995).

Landscape fragmentation over time may reduce the ability of seeds to move longer distances (Cain *et al.* 2000, p. 1223; Trakhtenbrot *et al*. 2005, p. 177), and, therefore, maintaining the integrity of the habitat is important to providing opportunities for the species to disperse across the landscape into suitable habitat patches. Wind updrafts could potentially carry seed from one suitable habitat patch to another across a fragmented landscape; while this may occur infrequently, it may be important in contributing to the long-term persistence of the species.

Contiguous chaparral habitat on Burton Mesa is important for population growth of Vandenberg monkeyflower because it also provides habitat for insect pollinators. Pollinators move pollen from one flower to another predominantly within the same plant population, but they can move pollen to another plant population if it is close enough and the pollinator is capable of carrying the pollen across that distance. Annual *Diplacus* species have a variety of visitors, including insects, bees, and butterflies. Although no research has been done to determine the effectiveness of various pollinators for Vandenberg monkeyflower (Fraga *in litt.* 2012), based on observations of other small annual *Diplacus* species, small- to medium-sized solitary bees are likely an important class of pollinator. Therefore, because contiguous chaparral habitat on Burton Mesa provides habitat connectivity that ensures space for seed dispersal and establishment and movement of pollinators, we identify contiguous chaparral habitat as a physical or biological feature for Vandenberg monkeyflower.

Primary Constituent Elements (PCEs) for Vandenberg Monkeyflower

Under the Act and its implementing regulations, we are required to identify the physical or biological features essential to the conservation of Vandenberg monkeyflower in areas occupied at the time of listing, focusing on the features' PCEs. Primary constituent elements are those specific elements of the 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 PCEs specific to Vandenberg monkeyflower are:

(1) Native maritime chaparral communities of Burton Mesa comprising maritime chaparral and maritime chaparral mixed with coastal scrub, oak woodland, and small patches of native grasslands. The mosaic structure of the native plant communities (arranged in a mosaic of dominant vegetation and sandy openings (canopy gaps)), may change spatially as a result of succession, and physical processes such as windblown sand and wildfire.

(2) Loose sandy soils on Burton Mesa. As mapped by the Natural Resources Conservation Service (NRCS), these could include the following soil series: Arnold Sand, Marina Sand, Narlon Sand, Tangair Sand, Botella Loam, Terrace Escarpments, and

Gullied Land.

Special Management Considerations or Protection

When designating critical habitat, we assess whether the specific areas within the geographical area occupied by the species at the time of listing contain features that are essential to the conservation of the species and which may require special management considerations or protection. All areas designated as critical habitat contain features that will require some level of management to address the current and future threats. In all units, special management may be required to ensure that the habitat is able to provide for the growth and reproduction of the species.

The habitat where Vandenberg monkeyflower occurs faces threats from urban development, maintenance of existing utility pipelines, anthropogenic fire, unauthorized recreational activities, and most substantially the expansion of invasive, nonnative plants (see *Factors A and E* in the final listing rule published on August 26, 2014, in the **Federal Register** (79 FR 50844). Management activities that may reduce these threats include, but are not limited to: (1) Protecting from development lands that provide suitable habitat; (2) minimizing habitat fragmentation; (3) minimizing the spread of invasive, nonnative plants; (4) limiting authorized casual recreational use to existing paths and trails (as opposed to off-trail use that can spread invasive species to unaffected areas); (5) controlled burning; and (6) encouraging habitat restoration. These management activities would limit the impact to the physical or biological features for

Vandenberg monkeyflower by decreasing the direct loss of habitat, maintaining the appropriate vegetation structure that provides the sandy openings that are necessary components of Vandenberg monkeyflower habitat, and minimizing the spread of invasive, nonnative plants to areas where they currently do not exist. Preserving large areas of contiguous suitable habitat throughout the range of the species should maintain the mosaic structure of the Burton Mesa chaparral that may be present at any given time, and maintain the genetic and demographic diversity of Vandenberg monkeyflower.

Criteria Used To Identify Critical Habitat

As required by section 4(b)(2) of the Act, we use the best scientific data available to designate critical habitat. In accordance with the Act and our implementing regulations at 50 CFR 424.12(b), we review available information pertaining to the habitat requirements of the species and identify specific areas within the geographical area occupied by the species at the time of listing that contain the features essential to the conservation of the species. If, after identifying these specific areas, we determine the areas are inadequate to ensure conservation of the species, in accordance with the Act and our implementing regulations at 50 CFR 424.12(e), we then consider whether designating additional areas outside of the geographic area occupied by the species are essential for the conservation of the species. We are not designating any areas outside the geographical area presently occupied by the species because its present range is sufficient to ensure the conservation of Vandenberg monkeyflower.

We used data from research published in peer-reviewed articles; reports and survey forms prepared for Federal, State, and local agencies and private corporations; site visits; regional Geographic Information Systems (GIS) layers, including soil and land use coverage; and data submitted to the California Natural Diversity Database (CNDDB). We also reviewed available information that pertains to the ecology, life history, and habitat requirements of this species. This material included information and data in peer-reviewed articles, reports of monitoring and habitat characterizations, reports submitted during section 7 consultations, and information received from local experts regarding Burton Mesa or Vandenberg monkeyflower.

Determining specific areas that Vandenberg monkeyflower occupies is challenging because areas may be occupied by the species even if no plants appear above ground (i.e., resident seed banks may be present with little or no visible aboveground expression of the species) (see "Background—Life History" section of the proposed listing rule published on October 29, 2013, in the **Federal Register** (78 FR 64840). Additionally, depending upon the climate and other annual variations in habitat conditions, the observed distribution of the species may shrink, temporarily disappear, or enlarge to encompass more locations on Burton Mesa. Because Vandenberg monkeyflower occurs in sandy soils within canopy gaps, and plant communities may undergo changes in which the gaps may shift spatially over time, the degree of cover that is provided by a vegetation type may favor the presence of Vandenberg monkeyflower or not. Furthermore, the way the current distribution of Vandenberg monkeyflower is mapped by the various agencies, organizations, or surveyors has varied depending on the

scale at which occurrences of individuals were recorded (such as many small occurrences versus one large occurrence). Therefore, we considered areas as occupied where suitable habitat is present and contiguous with an extant occurrence of Vandenberg monkeyflower, but which may not currently contain aboveground individuals.

We used a multistep process to delineate critical habitat boundaries.

(1) Using Burton Mesa as a palette, we placed a minimum convex polygon around all nine extant occurrences and one potentially extirpated occurrence (Lower Santa Lucia Canyon) of Vandenberg monkeyflower based on CNDDB and herbarium records, as well as survey information not yet formalized in a database. This resulted in a data layer of Vandenberg monkeyflower's current and historical range on Burton Mesa (see "Distribution of Vandenberg Monkeyflower" section of the proposed listing rule (78 FR 64840; October 29, 2013). We eliminated the occurrence noted in 1931 that was identified approximately 5 mi (8 km) downwind and to the east in the Santa Rita Valley because there is no suitable habitat remaining at this site; thus, we consider this occurrence to be extirpated (see "Historical Locations" section in the proposed listing rule (78 FR 64840; October 29, 2013).

(2) We used GIS to overlay soil data (NRCS) across Burton Mesa, not excluding any soil types at this time because Vandenberg monkeyflower appears to be tied more closely to loose sandy soil than to a specific soil type. Therefore, to define suitable sandy soil where Vandenberg monkeyflower may occur, we included all soil types where the species is currently extant. These soil types include Arnold Sand, Marina Sand, Narlon

Sand, Tangair Sand, Botella Loam, Terrace Escarpments, and Gullied Land. Additionally, we did not remove areas that comprise a small percentage of a different soil type if it was within a larger polygon of a suitable soil type because these areas were below the mapping resolution of the NRCS soil data we utilized.

(3) We expanded the distance from each extant occurrence and one potentially extirpated occurrence up to 1 mi (1.6 km) beyond the known outer edge of each occurrence of Vandenberg monkeyflower for the following reasons:

(a) We sought to maintain connectivity between occurrences of Vandenberg monkeyflower because seeds are primarily dispersed by gravity, along with wind, water, and small mammals. Habitat connectivity, especially canopy gaps where the species occurs, provides the necessary space needed for reproduction, dispersal, and individual and population growth (see "Physical or Biological Features" section above).

(b) A 1-mi (1.6-km) distance from each extant occurrence would provide adequate space for pollinator habitat. Vandenberg monkeyflower has a mixed mating system, and is dependent on pollinators to achieve seed production. As noted in the *Life History* section in the final listing rule published on August 26, 2014, in the **Federal Register** (79 FR 50844), likely pollinators of Vandenberg monkeyflower include smaller solitary bees to medium and larger social bees. Therefore, general pollinator travel distances described in the literature can help determine a distance that would capture pollinator habitat most representative of invertebrate species that visit annual Vandenberg

monkeyflower. Although pollinators typically fly distances that are in proportion to their body sizes, with larger pollinators flying longer distances (Greenleaf *et al.* 2007, pp. 593–596), a recent study by Zurbechen *et al*. (2010, entire) indicates that maximum flight distances of solitary bees have been underestimated and are greater than expected strictly based on body size. Therefore, if a pollinator can fly long distances, pollen transfer is also possible across these distances. Pollinators often focus on small, nearby areas where floral resources are abundant; however, occasional longer distance pollination may occur, especially in years when other floral resources are limited.

Although Chesnut (*in litt.* 2014) observed a "medium-sized" bumblebee on Vandenberg monkeyflower, we have removed previous reference to bumblebee flight distances in this section because their large size (generally 0.6–0.9 in (15–23 mm)) makes it unlikely they would be a frequent pollinator of Vandenberg monkeyflower, and the reference was confusing to readers. Our review of other pollinator flight distance studies described in Zurbechen *et al*. (2010) indicates that honeybees (considered a medium- to large-sized bee, and which have been observed to visit Vandenberg monkeyflower) can fly upwards of 8.7 mi (14,000 m). Based on observations of other small annual *Diplacus* species, small- and medium-sized solitary bees, which on average have shorter foraging distances than honeybees, are likely an important class of pollinator. Therefore, we use shorter foraging distances of the small- to medium-sized solitary bees. The foraging distances of these bees are highly variable, but range up to 0.75 mi (1,200 m)) (Zurbechen *et al*. 2010). We also note that, since flight distances have been measured from one direction from a hive or nest, over the course of several foraging trips bees

could travel double that distance, 1.5 mi (2,400 m) between two plant populations that are in opposite directions from a hive or nest. See additional discussion in this section under (d) below for a rationale of why other distance values are inappropriate.

(c) Providing a critical habitat boundary that is 1 mi (1.6 km) from the nine extant occurrences and one potentially extirpated occurrence of Vandenberg monkeyflower captures most of the remaining native vegetation on Burton Mesa, from east of the developed area on Vandenberg Air Force Base (AFB) through La Purisima Mission State Historic Park (SHP) (see "Distribution of Vandenberg Monkeyflower" section of the proposed listing rule (78 FR 64840)). In some instances, we expanded critical habitat farther than 1 mi (1.6 km) if the PCEs were contiguously present up-canyon. Expanding the boundary to 1 mi (1.6 km) created larger and contiguous blocks of suitable habitat, which have the highest likelihood of persisting through the environmental extremes that characterize California's climate, and of retaining the genetic variability to withstand future stressors (such as invasive, nonnative species or climate change). Additionally, contiguous blocks of habitat maintain connectivity, which is important because habitat fragmentation can result in loss of genetic variation (Young *et al.* 1996, pp. 413–417), has negative effects on biological populations (especially rare plants), and affects survival and recovery (Franklin *et al*. 2002, pp. 20–29; Alberts *et al*. 1993, pp. 103–110). Furthermore, fragmentation has been shown to disrupt plant-pollinator interactions and predator-prey interactions (Steffan-Dewenter and Tscharntke 1999, p. 437), alter seed germination percentages (Menges 1991, pp. 158–164), and result in low fruit set (Jennerston 1988, pp. 359–366; Cunningham 2000, pp. 1149–1152). Fragments are often

not of sufficient size to support the natural diversity prevalent in an area and thus exhibit a decline in biodiversity (Noss and Cooperrider 1994, pp. 50–54).

(d) We considered a critical habitat boundary at a distance of 0.5 mi (0.8 km) from the nine extant locations and one potentially extirpated location. This shorter distance, however, did not maintain connectivity of occurrences, did not encompass the remaining native vegetation of Burton Mesa, and did not represent a sufficient distance to encompass long-distance seed dispersal or the distance that pollinators may travel. Except as described above in (c), we did not consider any distance larger than 1 mi (1.6 km) because the 1-mile distance captures the remaining native vegetation and the distribution of Vandenberg monkeyflower, and any distance greater than 1 mi (1.6 km) also captured habitat that is not suitable for this species. Therefore, the areas within our critical habitat boundaries include the range of plant communities and soil types in which Vandenberg monkeyflower is found, maintain connectivity of occurrences, and provide for the sandy openings mixed within the dominant vegetation. The delineated critical habitat contains the elements of physical and biological features that are essential to the conservation of the species.

We did not include agricultural areas because, while the underlying dune sheet may be present depending on the land use practices, the topsoil would most likely not consist of loose sandy soil and the associated vegetation community would not exist. A few smaller agriculture and grazing plots exist within the Burton Mesa Ecological Reserve (Reserve), but agricultural lands mostly occur to the south and east of the

Reserve and La Purisima Mission SHP.

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 necessary for Vandenberg monkeyflower. The scale of the maps we prepared under the parameters for publication within the Code of Federal Regulations may not reflect the exclusion of such developed lands. Any such lands inadvertently left inside critical habitat boundaries shown on the maps of this final rule have been excluded by text in the rule and are not designated as critical habitat. Therefore, a Federal action involving these lands would not trigger section 7 consultation with respect to critical habitat and the requirement of no adverse modification unless the specific action would affect the physical or biological features in the adjacent critical habitat.

The critical habitat designation is defined by the map or maps, as modified by any accompanying regulatory text, presented at the end of this document in the rule portion. We include more detailed information on the boundaries of the critical habitat designation in the unit descriptions section of this document. We will make the coordinates or plot points or both on which each map is based available to the public on *http://www.regulations.gov* at Docket No. FWS–R8–ES–2013–0049, on our Internet site *http://www.fws.gov/ventura/*, and at the field office responsible for the designation (see **FOR FURTHER INFORMATION CONTACT** above).

We are designating critical habitat on lands that we have determined are within the geographical area occupied by the species at the time of listing (occupied at the time of listing) and contain the physical or biological features essential to the conservation of the species and which may require special management considerations or protection.

