DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018–AU51

Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for Astragalus brauntonii and Pentachaeta lyonii

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), are designating critical habitat for the *Astragalus brauntonii* (Braunton's milk-vetch) and *Pentachaeta lyonii* (Lyon's pentachaeta) pursuant to the Endangered Species Act of 1973, as amended (Act). For *A. brauntonii*, approximately 3,300 acres (ac) (1,337 hectares (ha)) fall within the boundaries of the critical habitat designation. The critical habitat for *A. brauntonii* is located in Ventura, Los Angeles, and Orange Counties, California. For *P. lyonii*, approximately 3,396 ac (1,372 ha) fall within the boundaries of the critical habitat designation. The critical habitat for *P. lyonii* is located in Ventura and Los Angeles Counties, California.

DATES: This rule becomes effective on December 14, 2006.

ADDRESSES: Comments and materials received, as well as supporting documentation used in the preparation of this final rule, are available for public inspection, by appointment, during normal business hours, in the branch of Endangered Species, at the Ventura Fish and Wildlife Office, 2493 Portola Road, Suite B, Ventura, CA 93003. The final rule, economic analysis, and map are also available on the Internet at *http://www.fws.gov/ventura.*

FOR FURTHER INFORMATION CONTACT: Diane Noda, Field Supervisor, Ventura Fish and Wildlife Office, at the address in **ADDRESSES** (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, 7 days a week and 24 hours a day.

SUPPLEMENTARY INFORMATION:

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

Attention to and protection of habitat are paramount to successful conservation actions. The role that designation of critical habitat plays in protecting habitat of listed species, however, is often misunderstood. As discussed in more detail below in the discussion of exclusions under section 4(b)(2) of the Act, there are significant limitations on the regulatory effect of designation under section 7(a)(2) of the Act. In brief, (1) designation provides additional protection to habitat only where there is a federal nexus; (2) the protection is relevant only when, in the absence of designation, destruction or adverse modification of the critical habitat would in fact take place (in other words, other statutory or regulatory protections, policies, or other factors relevant to agency decision-making would not prevent the destruction or adverse modification); and (3) designation of critical habitat triggers the prohibition of destruction or adverse modification of that habitat, but it does not require specific actions to restore or improve habitat.

Currently, only 476 species, or 36 percent of the 1,311 listed species in the United States under the jurisdiction of the Service, have designated critical habitat. We address the habitat needs of all 1,311 listed species through conservation mechanisms such as listing, section 7 consultations, the section 4 recovery planning process, the section 9 protective prohibitions of unauthorized take, section 6 funding to the States, the section 10 incidental take permit process, and cooperative, nonregulatory efforts with private landowners. The Service believes that it is these measures that may make the difference between extinction and survival for many species.

In considering exclusions of areas originally proposed for designation, we evaluated the benefits of designation in light of *Gifford Pinchot Task Force* v. *United States Fish and Wildlife Service, 378 F.3d 1059 (9th Cir 2004) (hereinafter Gifford Pinchot).* In that case, the Ninth Circuit invalidated the Service's regulation defining ''destruction or adverse modification of critical habitat.'' In response, on December 9, 2004, the Director issued guidance to be considered in making section 7 adverse modification determinations. This critical habitat designation does not use the invalidated regulation in our consideration of the benefits of including areas in this final designation. The Service will carefully manage future consultations that analyze impacts to designated critical habitat, particularly those that appear to be resulting in an adverse modification determination. Such consultations will be reviewed by the Regional Office prior to finalizing to ensure that an adequate analysis has been conducted that is informed by the Director's guidance.

On the other hand, to the extent that designation of critical habitat provides protection, that protection can come at significant social and economic cost. In addition, the mere administrative process of designation of critical habitat is expensive, time-consuming, and controversial. The current statutory framework of critical habitat, combined with past judicial interpretations of the statute, make critical habitat the subject of excessive litigation. As a result, critical habitat designations are driven by litigation and courts rather than biology, and made at a time and under a time frame that limits our ability to obtain and evaluate the scientific and other information required to make the designation most meaningful.

In light of these circumstances, the Service believes that additional agency discretion would allow our focus to return to those actions that provide the greatest benefit to the species most in need of protection.

Procedural and Resource Difficulties in Designating Critical Habitat

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

The consequence of the critical habitat litigation activity is that limited listing funds are used to defend active lawsuits, to respond to Notices of Intent (NOIs) to sue relative to critical habitat, and to comply with the growing number of adverse court orders. As a result, listing petition responses, the Service's own proposals to list critically imperiled species, and final listing determinations on existing proposals are all significantly delayed.

The accelerated schedules of court-ordered designations have left the Service with limited ability to provide for public participation or to ensure a defect-free rulemaking process before making decisions on listing and critical habitat proposals, due to the risks associated with noncompliance with judicially imposed deadlines. This in turn fosters a second round of litigation in which those who fear adverse

impacts from critical habitat designations challenge those designations. The cycle of litigation appears endless, and is expensive, thus diverting resources from conservation actions that may provide relatively more benefit to imperiled species.

The costs resulting from the designation include legal costs, the cost of preparation and publication of the designation, the analysis of the economic effects and the cost of requesting and responding to public comment, and in some cases the costs of compliance with the National Environmental Policy Act (NEPA; U.S.C. 4371 et seq.). These costs, which are not required for many other conservation actions, directly reduce the funds available for direct and tangible conservation actions.

Background

It is our intent to discuss only those topics directly relevant to the designation of critical habitat in this rule. For more information on *Astragalus brauntonii* and *Pentachaeta lyonii,* refer to the proposed critical habitat published in the **Federal Register** on November 10, 2005 (70 FR 68982), and the final listing rule published on January 29, 1997 (62 FR 4172).

Previous Federal Actions

For more information concerning previous Federal actions concerning *Astragalus brauntonii* and *Pentachaeta lyonii*, refer to the proposed designation of critical habitat published in the **Federal Register** on November 10, 2005 (70 FR 68982). On January 27, 2003, our decision not to designate critical habitat for *A. brauntonii* and *P. lyonii* was challenged in *Center for Biological Diversity* v. *Norton* (Case No. 03–CV–0198–IEG (S.D.Cal.). On July 28, 2003, the Court entered a settlement agreement, in which the Service agreed to submit for publication a proposal to withdraw the existing ''not prudent'' determination together with a new proposed critical habitat determination for both species by November 1, 2005. On November 10, 2005, we published a proposed rule to designate approximately 3,638 ac (1,471 ha) of critical habitat in 6 units in Ventura, Los Angeles, and Orange Counties, California, for *A. brauntonii*, and approximately 4,212 ac (1,703 ha) of critical habitat in 7 units in Ventura and Los Angeles Counties, California for *P. lyonii* (70 FR 68982). On July 21, 2006, we published a notice announcing the availability of the draft economic analysis (DEA), and reopening of the public comment period (71 FR 41410). This comment period closed on August 21, 2006.

Summary of Comments and Recommendations

We requested written comments from the public on the proposed designation of critical habitat for *Astragalus brauntonii* and *Pentachaeta lyonii* in the proposed rule published on November 10, 2005 (70 FR 68982). We also contacted appropriate Federal, State, and local agencies; scientific organizations; and other interested parties and invited them to comment on the proposed rule. The initial comment period ended January 9, 2006. We published newspaper notices on July 6, 2006, in the Ventura County Star, Ventura, California; and in the Yorba Linda Star, Orange County, California, inviting public comment on the economic analysis and proposed critical habitat designation. We did not receive any requests for a public hearing.

During the comment period that opened on November 10, 2005, and closed on January 9, 2006, we received 10 comments directly addressing the proposed critical habitat designation: 5 from peer reviewers, 1 from a Federal agency, and 4 from organizations or individuals. During the comment period that opened on July 21, 2006, and closed on August 21, 2006, we received five comments directly addressing the proposed critical habitat designation and the draft economic analysis. Of these latter comments, one was from a Federal agency, one was from a State agency, and three were from organizations or individuals. Fourteen commenters supported the designation of critical habitat for *Astragalus brauntonii* and *Pentachaeta lyonii*, and one commenter did not express support or opposition to the designation but requested that the lands under their ownership be excluded from the designation of critical habitat under section 4(b)(2) of the Act. All comments and new information relating to the proposed critical habitat designation for *A. brauntonii* and *P. lyonii* are addressed in the following summary and incorporated into the final rule as appropriate.

Peer Review

In accordance with our policy published on July 1, 1994 (59 FR 34270), we solicited expert opinions from seven knowledgeable individuals with scientific expertise that included familiarity with the species, the geographic region in which the species occurs, and conservation biology principles. We received responses from five of the peer reviewers. The peer reviewers generally concurred with our methods and conclusions and provided additional information, clarifications, and suggestions to improve the final critical habitat rule. Peer reviewer comments are addressed in the following summary and incorporated into the final rule as appropriate.

We reviewed all comments received from the peer reviewers and the public for substantive issues and new information regarding critical habitat for *Astragalus brauntonii* and *Pentachaeta lyonii*, and address them in the following summary.

Peer Reviewer Comments

1. *Comment:* A peer reviewer disagreed with our assertion that fire suppression was a threat to *Astragalus brauntonii* and *Pentachaeta lyonii.* He stated that despite efforts to suppress fires in coastal southern California, the present frequency of fires, which is every 15 years or less, is substantially higher than historically, which is thought to be every 50 to 100 years. This current fire frequency has resulted in displacing native shrubs with non-native grasses that are competitively superior to *A. brauntonii* and *P. lyonii.* Therefore, he recommended that management of critical habitat areas emphasize the need for preventing excessive fires.

Our Response: We agree that excessive fires should be prevented in critical habitat areas. We note that *Astragalus brauntonii* responds favorably to fire because it triggers germination of dormant seeds. However, if fires are too frequent, this benefit may be outweighed by the risk of conversion to non-native grasslands. We recognize that the long dormant period for seeds suggests that frequent fires are not necessary to ensure persistence, and thus frequent fires should not be encouraged. Instead, the management goal should be to maintain those conditions to which the species is adapted. Contrary to the reviewer's assertion, we did not list fire suppression as a threat to *Pentachaeta lyonii.* Invasion of non-native plants and annual grasses is a major threat to both species, and therefore, excessive fires should be prevented in critical habitat for *both species.* We have removed fire suppression as a threat to *A. brauntonii* in the final designation.

2. *Comment:* A peer reviewer disagreed with the Service's statement that ''critical habitat provides relatively little additional protection to listed species,'' because designation of critical habitat includes information about the primary constituent elements the species needs for persistence and

recovery. This information can be used by Federal and non-Federal agencies to develop a basic landscape scale long-term conservation strategy for the species.

Our Response: The section referenced by the reviewer is intended to be a general statement regarding our position on the designation of critical habitat. As discussed in the preamble of this and other critical habitat designation rules, we believe that, in most cases, conservation mechanisms provided through section 7, the section 4 recovery planning process, the section 9 protective prohibitions of unauthorized take, section 6 funding to the States, the section 10 incidental take permit process, and cooperative programs with private and public landowners and Tribes provide greater incentives and conservation benefits than does the designation of critical habitat. Furthermore, while we agree critical habitat designations include species specific information that can be used by Federal and non-Federal agencies to develop a basic landscape scale long-term conservation strategy for a species, agencies may obtain similar types of information from other Service documents, such as species recovery plans.

3. *Comment:* A peer reviewer commented that the proposed critical habitat rule did not discuss the Incidental Take permit for *Pentachaeta lyonii* pursuant to Fish and Game Code Section 1081 that is currently being processed for the Lake Sherwood Area Plan in Ventura County. The peer reviewer stated that most of the western portion of Unit 3c is addressed in the plan.

Our Response: We are aware of the State of California's pending Incidental Take permit for the Lake Sherwood Area Plan. However, as of this final designation, the plan is not finished and thus has not yet been approved. Therefore, we did not consider the potential impacts of the proposed activities on *Pentachaeta lyonii* or critical habitat within the Lake Sherwood Area Plan for this designation.

4. *Comment:* A peer reviewer stated that we did not include in our records a location of *Astragalus brauntonii* that occurs on the ''old Ahmanson property.''

Our Response: The reviewer is referring to occurrence number 29 in the California Natural Diversity Database (CNDDB) record for *Astragalus brauntonii.* The exact location of this occurrence is not known. After careful review and inquiries to several individuals who are familiar with the occurrences for this species, we have concluded that this occurrence is probably incorrect and may not exist. We welcome any further information about this occurrence.

5. *Comment:* A peer reviewer stated that the ''historic Stunt Ranch site'' should be included for recovery purposes for potential reintroduction. The reviewer is referring to occurrence number 3 in the CNDDB database record for *Pentachaeta lyonii.*

Our Response: We did not include this occurrence because it currently does not appear to be suitable habitat for *Pentachaeta lyonii.* The species has not been present on the site since it burned in 1993. The soil in that area has been heavily disturbed by gophers, and this has made the area very favorable for non-native annual grasses. Despite the fact that this occurrence was not included in critical habitat, we recognize that there may be reintroduction potential for this site, and would consider this a valid recovery effort for the species.

6. *Comment:* A peer reviewer thought that the designation of critical habitat for *Astragalus brauntonii* should be postponed until the portions of proposed critical habitat that were burned by a wildfire in 2005 (subunits 1a–1d and subunits 2a–2f) could be surveyed. The fires may have stimulated dormant seeds of *A. brauntonii* in areas where the plant was not known to occur. The purpose of these surveys would be to determine if there are additional areas that contain *A. brauntonii* for inclusion into critical habitat.

Our Response: We were unable to postpone designation of critical habitat to wait for the results of post-fire surveys because a July 28, 2003, settlement agreement and resulting court order mandated that we propose critical habitat by November 1, 2005, and finalize the critical habitat designation by November 1, 2006. However, we did fund post-fire surveys for *Astragalus brauntonii* in those areas that were burned. The results of those surveys revealed several new locations of *A. brauntonii* outside of proposed critical habitat. One location was found along a firebreak extending up to 2,297 feet (ft) (700 meters (m)) from subunit 2a in Oakbrook Regional Park, and at least four new locations were found between subunits 2d and 2e. These locations are within areas similar in habitat, and within the known distribution of the species. This highlights the difficulty in determining every occurrence of the species because the locations of dormant seeds may be unknown until a disturbance occurs. However critical habitat does not reflect every population or occurrence of *A. brauntonii.* We are designating habitat that we have determined contains the physical and biological features essential to the conservation of the species arranged in the quantity and spatial characteristics necessary for conservation (see section titled ''Critical Habitat'' below for more information on the determination of critical habitat).

7. *Comment:* A peer reviewer thought that PCE 1 for *Astragalus brauntonii*, which was ''carbonate limestone soils derived from marine sediment,'' was not the best description of the soil type associated with the plant. A recent study in which soil samples were taken at most locations of *A. brauntonii* revealed that the plant occurs in areas with calcium carbonate soils (a broader range of soils), and not necessarily where soils are derived from limestone (Landis 2005). The reviewer suggested that the original PCE could lead researchers to only look for *A. brauntonii* in soils that are obviously derived from limestone.

Our Response: We have changed this PCE by removing the reference to limestone soils and adding calcium carbonate to the soils description. This change is also reflected in ''Areas that Provide the Basic Requirements for Growth (Such as Water, Light, and Minerals).''

8. *Comment:* A peer reviewer commented that he is aware of occurrences of *Astragalus brauntonii* between Units 3 and 4 but is unable to disclose the locations because he entered into a ''confidentiality clause'' with the clients that commissioned surveys.

Our Response: We are not entirely surprised that additional populations occur in the area between units 3 and 4, because this intervening area has similar features and PCEs to the two units. The Service has made a diligent effort to gather all sources of information concerning the distribution of this species, including surveys and other studies, biological assessments, other unpublished materials, and the personal knowledge of experts. Our proposed critical habitat was based on the best information available to us at the time.

9. *Comment:* A peer reviewer wanted to know why there were discussions of 4 PCEs for *Astragalus brauntonii* and *Pentachaeta lyonii* throughout the proposed rule, but only 3 PCEs were listed in the PCE section of the proposed rule.

Our Response: Only three PCEs were included in the proposed rule. The reference to 4 PCEs in the proposed rule

was an error, which has been corrected in this final rule.

10. *Comment:* One peer reviewer suggested that a population viability analyses would assist us in designing critical habitat units that are large enough to assure persistence of sufficiently sized populations. Another peer reviewer thought that most of the units are too small and should be increased in size to reduce potential impacts of Argentine ant invasions on pollinators. Argentine ants are associated with manmade structures, and research has shown that they reduce native arthropod populations (e.g., bees and wasps) up to 656 ft (200 m) from their nests. The peer reviewer commented that Argentine ants could threaten the persistence of the plants because they would be expected to displace the pollinator community and suggested that we should include an additional ''ant buffer'' of 656 ft (200 m) around each unit, which would make the minimum unit size about 180 ac (73 ha).

Our Response: We used the best scientific information available for this designation, and the Service does not typically conduct population viability analyses to assist in determining critical habitat. We acknowledge the potential indirect negative impacts of Argentine ants on the pollinators of these plant species and agree that a 656-ft (200-m) distance from the nearest edge of manmade structure may reduce any potential impacts. The impacts of Argentine ants on a rare native plant were discussed in a study by Conservation Biology Institute (2000). However, critical habitat, within the geographical range occupied by the species at the time it was listed, is defined by those physical and biological features essential to the conservation of the species (see Primary Constituent Elements section) which may require special management or protection. Physical and biological features essential to the conservation means PCEs arranged in the quantity and spatial characteristics necessary for conservation of the species. Critical habitat is not intended to create a preserve or other conservation area, or to include buffers in order to reduce impacts from manmade structures. The potential direct and indirect impacts to critical habitat and listed plants as a result of development of manmade structures would presumably be addressed through section 7 or other regulatory means. Therefore, while we recognize the reviewer's position, we believe that any identifiable impacts will be addressed through other regulatory means.

Comments From the State

Section 4(i) of the Act states, ''the Secretary shall submit to the State agency a written justification for failure to adopt regulations consistent with the agency's comments or petition.'' California Department of Fish and Game (CDFG) provided the following comments concerning the proposed critical habitat designation for *Astragalus brauntonii* and *Pentachaeta lyonii.*

11. *Comment:* CDFG provided several corrections to our habitat description for *Pentachaeta lyonii.* They stated that *P. lyonii* is not always confined to flat slopes but is known to occur on slopes 20–30 percent or greater, and said it can occur on thin volcanic surface soils underlaid by near-surface volcanic rock, and in localized flat areas on steep slopes, dirt hiking trails, and old roadbeds.

Our Response: We based our habitat description on the best available information to us at the time, but acknowledge that *Pentachaeta lyonii* may occur in a broader range of habitat preferences than was described in the proposed critical habitat.

12. *Comment:* CDFG stated that PCE 2 for *Astragalus brauntonii*, ''Low proportion (<10%) of shrub cover directly around the plant,'' was not entirely correct because the species may persist in the form of dormant seeds within mature stands of chaparral between episodes of fire. Therefore, occupied habitat would only contain PCE 2 at some points in successional time.

Our Response: We recognize that *Astragalus brauntonii* occurrences may not contain PCE 2 all of the time, but this PCE is essential for the plant to be able to complete a necessary life history component—seed germination and plant growth. It is not necessary for all three PCEs to be present at a site at all times for it to be considered critical habitat.

13. *Comment:* CDFG said that we were incorrect in stating that *Pentachaeta lyonii* does not maintain a dormant seed bank, and that the species responds to favorable growing conditions with dramatic increases in population numbers and occupied acreage, suggesting that the species maintains some type of seed bank between years.

Our Response: Keeley (1995) found that seeds buried more that ¼ inch under the soil for more than 6 months did not germinate, leading to his conclusion that the species does not maintain a dormant seed bank. However, in a later study, he acknowledged that seeds likely remain dormant during drought years (Fotheringham and Keeley 1998), and hypothesized that seeds may need to be buried less than ¼ inch to germinate following long-term dormancy periods. This hypothesis contradicted his previous conclusion that the species does not maintain a seed bank. We have corrected the final rule to reflect this information.

14. *Comment:* CDFG employees have observed *Pentachaeta lyonii* in habitat that does not appear to contain a biotic crust, so biotic crust should not be considered essential for all populations. In this critical habitat designation, PCE 2 is listed as ''Exposed soils that exhibit a microbiotic crust which may inhibit invasion by other plant competitors.''

Our Response: Although there has not been a specific study on biotic crusts and *Pentachaeta lyonii*, the habitat of this species was characterized in the listing rule by ''a low percentage of total plant cover and exposed soils with a microbiotic crust, partially assisting with reducing competition with other species.'' Crusts can be seen at many occupied sites of *P. lyonii*, and it is believed that these crusts reduce the ability of other plants to invade areas where *P. lyonii* occurs. We believe that this is an important PCE because it highlights a special management consideration for this species, which is that disturbance of the soil's surface crust should be avoided to prevent invasion by other plant species. We recognize that not every occurrence may contain microbiotic crusts, and it is not necessary for all three PCEs to be present at a site for it to be considered critical habitat.