Four units are designated based on sufficient elements of physical or biological features being present to support Vandenberg monkeyflower life-history processes. All of the units contain all of the identified elements of physical or biological features and support multiple life-history processes.

Final Critical Habitat Designation

We are designating four units as critical habitat for Vandenberg monkeyflower, all of which are considered occupied. The critical habitat areas described below constitute our best assessment at this time of areas that meet the definition of critical habitat. Those four units are: (1) Vandenberg, (2) Santa Lucia, (3) Encina, and (4) La Purisima (see Table 1 below). Table 1 lists the critical habitat units and the area of each.

TABLE 1—Designated critical habitat units for Vandenberg monkeyflower.
(Area estimates reflect all land within the critical habitat boundary.)

CH Unit	Unit Name	Land Ownership (acres (hectares))				Total Area acres (hectares)
		Federal	State	Local Agency	Private	
1	Vandenberg	223 (90)	—	—	—	**223 (90)**
2	Santa Lucia	—	1,422 (576)	10 (4)	52 (21)	**1,484 (601)**

3	Encina	—	1,460 (591)	24 (10)	540 (218)	**2,024** **(819)**
4	La Purisima	—	1,792 (725)	4 (2)	228 (92)	**2,024** **(819)**
	TOTAL[1]	**223** **(90)**	**4,674** **(1,892)**	**38** **(16)**	**820** **(331)**	**5,755** **(2,329)**

Note: Area sizes may not sum due to rounding.
1-This total does not include 4,159 ac (1,683 ha) of lands within Vandenberg AFB that were identified as areas that meet the definition of critical habitat but are exempt from critical habitat designation under section 4(a)(3)(B) of the Act (see **Exemptions** section below).

We present brief descriptions of all units, and reasons why they meet the definition of critical habitat for Vandenberg monkeyflower, below.

Unit 1: Vandenberg

Unit 1 is within the geographical area occupied by Vandenberg monkeyflower at the time of listing and consists of 223 ac (90 ha). Unit 1 is located adjacent to and between two extant occurrences (Oak Canyon and Pine Canyon, which are located on Vandenberg AFB) and is known to support suitable habitat for Vandenberg monkeyflower. Although Vandenberg monkeyflower plants are not currently present above-ground within this unit, the area harbors the PCEs, and is contiguous with and between Vandenberg AFB lands that are known to be occupied; thus, the area within the unit (and the adjacent, contiguous land on Vandenberg AFB) is considered to be within the geographical area occupied by the species at the time of listing. The adjacent land on Vandenberg AFB is essential to the conservation of the species; however, we are not designating Vandenberg AFB as critical habitat within this subunit because we have

exempted Vandenberg AFB from critical habitat designation under section 4(a)(3)(B)(i) of the Act (see **Exemptions** section below).

Therefore, Unit 1 is composed entirely of Federal land (100 percent) exclusively owned and managed by the Department of Justice (DOJ) and which contains the Lompoc Penitentiary. The unit consists of the westernmost portion of DOJ lands, from the Vandenberg AFB boundary line to roughly the break in slope at 100 ft (30 m) in elevation above the bottom slope of Santa Lucia Canyon. Unit 1 contains the appropriate vegetation structure of contiguous chaparral habitat with canopy gaps (PCE 1) and loose, sandy soils (PCE 2) that support Vandenberg monkeyflower. Unit 1 provides connectivity of habitat between occurrences, habitat for pollinators, and space for establishment of new plants from seeds that are dispersed from adjacent extant occurrences of Vandenberg monkeyflower.

The features essential to the conservation of the species may require special management considerations or protection due to threats from invasion of nonnative plants. Ground disturbance within this unit could remove suitable habitat and create additional openings for nonnative plants to invade and degrade the quality of the habitat.

Unit 2: Santa Lucia

Unit 2 is within the geographical area occupied by Vandenberg monkeyflower at the time of listing, is currently occupied by the species, and consists of 1,484 ac (601 ha).

This unit includes State lands (96 percent) within the Reserve, relatively small portions of local agency lands (for example, school districts, water districts, community services districts) (less than 1 percent) and private lands (3 percent). Unit 2 contains the appropriate vegetation structure of contiguous chaparral habitat with canopy gaps (PCE 1) and loose, sandy soils (PCE 2) that support Vandenberg monkeyflower. The eastern boundary of Vandenberg AFB delineates the western boundary of this unit. Unit 2 includes most of the Vandenberg and Santa Lucia Management Units of the Reserve. Unit 2 extends from Purisima Hills at the northern extent through the width of Burton Mesa to the agricultural lands south of the Reserve, and to the eastern boundary of the Vandenberg and Santa Lucia Management Units where these units abut Vandenberg Village.

Unit 2 supports one extant occurrence (Volans Avenue) and one potentially extirpated occurrence (Lower Santa Lucia Canyon) of Vandenberg monkeyflower. Between 2006 and 2011, the Volans Avenue occurrence has consisted of no more than 25 individuals; the potentially extirpated occurrence was last observed in 1985 (see the "Distribution of Vandenberg Monkeyflower—Historical Locations" section of the proposed listing rule (78 FR 64840; October 29, 2013)). Unit 2 provides connectivity of habitat between occurrences within this unit, habitat for pollinators, space for establishment of seeds blown from upwind seed sources, and space for establishment of new plants from seeds that are dispersed from existing Vandenberg monkeyflower plants within the unit.

The features essential to the conservation of the species may require special management considerations or protection due to threats from invasion of nonnative plants, and activities such as utility maintenance, and off-road vehicle and casual recreational uses. These activities could remove suitable habitat and Vandenberg monkeyflower individuals, and create additional openings for nonnative plants to invade and degrade the quality of the habitat.

Unit 3: Encina

Unit 3 is within the geographical area occupied by Vandenberg monkeyflower at the time of listing and consists of 2,024 ac (819 ha). This unit contains State-owned lands (72 percent), including most of the Encina Management Unit of the Reserve, local agency lands (1.2 percent), and privately owned lands such as areas adjacent to the Clubhouse Estates residential development (27 percent) (see Table 1 above). Unit 3 contains the appropriate vegetation structure of contiguous chaparral habitat with canopy gaps (PCE 1) and loose, sandy soils (PCE 2) that support Vandenberg monkeyflower. Unit 3 extends from approximately the Purisima Hills to the north, through the Reserve and to the agricultural lands just south of the Reserve boundary, and is between Vandenberg Village and State Route 1 to the east and the residential communities of Mesa Oaks and Mission Hills to the west. Unit 3 supports two extant occurrences of Vandenberg monkeyflower (Clubhouse Estates and Davis Creek). Between 2006 and 2011, hundreds of individuals have been observed on more than one occasion at each of these occurrences (see "Current Status of Vandenberg Monkeyflower" section of the

proposed listing rule (78 FR 64840; October 29, 2013). Unit 3 provides connectivity of habitat between occurrences within this unit, habitat for pollinators, space for establishment of seeds blown from upwind seed sources, and space for establishment of new plants from seeds that are dispersed from existing Vandenberg monkeyflower plants within the unit.

The features essential to the conservation of the species may require special management considerations or protection due to threats from invasion of nonnative plants, development, utility maintenance, and off-road vehicle and casual recreational uses (including bicycling). These activities could remove suitable habitat and Vandenberg monkeyflower individuals, result in trampling of individual plants, and create additional openings for nonnatives to invade and degrade the quality of the habitat.

Unit 4: La Purisima

Unit 4 is within the geographical area occupied by Vandenberg monkeyflower at the time of listing and consists of 2,024 ac (819 ha). Unit 4 contains mostly State-owned lands (89 percent) consisting of most of La Purisima Mission SHP and a small portion of the La Purisima Management Unit of the Reserve that is north of La Purisima Mission SHP. This unit also contains private land to the east of La Purisima Mission SHP (11 percent), and a small portion of local agency lands (less than 1 percent) (see Table 1 above). Unit 4 contains the appropriate vegetation structure of contiguous chaparral habitat with canopy gaps (PCE 1) and loose, sandy soils (PCE 2) that support

Vandenberg monkeyflower. This unit extends approximately from the Purisima Hills in the north to the southern boundary of La Purisima Mission SHP, and between the residential communities of Mesa Oaks and Mission Hills to the west and to just east of, and outside, the State Park's eastern boundary. Unit 4 supports two extant occurrences of Vandenberg monkeyflower in La Purisima Mission SHP (La Purisima East and La Purisima West). Between 2006 and 2011, more than 2,000 individuals of Vandenberg monkeyflower have been observed among the sites on both the east and west side of Purisima Canyon (see "Current Status of Vandenberg Monkeyflower" section of the proposed listing rule (78 FR 64840; Otober 29, 2013). This unit provides connectivity of habitat between occurrences within this unit, habitat for pollinators, space for establishment of seeds blown from upwind seed sources, and space for establishment of new plants from seeds that are dispersed from existing Vandenberg monkeyflower plants within the unit.

The features essential to the conservation of the species may require special management considerations or protection due to threats from invasion of nonnative plants that could reduce the amount and quality of suitable habitat.

Effects of Critical Habitat Designation

Section 7 Consultation

Section 7(a)(2) of the Act requires Federal agencies, including the Service, to

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

Decisions by the 5th and 9th Circuit Courts of Appeals have invalidated our regulatory definition of "destruction or adverse modification" (50 CFR 402.02) (see *Gifford Pinchot Task Force* v. *U.S. Fish and Wildlife Service,* 378 F. 3d 1059 (9th Cir. 2004) and *Sierra Club* v. *U.S. Fish and Wildlife Service, et al*., 245 F.3d 434, 443 (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 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 and are likely to adversely affect, listed species or critical habitat.

When we issue a biological opinion concluding that a project is likely to jeopardize the continued existence of a listed species and/or destroy or adversely modify critical habitat, we provide reasonable and prudent alternatives to the project, if any are identifiable, that would avoid the likelihood of jeopardy and/or destruction or adverse modification of critical habitat. We define "reasonable and prudent alternatives" (at 50 CFR 402.02) as alternative actions identified during consultation that:

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

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

(3) Are economically and technologically feasible, and

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

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

Regulations at 50 CFR 402.16 require Federal agencies to reinitiate consultation on previously reviewed actions in instances where we have listed a new species or subsequently designated critical habitat that may be affected and the Federal agency has retained discretionary involvement or control over the action (or the agency's discretionary involvement or control is authorized by law). Consequently, Federal agencies sometimes may need to request reinitiation of consultation with us on actions for which formal consultation has been completed, if those actions 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 Vandenberg monkeyflower. 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 Vandenberg monkeyflower. These activities include, but are not limited to:

(1) Actions that would lead to the destruction or alteration of Vandenberg monkeyflower habitat. Such activities could include, but are not limited to, development, road and utility repairs and maintenance, anthropogenic fires, and some casual recreational uses. These activities could lead to loss of habitat; removal of the seed bank; introduction and proliferation of invasive, nonnative plants; reduction of pollinators; and habitat fragmentation.

(2) Actions that create ground disturbance and would lead to significant invasive,

nonnative plant competition. Such activities could include, but are not limited to, any activity that results in ground disturbance and creates additional open areas for invasive, nonnative plants to invade Vandenberg monkeyflower habitat. Invasive, nonnative plants quickly establish in disturbed areas and outcompete native vegetation, including Vandenberg monkeyflower in the sandy openings (see *Factor A—Invasive, Nonnative Species* in the proposed listing rule (78 FR 64840; October 29, 2013)).

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 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."

We consult with the military on the development and implementation of INRMPs for installations with listed species. We analyzed INRMPs developed by military installations located within the range of the critical habitat designation for Vandenberg monkeyflower to determine if they meet the criteria for exemption from critical habitat under section 4(a)(3) of the Act. The following areas are Department of Defense lands with completed, Service-approved INRMPs within the area that meets the definition of critical habitat for Vandenberg monkeyflower.

Approved INRMPs

Vandenberg AFB has a Service-approved INRMP. The U.S. Air Force (on Vandenberg AFB) committed to working closely with us and California Department of Fish and Wildlife (CDFW) to continually refine the existing INRMP as part of the Sikes Act's INRMP review process. Based on our review of the INRMP for this military installation, and in accordance with section 4(a)(3)(B)(i) of the Act, we have determined that certain lands within this installation meet the definition of critical habitat, and that conservation efforts identified in this INRMP, as modified by the 2012 Addendum, will provide a benefit to Vandenberg monkeyflower (see the following sections that detail this determination for the installation). Therefore, lands within this installation are exempt from critical habitat designation under section 4(a)(3)(B)(i) of the Act. In summary, we are not including as critical habitat in this final rule approximately 4,159 ac (1,683 ha) on Vandenberg AFB that meet the definition of critical habitat but are exempt from designation under section 4(a)(3)(B)(i) of the Act.

Vandenberg Air Force Base

Vandenberg AFB is headquarters for the 30th Space Wing, the Air Force's Space Command unit that operates Vandenberg AFB and the Western Test Range and Pacific Missile Range. Vandenberg AFB operates as an aerospace center supporting west coast launch activities for the Air Force, Department of Defense, National Aeronautics and Space Administration, and commercial contractors. The three primary operational

missions of Vandenberg AFB are to launch, place, and track satellites in near-polar orbit; to test and evaluate the Intercontinental ballistic missile systems; and to support aircraft operations in the western range. Vandenberg AFB lies on the south-central California coast, approximately 275 mi (442 km) south of San Francisco, 140 mi (225 km) northwest of Los Angeles, and 55 mi (88 km) northwest of Santa Barbara. The 99,100-ac (40,104-ha) base extends along approximately 42 mi (67 km) of Santa Barbara County coast, and varies in width from 5 to 15 mi (8 to 24 km).

The Vandenberg AFB INRMP was prepared to provide strategic direction to ecosystem and natural resources management on the Base. The long-term goal of the INRMP is to integrate all management activities in a manner that sustains, promotes, and restores the health and integrity of ecosystems using an adaptive management approach. The INRMP was designed to: (1) Summarize existing management plans and natural resources literature pertaining to Vandenberg AFB, (2) identify and analyze management goals in existing plans, (3) integrate the management goals and objectives of individual plans, (4) support Base compliance with applicable regulatory requirements, (5) support the integration of natural resource stewardship with the Air Force mission, and (6) provide direction for monitoring strategies.

Vandenberg AFB completed an INRMP in May 2011 (Air Force 2011c). The INRMP includes chapters that identify invasive, nonnative plants on the Base as well as step-down goals for the management of threatened and endangered species on the Base. However, since Vandenberg monkeyflower was not a listed species at that time, specific

goals for this plant were not included. In 2012, the Air Force approved an addendum to the May 2011 INRMP that addresses specific goals for Vandenberg monkeyflower (Air Force 2012). Management considerations that provide a conservation benefit to Vandenberg monkeyflower in the addendum are:

(1) Avoiding Vandenberg monkeyflower and its habitat to the maximum extent practicable by relocating and redesigning proposed projects, and using biological monitors during project activities.