15. *Comment:* CDFG noted that the minimum distance from one edge of a proposed unit to the other edge is insufficient to reduce potential adverse edge effects. They stated that Argentine ants, which are associated with manmade structures, are known to reduce native arthropod populations, including known insect pollinators of these species, such as bees and wasps. According to research, a distance of 328–656 ft (100–200 m) from the urban edge to core habitat is needed to ensure that core habitats remain free of Argentine ants.

Our Response: As discussed in our response to comment 10, we acknowledge that there is the potential for indirect negative impacts of Argentine ants associated with manmade structures on the pollinators of these plant species, and agree that an additional 328–656 ft (100–200 m) distance beyond the proposed units and from the nearest urban edge may reduce

these impacts. However, in defining critical habitat, we believe that we have identified those areas that contain the PCEs essential to the conservation of the species which may require special management considerations or protections. The potential direct and indirect impacts to critical habitat and listed plants as a result of development of manmade structures would presumably be addressed through section 7 or other regulatory means.

16. *Comment:* CDFG commented that the true distribution of *Astragalus brauntonii* is not known because of the species' dormant seeds that may persist undetected in the soil for many years, and recommended using soil and geologic maps to capture additional potentially suitable habitat in the vicinity of known locations.

Our Response: We included additional suitable habitat up to 935 ft (285 m) from known occurrences in order to capture areas that are likely to contain an undetected seed bank and to allow for genetic exchange between patches. We did not include habitat beyond the 935 ft (285 m) distance, because those areas are not known to be occupied by the species nor do we have evidence to support that this habitat is essential to the conservation of the species. We recognize that designation of critical habitat may not include all of the habitat areas that may ultimately be necessary for the recovery of the species, and therefore, critical habitat designations do not signal that habitat outside the designation is unimportant or not required for recovery.

17. *Comment:* CDFG commented that many of the units for both species lack connectivity to other units; suggested connecting units where there is potentially suitable geology or soils; and gave specific examples of units that could be connected.

Our Response: We connected occurrences that were within 1,968 ft (600 m) of each other into single units to allow for genetic exchange between populations. We did not connect occurrences beyond that distance because they were not likely to be genetically connected. In some cases, units closer than 1,968 ft (600 m) from each other were not connected because the intervening habitat was developed and lacked the PCEs.

Public Comments on the Process of Designating Critical Habitat

18. *Comment:* One commenter stated that the ''historic Stunt Ranch site'' should be included for recovery purposes for potential reintroduction. This commenter is referring to occurrence number 3 in the CNDDB database record for *Pentachaeta lyonii.*

Our Response: As explained in our response to peer review comment 5, we did not include this occurrence because it currently does not appear to be suitable habitat for *Pentachaeta lyonii.* Despite the fact that this occurrence was not included in critical habitat, we recognize that there may be reintroduction potential for this site, and would consider reintroduction to be a valid recovery effort for the species.

19. *Comment:* One commenter disagreed with the Service's statement that ''critical habitat provides relatively little additional protection to listed species'' and asserted that critical habitat designations include information about the primary constituent elements the species needs for persistence and recovery. This information can be used by Federal and non-Federal agencies to develop a basic landscape scale long-term conservation strategy for the species.

Our Response: As discussed in our response to peer review comment 2, the section referenced by the commenter is intended to be a general statement regarding our position on the designation of critical habitat. Although it is our position that the conservation and recovery of listed species are better served through other conservation mechanisms, we agree with the commenter's assertion that the information contained in this designation can be used to develop long-term conservation strategies for the species.

20. *Comment:* Several commenters thought that many of the units for both species were too small for a variety of reasons. They commented that we failed to account for areas needed for pollinator reproduction, which are different from pollinator foraging areas and may require larger patch sizes to support the pollinator population. One commenter asserted that additional area is needed to provide for pollinator persistence and pollinator linkages between populations of *Pentachaeta lyonii*, and that the minimum size needed to ensure persistence depends on local habitat conditions and the degree of isolation between patch sizes. The commenter noted that *P. lyonii* requires a low proportion of vegetative cover to persist, suggesting that patches should be larger to contain enough flowering plants to support pollinators. Similarly, a commenter thought critical habitat should be enlarged and merged to include appropriate soils and potential habitat and provide opportunities for pollinator dispersal. In the opinion of the commenter, this would provide corridors of connectivity, reducing habitat fragmentation and genetic isolation. Larger areas would also better support populations that shift in time and space, allow for ecosystem processes (including fire or fire-like disturbances) to function at appropriate scales, and minimize edge effects.

Our Response: We generally agree with the conservation biology principles and rationale presented by the commenters. However, the Act states that critical habitat is ''the specific areas within the geographical area occupied by the species * * * on which are found those physical or biological features essential to the conservation of the species'' (i.e., PCEs (see Primary Constituent Elements section)). Furthermore, based on the Act, we only designate critical habitat in areas outside the geographical area occupied by the species at the time of listing when the best available information indicates that it is essential to the conservation of the species.

We used the best scientific information available to determine the necessary habitat to ensure persistence of individual populations. In order to reduce fragmentation and preserve genetic connectivity, we connected populations within 1,968 ft (600 m) of each other because they are likely to be visited by the same pollinators. We also designated suitable habitat to allow for important life-history functions such as seed dispersal and presence of pollinators, and included areas that likely contain a seed bank and/or unmapped patches within populations. We believe that our critical habitat design captures the areas essential to the conservation to the species based on the best scientific information currently available. We believe that by capturing entire populations within single critical habitat units and by connecting populations within 1,968 ft (600 m) of each other into single units, the species will persist and pollination will continue.

21. *Comment:* One commenter thought that surveys should be conducted for *Astragalus brauntonii* and *Pentachaeta lyonii* because of a wildfire that burned areas within the known distribution of the species, and any additional locations discovered should be included in critical habitat.

Our Response: As discussed in our response to comment 6, we were unable to postpone our proposed designation of critical habitat further to incorporate the results of these surveys, although we funded post-fire surveys for *Astragalus brauntonii* in those areas that were burned and found additional locations

of the species. We determined that the fire did not burn within the known distribution of *Pentachaeta lyonii*, so there was no need for post-fire surveys.

22. *Comment:* One commenter thought that PCE 1 for *Astragalus brauntonii,* ''carbonate limestone soils derived from marine sediment,'' was not the best description of the soil type associated with the plant. A recent study in which soil samples were taken at locations of *A. brauntonii* revealed that the plant occurs with calcium carbonate soils (a broader range of soils), and not necessarily with limestone-derived soils (Landis 2005). The PCE as originally proposed could lead researchers to only look for *A. brauntonii* on soils that are obviously derived from limestone.

Our Response: As stated in our response to comment 7, we have changed this PCE by removing the reference to limestone soils and adding calcium carbonate to the soils description. This change is also reflected in ''Areas that Provide the Basic Requirements for Growth (Such as Water, Light, and Minerals)''.

23. *Comment:* Two commenters thought that an occurrence of *Astragalus brauntonii* located within the City of Oak Park should have been included within critical habitat because it contains the largest known seed bank in the Simi Hills. The commenters noted that inclusion of this occurrence, if a 3,281-ft (1,000-m) zone to protect pollinator habitat was incorporated, would link units 2c and 2d. In addition, one of the commenters stated that a ''Rare Plant Conservation Plan'' is in effect in the Oak Park area that covers three tiny preserves within open space and a ''demonstration garden'' that contains *A. brauntonii,* on land owned and managed by the Rancho Simi Recreation and Parks District. The commenter states that the plan does not adequately ensure the conservation and persistence of *A. brauntonii,* and should not be used as a basis to exclude this occurrence from critical habitat.

Our Response: The commenters are referring to occurrence 20 in the CNDDB record for *Astragalus brauntonii.* We did not include this occurrence because it does not contain the PCEs. A large portion of this occurrence was removed by Rancho Simi Recreation and Parks District to create a city park, other portions were removed by urban development, and very small remaining portions are surrounded by or directly adjacent to urban development. It is difficult to determine the size of a seed bank, and there is no clear evidence that this occurrence contains the largest known seed bank in the Simi Hills, although small numbers of plants and a seed bank may remain within open space areas along the periphery of developed areas. Remaining portions of this occurrence are almost completely surrounded by urban development; therefore, we would be unable to link units 2c and 2d because we do not intentionally include developed areas such as buildings, paved areas, and other areas that lack the PCEs. Because this occurrence does not contain the PCEs, we did not evaluate the existing conservation plan as a basis for excluding this occurrence from critical habitat.

24. *Comment:* Several commenters identified portions of *Pentachaeta lyonii* populations that were not included in the designation (e.g., in subunit 2a, and Unit 4), and also thought that intervening habitat between subunits should have been included (e.g., between subunits 2b and 2c, and between the two parts of subunit 3c).

Our Response: We do not intentionally include developed areas such as buildings, paved areas, and other areas that lack the PCEs in our critical habitat designations. Based on aerial photos of those areas (PhotoMapper 3.50, AirPhoto USA, NW Los Angeles Map 1999), we determined that those portions of populations and intervening habitat were previously removed by urban development.

25. *Comment:* A commenter thought we should have included *Pentachaeta lyonii* occurrences 9 and 19 from the CNDDB records in critical habitat.

Our Response: We only included extant occurrences that contain the PCEs within critical habitat. We did not include occurrence 9 within the nearby Unit 7 (Malibu Lake unit) because, based on the CNDDB records, this occurrence has been extirpated since 1992. We did not include occurrence 19 because three of the four patches of *Pentachaeta lyonii* within this occurrence were removed by construction of a golf course. The fourth and only remaining patch is within approximately a 500 square-foot (46-square-meter) area, and is surrounded by the golf course. We believe that this remaining occurrence contains a population size of fewer than 10 individuals and may have even been extirpated. This location lacks the PCEs and has little recovery or conservation value; therefore, it was not included in the critical habitat designation.

26. *Comment:* There were several suggestions of simple management strategies for protecting both species that would not result in economic hardship on any jurisdiction or management agency, as well as suggestions for additional new criteria for delisting. For *Astragalus brauntonii,* suggested management techniques include: Lifting the blade of bulldozers at least 18 inches in the air when clearing roads or creating firebreaks; using weed-whackers to clear weeds around the plant; and leaving cut stalks and seedpods on the side of the road rather than removing *A. brauntonii* plant material. For *Pentachaeta lyonii,* suggested management techniques include routing roads around critical habitat areas and controlling non-native weeds invading critical habitat areas without the use of herbicides and without disturbing the soil. For both species, suggested management techniques include not transplanting plants as a conservation tool because both species are dependent on specific soil characteristics and performing road maintenance, fuel modification, and other management activities after fruiting.

Our Response: We have incorporated some of the management strategies into the section titled ''Special Management Considerations or Protections'' in this rule. We may also provide these suggestions, in the form of best management practices, to local agencies when we provide technical assistance regarding ways to reduce impacts to listed species, and to Federal agencies through the section 7 consultation process. The suggested new criteria for delisting are valid recovery actions that we may attempt to accomplish in future recovery actions for the species. These criteria may also be incorporated into a revised recovery plan at some point in the future.

27. *Comment:* One commenter thought that the proposed critical habitat only maintains both species at their current level with no opportunity for recovery because we do not propose unoccupied suitable habitat. Other commenters thought that we should have included unoccupied suitable habitat on land owned by the National Park Service (NPS) or by local open space agencies because they represent opportunities for population expansion for the species. They noted that an experimental population of *Pentachaeta lyonii* was recently introduced at Paramount Ranch on NPS land, illustrating the potential for reintroductions into other areas.

Our Response: We disagree with the commenter that our proposal and designation do not provide opportunities for recovery of the species. Our critical habitat designation noted the fact that both plants occur in patchy distributions both physically and temporally. In order to incorporate

entire populations, we conducted a nearest neighbor analysis and determined that the average distance between patches of plants was 275 m (902 ft) for *Pentachaeta lyonii* and 285 m (935 ft) for *Astragalus brauntonii.* Therefore, in areas where the habitat was contiguous and PCEs were present, we included suitable habitat up to 275 m (902 ft) and 285 m (935 ft) from known patches of *P. lyonii* and *A. brauntonii,* respectively, to ensure that we captured the entire population (including the seed bank) within one critical habitat unit and minimized fragmentation. Furthermore, where we had populations within 600 m (1,968 ft) of one another and the habitat was contiguous and contained the PCEs, we connected those populations together in one unit to facilitate genetic exchange between populations through pollinator activity. We expect that these areas contain a seed bank, and/or additional suitable habitat for population expansion through seed dispersal. Both of these strategies capture recovery opportunities for the species and, through these strategies, we believe we have captured the entire area necessary to ensure persistence of the species. For further information, please refer to the ''Criteria Used to Identify Critical Habitat'' section. Although we did not designate specific areas of unoccupied habitat for potential reintroductions, we believe that this can be an important recovery tool for *P. lyonii,* particularly on Federal Lands, and we support these types of actions. We recognize that designation of critical habitat may not include all of the habitat areas that are necessary for the recovery of the species, and therefore, critical habitat designations do not signal that habitat outside the designation is unimportant or not required for recovery.

28. *Comment:* A researcher commented that we were incorrect in stating that *Pentachaeta lyonii* does not maintain a dormant seed bank. Surveys conducted in multiple years at the same site show large fluctuations in population size, and this would likely be impossible unless the species maintains a seed bank for at least 5 to 10 years.

Our Response: As discussed in our response to comment 13 from the State, we have corrected the final rule to reflect this information.

29. *Comment:* A researcher commented that the role of biotic crusts is unsupported by data and that this should not be used for PCE 2 for *Pentachaeta lyonii* because it suggests that crust is a required element for *P. lyonii* habitat. In the proposed designation, PCE 2 was listed as ''Exposed soils that exhibit a microbiotic crust which may inhibit invasion by other plant competitors.''

Our Response: As discussed in our response to comment 14, we recognize that not every occurrence may contain microbiotic crusts, and it is not necessary for all three PCEs to be present at a site for it to be considered critical habitat.

30. *Comment:* A researcher commented that PCE 3 for *Pentachaeta lyonii* should focus on the presence of bare ground rather than on proportion of vegetative cover. In the proposed designation, PCE 3 was listed as ''low proportion of total vegetative cover (<25%).'' The commenter asserted that this PCE can be misleading because, based on research, *P. lyonii* is found in areas with 20 to 60 percent cover of native vegetation at a larger scale (i.e., 538 to 2,153 square foot patch sizes (50 to 200 square meter)). Although the species can be found in areas with a larger proportion of total vegetative cover, there needs to be small openings of bare ground for the plant to grow in (i.e., > 10% bare ground on a small scale of less than approximately 3 ft (1 m) because it does not compete well with other species. In addition, the researcher found that plant litter accumulation associated with annual grass invasion reduces *P. lyonii* populations. The commenter indicated that this finding further highlights that bare ground is an essential component of this species' habitat.

Our Response: We agree with the researcher's comment, and have changed *P. lyonii* PCE 3 to read: ''a mosaic of bare ground (>10%) patches in an area with less than 60 percent cover.'' We believe this more accurately reflects the physical and biological needs essential to the conservation of the species.

31. *Comment:* A researcher commented that we should have a PCE that addresses habitat quality based on presence of *Pentachaeta lyonii*-associated native plant species and the absence of non-native invasive plants. *P. lyonii* habitat that is in decline shows increased presence of non-native species, build-up of litter cover and loss of bare ground, and slow loss of associated species.

Our Response: We agree that presence of non-native invasive plants indicates poor habitat quality for *Pentachaeta lyonii,* and that presence of some associated native species can be a good indicator of good habitat quality, and this concept was discussed in the proposed and final rule. However, we believe that PCEs 2 and 3 adequately capture habitat quality, because it is unlikely that either PCE would exist if the unit became overtaken with non-native invasive plants.

Comments Related to the Draft Economic Analysis

32. *Comment:* Two commenters stated that economic analysis overestimates the cost of critical habitat designation because it will affect real estate development on private lands only where there is a Federal nexus. Such a nexus will not exist for most projects in the area proposed as critical habitat.

Our Response: We recognize that real estate development on private lands does not come under the purview of the section 7 consultation process unless there is a Federal nexus. However, it is difficult to predict which future actions may bare a Federal nexus. The methodology of the analysis quantifies future costs when it is possible to isolate and measure them and then calculates the economic surplus resulting from future activities that may take place within proposed critical habitat. This approach avoids speculation about regulatory impacts. It is, however, possible to calculate the value added from development activities within areas of critical habitat. By using this methodology, we believe we have appropriately captured potential costs to the real estate development sector.

33. *Comment:* One commenter stated that costs that occurred prior to designation should not be included in the cost of critical habitat designation.

Our Response: Based on the 10th Circuit Court's ruling in *New Mexico Cattle Growers Association* v. *U.S. Fish and Wildlife Service, 248 F.3d 1277, 128 (10th Cir. 2001)* the Service conducts a full analysis of all the economic impacts of a critical habitat designation, regardless of whether those impacts are attributable co-extensively to other causes. Accordingly, here, the economic analysis specifies that it considers the future economic impacts associated with critical habitat designation and past costs that have resulted from efforts to conserve the species within areas of critical habitat. As explained in section III.1, past costs are defined as costs that occurred between when the species was listed under the Endangered Species Act and the present. These past costs are not attributable to critical habitat.

34. *Comment:* One commenter suggested that past development projects in areas of critical habitat should be analyzed to determine the limitations on development arising from critical habitat.

Our Response: The economic analysis uses consultation history to determine how many future development projects

will have a Federal nexus and what the recommended restriction on development will be. For both species in question, the number of available consultations on private development projects is highly limited or nonexistent. The available evidence, however, suggests that total avoidance of the species has been required in the past; for example, the 1999 consultation with Lennar Homes referenced in the report.

35. *Comment:* One commenter stated that that local zoning and other restrictions limit the pace of development, thus reducing the costs of critical habitat.

Our Response: We agree that local regulation plays a large role in determining the timing and intensity of development. The development projections from the Southern California Association of Governments (SCAG) that form the basis of the economic modeling incorporate these restrictions.

36. *Comment:* One commenter stated that there are many additional benefits of critical habitat designation beyond just the conservation of habitat for the listed species, and that these should be included in the economic analysis.

Our Response: In the context of a critical habitat designation, the primary purpose of the rulemaking (i.e., the direct benefit) is to designate areas in need of special management that contain the features that are essential to the conservation of listed species.

The designation of critical habitat may result in two distinct categories of benefits to society: (1) Use; and (2) non-use benefits. Use benefits are simply the social benefits that accrue from the physical use of a resource. Visiting critical habitat to see endangered species in their natural habitat would be a primary example. Non-use benefits, in contrast, represent welfare gains from ''just knowing' that a particular listed species'' natural habitat is being specially managed for the survival and recovery of that species. Both use and non-use benefits may occur unaccompanied by any market transactions.

A primary reason for conducting this analysis is to provide information regarding the economic impacts associated with a proposed critical habitat designation. Section 4(b)(2) of the Act requires the Secretary to designate critical habitat based on the best scientific data available after taking into consideration the economic impact, and any other relevant impact, of specifying any particular area as critical habitat. Economic impacts can be both positive and negative and by definition, are observable through market transactions.

Where data are available, the analysis attempt to recognize and measure the net economic impact (i.e., the increased regulatory burden less any discernable offsetting market gains), of species conservation efforts imposed on regulated entities and the regional economy.

Under Executive Order 12866, OMB directs Federal agencies to provide an assessment of both the social costs and benefits of proposed regulatory actions. OMB's Circular A–4 distinguishes two types of economic benefits: direct benefits and ancillary benefits. Ancillary benefits are defined as favorable impacts of a rulemaking that are typically unrelated, or secondary, to the statutory purpose of the rulemaking. In the context of critical habitat, the primary purpose of the rulemaking (i.e., the direct benefit) is the potential to enhance conservation of the species. The published economics literature has documented that social welfare benefits can result from the conservation and recovery of endangered and threatened species. In its guidance for implementing Executive Order 12866, OMB acknowledges that it may not be feasible to monetize, or even quantify, the benefits of environmental regulations due to either an absence of defensible, relevant studies or a lack of resources on the implementing agency's part to conduct new research. Rather than rely on economic measures, the Service believes that the direct benefits of the proposed rule are best expressed in biological terms that can be weighed against the expected cost impacts of the rulemaking.

We have accordingly considered, in evaluating the benefits of excluding versus including specific areas, the biological benefits that may occur to a species from designation (see below, Exclusions Under section 4(b)(2) of the Act), but these biological benefits are not addressed in the economic analysis.

37. *Comment:* One commenter stated that Section 9 of the ESA is flawed, and allows extirpation of plants in areas outside federal jurisdiction. The comment asserts that critical habitat is important to the conservation of the species by prohibiting take, requiring mitigation and facilitating the development of recovery plans.