(2) Conducting nonnative species control efforts that target veldt grass across Vandenberg AFB. The Air Force has programmed more than $500,000 to treat veldt grass, with funding that started in 2009 and would continue through 2019.

(3) Training Base personnel in the identification of sensitive species and their habitats, including Vandenberg monkeyflower, prior to implementing nonnative species control actions.

(4) Implementing a fire response program, such as a Burned Area Emergency Response project, which includes post-fire monitoring, habitat restoration, erosion control, and nonnative species management.

(5) Developing a controlled burning program that would include portions of Vandenberg monkeyflower habitat.

(6) Conducting habitat and threat assessments to help decide the best approach for restoration actions.

(7) Periodic surveys of Vandenberg monkeyflower populations on the Base.

Vandenberg AFB supports four extant occurrences of Vandenberg monkeyflower located in Oak, Pine, Lakes, and Santa Lucia Canyons. Between 2006 and 2011, these four locations contained multiple occurrences; in 2010 specifically, more than 5,000 individuals were observed amongst all occurrences (see "Occurrences Located on Vandenberg AFB" section of the proposed listing rule (78 FR 64840; October 29, 2013)**)**. Vandenberg AFB provides approximately half of the available suitable habitat (Burton Mesa chaparral) for Vandenberg monkeyflower and has four out of nine extant occurrences.

Based on the above considerations, and in accordance with section 4(a)(3)(B)(i) of the Act, we have determined that the identified lands are subject to the Vandenberg AFB INRMP and addendum, and the conservation efforts identified in the INRMP addendum will provide a benefit to Vandenberg monkeyflower. Therefore, lands within this installation are exempt from critical habitat designation under section 4(a)(3)(B)(i) of the Act. We are not including approximately 4,159 ac (1,683 ha) of habitat in this final critical habitat designation because of this exemption.

Consideration of Impacts Under 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 scientific data available 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 she determines that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless she 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.

Consideration of Economic Impacts

Under section 4(b)(2) of the Act, we consider the economic impact of specifying any particular area as critical habitat. In order to consider economic impacts, we prepared an incremental effects memorandum (IEM) and screening analysis, which, together with our narrative and interpretation of effects, constitute our DEA of the proposed critical habitat designation and related factors (IEc 2014, entire). The analysis, dated March 19, 2014, was made available for public review from May 6, 2014, through June 5, 2014 (IEc 2014, entire)(79 FR 25797). The DEA addressed potential economic impacts of critical habitat designation for Vandenberg monkeyflower. Following the close of the comment period, we reviewed and evaluated all information submitted during the comment period that may pertain to our consideration of the probable incremental economic impacts of this critical habitat designation. Information relevant to the probable incremental economic impacts of critical habitat designation for the Vandenberg monkeyflower is summarized below and available in the screening analysis

for the Vandenberg monkeyflower (IEc 2014), available at *http://www.regulations.gov*.

Critical habitat designation for Vandenberg monkeyflower is unlikely to generate combined direct and indirect costs exceeding $100 million in a single year. Data limitations prevent the quantification of critical habitat benefits (IEc 2014, pp. 3, 22, 24).

All critical habitat units are considered occupied. However, Vandenberg monkeyflower is an annual plant that may only be expressed above ground once a year or even less frequently (Service 2014, p. 15). Even though all units contain Vandenberg monkeyflower seed banks below ground, some project proponents may not be aware of the presence of the species absent a critical habitat designation. The characteristics of the plant make it difficult to determine whether future consultations will result from the presence of the listed species or designated critical habitat.

Throughout our analysis (IEc, 2014, entire), we have considered two scenarios:

(1) *Low-end scenario*. Project proponents identify the monkeyflower at their site, and most costs and benefits are attributable to listing the species.

(2) *High-end scenario*. Costs and benefits are attributed to the designation of critical habitat.

Projects with a Federal nexus within Vandenberg monkeyflower critical habitat are likely to be rare. We project fewer than three projects annually, associated with the Lompoc Penitentiary, the existing oil pipeline and utilities running through the Reserve,

and road projects using Federal funding (IEc 2014, pp. 3, 12). In the high-end scenario, costs in a single year are likely to be on the order of magnitude of tens to hundreds of thousands of dollars (IEc 2014, pp. 3, 12). In the low-end scenario, assuming above-ground expression of the monkeyflower, total costs in a single year will likely be less than $100,000.

The potential exists for critical habitat to trigger additional requirements under the California Environmental Quality Act (CEQA). In the low-end scenario, impacts at all sites except the Burton Ranch Specific Plan area would be attributed to listing Vandenberg monkeyflower. In the high-end scenario, properties that could experience relatively larger impacts include the Burton Ranch Specific Plan area (Unit 3), potentially developable parcels along the northern border of Vandenberg Village (Units 2 and 3), the Freeport-McMoRan Inc., parcels overlapping the State-designated Lompoc Oil Field (Units 2 and 3), and preferred sites for new drinking water wells in the Reserve (Unit 3). Given the value of possible impacts in these areas, we conclude that designating critical habitat for Vandenberg monkeyflower will not generate combined direct and indirect costs that exceed $100 million in a single year (i.e., the threshold according to Executive Order 12866 for determining if the costs and benefits of regulatory actions may have a significant economic impact in any one year).

The changes to Units 1 and 3 described in this final rule do not modify the results of the screening analysis. Additional information and discussion regarding our economic analysis is available in our screening analysis and IEM (IEc 2014, entire; Service 2014,

entire) available on the Internet at *http://www. regulations.gov* at Docket No. FWS–R8–ES–2013–0049.

Exclusions Based on Economic Impacts

Our economic analysis did not identify any disproportionate costs that are likely to result from the designation. Consequently, the Secretary is not exercising her discretion to exclude any areas from this designation of critical habitat for the Vandenberg monkeyflower based on economic impacts.

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

Exclusions Based on National Security Impacts or Homeland 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 final rule, we have determined that no lands within the designation of critical habitat for Vandenberg monkeyflower are owned or managed by the Department of Defense or Department of Homeland Security, and, therefore, we anticipate no impact on national security or homeland security. Consequently, the Secretary is not exercising her discretion to exclude any areas from this final designation based on impacts on

national security or homeland security.

Exclusions Based on Other Relevant Impacts

Under section 4(b)(2) of the Act, we also consider any other relevant impacts resulting from the designation of critical habitat. 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.

There are currently two management plans in existence for State lands at the Reserve and La Purisima Mission SHP. We considered for exclusion State lands at the Reserve (3,132 ac (1,268 ha) at the Reserve) and at La Purisima Mission SHP (1,542 ac (624 ha) at La Purisima Mission SHP), which together account for approximately 81 percent of the critical habitat designation. For Vandenberg monkeyflower, we considered the following criteria for our exclusion analysis: (1) If the plan was complete and provided a conservation benefit for the species and its habitat; (2) if there was a reasonable expectation that the conservation management strategies and actions would be implemented into the future, based on past practices, written guidance, or regulations; and (3) if the plan provided conservation strategies and measures consistent with

currently accepted principles of conservation biology.

We did not exclude these areas from this final designation because: (1) These lands contain the physical and biological features essential to the conservation of Vandenberg monkeyflower; (2) the State has developed general management plans for the Reserve and La Purisima Mission SHP that support a conservation strategy consistent with currently accepted principles of conservation biology and that may provide a benefit to Vandenberg monkeyflower and its habitat; however, these plans are general in nature and do not contain specific management goals for Vandenberg monkeyflower; and (3) we are concerned whether adequate resources (i.e., staffing and funding) will be available to implement these plans to protect Vandenberg monkeyflower into the future. The State is supportive of our critical habitat designation on the Reserve; the State did not provide any comments regarding La Purisima Mission SHP. However, we verbally discussed designation of critical habitat with State Parks staff and received no substantive comments from them. Therefore, because the State lands at the Reserve and La Purisima Mission SHP meet the definition of critical habitat, the management plans do not include management goals specific to Vandenberg monkeyflower, we have concerns regarding implementation of these management plans into the future, and the State is generally supportive of critical habitat designated on these lands, the Reserve and La Purisima Mission SHP are included in the final critical habitat designation.

In preparing this final rule, we have determined that there are currently no permitted HCPs or other management plans for Vandenberg monkeyflower beyond those

two identified above, and the final designation does not include any tribal lands or tribal trust resources. We anticipate no impact on tribal lands, partnerships, or HCPs from this critical habitat designation. Accordingly, the Secretary is not exercising her discretion to exclude any areas from this final designation based on other relevant impacts.

Summary of Comments and Recommendations

We requested written comments from the public on the proposed designation of critical habitat for Vandenberg monkeyflower during two comment periods. The first comment period associated with the publication of the proposed rule to designate critical habitat (78 FR 64446) opened on October 29, 2013, and closed on December 30, 2013. We also requested comments on the proposed critical habitat designation and associated DEA during a comment period that opened May 6, 2014, and closed on June 5, 2014 (79 FR 25797). 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 DEA during these comment periods. We received State comments from the CDFW regarding the Reserve, but received none from State Parks regarding La Purisima Mission SHP.

During the first comment period, we received seven comment letters directly addressing the proposed critical habitat designation. During the second comment period, we received six comment letters addressing the proposed critical habitat designation or the DEA. All substantive information provided during comment periods has either been

incorporated directly into this final determination or is addressed below. Comments we received 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 Vandenberg monkeyflower and its habitat, the geographic region in which the species occurs, and conservation biology principles. Our request included peer review of both the proposed listing rule (78 FR 64840) and proposed critical habitat rule (78 FR 64446). Although we received responses from all three peer reviewers on the proposed listing rule, only two commented specifically on the proposed critical habitat rule. We reviewed all comments received from the peer reviewers for substantive issues and new information regarding critical habitat for Vandenberg monkeyflower. Peer reviewer comments are addressed in the following summary and incorporated into the final rule as appropriate.

Peer Reviewer Comments Received

(1) Comment: One peer reviewer stated that designation of lands within the Reserve and La Purisima Mission SHP as critical habitat is necessary for preserving the few extant populations of Vandenberg monkeyflower, and preserving sites for potential

new populations or currently unknown populations. The peer reviewer believes that this species likely persists as a metapopulation that consists of a mix of currently occupied and unoccupied patches, and the currently unoccupied patches are critical for the long-term persistence of the species. Additionally, the peer reviewer stated that fires, floods, anthropogenic disturbances, and vegetation succession will inevitably degrade the quality of some currently occupied patches, yet improve the quality of other patches or create new sandy openings suitable for colonization. Finally, the peer reviewer stated that it is critical to maintain the network of occupied, unoccupied, and potential new patches within the region of the metapopulation, particularly for a species such as the Vandenberg monkeyflower that has limited dispersal capabilities and a persistent seed bank.

Our Response: We agree with the peer reviewer that occupied, unoccupied and potential new patches of habitat for VM are important for the long-term persistence and recovery of the species. We have designated areas that are considered occupied; although Vandenberg monkeyflower plants are not presently above ground in some areas of unit 1, we agree with the peer reviewer that these areas are critical for the long-term persistence of the species. With respect to the state lands, as described above under "Exclusions Based on Other Relevant Impacts," we did not exclude the State lands within the Reserve and La Purisima Mission SHP from this final critical habitat designation because: (1) They contain the physical and biological features essential to the conservation of Vandenberg monkeyflower; (2) the State's general management plans for the Reserve and La Purisima Mission SHP support a conservation strategy consistent with currently accepted principles of conservation biology and that may provide a benefit to

Vandenberg monkeyflower and its habitat, but these plans are general in nature and do not contain specific management goals important for Vandenberg monkeyflower; and (3) we are concerned whether adequate resources (i.e., staffing and funding) will be available to implement these plans to protect Vandenberg monkeyflower into the future. We will continue to work with our State partners to address the conservation needs of the species, and we will consider the network of occupied and unoccupied areas when we develop recovery criteria for a recovery plan in the future.

(2) Comment: One peer reviewer said that our description of Vandenberg monkeyflower as occurring "only at low elevations and close to the coast in a distinct region in western Santa Barbara County known as Burton Mesa" was too definitive. The peer reviewer pointed out that, although we only know it to occur on Burton Mesa currently, with additional information, we could find that it occurs at higher elevations or at other locations (such as in Santa Ynez Valley where the species was collected in 1931).

Our Response: We agree that it is possible that, with additional surveys over time, more populations of the species may be located at higher elevations or outside the currently known range. Our Policy on Information Standards under the Endangered Species Act (see discussion under **Critical Habitat** above) directs us to base our decisions on the best scientific data available. It is possible that additional populations of Vandenberg monkeyflower will be found in the future, and that they may occur on lands not designated as critical habitat. We note, however, 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. 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, HCPs, or other species conservation planning efforts if new information available at the time of these planning efforts calls for a different outcome.

State Comments Received

(3) Comment: The CDFW is generally supportive of critical habitat on the Reserve because it would assist the Department in obtaining funding and grants to enhance management and recovery of the species and its habitat.

Our Response: We appreciate the State's comment.

(4) Comment: The CDFW suggested that designation of critical habitat would provide an additional level of attention and protection for areas known to support the species and its pollinators.

Our Response: We appreciate CDFW's concern for protection of Vandenberg monkeyflower, its habitat, and its pollinators. The benefits of designating critical habitat for Vandenberg monkeyflower include, but are not limited to, public awareness of the presence of Vandenberg monkeyflower, the importance of habitat protection, and in cases where a Federal nexus exists, the potential for greater habitat protection for Vandenberg monkeyflower due to the legally binding duty of Federal agencies to avoid destruction or adverse modification of critical habitat. Therefore, the rules designating critical habitat and listing the species as an endangered species serve to educate the public on the sensitivity of Vandenberg monkeyflower and its habitat on Burton Mesa.

(5) Comment: The CDFW is concerned that lands on the Reserve are at risk from requests by outside parties to obtain additional leases that could result in direct effects to Vandenberg monkeyflower (such as removal of occupied habitat), or indirect effects (such as from changing adjoining land uses and fragmenting remaining areas). CDFW stated that they specifically support critical habitat designation on the 106 ac (43 ha) that the Vandenberg Village Community Services District (VVCSD) requested for exclusion from the critical habitat designation because CDFW believes this area supports Vandenberg monkeyflower and other rare and endangered plant and animal species, provides essential connectivity for wildlife, and contains the only perennial stream (Davis

Creek) in the Reserve.