Our Response: Critical habitat does not prohibit take of plants on private lands, or require mitigation for private activities. Critical Habitat only affects private activities when a project requires a Federal permit, approval or funding. The Act requires the Service to develop recovery plans independent of critical habitat designations.

38. *Comment:* One commenter thought that the cost estimated in the economic analysis was too high because it includes costs attributable to listing as opposed to costs of critical habitat designation. A second commenter asserted that it was unlawful to report the coextensive costs of conserving the species and that only the incremental costs resulting from critical habitat should be reported.

Our Response: The primary purpose of the economic analysis is to estimate the potential economic impacts associated with the designation of critical habitat for these two species. We interpret the Act to require that the economic analysis include all of the economic impacts associated with the conservation of the species, which may include some of the effects associated with listing. We note that the Act generally requires critical habitat to be designated at the time of listing, and if we had conducted an economic analysis at that time, the impacts associated with listing would not be readily distinguishable from those associated with critical habitat designation.

39. *Comment:* One commenter indicated that the majority of lands designated as critical habitat are already conserved as open space and thus not likely to be developed.

Our Response: We agree that a significant amount of land within the areas proposed as critical habitat has been conserved as open space via long-term agreements. We have detailed these agreements for each unit of proposed critical habitat. Projected development in the economic analysis is limited to areas that fall outside these conservation commitments.

40. *Comment:* One commenter asserted that SCAG projections are inadequate since they fail to consider local zoning requirements and capture only the potential for development in various regions.

Our Response: The SCAG development projections are the best information available on the extent, timing and placement of real estate development in the Los Angeles metropolitan region. These forecasts are based on aggregate projections of economic activity and employment, as well as location-specific factors such as zoning and other local factors.

41. *Comment:* One commenter stated that the costs presented in Table 1 of the Draft Economic Analyses are overstated because portions of proposed critical habitat are public lands.

Our Response: The totals presented in Table 1 are associated with development occurring on private land only.

42. *Comment:* One public comment stated that there is a discrepancy in the ''Surplus per Developed Acre'' between Table 1 and the text.

Our Response: Table 1 is correct, however, the corresponding figure presented in the text ($2,714,359) is not. This has been corrected in the final economic analysis.

43. *Comment:* One commenter stated that the small business analyses are incomplete.

Our Response: These sections have been expanded in the final economic analyses.

44. *Comment:* One commenter stated that it is unclear how the IMPLAN (economic modeling software) analyses calculated such a high number when the designation of critical habitat does not prevent development.

Our Response: The regional economic analysis considers the secondary effects of housing construction within the areas proposed as critical habitat. We note, however, that estimated secondary effects are small when considered as a fraction of the total contribution of the housing industry to the Southern California economy.

45. *Comment:* One commenter stated that it is unclear how the IMPLAN Analyses evaluates the secondary effects of critical habitat designation on other industries.

Our Response: Section V Regional Economic Impacts contains an explanation of how IMPLAN, which is an input-output model, computes indirect and induced effects. See also Table 3, which breaks down the secondary effects of designation to each industry.

46. *Comment:* One commenter asserted that the costs presented in Table 1 are significantly higher than they should be because they are associated with the designation on public and private lands.

Our Response: The costs presented in the reports are estimated based on the private land projected for development, not the public and private land proposed for critical habitat designation.

47. *Comment:* One commenter stated that there are other discrepancies between the text and Table 1, including the ''Projected Households''.

Our Response: Table 1 presents the projected households, which is consistent with the projected households in the text. Table 3 presents the households allowed by zoning, which is also consistent with the zoning allowances in the text.

48. *Comment:* One commenter requested to be excluded under 4(b)(2) of the Act based on economic impacts of critical habitat on their property. The landowner owns the property within the proposed Unit 6 for *Pentachaeta lyonii* and has proposed to develop 81 residential units on the property.

Our Response: Section 4(b)(2) of the Act requires the Secretary to designate critical habitat based on the best scientific data available after taking into consideration the economic impact, impact on national security, and any other relevant impact, of specifying any particular area as critical habitat. We received additional information from the landowner in a Memorandum, dated March 3, 2006, which estimated that the lost revenue as a result of critical habitat on their proposed development, if they avoided impacts to the species, would be approximately $78 million. As a result, Unit 6 in its entirety has been excluded from the final rule. See Exclusions Under Section 4(b)(2) of the Act section below for more details.

Summary of Changes From Proposed Rule

(1) We modified our criteria for delineating the outer boundaries of each unit resulting in minor reductions in unit sizes. In the proposed rule, the outer boundaries of each unit or subunit extended to 984 ft (300 m) on all sides of each mapped patch, which would presumably incorporate the minimum size habitat necessary to support associated insect pollinators. However, *A. brauntonii* and *P. lyonii* are known to be pollinated by several insect pollinators, and nonspecific pollinators are not a Primary Constituent Element (PCE) for either species. Upon further consideration, we felt we needed to better define and map the critical habitat boundaries. In looking at the mapping information from all mapped records (i.e., from the CNDDB database and from records collected from other sources), we noticed that the distribution of plants was often patchy, both at any one moment in time and over time. In other words, the plants were often expressed at different locations within a single area or population. This evidence supports the presence of a seed bank. In order to define when patches were within a single population and include areas with a seed bank, we conducted a nearest neighbor analysis for both species using all available mapped occurrences. To do this, we used GIS to determine the distance from the centroid of each mapped occurrence or ''patch'' to the centroid of the nearest mapped occurrence. We determined that the average distance between patches within populations was 935 ft (285 m) for *Astragalus brauntonii* and 902 ft (275 m) for *Pentachaeta lyonii*. Therefore, in the final designation, we designated additional suitable habitat up to 935 ft (285 m) from each mapped patch of *A. brauntonii* to incorporate the patchy expression of populations in space and over time, include unmapped patches within populations, incorporate the existing seed bank, and include areas for seed dispersal and genetic exchange through pollinator activity. For *P. lyonii*, we designated additional suitable habitat up to 902 ft (275 m) from each mapped patch to incorporate the patchy expression of the plant in space and time, include unmapped patches within populations, incorporate the existing seed bank, and include areas for seed dispersal and genetic exchange through pollinator activity. See the Criteria Used to Identify Critical Habitat section for details on the revised criteria. Table 1 for *A. brauntonii* and Table 3 for *P. lyonii* shows the proposed and final acreages of each unit that were changed based on the new criteria.

(2) We made corrections on ownership of lands within several units. The ownership of subunit 1c for *Pentachaeta lyonii* was misidentified as being entirely owned by Calleguas Municipal Water District. We determined that, in the proposed rule, the ownership of the land within this subunit is 49 ac (19 ha) of private land and only 2 ac (1 ha) of land owned by Calleguas Municipal Water District. After applying the revised criteria, in this final rule, the entire unit (33 ac (13 ha)) is on private land. The ownership of subunit 2b for *P. lyonii* was misidentified as 31 ac (13 ha) owned by Conejo Open Space Conservation Agency (COSCA), and 16 ac (6 ha) of private land; after identifying the correct ownership and applying the revised criteria, 22 ac (9 ha) is owned by COSCA and 18 ac (7 ha) is on private land. The ownership of subunit 1d for *Astragalus brauntonii* was misidentified as being owned by Rocketdyne. However, Rocketdyne sold this property to Boeing. In addition, it was determined that a small portion of this subunit is owned by a local agency. After identifying the correct ownership and applying the revised criteria, 68 ac (27 ha) is owned by Boeing and 2 ac (1 ha) is owned by a local agency (Santa Monica Mountains Conservancy). The ownership of subunit 2a for *A. brauntonii* was misidentified as 235 ac (95 ha) owned by COSCA, and 217 ac (88 ha) of private land; after identifying the correct ownership and applying the revised criteria, 118 ac (48 ha) is owned by the State, 221 ac (89 ha) is owned by COSCA, and 71 ac (29 ha) is on private land.

(3) We corrected the reference to soils in PCE 1 for *Astragalus brauntonii* from ''carbonate limestone soils derived from marine sediment'' to ''calcium carbonate soils derived from marine sediment,'' because we believe that this is a more accurate description of the soil type. A recent study in which soil samples were taken at most locations of *A. brauntonii* revealed that the plant occurs in areas with calcium carbonate soils (a broader range of soils), and not necessarily where soils are derived from limestone (Landis 2005). This correction is also reflected in the discussion of Areas that Provide the Basic Requirements for Growth (Such as Water, Light, and Minerals).

(4) We changed PCE 3 for *Pentachaeta lyonii* from ''low proportion of total vegetative cover (<25%)'' to ''a mosaic of bare ground (>10%) patches in an area with less than 60 percent cover,'' because we believe that this is a more accurate and complete description of the habitat. This is based on a recent habitat study of the species conducted by Santa Monica Mountains National Recreation Area. This correction is also reflected in the discussion of Areas that Provide the Basic Requirements for Growth (Such as Water, Light, and Minerals).

(5) We changed PCE 3 *Astragalus brauntonii* from ''periodic disturbances that stimulate seed germination (e.g., fire, flooding, erosion) and reduce vegetative cover'' to ''chaparral and coastal sage scrub communities characterized by periodic disturbances that stimulate seed germination (e.g., fire, flooding, erosion) and reduce vegetative cover,'' because we believe that a PCE should not be a physical process, but a habitat condition that occurs in part as a result of the physical process. The revised PCE allows for easier identification of its presence because it would be expected to be present at any point in time, whereas the original PCE is more difficult to identify because it occurs only periodically.

(6) We excluded Unit 6 for *Pentachaeta lyonii* (223 ac (94 ha)) under section 4(b)(2) of the Act from the final critical habitat designation based on economic impacts to the landowner. See Exclusions Under Section 4(b)(2) of the Act section for a detailed discussion.

Critical Habitat

Critical habitat is defined in section 3 of the Act as—(i) the specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) that may require special management considerations or protection; and (ii) specific areas outside the geographical area occupied by a species at the time it is listed, upon a determination that such areas have features that 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 any endangered species 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 prohibition against destruction or adverse modification of critical habitat with regard to actions carried out, funded, or authorized by a Federal agency. Section 7 requires consultation on Federal actions that are 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 government or public access to private lands. Section 7 is a purely protective measure and does not require implementation of restoration, recovery, or enhancement measures.

To be included in a critical habitat designation, the habitat within the area occupied by the species must first have features that are essential to the conservation of the species. Critical habitat designations identify, to the extent known using the best scientific data available, habitat areas that provide essential life cycle needs of the species (i.e., areas on which are found the primary constituent elements, as defined at 50 CFR 424.12(b)).