Our Response: We agree with CDFW that leases could affect Vandenberg monkeyflower and its habitat. Because the 106 ac (43 ha) that the VVCSD requested to exclude from the final critical habitat designation contains the physical or biological features essential to conservation of the species, including a known population of Vandenberg monkeyflower, and do not otherwise meet our standards for excluding areas from the designation, we are not excluding this area within the Reserve from the final critical habitat designation.

(6) Comment: The CDFW suggested that the designation of critical habitat on the Reserve and nearby private lands would strengthen their ability to protect biological resources, such as Vandenberg monkeyflower, and help ensure avoidance measures and mitigation efforts are undertaken for this species.

Our Response: Under the Act, the only regulatory effect of a critical habitat designation 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. The designation of critical habitat on private lands does not impose a legally binding duty on non-Federal

Government entities or private parties, although, again, there may be indirect impacts if there is a federal nexus. Local land use planning and permitting agencies, such as the County of Santa Barbara and the City of Lompoc, serve as lead agencies for purposes of compliance with CEQA. The designation of critical habitat on private lands will serve to notify these agencies concerning the importance of conserving this habitat for Vandenberg monkeyflower during project planning and review.

(7) Comment: The CDFW noted that Reserve lands include numerous easements by various entities; unmarked rights-of-way; and old and sometimes abandoned infrastructure. In addition, the Central Coastal Water Authority's (CCWA) State water-line traverses Vandenberg monkeyflower habitat just north of the Reserve. CDFW stated that maintenance and emergency repairs of such infrastructure should address conservation and protection of this habitat area.

Our Response: We appreciate this information and look forward to working with the CDFW to develop best management practices that could be used during routine maintenance activities, emergency repairs, and other opportunities that may arise. These practices would likely be important to contribute to the conservation of Vandenberg monkeyflower and its habitat.

(8) Comment: The CDFW commented that designating critical habitat on the Clubhouse Estates project area would be beneficial for the conservation of Vandenberg monkeyflower.

Our Response: We appreciate the comment. In the revised proposed rule to designate critical habitat (79 FR 25797), we added 24 ac (10 ha) of private land inadvertently left out of the original proposal to Unit 3 of the proposed critical habitat designation (78 FR 64446). The 24 ac (10 ha) is on a portion of the open space parcel at Clubhouse Estates. This portion of the open space parcel meets the definition of critical habitat for Vandenberg monkeyflower and contains the physical or biological features essential to the conservation of Vandenberg monkeyflower, and is contiguous with Reserve lands that also support Vandenberg monkeyflower. See *Summary of Changes from October 29, 2013, Proposed Rule* above.

(9) Comment: The CDFW noted that there is potential for oil and gas exploration and development to occur on lands adjoining the Reserve, and that directional drilling, hydraulic fracking, or steam injection techniques could affect surface resources on the Reserve.

Our Response: In our proposed rule to list Vandenberg monkeyflower, we discussed that there were oil and gas fields adjacent to Burton Mesa (see *Background—Land Ownership* section in the proposed listing rule (78 FR 64840)). However, we did not identify these activities as threats to the species because we had no information regarding the potential for them to affect Vandenberg monkeyflower or its habitat. There has been an increase in oil well permit applications in Santa Barbara County over the past 5 years (IEc 2014); even so, we have no specific information regarding the extent that

these activities may occur in the future, or the extent that they may affect surface resources on the Reserve. However, should these activities be proposed in the future, they may be subject to review by Santa Barbara County pursuant to CEQA depending on the impact to environmental resources and whether there is a possible impact to a sensitive species or its habitat. State oil and gas fields are regulated by the California Department of Conservation, Division of Oil, Gas, and Geothermal Resources.

(10) Comment: The CDFW states that there is potential for oil and gas exploration to occur on lands adjoining the Reserve, and that directional drilling beneath the Reserve for hydraulic fracking or steam injection could adversely affect surface resources. The CDFW explains that the designation of critical habitat would provide an additional layer of protection for the species, and would help ensure that avoidance measures and mitigation efforts are undertaken to protect the species. The CDFW is in favor of the proposed designation.

Our Response: As discussed in the DEA, there has been an increase in oil and gas permit applications in Santa Barbara County over the past 5 years (IEc 2014, p. 19). It is possible that new directional drilling projects could be initiated in the area, but it is difficult to predict whether these may occur within the critical habitat area. Because new directional drilling technologies are rapidly being developed and becoming economically viable, it is unclear whether a new project may involve hydraulic fracking, steam injection, or a different drilling technique. Furthermore, hydraulic fracking and steam injection are relatively new techniques and there is limited knowledge and evidence of

their potential to affect surface resources. Due to these uncertainties, data limitations prevent us from quantifying the likelihood or magnitude of such directional drilling involving hydraulic fracking in areas designated as critical habitat. Thus we are unable, at this time, to estimate the potential impact of hydraulic fracking on surface resources in the Reserve. Therefore, data limitations prevent us from estimating the potential for economic impacts associated with this activity.

Other Comments Received

(11) Comment: One commenter suggested that we open a nursery at the Lompoc Penitentiary and transplant all Vandenberg monkeyflowers to this nursery. The commenter believes that letting the prisoners raise Vandenberg monkeyflower would save the species from being endangered and it would also create a profit for the prison because they could sell Vandenberg monkeyflower that is grown in the nursery.

Our Response: We agree that cooperation among agencies is important to prevent further losses of currently occupied habitat, as well as for developing options for future management and conservation of Vandenberg monkeyflower. However, section 2(b) of the Act directs us "to provide a means whereby the ecosystems upon which endangered and threatened species depend may be conserved." Because approximately 50 percent of the habitat on which Vandenberg monkeyflower occurs still remains, and this habitat contains the appropriate physical or biological features essential to the conservation of the species, we expect this remaining habitat would support the recovery of the species

with appropriate management and conservation actions. The critical habitat designation will provide an educational tool to our partners regarding the importance of managing the remaining habitat appropriately.

Specific recovery objectives and criteria to delist Vandenberg monkeyflower in the future will be developed during the formal recovery planning process. This process will involve species experts, scientists, and interested members of the public, in accordance with the interagency policy on recovery plans under the Act, published on July 1, 1994 (59 FR 34272). We anticipate that recovery objectives and criteria for Vandenberg monkeyflower will focus on *in situ* (within its natural habitat) conservation efforts, and whether *ex situ* (outside of its natural habitat) conservation efforts such as propagating plants in a nursery are called for would be determined through the recovery planning process. We look forward to working with the Bureau of Prisons during the recovery planning process to determine how they can assist in the recovery of the species.

(12) Comment: Three commenters submitted similar comments regarding their concern that designation of critical habitat would limit recreational activities for local residents in Burton Mesa chaparral. Specifically, these commenters are concerned that the critical habitat designation would reduce mountain bicycling opportunities for the local residents.

Our Response: The only regulatory effect of a critical habitat designation is that Federal agencies must ensure that their actions do not destroy or adversely modify critical

habitat under section 7 of the Act. 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.

For State lands included in the critical habitat designation (i.e., the Reserve and La Purisima Mission SHP), recreational activities, including mountain-biking, are regulated and managed by the CDFW (in the case of the Reserve) and California State Parks (in the case of La Purisima Mission SHP). Mountain-biking is prohibited at the Reserve, and is restricted to authorized roads and trails at La Purisima Mission SHP. These State agencies have already completed analyses of the potential impacts of various recreational activities on the natural resources they manage; these analyses are contained in their management plans (Gevirtz *et al.* 2007; California State Parks 1991) and other regulatory documents. The designation of critical habitat on these lands imposes no additional restrictions on these uses beyond what is imposed by these State agencies. For Federal lands included in the critical habitat designation, the Bureau of Prisons manages Lompoc Penitentiary, and riding bicycles by members of the public is prohibited. On private lands, the designation of critical habitat does not impose a legally binding duty on non-Federal government entities or private parties.

In summary, the designation of critical habitat requires Federal agencies not to destroy or adversely modify critical habitat, but does not impose any additional

regulations or prohibitions beyond those described above on the current management that the State agencies administer at the Reserve or La Purisima Mission SHP, or that private landowners impose on their lands.

(13) Comment: One commenter stated that he has lived and enjoyed the chaparral near Vandenberg Village since he was child, and as an adult he enjoys it often by running, walking dogs, riding off-road bikes, and geo-caching. The commenter stated that these experiences provide a healthy respect for the environment, and the government should not pursue respect of the environment by outlawing the enjoyment of the surrounding environment through legislation. We interpret the commenter's statement that "Ordinary, casual, non-invasive access to public lands should never be criminalized" to reflect the commenter's belief that a critical habitat designation for a federally endangered plant would prevent further access to public lands that harbor chaparral habitat.

Our Response: Recreational activities on the Reserve and at La Purisima Mission SHP are governed by state management plans. According to the Reserve's management plan, hiking on designated trails, wildlife watching, environmental education, walking with a pet on a leash less than 10 ft (3 m) in length, and research allowed by the CDFW are public recreational uses allowed at the Reserve (Gevirtz *et al.* 2007, p. 70). In addition, according to the La Purisima Mission SHP management plan, current recreational uses allowed by State Parks include tours (guided mission tours and self-guided tours); nature walks, hiking, jogging, dog-walking, and horseback riding on

designated trails; and picnicking (California State Parks 1991, p. 148). However, riding of off-road bikes is not an allowed recreational activity at the Reserve, and is restricted to authorized roads and trails at La Purisima Mission SHP. As stated above (see our response to *Comment 12* above), the designation of critical habitat would not preclude the recreational activities already allowed at the Reserve and La Purisima Mission SHP, nor create additional restrictions. Therefore, the public would be able to participate in the recreational activities as allowed under the management plans of the Reserve and La Purisima Mission SHP, respectively.

(14) Comment: Two commenters suggested that primary action for us to conserve Vandenberg monkeyflower would be to educate the public on the sensitivity of the chaparral as opposed to "closing it down" and "locking the public away from it."

Our Response: Absent explanation from the commenters, we have assumed that "closing it down" and "locking the public away from it" refers to the commenters' concern that the designation would prevent public use of the Reserve and La Purisima Mission SHP. See our response to *Comments 12 and 13* above regarding what duty the designation of critical habitat places on non-Federal landowners and non-Federal agencies and the relationship of designating critical habitat to the current management at the Reserve and La Purisima Mission SHP; designation of critical habitat would not affect the current management plans of these State lands.

Regarding educating the public on the sensitivity of the chaparral habitat, in the

case of Vandenberg monkeyflower, the benefits of critical habitat include public awareness of the presence of Vandenberg monkeyflower, the importance of habitat protection, and in cases where a Federal nexus exists, the potential for greater habitat protection for the species due to the legally binding duty of Federal agencies to avoid destruction or adverse modification of critical habitat (see *"Exclusions—Application of Section 4(b)(2) of the Act"* section in the proposed critical habitat rule)(78 FR 64446). Therefore, the final rules to designate critical habitat and list Vandenberg monkeyflower as an endangered species serve to educate the public on the sensitivity of this species and its habitat on Burton Mesa.

(15) Comment: A mountain-biking association noted that the DEA (screening memo and associated IEM) do not discuss nor provide evidence of the effects of human recreation on the proposed critical habitat, specifically effects related to bicycling.

Our Response: The purpose of the DEA is to discuss the economic impacts that critical habitat designation may have, above and beyond the listing of the species, to various sectors of the community. Recreational activities, including mountain-biking, are regulated by the CDFW (in the case of the Reserve) and California State Parks (in the case of La Purisima Mission SHP) on the lands they manage. Mountain-biking is prohibited on Reserve lands, and restricted to authorized roads and trails on La Purisima Mission SHP. These State agencies have already developed management plans that define the types of recreational activities on the natural resources they manage (Gevirtz *et al.* 2007; California State Parks 1991)The designation of critical habitat on these lands

imposes no additional restrictions beyond what is imposed by these State agencies. Consequently, there is no economic impact to the mountain-biking community, and that is why mountain biking was not addressed in the DEA.

(16) Comment: A mountain-biking association stated that studies have been done to suggest that mountain bicycles and hiking have similar impacts on wildlife. The commenter stated that, without specific studies on how mountain-bike use would impact Vandenberg monkeyflower, it would be premature to limit or halt the use of mountain bikes in Burton Mesa chaparral habitat.

Our Response: In the proposed rule to list Vandenberg monkeyflower as an endangered species (78 FR 64840), we stated that the available information did not indicate the extent and degree to which mountain biking may be directly impacting Vandenberg monkeyflower habitat on the Reserve, which accounts for much of the Burton Mesa chaparral habitat within our critical habitat designation. However, we have recently been informed by CDFW that unauthorized mountain-bike use on the Reserve has been increasing, and that CDFW law enforcement staff have recently been meeting with local biking groups to discuss these issues.

With respect to the biological impacts that mountain bikes may have to sensitive resources, we note that the commenter did not provide information regarding studies on biking and hiking impacts. Nevertheless, in our proposed rule to list Vandenberg monkeyflower as an endangered species (78 FR 64840), we discuss threats to this species

and its habitat from recreational activities (see *Factor A—The Present or Threatened Destruction, Modification, or Curtailment of Its Habitat or Range—Recreational and Other Human Activities*); studies have shown that wheeled recreational activities likely contribute to the spread of invasive, nonnative plant species at other locations (Gelbard and Belnap 2003; Gevirtz *et al.* 2005, p. 225). Therefore, while there may not be studies regarding the effects of mountain biking on Vandenberg monkeyflower specifically, we identified invasive, nonnative plants as the greatest threat to this species and its habitat, and it is likely that this type of impact occurs within the Reserve along the travel routes, some of which occur within Burton Mesa chaparral (Vandenberg monkeyflower) habitat.

Restrictions on mountain bike use are a result of State direction as opposed to a restriction associated though a critical habitat designation. Specifically, for State lands included in the critical habitat designation, mountain-biking is prohibited at the Reserve, and is restricted to authorized roads and trails at La Purisima Mission SHP. The State agencies have completed analyses of potential mountain biking impacts on natural resources that they manage. See also our response to *Comment 12*.

(17) Comment: One commenter supported the designation of critical habitat because it would greatly increase Vandenberg monkeyflower's chance of survival.

Our Response: We appreciate the commenter's support to designate critical habitat for this species. The potential benefits of designating critical habitat for Vandenberg monkeyflower include, but are not limited, to: (1) Focusing conservation

activities on the most essential features and areas; (2) providing educational benefits to State or county governments, private entities, and the public; and (3) reducing the potential for the public to cause inadvertent harm to the species.

(18) Comment: One commenter encouraged us to consider unoccupied habitat for the critical habitat designation, specifically where the species could be recovered in light of the extent of habitat loss of Vandenberg monkeyflower.

Our Response: Under the first prong of the Act's definition of critical habitat, areas within the geographic area occupied by the species at the time it is 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. Under the second prong of the Act's definition of critical habitat, we can designate critical habitat in areas outside the geographic area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species. We designate critical habitat in areas outside the geographic area occupied by a species only when a designation limited to its range would be inadequate to ensure the conservation of the species.

In the case of Vandenberg monkeyflower, we are designating critical habitat under the first prong of the Act because we determined that the area that is within the geographic range of the species contains the physical or biological features that are essential to Vandenberg monkeyflower and would be adequate for the conservation of the

species. In addition, habitat that is essential to Vandenberg monkeyflower occurs on Vandenberg AFB; however, we did not designate critical habitat on Vandenberg AFB because the Air Force has an approved INRMP, which provides a conservation benefit to Vandenberg monkeyflower and its habitat, and thus the Air Force is exempt from critical habitat per section 4(a)(3)(B)(i) of the Act. Finally, we note that the commenter did not include reference to any particular area in which they were concerned.

(19) Comment: One commenter suggested that we should not exclude lands from the final critical habitat designation that are managed by the State at the Reserve and La Purisima Mission SHP because their existing management plans are general plans and are not implemented specifically to protect Vandenberg monkeyflower. The commenter stated that the benefits of including State lands at the Reserve and the La Purisima Mission SHP as designated critical habitat would enhance protection for Vandenberg monkeyflower, even if the existing general plans overlap or duplicate future protections on these lands.

Our Response: Under section 4(b)(2) of the Act, the Secretary may designate and make revisions to critical habitat on the basis of the best available scientific data after taking into consideration the economic impact, the impact on national security, and any other relevant impact of specifying any particular area as critical habitat. We consider a number of factors when excluding areas from critical habitat designations, including (but not limited to) whether landowners have developed any HCPs or other management plans for the area; whether there are conservation partnerships that would be encouraged by

designation of, or exclusion from, critical habitat; tribal issues; and other relevant impacts. For Vandenberg monkeyflower, we considered if the current land management plans at the Reserve and La Purisima Mission SHP provide adequate management or protection (see *Exclusions Based on Other Relevant Impacts* for additional discussion).

For both the Reserve and La Purisima Mission SHP, the commenter is correct in that the general management plans are not implemented specifically to protect Vandenberg monkeyflower. Both the general management plans address the above criteria to some degree for exclusion of lands from critical habitat designation; for instance, they support a conservation strategy consistent with currently accepted principles of conservation biology that would provide a benefit to Vandenberg monkeyflower habitat. However, based on conversations with staff at the Reserve and La Purisima Mission SHP, we have concerns whether the resources will be available to adequately implement these plans to protect Vandenberg monkeyflower and its habitat into the future. Therefore, because these lands meet the definition of critical habitat and contain the physical or biological features essential to the conservation of the species, and we have concerns regarding the implementation of the management plans in the future, we have not excluded the Reserve and La Purisima Mission SHP in the final critical habitat designation (see *Exclusions Based on Other Relevant Impacts* section).

(20) Comment: One commenter suggested that among the economic benefits and impacts of designating critical habitat, the Service should consider such benefits as the ecological value of protecting the maritime chaparral of Burton Mesa, the added benefit

of the public's enjoyment of nature, and the natural heritage of California and Santa Barbara County.

Our Response: We acknowledge the comment. Critical habitat designation can also result in ancillary conservation benefits to Vandenberg monkeyflower and its habitat by educating the public and local agencies, such as the County of Santa Barbara, about the importance of conserving Burton Mesa chaparral habitat. Section 4(b)(2) of the Act directs us to take into consideration the economic impact, the impact on national security, and any other relevant impact, of specifying any particular areas as critical habitat. We recognize that there may be economic benefits from the additional beneficial services that derive from conservation efforts but are not the purpose of the Act (i.e., ancillary benefits). However, due to existing data limitations, we were unable to monetize these beneficial services during the development of the economic analysis.

Comment Regarding Critical Habitat Unit Boundaries

(21) Comment: One commenter was supportive of our proposal to designate critical habitat and our inclusion into critical habitat of areas with suitable habitat on Burton Mesa where the species may grow due to the shifting nature of Vandenberg monkeyflower and its habitat. However, the commenter questioned the boundaries of critical habitat because we did not include certain areas in Unit 2 (Santa Lucia) that were impacted by nonnative species and vehicle trackways (e.g., the racetrack), which makes the unit unnecessarily fragmented. The commenter stated that we should include

additional areas between Units 3 (Encina) and 4 (La Purisima), and northeast of Unit 3 because suitable habitat is present.

Our Response: We conducted an evaluation of the specific areas suggested by the commenter as potentially containing habitat to determine if they may have the physical or biological features essential to the conservation of the species and may require special management considerations or protection. We used aerial photographs (Google Earth 2012) and soil series mapped by the Natural Resources Conservation Service (Soil Conservation Service 1972). We found that neither the suggested areas within Unit 2 nor the area northeast of Unit 3 consist of the appropriate soil types as described in the *Physical or Biological Features—Loose Sandy Soils* section of the proposed critical habitat rule (78 FR 64446). Additionally, the ridge between Units 3 and 4 was at a higher elevation than we used for our mapping criteria, which was based in part on the elevations of known populations of Vandenberg monkeyflower. Consequently, these areas do not meet the definition of critical habitat for Vandenberg monkeyflower and thus were not included in this final rule.

Adequacy of PCEs

(22) Comment: One commenter questioned the Primary Constituent Elements (PCEs) we identified, stating that the PCEs (maritime chaparral communities of Burton Mesa and loose sandy soils) described in the proposed critical habitat designation are

overly general and encompass large areas that are not currently occupied by the species, and that the link between the PCEs and these areas is not clear or supported by evidence.

Our Response: Under the Act and its implementing regulations, we are required to identify the physical or biological features essential to the conservation of Vandenberg monkeyflower in areas occupied at the time of listing, focusing on the features' PCEs. We consider PCEs to be the elements of physical or biological features that provide for a species' life-history processes and are essential to the conservation of the species. In determining which areas within the geographic area occupied by the species at the time of listing to designate as critical habitat, we consider the physical or biological features that are essential to the conservation of the species and which may require special management considerations or protection. Therefore, we considered the areas occupied by the species, and the elements of the physical or biological features that provide for this species' life-history processes, including: (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 Vandenberg monkeyflower.

Combined with the criteria used to identify critical habitat, we evaluated the best available information and used the best scientific data available. Based on our current knowledge of the physical or biological features and habitat characteristics required to

sustain the species' life-history processes, we determined that the structure of the maritime chaparral habitat and loose sandy soils are appropriate PCEs for Vandenberg monkeyflower (see *Primary Constituent Elements (PCEs) for Vandenberg Monkeyflower*). We note that, although the commenter stated the PCEs in and of themselves may appear overly broad, the commenter provided no new information to help better define the PCEs or improve the criteria we used to delineate boundaries.

(23) Comment: One commenter stated we should have excluded in the text description of the PCEs those areas that consist of consolidated soils because they are not suitable for Vandenberg monkeyflower.

Our Response: Consolidated soils may appear to be less suitable than loose sandy soils for Vandenberg monkeyflower and its associated life-history processes. We sought to find a means of separating out such consolidated soils from loose sandy soils; however, the best available data (as mapped by NRCS) includes a combined mix of consolidated and loose sandy soils. It is also quite likely that both the consolidated and loose sandy soils provide suitable substrate and vegetation for certain ground-nesting pollinators. For these reasons, we did not exclude consolidated soils when we created/developed PCEs for Vandenberg monkeyflower. We note further that the commenter did not provide any additional information that would assist us in excluding these soils.

(24) Comment: One commenter stated we should have excluded areas that are currently dominated by nonnative species, such as veldt grass or eucalyptus and pine groves, because these areas do not contain the "essential features."

Our Response: 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. Areas that currently support nonnative species, such as veldt grass or eucalyptus and pine groves, may not visually appear to be suitable habitat for Vandenberg monkeyflower. However, physical or biological features relied upon by the species are present.

For example, appropriate soil types are present throughout the areas with invasive, nonnatives present, and it is probable that pollinators and seed dispersers traverse areas consisting of nonnative plants adjacent to and in between Vandenberg monkeyflower populations (see *Criteria Used To Identify Critical Habitat* and *Physical or Biological Features—Contiguous Chaparral Habitat* sections for additional pollinator discussion). In addition, with special management of the habitat that currently consists of nonnative plants, these areas could support new or expanded populations of Vandenberg monkeyflower and its habitat, as well as associated life-history processes, in the future.

Therefore, we have included in the critical habitat designation those areas containing the physical or biological features essential to the conservation of the species that are occupied at the time of listing and that may require special management considerations or protection, including some areas that currently support nonnative species.

(25) Comment: One commenter stated that no explanation was given as to why we needed to include all extant populations outside of Vandenberg AFB in the proposed critical habitat designation.

Our Response: As discussed above, the purpose of designating critical habitat is to identify the physical or biological features essential to the conservation of a threatened or endangered species in areas occupied at the time of listing that may require special management considerations or protection. In the case of Vandenberg monkeyflower, the Burton Mesa chaparral community, which harbors the full range of the species, has already sustained a loss of approximately 53 percent over the last 80 years (Service 2012a; Hickson 1987). Moreover, the number of Vandenberg monkeyflower populations and the number of individuals are small when compared to other annual species (see, for example, Keith 1998, pp. 1076–1090; Natureserve 2012, pp. 21–22). Because the size and number of populations are small, and the habitat has already been subjected to substantial losses over the last 80 years, additional losses of habitat that support the life-history processes reduce the likelihood of the long-term persistence of the species. These factors contributed to our determination that the remaining suitable habitat (including

habitat supporting all populations outside of Vandenberg AFB) for Vandenberg monkeyflower is essential to the conservation of the species.

(26) Comment: One commenter stated that seed dispersal distances, which the Service uses as part of the methodology to delineate proposed critical habitat boundaries for Vandenberg monkeyflower, are based on inappropriate examples, such as Greene and Johnson (1995). The commenter believes this reference is not appropriate because the study focused on long-distance dispersal of tree seeds that are specifically adapted to wind dispersal, rather than small-statured annual plant species like Vandenberg monkeyflower. Rather, the commenter suggested using examples such as Soons *et al*. (2004), which show dispersal distances of less than 33 ft (10 m) that may be more appropriate to compare with Vandenberg monkeyflower.

Our Response: We agree that the discussion concerning seed dispersal distances could be improved, specifically with regard to how dispersal distances were used as one criterion to help delineate boundaries of the proposed critical habitat. Therefore, we have provided revised text to clarify the seed dispersal discussion in the *Contiguous Chaparral Habitat* section of this rule. We acknowledge that one of the references cited (i.e., Greene and Johnson 1995) focused on long-distance dispersal of tree seeds rather than annual plant species. However, we note that we did not compare the dispersal distances of the tree seeds with those of Vandenberg monkeyflower; we used this reference specifically to make the point that seeds may be caught in wind updrafts that could carry them longer distances than horizontal winds.

We also reviewed Soons *et al.* (2004), which the commenter suggested could be more analogous to Vandenberg monkeyflower for examining potential seed dispersal distances. We found that the focus of the Soons *et al.* (2004) study was to: (1) Determine which intrinsic and extrinsic factors were used in various dispersability models, and (2) compare how well the models simulated field studies of seed dispersal distances for four species. The study, therefore, did not attempt to determine long-distance seed dispersal distances for the four species. Further, we conducted an additional review of the best available literature regarding seed dispersal distances and recognize that determining long-distance seed dispersal distances for any species is challenging (see *Contiguous Chaparral Habitat* and *Summary of Changes From October 29, 2013, Proposed Rule* sections above). More importantly, we realize we did not explain how short-distance seed dispersal and long-distance seed dispersal differ with respect to the long-term persistence of the species, even if the latter cannot be precisely determined. Therefore, we have provided a revised discussion of seed dispersal for Vandenberg monkeyflower in the discussion of Contiguous Chaparral Habitat (see *Summary of Changes From October 29, 2013, Proposed Rule* and *Physical or Biological Features* sections).

Comments Regarding Pollinators and Pollinator Foraging Distances

(27) Comment: One commenter stated that pollinators would only use maximum foraging distances under highly stressed conditions, as compared to shorter distances that are more commonly used.

Our Response: Regarding our use of maximum pollinator foraging distances rather than average foraging distances to help delineate critical habitat boundaries, we note the following: A recent discussion of pollinator foraging distances by Zurbechen *et al*. (2010, entire) concludes that earlier studies on foraging distances had generally underestimated the maximum distances flown, such as those calculated based on body size (e.g., Gathmann and Tscharntke 2002, entire). For instance, the small solitary bee *Hylaeus punctulatissimus* (no common name) had a maximum foraging distance of 3,609 ft (1,100 m), and the medium-sized solitary bee *Chelostoma rapunculi* (no common name) had a maximum foraging distance of 4,183 ft (1,275 m) (Zurbechen *et al.* 2010, p. 674). They also found that most individual bees within each species typically flew shorter distances, with 75 percent of *H. punctulatissimus* and *Hoplitis adunca* (another medium-sized solitary bee) individuals flying no farther than 1,312 ft (400 m) and 2,297 ft (700 m), respectively (Zurbechen *et al.* 2010, pp. 671–675). We agree with the commenter that pollinator flight distances would be dependent on the availability of floral resources, among other things. Pollinators for Vandenberg monkeyflower likely fly longer distances to gather required resources in less favorable years given that it is a small annual species that shows high variability in its expression depending on climatic conditions, and that other flowering plants within the maritime chaparral habitat are also affected by the annual variation in climatic conditions. Thus, when determining which areas should be critical habitat for Vandenberg monkeyflower, we considered habitat potentially used by pollinators in both favorable and unfavorable years to assist us in

developing the pollinator foraging distance criteria for delineating critical habitat boundaries.

(28) Comment: One commenter stated that the discussion we included in the proposed rule regarding bumblebee foraging distances (see *Criteria Used To Identify Critical Habitat*) was irrelevant to Vandenberg monkeyflower, since they are not considered potential pollinators for this plant.

Our Response: We have provided a revised discussion of pollinator foraging distances in this final rule (see *Summary of Changes from October 29, 2013, Proposed Rule* and *Criteria Used To Identify Critical Habitat* sections). We agree that bumblebee foraging distances are not appropriate to reference with respect to Vandenberg monkeyflower because they are not likely pollinators. Therefore, we discuss foraging distances of small- to medium-sized bees that are more likely pollinators than bumblebees for Vandenberg monkeyflower.