Habitat occupied at the time of listing may be included in critical habitat only if the essential features thereon may require special management or protection. Areas outside of the geographic area occupied by the species at the time of listing may only be included in critical habitat if they are essential for the conservation of the species. Accordingly, when the best available scientific data do not demonstrate that the conservation needs of the species require additional areas, we will not designate critical habitat in areas outside the geographical area occupied by the species at the time of listing. An area currently occupied by the species but was not known to be occupied at the time of listing will likely, but not always, be essential to the conservation of the species and, therefore, typically included in the critical habitat designation.

The Service's Policy on Information Standards Under the Endangered Species Act, published in the **Federal Register** on July 1, 1994 (59 FR 34271), and Section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Pub. L. 106–554; H.R. 5658) and the associated Information Quality Guidelines issued by the Service, provide criteria, establish procedures, and provide guidance to ensure that decisions made by the Service represent the best scientific data available. They require Service 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 determining which areas are critical habitat, a primary source of information is generally the listing package for the species. Additional information sources include the recovery plan for the species, articles in peer-reviewed journals, conservation plans developed by States and counties, scientific status surveys and studies, biological assessments, or other unpublished materials and expert opinion or personal knowledge. All information is used in accordance with the provisions of Section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Pub. L. 106–554; H.R. 5658) and the associated Information Quality Guidelines issued by the Service.

Section 4 of the Act requires that we designate critical habitat on the basis of the best scientific data available. Habitat is often dynamic, and species may move from one area to another over time. Furthermore, we recognize that designation of critical habitat may not include all of the habitat areas that may eventually be determined to be necessary for the recovery of the species. For these reasons, critical habitat designations do not signal that habitat outside the designation is unimportant or may not be required for recovery.

Areas that support populations, but are outside the critical habitat

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

Primary Constituent Elements

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

The specific PCEs required for *Astragalus brauntonii* and *Pentachaeta lyonii* are derived from the physical and biological features that are essential to the conservation of the species as described below.

Astragalus brauntonii

Space for Individual and Population Growth, Including Sites for Germination, Pollination, Reproduction, and Seed Bank

Seeds of *Astragalus brauntonii* are enclosed in dense hairy pods and require heat or physical scarification (breaking, scratching, or mechanically altering the seed coat) to germinate. Disturbances such as fire, erosion, and human activities such as mechanical scraping of soil (e.g., during road or trail maintenance) are known to stimulate germination (Fotheringham and Keeley 1998). Each seed pod produces between three and six seeds, and each plant may support upwards of several hundred flowers (Barneby 1964). Therefore, plants may produce a large number of seeds before dying back, depositing a seed ''bank'' in the soil that has the ability to remain dormant for many years until the next disturbance. Plant seeds are frequently dispersed by a variety of vectors, some which result in short-distance dispersal, and others which result in long-distance dispersal (Cain *et al.* 2000; Nathan and Muller-Landau 2000). Because the seeds of *A. brauntonii* have no specialized adaptations to facilitate seed dispersal by wind, it is likely that most seed fall within a short distance of the parent plant (Cain *et al.* 2000). Long-distance dispersal, however, is likely achieved by water (during rainstorms), and by transport of seeds by wildlife. Seeds from species within the Fabaceae family are known to be transported by small seed-eating mammals, including ground squirrels (*Citellus* sp.) pocket mice (*Perognathus* sp.), kangaroo rats (*Dipodomys* sp.), and birds, including quail (*Lophortyx* sp.) (Martin *et al.* 1961). Small mammals facilitate seed dispersal through consumption and elimination of undigested seed and through seed caching (Cain *et al.* 2000; Sieg 1987).

The presence of a persistent seed bank makes it difficult to determine the complete distribution of the species at any one point in time. Where a dormant seed bank is present, *Astragalus brauntonii* establishes quickly after a disturbance that removes other plant competitors and stimulates germination of dormant seeds (Fotheringham and Keeley 1998). Individual plants have a lifespan of two to three years, although some individuals may live five years or more if conditions are favorable, and then plants may not be visible again until the next disturbance (Fotheringham and Keeley 1998).

Like many other *Astragalus* species, *Astragalus brauntonii* is self-fertile, and also produces seed through cross-pollination (Fotheringham and Keeley 1998). Insect pollinators of *A. brauntonii* are polylectic, meaning that they utilize several plant species within an area (Karron 1987), and a variety of plants may be necessary to sustain populations of pollinators. Insect visitors include megachilid bees and bumblebees (Fotheringham and Keeley 1998). Gathmann and Tscharntke (2002) determined that maximum foraging distance of several species of solitary bees was positively correlated with body length. The body length of megachilid bees ranges 0.24–0.47 inches (in) (6–12 millimeters (mm)). Based on the linear regression model calculated by Gathmann and Tscharntke (2002), the maximum foraging distance of megachilid bees is 492–1,968 ft (150–600 m). The body length of bumblebees (*Bombus* sp.) ranges 0.51–0.98 in (13–25 mm), giving them a maximum foraging distance of 1,968–3,937 ft (600–1,200 m) (Gathmann and Tscharntke 2002). Therefore, known pollinators of *P. lyonii* have the ability to pollinate individual plants up to 1,968 ft (600 m) from the pollen source, suggesting that genetic connectivity can occur between populations that are up to 1,968 ft (600 m) apart from each other.

Areas That Provide the Basic Requirements for Growth (Such as Water, Light, and Minerals)

Astragalus brauntonii may be limited to shallow calcium carbonate soils derived from marine substrates (Mistretta 1992, Fotheringham and Keeley 1998, Betsey Landis, California Native Plant Society, in litt. 2005). It occasionally occurs on non-carbonate soils at down-wash sites near other known occurrences, although survivorship of plants may be reduced on non-carbonate soils (Fotheringham and Keeley 1998; B. Landis, in litt. 2005).

Habitat of *Astragalus brauntonii* has been described as scrub dominated by chaparral with a high overall percentage (<80%) of vegetative cover, however, the species does not tolerate shading and is associated with bare ground directly around the plant (Carroll 1987, Fotheringham and Keeley 1998). It may persist for several years on sites where microsite conditions inhibit or are hostile to shrub growth, or it may be gradually crowded out by more robust and tough-woody chaparral plants until the next disturbance event that removes plant cover (Carroll 1987; Fotheringham and Keeley 1998). Common species associated with chaparral communities in this region of California are chamise (*Adenostoma fasciculatum*), California lilacs (*Ceanothus* spp.), manzanitas (*Arctostaphylos* spp.), sages (*Salvia* spp.), California buckwheat (*Eriogonum fasciculatum*), laurel sumac (*Malosma laurina*), sugar bush (*Rhus ovata*), and yucca (*Yucca whipplei*) (Hanes 1988). Common species associated with coastal sage scrub are California sagebrush (*Artemisia californica*), sages, California buckwheat, lemonade berry (*Rhus integrifolia*), encelia (Encelia californica), and goldenbush (*Isocoma menziesii*) (Mooney 1988). The above-ground expression of *A. brauntonii* populations are patchy over time and space as a result of the dormant seed

bank and dynamic habitat conditions and physical processes where it occurs.

Primary Constituents for Astragalus brauntonii

Pursuant to our regulations, we are required to identify the known physical and biological features (PCEs) essential to the conservation of *Astragalus brauntonii*. All areas designated as critical habitat for *A. brauntonii* are occupied, within the species' historic geographic range, and contain sufficient PCEs to support at least one life history function.

Based on our current knowledge of the life history, biology, and ecology of the species and the requirements of the habitat to sustain the essential life history functions of the species, we have determined that the PCEs for *Astragalus brauntonii* are:

(1) Calcium carbonate soils derived from marine sediment;

(2) Low proportion (<10%) of shrub cover directly around the plant; and

(3) Chaparral and coastal sage scrub communities characterized by periodic disturbances that stimulate seed germination (e.g., fire, flooding, erosion) and reduce vegetative cover.

This designation is designed for the conservation of those areas containing PCEs necessary to support the life history functions that were the basis for the proposal. Because not all life history functions require all the PCEs, not all critical habitat will contain all of the PCEs.

Units are designated based on sufficient PCEs being present to support one or more of the species's life history functions. Some units contain all PCEs and support multiple life processes, while some units contain only a portion of the PCEs necessary to support the species' particular use of that habitat. Where a subset of the PCEs is present at the time of designation, this rule protects those PCEs and thus the conservation function of the habitat.

Pentachaeta lyonii

Space for Individual and Population Growth, Including Sites for Germination, Pollination, Reproduction, and Seed Bank

Pentachaeta lyonii is an annual plant that may exhibit large fluctuations in population size between years (Keeley and Baer-Keeley 1992). Population boundaries exhibit annual fluctuations, although the plants generally remain within core areas that contain suitable microsite characteristics (Keeley and Baer-Keeley 1992). Each flower produces 30 or more seed heads, and each seed head produces 20 to 40 seeds; therefore, in a favorable year, an individual plant may produce on the order of 1,000 seeds. The seeds likely persist in the soil for several years during extended dry spells (Fotheringham and Keeley 1998). Plant seeds are frequently dispersed by a variety of vectors, some which result in short-distance dispersal, and others which result in long-distance dispersal (Cain *et al.* 2000; Nathan and Muller-Landau 2000). The presence of deciduous pappus bristles on the seeds indicates that the plant does not exhibit long-distance dispersal by wind, as do many other species in this family, reducing the likelihood of colonization of new areas and contributing to the limited distribution by this method (Keeley and Baer-Keeley 1992; Fotheringham and Keeley 1998). Long-distance dispersal, however, is likely achieved by transport of seeds by wildlife. Seeds from species within the Asteraceae family are known to be transported by small seed-eating mammals, including ground squirrels (Citellus sp.) pocket mice (Perognathus sp.), kangaroo rats (Dipodomys sp.), and birds, including quail (Lophortyx sp.) (Martin *et al.* 1961). Small mammals facilitate seed dispersal through consumption and elimination of undigested seed and through seed caching (Cain *et al.* 2000; Sieg 1987).

Pentachaeta lyonii is not capable of self-pollination, but is dependent upon insect pollinators for successful seed production (Fotheringham and Keeley 1998). Pollinators of *P. lyonii* include digger bees, andrenid bees, and megachilid bees (Braken and Verhoeven 1998; Fotheringham and Keeley 1998). These pollinators are polylectic, meaning that they utilize several plant species within an area (Braken and Verhoeven 1998), and a variety of plants are necessary to sustain pollinator populations. Based on the linear regression model calculated by Gathmann and Tscharntke (2002), the maximum foraging distance of digger bees (body length 0.51–0.75 in; 13–19 mm) is approximately 1,968 ft (600 m), and the maximum foraging distance of megachilid bees (body length 0.24–0.47 in; 6–12 mm) is 492–1,968 ft (150–600 m). The maximum foraging distance of andrenid bees is 853–1,640 ft (260–500 m) (Gathmann and Tscharntke 2002). Therefore, known pollinators of *P. lyonii* have the ability to pollinate individual plants up to 1,968 ft (600 m) from the pollen source, suggesting that genetic connectivity occurs between populations that are up to 1,968 ft (600 m) apart from each other.