(29) Comment: One commenter stated that we inappropriately focused on a study by Steffan-Dewenter and Tscharntke (2000) that discusses foraging distances for honeybees, rather than considering the foraging distances of solitary bee species that are more likely between 164 and 1,640 ft (50 and 500 m). The commenter believes the actual foraging distance is more appropriate to consider than maximum foraging distance.

Our Response: Relative to our use of a study by Steffan-Dewenter and Tscharntke (2000, entire), we have rewritten the discussion of pollination ecology for Vandenberg monkeyflower and the discussion of pollinator flight distances in the *Criteria Used To Identify Critical Habitat* section of this final rule. In addition, see our response to *Comment 27* relative to using maximum foraging distances of pollinators, including the need to consider areas used by pollinators in both favorable and unfavorable years.

(30) Comment: One commenter stated that, although bees require nearly continuous habitat for foraging, habitat need not be in every direction out from the apiary (i.e., hive or nest). As such, the commenter believes the existing areas of reserves and conservation areas on State and Federal land are adequate for conservation of Vandenberg monkeyflower.

Our Response: We agree with the commenter's understanding that bees require nearly continuous habitat for foraging but that suitable habitat need not be in every direction out from the apiary. However, we note that for delineating critical habitat boundaries, we considered bee foraging habitat, bee nesting habitat, and other habitat important to Vandenberg monkeyflower to support its life-history processes (see *Criteria Used To Identify Critical Habitat* section). For example, we considered space for Vandenberg monkeyflower individual and population growth, reproduction, and dispersal—not only within populations, but between populations and from existing populations to other sites that support the physical or biological features upon which

Vandenberg monkeyflower depends. Principles of conservation biology stress the importance of maintaining the largest areas of contiguous habitat possible, with the least amount of fragmentation. Moreover, under the Act and its implementing regulations, we are required to identify the physical or biological features essential to the conservation of Vandenberg monkeyflower in areas occupied at the time of listing, focusing on the features' PCEs. We are required to identify these lands irrespective of land ownership. While reserve and park lands may be viewed or considered by most as conserved areas, the management of these lands does not ensure the conservation of sensitive species. Conversely, privately owned lands may provide space for Vandenberg monkeyflower individual and population growth, reproduction, and dispersal, and so are important to identify as lands important to the species. Therefore, we have identified all the lands that are important, regardless of ownership.

Comments Regarding Habitat Fragmentation

(31) Comment: One commenter stated that designating critical habitat to address losses due to habitat fragmentation is not applicable for Vandenberg monkeyflower because of the presence of various State and Federal lands that are protected either through conservation purpose (Reserve and La Purisima Mission SHP) or by conservation plan (Vandenberg AFB INRMP), in addition to land that was purchased for mitigation for the Burton Ranch Project site and now is owned by the Land Trust for Santa Barbara County.

Our Response: 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 essential to the conservation of the species and 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. In the case of Vandenberg monkeyflower, we have determined that only those areas on Burton Mesa identified under the first part of the definition of critical habitat are considered essential to the species conservation. Once the physical or biological features were determined and mapped (see the *Physical or Biological Features* and *Criteria Used To Identify Critical Habitat* sections), the resulting proposed critical habitat included fragmented areas (which are a result of impacts such as (but not limited to) development, roads and nonnative, invasive plants (see Factors A and E discussions in the proposed listing rule (78 FR 64840)).

It was important for us to take these fragmented areas on Burton Mesa into consideration due to the threats that have caused and continue to cause habitat fragmentation throughout the final critical habitat designation and the needs of this species requiring contiguous chaparral habitat (see *Physical or Biological Features—Contiguous Chaparral Habitat*). Because Vandenberg monkeyflower occurs in a conservation area or an area with a management plan in place does not necessarily mean that there is not already, or would not be, habitat fragmentation. We have also determined that habitat within the conservation areas meets the definition of critical

habitat, per the criteria outlined in the *Criteria Used To Identify Critical Habitat* section, and that special management considerations are needed in these conserved areas (e.g., minimizing habitat fragmentation, minimizing the spread of invasive, nonnative plants) (see *Special Management Considerations or Protection*).

(32) Comment: One commenter stated that the proposed critical habitat designation refers to Young *et al*. (1996) for evidence that habitat fragmentation results in a loss of genetic variation (see *Criteria Used To Identify Critical Habitat* section in the proposed critical habitat rule (78 FR 64446)), and further stated that the authors concluded that genetic losses are primarily a result of genetic bottlenecks at the time of fragmentation; the proposed critical habitat rule asserted that separating populations from each other would have the greatest effect on genetic losses.

Our Response: Young *et al*. (1996, p. 416) concluded that losses are due to genetic bottlenecks at the time of habitat fragmentation and to subsequent inbreeding in small populations. We used this citation to note that habitat fragmentation generally has population genetic consequences for plants, especially species with small population numbers. Therefore, because some residual populations of Vandenberg monkeyflower are small (the numbers of populations and the numbers of individuals are small when compared to other annual species) and the habitat is fragmented due to the factors mentioned above in our response to *Comment 31*, even a small loss of genetic diversity may impact this species.

(33) Comment: One commenter stated that the proposed critical habitat designation refers to Aguilar *et al*. (2008) for evidence that habitat fragmentation affects survival and recovery, and further states that Aguilar *et al.* (2008) concluded that habitat fragmentation results in lower genetic diversity, but losses are greatest for common species. The commenter also noted that Vandenberg monkeyflower is not a common species but an uncommon species and would, therefore, be expected to have smaller losses of genetic diversity as a result of habitat fragmentation.

Our Response: While we meant to point out that habitat fragmentation affects the survival and recovery of species, the focus of Aguilar *et al.* (2008, entire) was on how habitat fragmentation may differentially affect the genetic diversity of common species compared to that of uncommon species. Therefore, we removed the reference to Aguilar *et al*. (2008) in the *Physical or Biological Features—Contiguous Chaparral Habitat* and *Criteria Used To Identify Critical Habitat* sections above, and replaced it with other references that more generally discuss the ways that habitat fragmentation can affect the survival and recovery of species (i.e., Franklin *et al*. 2002, pp. 20–29; Alberts *et al*. 1993, pp. 103–110).

(34) Comment: One commenter stated that that we inappropriately focused on Menges (1991) (see *Criteria Used To Identify Critical Habitat* section in the proposed critical habitat rule (78 FR 64446)) to support the argument that habitat fragmentation results in decreased germination rates. The commenter stated that because most populations of Vandenberg monkeyflower have at least several hundred individuals, and

populations above several hundred individuals generally had germination rates equivalent to larger populations, habitat fragmentation would not be expected to result in decreased germination for this species.

Our Response: We agree with the commenter that, in general, larger populations of plant species would likely be less threatened by reduced germination rates than smaller populations. For determining critical habitat for Vandenberg monkeyflower, we chose to group the extant occurrences into nine populations based on the geographic separation between them (see *Distribution of Vandenberg Monkeyflower—Current Status of Vandenberg Monkeyflower* section in the proposed listing rule (78 FR 64840)). Five of the populations consist of several hundred individuals, while four of the populations comprise less than a hundred individuals each. These four small populations have already been affected by habitat fragmentation and invasive, nonnative plants (78 FR 64840). Furthermore, with the expansion of invasive, nonnative species on Burton Mesa, habitat quality may continue to decline and negatively affect the size of the remaining populations of Vandenberg monkeyflower (see Factor A discussion in the proposed listing rule (78 FR 64840)). Although we have no specific information about germination rates in Vandenberg monkeyflower at this time, the reference to Menges (1991, entire) relative to the example of how habitat fragmentation leads to small population size and reduced germination rates is appropriate to include in our discussion of how habitat fragmentation could affect Vandenberg monkeyflower.

(35) Comment: One commenter stated that we inappropriately focused on Jennersten (1988) and Cunningham (2000) to document that habitat fragmentation leads to reduced fruit set in Vandenberg monkeyflower populations. The commenter noted that because fragmented habitats evaluated in Jennersten (1988) were very small in size, this situation should not apply similarly to Vandenberg monkeyflower, which predominantly occurs in conserved areas with management plans.

Our Response: In regard to the study by Jennersten (1988, entire), we stated in our response to *Comment 31* above and *Summary of Factors Affecting the Species* section of the proposed listing rule (78 FR 64840) that Burton Mesa is currently fragmented by residential developments and on a smaller scale by roads, trails, and stands of invasive, nonnative plants. A large proportion (approximately 81 percent) of Vandenberg monkeyflower critical habitat occurs in conserved areas (i.e., ecological reserve and State park lands with management plans); however, this does not necessarily eliminate the potential for populations of this species to be isolated in a smaller area (for example, see Volans Avenue occurrence in *Current Status of Vandenberg Monkeyflower* in the proposed listing rule (78 FR 64840)).

(36) Comment: One commenter stated that Cunningham (2000) does not provide evidence that habitat fragmentation results in reduced fruit set for Vandenberg monkeyflower because Cunningham (2000) found variable results for different species (i.e., some species produced more fruit and some produced less).

Our Response: In regard to the study by Cunningham (2000, entire), study results showed that flowers received less pollen when growing in fragmented sites. Because Vandenberg monkeyflower is known to occur in fragmented areas (see *Distribution of Vandenberg Monkeyflower—Current Status of Vandenberg Monkeyflower* section in the proposed listing rule (78 FR 64840) and our response to *Comment 31*, we found it appropriate to use this study along with Jennersten (1988, entire) to explain the general principle that plants subject to habitat fragmentation may have lower fruit production.

Comments Requesting Exclusion From the Final Critical Habitat Designations

(37) Comment: One commenter stated the conservation measures currently in place for the development of Burton Ranch adequately protect Burton Mesa chaparral. The commenter stated that the owners of Burton Ranch completed a conservation easement with Land Trust of Santa Barbara County that protects 95 ac (38 ha) offsite, and they plan to maintain a buffer at the north end of the Burton Ranch property to protect onsite chaparral habitat. The commenter stated that these protections are certainly as robust as, or more robust than, other conservation measures applicable to the Reserve and La Purisima Mission SHP in which the Service has found sufficient to support excluding these lands from the final critical habitat designation. Therefore, the commenter requests that Burton Ranch be excluded from the final critical habitat designation.

Our Response: 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. For exclusions based on other relevant impacts, we consider a number of other factors, including whether the landowners have developed any Habitat Conservation Plans (HCP) or other management plans for an area, or whether there are conservation partnerships that would be encouraged by designation of, or exclusion from, critical habitat. We consider a current land management or conservation plan (HCPs as well as other types) to provide adequate management or protection if it meets the following criteria: (1) The plan is complete and provides a conservation benefit for the species and its habitat; (2) there is a reasonable expectation that the conservation management strategies and actions will be implemented into the 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.

With regard to the Reserve and La Purisima Mission SHP, the purpose of the Reserve is to manage, operate, and maintain the sovereign lands for the sensitive species and habitats they support (Gevirtz *et al.* 2007, p. 3), and the goal of the State Parks natural resource management program is to protect, restore, and maintain the natural resources in the State Park system (*www.parks.ca.gov*). These State lands also have existing management plans (Gevirtz 2007; California State Parks 1991). In our proposed rule, we considered excluding the Reserve and La Purisima Mission SHP from the final designation of critical habitat under section 4(b)(2) of the Act based on partnerships with the State for their management of the Reserve and La Purisima Mission SHP, and the

management and protection afforded to these lands by general management plans the State has developed for the Reserve and La Purisima Mission SHP (see *Exclusions Based on Other Relevant Impacts* in the proposed critical habitat rule (78 FR 64446)). In this final rule, we did not exclude the State lands at the Reserve and La Purisima Mission SHP from critical habitat (see *Consideration of Impacts Under Section 4(b)(2) of the Act—Exclusions Based on Other Relevant Impacts*).

With regard to the Burton Ranch project site and specifically the Burton Ranch Development Plan, we note that up to approximately 83 out of 93 ac (34 out of 38 ha, or approximately 90 percent) of Burton Mesa chaparral is proposed to be impacted. With the estimated effect to chaparral on Burton Ranch, the conservation strategy outlined for the Burton Ranch Development Plan would not be adequate to protect the species and its remaining habitat in this area.. Therefore, we did not consider Burton Ranch for exclusion from critical habitat based on other relevant impacts under section 4(b)(2) of the Act. However, we appreciate that the owners of Burton Ranch proposed to maintain a buffer between development and the Reserve to minimize effects to the chaparral habitat within the Reserve, including areas containing Vandenberg monkeyflower habitat. We also appreciate that Burton Ranch completed a conservation easement with the Land Trust for Santa Barbara County to protect 95 ac (38 ha) off-site of Vandenberg monkeyflower habitat that features Burton Mesa chaparral, coastal scrub, and oak savannah habitat.

(38) Comment: One commenter stated that Vandenberg monkeyflower was found not to exist on Burton Ranch, and, therefore, this area should not be included as critical habitat.

Our Response: According to section 4 of the Act, we designate critical habitat in areas within the geographic area occupied by the species at the time of listing that contain the physical or biological features (1) which are essential to the conservation of the species and (2) which may require special management considerations or protections. Although Vandenberg monkeyflower has not been observed above-ground on this specific property, the area harbors the PCEs, as well as the physical or biological features essential to the conservation of the species that may require special management considerations or protections (see *Primary Constituent Elements (PCEs) for Vandenberg Monkeyflower* and *Physical or Biological Features* sections), and is contiguous with State lands (i.e., Reserve) that are known to be occupied. Thus, this area is considered to be within the geographical area occupied by the species at the time of listing. Unit 3 is considered occupied based on the presence of the species at multiple locations throughout the unit. In addition, Burton Ranch may contain a seed bank (see *Background—Life History* section of the proposed listing rule (78 FR 64840)) because Vandenberg monkeyflower is known to occur within 0.5 mi (0.8 km) of Burton Ranch. Therefore, Burton Ranch meets the definition of critical habitat according to the Act and is included as critical habitat in this final rule.

(39) Comment: One commenter stated that Burton Ranch is not "prime" habitat for Vandenberg monkeyflower because most of the area slated for development has been previously disturbed over the years. The commenter explained that several homes already exist on immediately adjacent properties, which fragments the continuity of native plant species in general. In addition, the commenter stated that the property has been previously graded and has been farmed in the past. Therefore, the commenter believes this "less than prime" area should be excluded from the final critical habitat designation.