Areas That Provide the Basic Requirements for Growth (Such as Water, Light, and Minerals)

Pentachaeta lyonii tends to occur on rocky clay soils of volcanic origin (Baier & Associates 1991; Impact Sciences 2003). It has been recorded in areas with a large percentage of bare ground (>60%), a low proportion of vegetative cover (<25%), and it does not compete well with dense annual grasses or shrubs (Keeley 1995, Fotheringham and Keeley 1998). *P. lyonii* will persist in stable populations without disturbance if site conditions such as exposed soils that exhibit a microbiotic crust (Belnap 1990) inhibit invasion by shrubs and annual grasses, or it may require periodic disturbances to remove plant competitors (Fotheringham and Keeley 1998). The chaparral and coastal sage plant communities are similar to those described above for *Astragalus brauntonii*. The pocket grasslands within these shrub communities that support *P. lyonii* are comprised of native and nonnative grasses including purple needlegrass (Nassella pulchra), wild oat (Avena spp.), and bromes (*Bromus* spp.); as well as a variety of herbs.

Primary Constituents for Pentachaeta lyonii

Pursuant to our regulations, we are required to identify the known physical and biological features (PCEs) essential to the conservation of *Pentachaeta lyonii*. All areas designated as critical habitat for *P. lyonii* are occupied, within the species' historic geographic range, and contain sufficient PCEs to support at least one life history function.

Based on our current knowledge of the life history, biology, and ecology of the species and the requirements of the habitat to sustain the essential life history functions of the species, we have determined that the PCEs for *Pentachaeta lyonii* are:

(1) Clay soils of volcanic origin;

(2) Exposed soils that exhibit a microbiotic crust which may inhibit invasion by other plant competitors; and

(3) A mosaic of bare ground (>10%) patches in an area with less than 60 percent cover.

This designation is designed for the conservation of the PCEs necessary to support the life history functions that were the basis for the proposal. Because not all life history functions require all the PCEs, not all critical habitat will contain all of the PCEs.

Units are designated based on sufficient PCEs being present to support one or more of the species's life history functions. Some units contain all PCEs and support multiple life processes,

while some units contain only a portion of the PCEs necessary to support the species' particular use of that habitat. Where a subset of the PCEs is present at the time of designation, this rule protects those PCEs and thus the conservation function of the habitat.

Criteria Used To Identify Critical Habitat

As required by section 4(b)(1)(A) of the Act, we use the best scientific and commercial data available in determining areas that contain the features that are essential to the conservation of *Astragalus brauntonii* and *Pentachaeta lyonii.* We have also reviewed available information that pertains to the habitat requirements of these species. This includes information from Service documents, including the final rule listing these taxa as endangered (62 FR 4172; January 29, 1997) and the recovery plan (USFWS 1999); information from the CNDD (2003); data in reports submitted during section 7 consultations; recent biological surveys; regional GIS coverages; information from research published in peer-reviewed articles and presented in agency reports; aerial photos; and discussions with botanical experts. We designated no areas outside the geographic area presently occupied by the species.

We used agency and academic reports to describe the ecology, habitat, and pollination biology of *Astragalus brauntonii* and other related *Astragalus* species (Carroll 1987; Karron 1987; Fotheringham and Keeley 1998; Gathmann and Tscharntke 2002). We used agency and academic reports to describe the ecology, habitat, and pollination biology of *Pentachaeta lyonii* (Belnap 1990; Keeley and Baer-Keeley 1992; Keeley 1995; Braker and Verhoeven 1998; Fotheringham and Keeley 1998; Gathmann and Tscharntke 2002).

We designated critical habitat on lands that were occupied at the time of listing, are currently known to be occupied, and contain sufficient PCEs to support life history functions essential for the conservation of *Astragalus brauntonii* and *Pentachaeta lyonii*, and may be in need of special management considerations or protections. In a few instances, we designated occupied areas that were identified after listing, but which we determined to be essential to the conservation of *A. brauntonii* and *P. lyonii.*

We reevaluated the proposed designations based on public comment, peer review, the economic analysis of the proposed rule, public comments on the economic analysis, and other available and new information to ensure that the designation accurately reflects habitat containing the physical and biological features essential to the conservation of *Astragalus brauntonii* and *Pentachaeta lyonii.*

Astragalus brauntonii

We designated critical habitat for *Astragalus brauntonii*—supporting areas that were known to be occupied at the time of listing and contain the features essential to the conservation of the species. We also designated occurrences not known to be occupied at the time of listing but which are currently occupied, and were determined to be essential to the conservation of the species. We included occurrences not known to be occupied at the time of listing because this species is extremely limited in distribution and often occurs in very small disjunct populations, making it particularly vulnerable to extinction. According to Noss *et al.* (1997), a species distributed across multiple sites within its range is less susceptible to extinction than another similar species confined to far fewer sites. As a result, being restricted to small, isolated locations makes the species more vulnerable to threats such as loss of genetic variation, extremely small or declining population sizes, and increased vulnerability to stochastic (i.e., random or less predictable) events. Inclusion of all known occurrences that still contain the PCEs was deemed necessary in this instance to reduce fragmentation and helps to maintain genetic connectivity between populations and increase the chance of recolonization from neighboring patches if one patch becomes extirpated.

We designated critical habitat for *Astragalus brauntonii* in areas that contained known populations and additional surrounding suitable habitat that likely supports unmapped or unknown patches present but missed during surveys within populations, and likely incorporates the existing seed bank. We included patches of surrounding suitable habitat, using the method described below, around known plant locations because of the difficulty of knowing the full distribution given the long dormancy of this species' seed bank and the aboveground expression of the plant in different portions of the species' range over time. Inclusion of this surrounding suitable habitat allows for necessary life history functions such as seed dispersal, support of associated insect pollinators, and appropriate periodic ground disturbances in order to stimulate dormant seeds within the soil to germinate. We also connected units within close geographic proximity to each other to maintain genetic connectivity between populations, reduce fragmentation, and to include contiguous habitat for pollinators and seed dispersal. A detailed description of how we determined areas appropriate for inclusion follows.

We used a multi-step process to map critical habitat units. First, we mapped all CNDDB records of *Astragalus brauntonii* in a GIS format. These data consist of polygons (figures made up of several line segments) depicting the results of field surveys for *A. brauntonii.* Additional records from recent surveys that are not in the CNDDB records were also mapped in a GIS format. To determine areas where unmapped or unknown patches within populations are likely to occur, and to include areas that contain an unknown or unexpressed seed bank, we measured the distance from the centroid of each known occurrence or ''patch'' to the centroid of the nearest neighboring patch, and found that the average distance between nearest patches was 935 ft (285 m). Therefore, we included additional suitable habitat up to 935 ft (285 m) from known occurrences to incorporate entire populations that are patchy in time and space.

Then, we connected areas that were within 1,968 ft (600 m) of each other, because this is the distance between populations that could be traversed by important insect pollinators, and this approach allows for genetic exchange and connectivity between populations and reduces fragmentation. As discussed in the PCEs section, known pollinators of *Astragalus brauntonii* include megachilid bees and bumblebees. Based on body length, foraging ranges are approximately 492–1,968 ft (150–600 m) for megachilid bees and 1,968–3,937 ft (600–1,200 m) for bumblebees (Gathmann and Tscharntke 2002). We chose 1,968 ft (600 m) as the maximum distance to connect known populations because 1,968 ft (600 m) is the minimum foraging range for bumblebees, and megachilid bees also fall within this foraging range. Plant communities between these areas would also support insect pollinators and seed dispersers of *A. brauntonii,* and may also contain unknown or unmapped populations and/or a dormant seed bank.

Pentachaeta lyonii

We designated critical habitat for areas that support occurrences of *Pentachaeta lyonii* that were known to be occupied at the time of listing and contain the features essential to the conservation of the species. We also designated occurrences not known to be

occupied at the time of listing but which are currently occupied; however, these occurrences are within the geographic range of occurrences known to be occupied at the time of listing and contain the features essential to the conservation of the species. With the exception of Unit 6, we included all known occurrences that still contain the PCEs because this species is extremely limited in distribution, and patches exhibit large annual fluctuations in population numbers and area, making it particularly vulnerable to extinction. According to Noss *et al.* (1997), a species distributed across multiple sites within its range is less susceptible to extinction than another similar species confined to far fewer sites. As a result, being restricted to small, isolated locations makes the species more vulnerable to threats such as loss of genetic variation, extremely small or declining population sizes, and increased vulnerability to stochastic (i.e., random or less predictable) events. Inclusion of all known occurrences, with the exception of Unit 6, that still contain the PCEs reduces fragmentation, maintains genetic connectivity between populations, and increases the chance of recolonization from neighboring patches if one patch becomes extirpated.

We designated critical habitat for *Pentachaeta lyonii* in areas that contained known populations and additional surrounding suitable habitat that likely includes unmapped or unknown patches present but missed during surveys within populations, and incorporates the existing seed bank. We included surrounding habitat around known plant locations, using the method described below, because the boundaries of patches fluctuate between years, and this species' ability to maintain a seed bank during extended dry spells makes it difficult to know the full distribution of the species. Inclusion of surrounding suitable habitat allows for support of associated insect pollinators. We also connected units within close geographic proximity to each other to maintain genetic connectivity between populations, reduce fragmentation, and include contiguous habitat for pollinators and allow for population boundaries to expand.

We used a multi-step process to map critical habitat units. First, we mapped all CNDDB records of *Pentachaeta lyonii* in a GIS format. These data consist of polygons depicting the results of field surveys for *P. lyonii.* Additional records from recent surveys that are not in the CNDDB records were also mapped in a GIS format. To determine areas where unmapped or unknown patches within populations are likely to occur, and to include areas that contain an unknown or unexpressed seed bank, we measured the distance from the centroid of each known occurrence or ''patch'' to the centroid of the nearest neighboring patch, and found that the average distance between nearest patches was 902 ft (275 m). Therefore, we included additional suitable habitat up to (902 ft (275 m) from known occurrences. Population boundaries are known to fluctuate, so this approach also includes areas into which populations could expand.