Our Response: According to section 4 of the Act, we designate critical habitat in areas within the geographic area occupied by the species at the time of listing that contain the physical or biological features (1) which are essential to the conservation of the species and (2) which may require special management considerations or protection (see our response to *Comment 37* above). The commenter did not define what "prime habitat" for Vandenberg monkeyflower is, but we presume the commenter was referring to our description of Burton Mesa chaparral (see the *Background—Habitat* section in the proposed listing rule (78 FR 64840)) that has not been subject to any disturbance. We note that Vandenberg monkeyflower habitat is disturbed at various levels, for example due to development, utilities, roadways, and invasive, nonnative plants, and that management in these areas is needed to ensure that the habitat is able to provide for the growth and reproduction of the species (see *Special Management Considerations or Protection*). The existence of disturbed habitat (whether past or current), however, would not necessarily preclude individuals of Vandenberg monkeyflower from occurring in an

area or entirely remove the physical or biological features from an area. Because Burton Ranch contains the physical or biological features essential to the conservation of Vandenberg monkeyflower (see response to *Comment 38*) and may require special management consideration or protections, the area meets the definition of critical habitat according to the Act.

(40) Comment: The Vandenberg Village Community Services District (VVCSD) requested that 106 ac (43 ha) be excluded from the final critical habitat designation. The commenter stated that if finalized, the critical habitat designation may preclude future construction of water wells necessary to supply the community of Vandenberg Village with drinking water.

Our Response: We note that the 106 ac (43 ha) of land requested for exclusion from the final critical habitat designation is land owned by the State Lands Commission and managed by the California Department of Fish and Wildlife. Relative to the commenter's concern that a final critical habitat designation may preclude development of wells, designation of critical habitat does not automatically prohibit development on private or State lands because there are no statutory requirements for section 7 consultations for actions undertaken on non-Federal lands or without a Federal nexus. The designation of critical habitat does not affect land ownership or establish a refuge, wilderness, reserve, preserve, or other conservation area, nor does it require implementation of restoration, recovery, or enhancement measures by non-Federal landowners. 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. At this time, we have not received any information indicating there is a Federal nexus for the construction of new water wells. Without such a nexus, potential future construction of water wells would not require section 7 consultation. We welcome the opportunity to work with VVCSD to minimize the effects to Vandenberg monkeyflower and its habitat relative to the potential construction of new wells.

(41) Comment: One commenter stated that Unit 3 (Encina) contains plant communities not consistent with Vandenberg monkeyflower habitat, such as oak woodland and chamise chaparral, and may provide areas where Vandenberg monkeyflower does not occur and where wells could be constructed.

Our Response: Unit 3 contains the physical or biological features essential to the conservation of Vandenberg monkeyflower (see *Physical or Biological Features*). We note that we identified oak woodland and chamise chaparral as aspects of the composition of vegetation on Burton Mesa (see *Background—Habitat* section in the proposed listing rule (78 FR 64840)). We also note that we discussed the structure of the chaparral habitat as a mosaic of maritime chaparral vegetation (which includes maritime chaparral and maritime chaparral mixed with coastal scrub, oak woodland, and small patches of native grasslands (Wilken and Wardlaw 2010, p. 2)) and sandy openings (canopy gaps) that varies from place to place (see *Background—Habitat* in the proposed

listing rule (78 FR 64840)). Thus, within a given substrate, the chaparral composition is a reflection of stand age or shrub canopy cover, disturbance history, history of wildfire, and distance from the coast (Davis *et al.* 1988, p. 188; Gevirtz *et al.* 2007, p. 97). Therefore, even though Unit 3 may contain habitat such as oak woodland and chamise chaparral, the structure of the habitat may shift over time, and the unit currently contains the physical or biological features essential to the conservation of the species that may require special management considerations or protection. As such, Unit 3 meets the definition of critical habitat for Vandenberg monkeyflower according to the Act.

Economic Comments Related to the Draft Economic Analysis (DEA)

(42) Comment: Three commenters stated that public lands near Vandenberg Village provide important recreational opportunities. They expressed the concern that if critical habitat is designated, access to public lands would be reduced, and recreational activities such as hiking and bicycling would no longer be allowed. One of these commenters was also concerned that this would negatively affect local bike shops.

Our Response: The majority (approximately 81 percent) of the total proposed critical habitat designation is located on State lands consisting of the Reserve and La Purisima Mission SHP. Both of these areas have land management plans that specify allowable recreational activities. According to the Final Land Management Plan for the Reserve, bicycling is not allowed (see Gevirtz *et al*. 2007, *Final Land Management Plan for Burton Mesa Ecological Reserve*). The La Purisima Mission SHP Park General Plan

states that bicycles are permitted on approximately 5 miles of fire roads (see California State Parks 1991, *La Purisima Mission State Historic Park General Plan)*. Both plans also specify areas in which hiking is allowed.

If these land management plans are changed or updated, section 7 consultation with the Service is unlikely because a Federal nexus does not exist. Hence, it is unlikely that the designation of critical habitat would limit the recreational activities that are allowed in the Reserve and the La Purisima Mission SHP. To the extent that biking or other recreational activities occur on private lands, a Federal nexus requiring consultation with the Service is also unlikely. Therefore, it is unlikely that this designation of critical habitat for Vandenberg monkeyflower will have a significant effect on use of the areas designated for bicycling.

(43) Comment: One commenter stated that the proposed critical habitat designation would lead to numerous environmental and social benefits, including: (a) Requiring Federal agencies to review their actions to assess effects on critical habitat, (b) helping focus Federal and State conservation efforts, (c) increasing public awareness of the species, (d) creating educational opportunities, and (e) creating greater protection for Vandenberg monkeyflower. This commenter supported the designation of critical habitat for Vandenberg monkeyflower, and stated that as much land as possible should be included in the designation.

Our Response: While the primary intended benefit of critical habitat is to support

the conservation of endangered or threatened species, the designation would lead to numerous ancillary benefits, as discussed in the screening analysis under the high-end section 7 consultation scenario (IEc 2014, pp. 22–23). This scenario assumes that project proponents are unaware of the presence of Vandenberg monkeyflower and would, therefore, not consult with the Service absent critical habitat. Therefore, under this scenario, all section 7 consultations are an incremental effect of the critical habitat designation, and the designation would create multiple ancillary benefits. These include requiring Federal agencies to review their actions to assess effects on critical habitat, which would not only help protect Vandenberg monkeyflower but also benefit the general health of the chaparral ecosystem. Further benefits of the designation of critical habitat may include improved water and soil quality, and improved ecosystem health for coexisting species.

(44) Comment: One commenter stated that the Reserve is at risk of being removed from the regulatory protections afforded under the Title 14 ecological reserve designation (see California Code of Regulations, Title 14, §630). The commenter supported the proposal to designate critical habitat because, among other reasons, they believe it would provide an additional level of attention and protection for areas known to support the species and its pollinators. More specifically, the commenter stated that the area is at risk from requests from outside parties to obtain additional leases for projects within occupied habitat, such as the construction of water wells by the VVCSD.

Our Response: The primary purpose of designating critical habitat is to identify

the specific areas within the geographic area occupied by the species at the time of listing that contain the physical or biological features essential to the conservation of the species and that may need special management considerations or protection and to identify areas that may be essential for the conservation of the species. Critical habitat designations affect only Federal agency actions or federally funded or permitted activities. While the Final Land Management Plan for the Reserve provides baseline protection within the Reserve, the critical habitat designation could serve as an additional layer of protection if a Federal nexus (i.e., funding or authorization) exists for future actions that could affect critical habitat for Vandenberg monkeyflower.

At this time, we have not received any information indicating there is a Federal nexus for the construction of new water wells within the VVCSD. Without such a nexus, potential future construction of water wells would not require section 7 consultation (see also our response to *Comment 40*). However, as discussed in the DEA, it is possible that the presence of critical habitat would require the project to undergo additional review under the CEQA (IEc 2014, p. 20). As a result, the permitting agency, at their discretion, could require modification of the project plan to avoid adverse impacts to Vandenberg monkeyflower critical habitat.

Required Determinations

Regulatory Planning and Review (Executive Orders 12866 and 13563)

Executive Order 12866 provides that the Office of Information and Regulatory Affairs (OIRA) will review all significant rules. The Office of Information and Regulatory Affairs has determined that this rule is not significant.

Executive Order 13563 reaffirms the principles of Executive Order 12866 while calling for improvements in the nation's regulatory system to promote predictability, to reduce uncertainty, and to use the best, most innovative, and least burdensome tools for achieving regulatory ends. The executive order directs agencies to consider regulatory approaches that reduce burdens and maintain flexibility and freedom of choice for the public where these approaches are relevant, feasible, and consistent with regulatory objectives. Executive Order 13563 emphasizes further that regulations must be based on the best available science and that the rulemaking process must allow for public participation and an open exchange of ideas. We have developed this rule in a manner consistent with these requirements.

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 of 1996 (SBREFA; 5 U.S.C. 801 *et seq.*), whenever an agency is required to publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effects of the rule on small entities (i.e., small businesses, small organizations, and small government jurisdictions). However, no

regulatory flexibility analysis is required if the head of the 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.

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; and small businesses (13 CFR 121.201). Small businesses include manufacturing and mining concerns with fewer than 500 employees, wholesale trade entities with fewer than 100 employees, retail and service businesses with less than $5 million in annual sales, general and heavy construction businesses with less than $27.5 million in annual business, special trade contractors doing less than $11.5 million in annual business, and agricultural businesses with annual sales less than $750,000. To determine if potential economic impacts to these small entities are significant, we considered the types of activities that might trigger regulatory impacts under this designation as well as types of project modifications that may result. In general, the term "significant economic impact" is meant to apply to a typical small business firm's business operations.

The Service's current understanding of the requirements under the RFA, as amended, and following recent court decisions, is that Federal agencies are only required

to evaluate the potential incremental impacts of rulemaking on those entities directly regulated by the rulemaking itself, and therefore, not required to evaluate the potential impacts to indirectly regulated entities. The regulatory mechanism through which critical habitat protections are realized is section 7 of the Act, which requires Federal agencies, in consultation with the Service, to ensure that any action authorized, funded, or carried by the Agency is not likely to destroy or adversely modify critical habitat. Therefore, under section 7 only Federal action agencies are directly subject to the specific regulatory requirement (avoiding destruction and adverse modification) imposed by critical habitat designation. Consequently, it is our position that only Federal action agencies will be directly regulated by this designation. There is no requirement under RFA to evaluate the potential impacts to entities not directly regulated. Moreover, Federal agencies are not small entities. Therefore, because no small entities are directly regulated by this rulemaking, the Service certifies that this final critical habitat designation will not have a significant economic impact on a substantial number of small entities.

During the development of this final rule, we reviewed and evaluated all information submitted during the comment period that may pertain to our consideration of the probable incremental economic impacts of this critical habitat designation. Based on this information, we affirm our certification that this final critical habitat designation will not have a significant economic impact on a substantial number of small entities, and a regulatory flexibility analysis is not required.

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.

Based on information in the economic analysis, energy-related impacts associated with Vandenberg monkeyflower 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 would 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. Our economic analysis concludes that the economic costs of implementing the rule through section 7 of the Act will most likely be limited to the additional administrative effort required to consider adverse modification. This finding is based on the following factors:

(a) All units are considered occupied, providing baseline protection;

(b) Activities occurring within designated critical habitat with a potential to affect critical habitat are also likely to adversely affect the species, either directly or indirectly; and

(c) In occupied habitat, project modifications requested to avoid adverse modification are likely to be the same as those needed to avoid jeopardy.

Consequently, we do not believe that the critical habitat designation would significantly or uniquely affect small government entities. As such, 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 Vandenberg monkeyflower 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. Our DEA found (and our FEA reaffirms) that no significant economic impacts are likely to result from the designation of critical habitat for Vandenberg monkeyflower. Because the Act's critical habitat protection requirements apply only to Federal agency actions, few conflicts between critical habitat and private property rights should result from this designation. Based on information contained in the DEA and described within this document, it is not likely that economic impacts to a property owner would be of a sufficient magnitude to support a takings action. Therefore, the takings implications assessment concludes that this designation of critical

habitat for Vandenberg monkeyflower does not pose significant takings implications.

Federalism—Executive Order 13132

In accordance with E.O. 13132 (Federalism), this rule does not have significant Federalism effects. A federalism summary impact 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 received comments from the State of California (CDFW, who manages the Reserve) but did not receive comments from State Parks (La Purisima Mission SHP), in response to our request for information on the proposed rule. However, we verbally discussed this critical habitat rule with State Parks staff. From a federalism perspective, the designation of critical habitat directly affects only the responsibilities of Federal agencies. The Act imposes no other duties with respect to critical habitat, either for States and local governments, or for anyone else. As a result, the rule does not have substantial direct effects either on the States, or on the relationship between the national government and the States, or on the distribution of powers and responsibilities among the various levels of government. The designation may have some benefit to these governments because the areas that contain the features essential to the conservation of the species are more clearly defined, and the physical and biological features of the habitat necessary to the conservation of the species are specifically identified. This information does not alter where and what federally sponsored activities may occur. However, it may assist these local governments in long-

range planning (because these local governments no longer have to wait for case-by-case section 7 consultations to occur).

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

Civil Justice Reform—Executive Order 12988

In accordance with Executive Order 12988 (Civil Justice Reform), 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. To assist the public in understanding the habitat needs of the species, the rule identifies the elements of physical or biological features essential to the conservation of Vandenberg monkeyflower. The designated areas of critical habitat are presented on maps, and the rule provides several options for the interested public to obtain more detailed location information, if desired.

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 Vandenberg monkeyflower at the time of listing that contain the physical or biological features essential to conservation of the species, and there are no tribal lands not occupied by Vandenberg monkeyflower that are essential for the conservation of the species. Therefore, we are not designating critical habitat for Vandenberg monkeyflower 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 Ventura Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT**).

Authors

The primary authors of this rulemaking are the staff members of the Pacific Southwest Regional Office and Ventura 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; 1531–1544; 4201–4245, unless otherwise noted.

2. Amend § 17.12(h), the List of Endangered and Threatened Plants, by adding an entry for "*Diplacus vandenbergensis"* in alphabetical order under Flowering Plants, to read as follows:

§ 17.12 Endangered and threatened plants.

* * * * *

(h) * * *

Species		Historic range	Family	Status	When listed	Critical habitat	Special rules
Scientific name	**Common name**						
Flowering Plants							
* * * * * * *							
Diplacus vandenbergensis	Vandenberg monkeyflower	U.S.A. (CA)	Phrymaceae	E	847	17.96(a)	NA
* * * * * * *							

3. In § 17.96, amend paragraph (a) by adding the family Phrymaceae and an entry for *"Diplacus vandenbergensis* (Vandenberg monkeyflower)" in alphabetical order to read as follows:

§ 17.96 Critical habitat—plants.

* * * * *

Family Phrymaceae: *Diplacus vandenbergensis* (Vandenberg monkeyflower)

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

(2) Within these areas, the primary constituent elements of the physical or biological features essential to the conservation of Vandenberg monkeyflower consist of two components:

(i) Native maritime chaparral communities of Burton Mesa comprising maritime chaparral and maritime chaparral mixed with coastal scrub, oak woodland, and small patches of native grasslands. The mosaic structure of the native plant communities (arranged in a mosaic of dominant vegetation and sandy openings (canopy gaps)) may change spatially as a result of succession, and physical processes such as windblown sand and wildfire.

(ii) Loose sandy soils on Burton Mesa. As mapped by the Natural Resources Conservation Service (NRCS), these could include the following soil series: Arnold Sand,

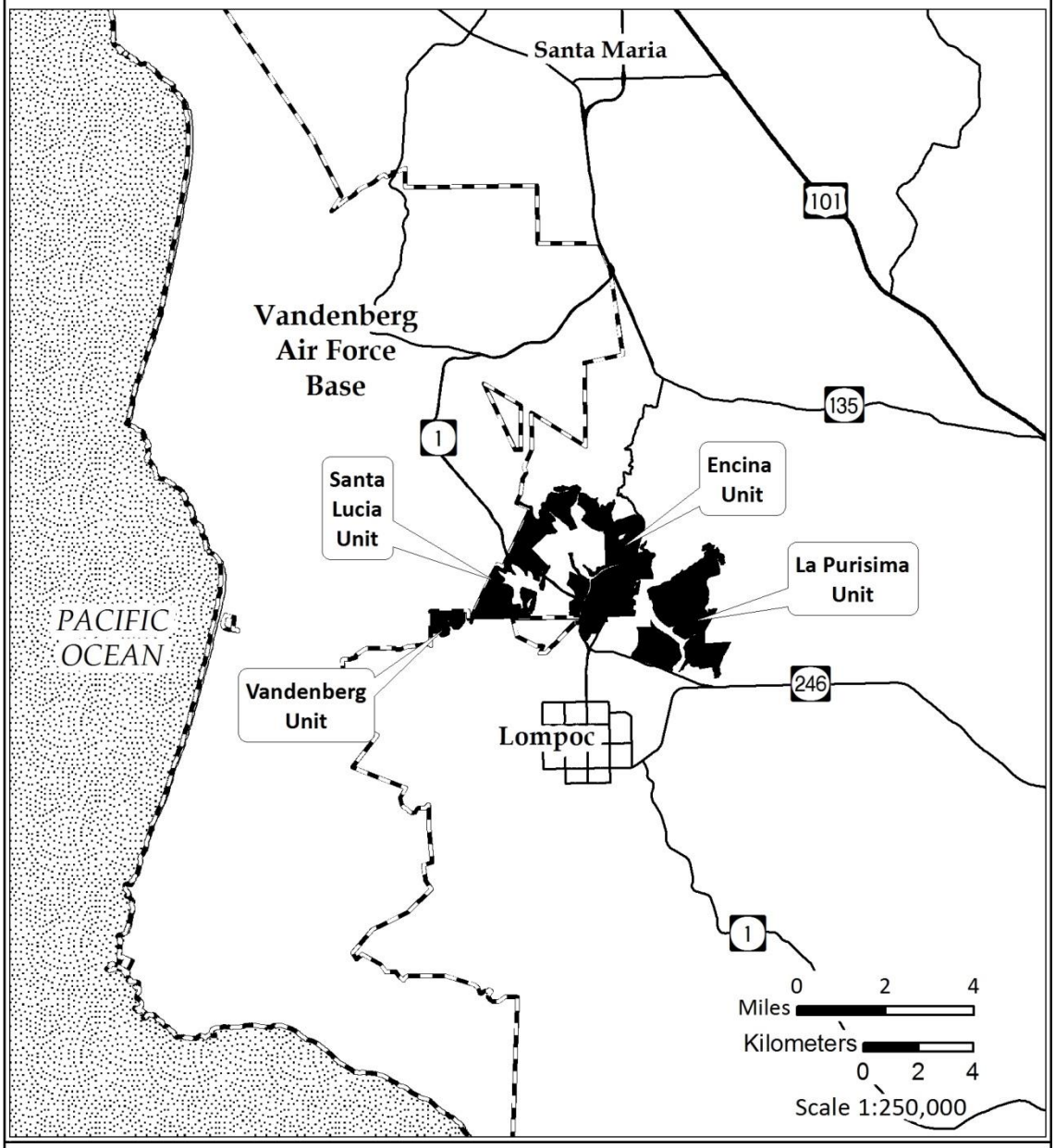
Marina Sand, Narlon Sand, Tangair Sand, Botella Loam, Terrace Escarpments, and Gullied Land.

(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 [INSERT DATE 30 DAYS AFTER DATE OF FEDERAL REGISTER PUBLICATION].

(4) *Critical habitat map units*. Data layers defining map units were created on a base of USGS 1:24,000 maps, and critical habitat units were then mapped using Universal Transverse Mercator (UTM) Zone 15N coordinates.

(5) Index map follows:

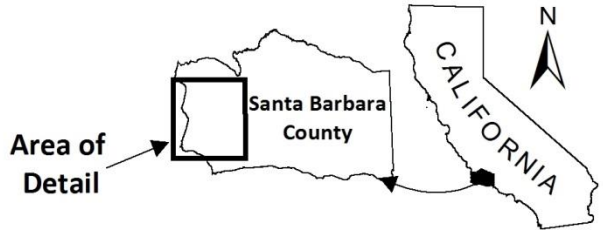
Critical Habitat for Vandenberg Monkeyflower



CRITICAL HABITAT

VANDENBERG AFB BOUNDARY

ROADS

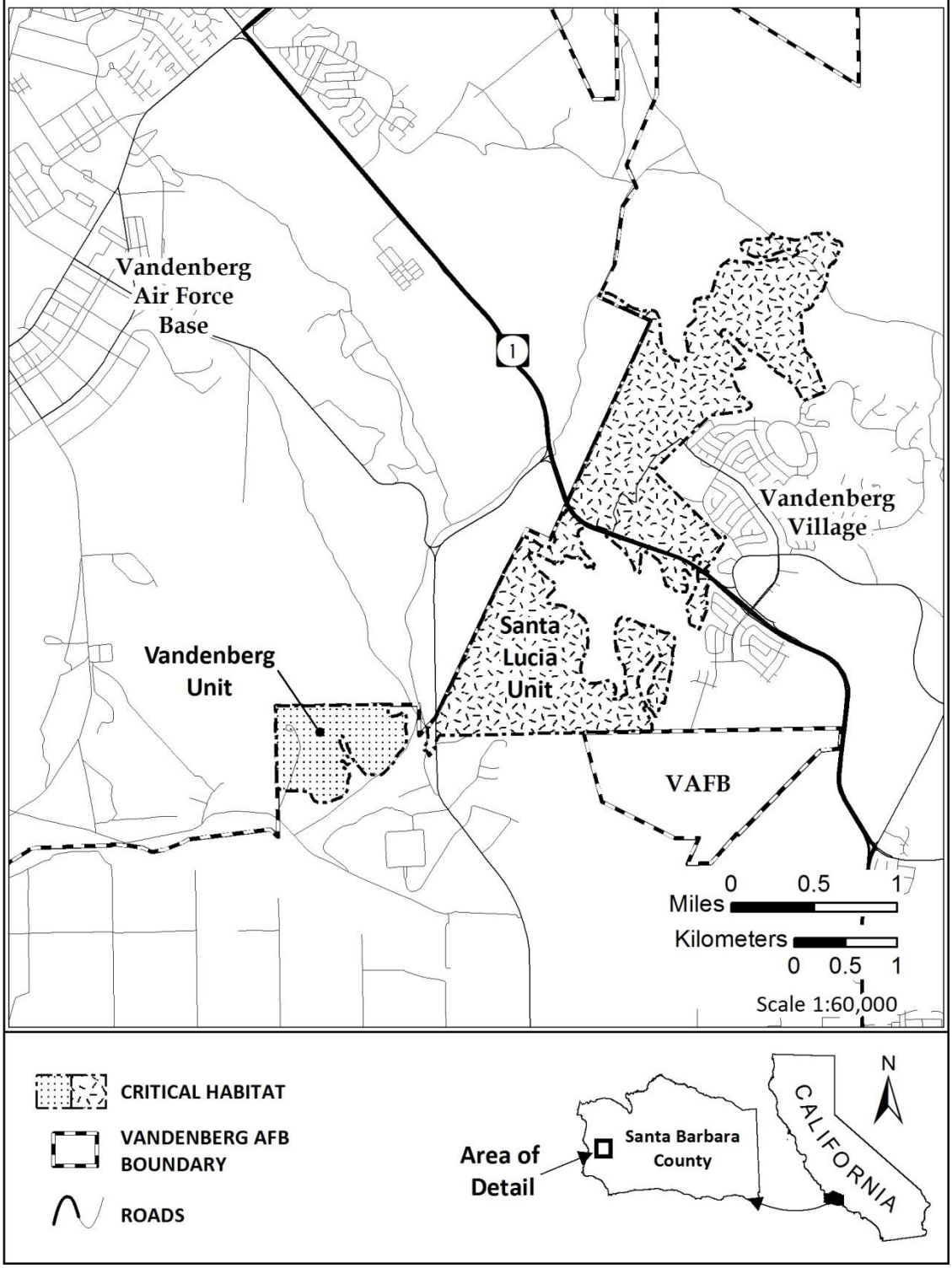


(6) Unit 1 (Vandenberg) and Unit 2 (Santa Lucia): Santa Barbara County, California.

(i) Unit 1 includes 223 ac (90 ha), and Unit 2 includes 1,484 ac (601 ha).

(ii) Map of Units 1 and 2 follows:

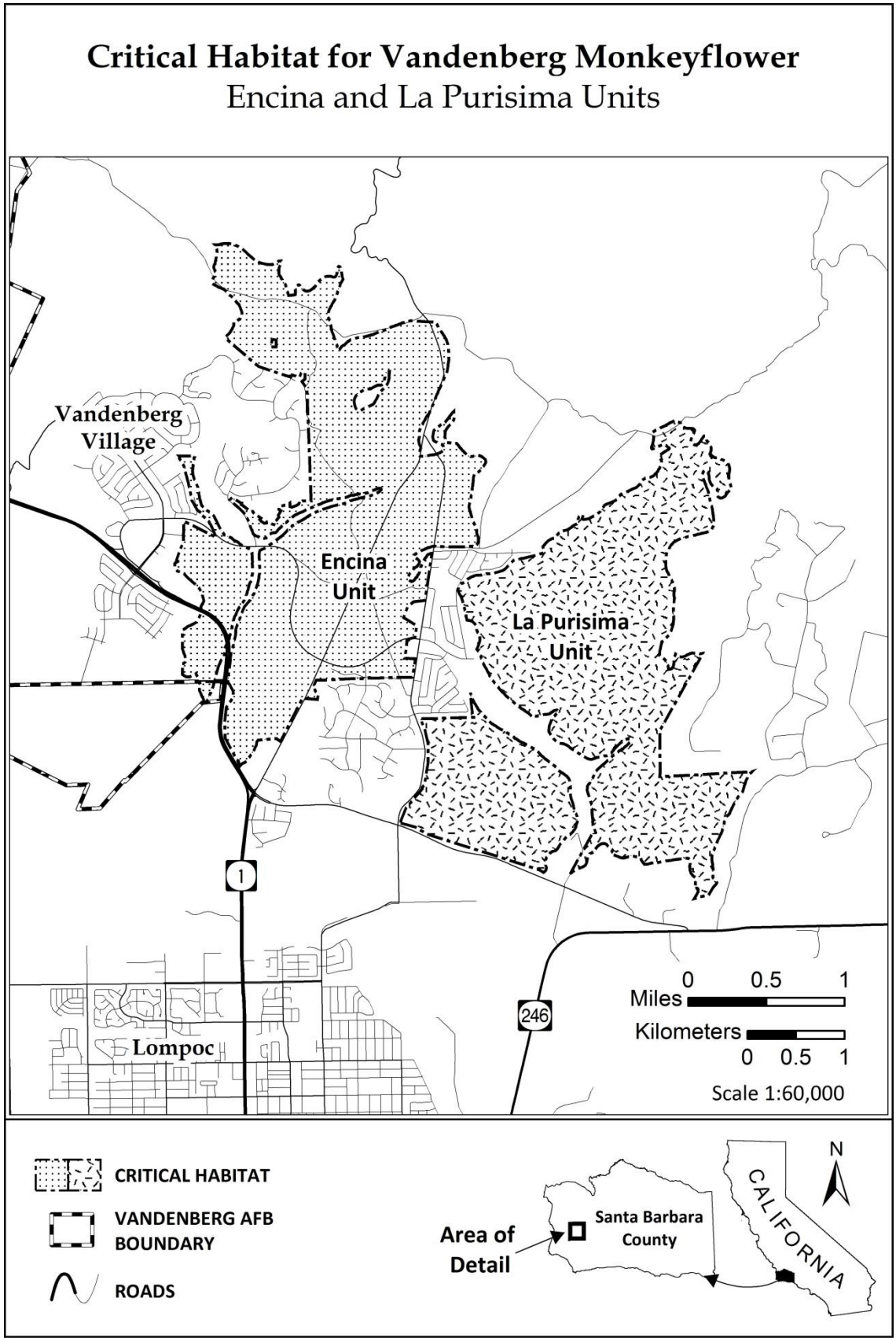
Critical Habitat for Vandenberg Monkeyflower
Vandenberg and Santa Lucia Units



(7) Unit 3 (Encina) and Unit 4 (La Purisima): Santa Barbara County, California.

(i) Unit 3 includes 2,024 ac (819 ha), and Unit 4 includes 2,024 ac (819 ha).

(ii) Map of Units 3 and 4 follows:


Critical Habitat for Vandenberg Monkeyflower
Encina and La Purisima Units
Vandenberg Village
Encina Unit
La Purisima Unit
Lompoc
1
246
0 0.5 1
Miles
Kilometers
0 0.5 1
Scale 1:60,000
CRITICAL HABITAT
VANDENBERG AFB BOUNDARY
ROADS
Area of Detail
Santa Barbara County
CALIFORNIA
N

* * * * *

Dated: July 29, 2015

Signed: Michael J. Bean

Principal Deputy Assistant Secretary for Fish and Wildlife and Parks

Billing Code 4310-55-P

[FR Doc. 2015-19352 Filed: 8/10/2015 08:45 am; Publication Date: 8/11/2015]