Then, we connected areas that were within 1,968 ft (600 m) of each other because this is the distance between populations that could be traversed by important insect pollinators, and this approach allows for genetic exchange and connectivity between populations and reduces fragmentation. As discussed in the PCEs section, known pollinators of *Pentachaeta lyonii* include digger bees, megachilid bees, and andrenid bees. Based on body length, foraging ranges are approximately 1,968 ft (600 m) for digger bees, 492–1,968 ft (150–600 m) for megachilid bees and 853–1,640 ft (260–500 m) for andrenid bees (Gathmann and Tscharntke 2002). We chose 1,968 ft (600 m) as the maximum distance to connect known populations because 1,968 ft (600 m) is the foraging range for digger bees, and megachilid bees, and andrenid bees also fall within this foraging range. Plant communities between these areas would also support insect pollinators, include areas for population boundaries to expand, and may also contain unknown or unmapped populations and/or a seed bank.

When determining final critical habitat boundaries, we made every effort to avoid including developed areas such as buildings, paved areas, and other structures that lack PCEs for *Astragalus brauntonii* and *Pentachaeta lyonii.* Because of their small scale, the maps prepared under the parameters for publication within the *Code of Federal Regulations* may not reflect the exclusion of such developed areas. Any such structures and the land under them inadvertently left inside critical habitat boundaries shown on the maps of this final rule have been excluded by text and are not designated as critical habitat. Therefore, Federal actions limited to these excluded areas would not trigger section 7 consultation, unless they affect the species and/or primary constituent elements in adjacent critical habitat.

We are designating critical habitat in areas that contain sufficient primary constituent elements (PCEs) to support life history functions essential for the conservation of the species. Lands are proposed for designation based on sufficient PCEs being present to support the life processes of the species. Some lands contain all PCEs and support multiple life processes. Some lands contain only a portion of the PCEs necessary to support the particular use of that habitat.

A brief discussion of each area designated as critical habitat is provided in the unit descriptions below. Additional detailed documentation concerning the essential nature of these areas is contained in our supporting record for this rulemaking.

Special Management Considerations or Protections

When designating critical habitat, we assess whether the areas determined to be occupied at the time of listing and containing the PCEs may require special management considerations or protections. As discussed in the listing rule, throughout our proposed rule published on November 10, 2006 (70 FR 68982), and in this final rule, most of the known occurrences of *Astragalus brauntonii* and *Pentachaeta lyonii* occur within the direct vicinity of urban areas and are threatened by direct and indirect effects of habitat fragmentation and loss resulting from urban development. The most significant threat to both species is direct loss of plants from urban development. In addition, indirect effects associated with urban development include habitat fragmentation, which reduces gene flow between sites; reduction in insect pollinators; increases in nonnative plants and animals; and changes in local hydrology that affect plant communities (Conservation Biology Institute 2000).

Known threats to both species include but are not limited to: Weed control such as herbicide application, mowing, and direct removal of plants; increased fire frequencies associated with human activities that contribute to the conversion of native shrubland to grassland; competition from nonnative plant species; and cattle grazing and recreational activities such as off-road vehicle use and equestrian and foot traffic that results in trampling of plants. Other known threats specific to *Astragalus brauntonii* include land use activities that result in frequent disturbances and removal of plants before they replenish the seed bank, such as yearly road maintenance. Other known threats specific to *Pentachaeta lyonii* include soil-disturbing activities such as discing associated with fire suppression activities and changes to

the structure and composition of pocket grassland communities that displace *P. lyonii* (i.e., introduction of nonnative annual grasses, changes in local hydrology, and increased gopher activity). As such, we believe that each area designated as critical habitat may require some level of management and/or protection to address the current and future threats to the species. Threats specific to each unit that may require special management considerations or protection are further discussed in the Unit Descriptions section.

Critical Habitat Designation

We are designating 3,300 ac (1337 ha) within six units as critical habitat for *Astragalus brauntonii.* The critical habitat areas described below constitute our best assessment at this time of areas determined to be occupied at the time of listing, that contain the PCEs and may require special management, and those additional areas that were not known at the time of listing but were found to be essential to the conservation of *A. brauntonii.* With the exception of Units 1 and 3, all areas not known at the time of listing are within the same geographic areas and part of the same populations as those areas known at the time of listing. For reasons described previously (see Criteria Used To Identify Critical Habitat section), we have determined that inclusion of all known locations that still contain the PCEs, including those not known at the time of listing, is essential to the conservation of the species because this species is extremely limited in distribution, has a very small overall population size, and often occurs in very small disjunct populations, making it particularly vulnerable to extinction (Noss *et al.* 1997). Inclusion of these populations reduces fragmentation, prevents range collapse of the species, maintains genetic connectivity between populations, and increases the chance of recolonization from neighboring populations if one patch becomes extirpated (Noss *et al.* 1997).

Table 1 shows the proposed and final critical habitat units for *Astragalus brauntonii.* Table 2 shows the approximate area designated as critical habitat for *A. brauntonii* by land ownership.

TABLE 1.—PROPOSED AND FINAL CRITICAL HABITAT UNITS FOR ASTRAGALUS BRAUNTONII (AC (HA))

Critical habitat units/subunits	County	Proposed rule (Nov. 10, 2005) ac (ha)	Final rule ac (ha)
Unit 1: Northern Simi Hills	Ventura	471 (191)	434 (175)
Subunit 1a		196 (79)	183 (74)
Subunit 1b		80 (32)	73 (29)
Subunit 1c		118 (48)	108 (44)
Subunit 1d		77 (32)	70 (28)
Unit 2: Southern Simi Hills	Ventura/Los Angeles	1,128 (456)	1,019 (414)
Subunit 2a		452 (183)	410 (166)
Subunit 2b		1 (0.5)	1 (0.5)
Subunit 2c		173 (70)	144 (58)
Subunit 2d		121 (49)	111 (45)
Subunit 2e		157 (63)	146 (60)
Subunit 2f		224 (90)	207 (84)
Unit 3: Santa Monica Mountains	Los Angeles	243 (98)	228 (93)
Unit 4: Pacific Palisades	Los Angeles	577 (233)	505 (205)
Unit 5: Monrovia	Los Angeles	331 (134)	282 (114)
Unit 6: Coal Canyon	Orange	889 (360)	832 (336)
Total		3,639 (1,472)	3,300 (1,337)

TABLE 2.—APPROXIMATE ACREAGE BY LAND OWNERSHIP CATEGORIES WITHIN CRITICAL HABITAT UNITS/SUBUNITS FOR ASTRAGALUS BRAUNTONII (AC (HA))

Critical habitat unit and subunit	Federal	State	Local agency	Private	Total
Unit 1: Northern Simi Hills	0 (0)	0 (0)	21 (9)	413 (166) 4	34 (175)
Subunit 1a	0 (0)	0 (0)	19 (8)	164 (66)	183 (74)
Subunit 1b	0 (0)	0 (0)	0 (0)	73 (29)	73 (29)
Subunit 1c	0 (0)	0 (0)	0 (0)	108 (44)	108 (44)
Subunit 1d	0 (0)	0 (0)	2 (1)	68 (27)	70 (28)
Unit 2: Southern Simi Hills	196 (80)	118 (48)	427 (173)	278 (113)	1,019 (414)
Subunit 2a	0 (0)	118 (48)	221 (89)	71 (29)	410 (166)
Subunit 2b	0 (0)	0 (0)	1 (0.5)	0 (0)	1 (0.5)
Subunit 2c	0 (0)	0 (0)	144 (58)	0 (0)	144 (58)
Subunit 2d	111 (45)	0 (0)	0 (0)	0 (0)	111 (45)
Subunit 2e	85 (35)	0 (0)	61 (25)	0 (0)	146 (60)
Subunit 2f	0 (0)	0 (0)	0 (0)	207 (84)	207 (84)
Unit 3: Santa Monica Mountains	172 (70)	0 (0)	0 (0)	56 (23)	228 (93)
Unit 4: Pacific Palisades	0 (0)	439 (178)	0 (0)	66 (27)	505 (205)
Unit 5: Monrovia	0 (0)	0 (0)	218 (88)	64 (26)	282 (114)
Unit 6: Coal Canyon	0 (0)	589 (238)	0 (0)	243 (98)	832 (336)
Total	368 (150)	1,146 (464)	666 (270)	1,120 (453)	3,300 (1,337)

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

Unit 1: Northern Simi Hills Unit

This unit is located south of Simi Valley in the northern Simi Hills in Ventura County and consists of 21 ac (9 ha) of local agency land (Rancho Simi Recreation and Parks District) and 413 ac (166 ha) of private lands. It is divided into four subunits mapped from occurrences identified after the time of listing but currently occupied; all occur within 1.5 mi (2.5 km) of each other. Unit 1, inclusive of the four subunits, is located within the same physiographic area (the Simi Hills) as Unit 2. This unit is essential because it represents a previously unknown portion of the species' range north of Unit 2, and inclusion of multiple populations within the entire range increases a species' chance of persistence (Noss *et al.* 1997). These subunits are occupied and contain one or more of the PCEs. Threats that may require special management in this unit include road maintenance, which could result in disturbances that are too frequent and prevent replenishment of the seed bank, invasion of nonnative plants which could crowd out *A. brauntonii*, cattle grazing, and recreation activities such as equestrian and foot traffic, which could result in trampling of plants.

Subunit 1a: This subunit consists of 19 ac (8 ha) of local agency land in Challenger Park owned by Rancho Simi Recreation and Parks District and 164 ac (66 ha) of private land within dedicated open space managed by the Bridle Path Homeowner's Association. It occurs along Bus Canyon. This subunit contains at least two of the PCEs (2 and 3); whether it contains PCE 1 is unknown. This subunit supports a population as evidenced by three plants observed in three separate locations in 1998.

Subunit 1b: This subunit consists of 73 ac (29 ha) of private land that may be threatened by urban development. It occurs near the end of Peter Place Road in Simi Valley, which is north of Bus Canyon at the edge of an urban development. This subunit contains at least two of the PCEs (2 and 3); whether it contains PCE 1 is unknown. This subunit supports a population of at least three plants observed in 2000.

Subunit 1c: This subunit consists of 108 ac (44 ha) of private land within dedicated open space managed by the Bridle Path Homeowner's Association. It occurs along a ridge between Bus Canyon and Runkel Canyon above a fire road. This subunit contains all of the PCEs. This subunit supports a population of approximately 66 plants observed in 2004.

Subunit 1d: This subunit consists of 68 ac (27 ha) of private land owned by Boeing and 2 ac (1 ha) of local agency lands (Santa Monica Mountains Conservancy). This subunit contains at least two of the PCEs (2 and 3); whether it contains PCE 1 is unknown. Several hundred plants were reported at this location after a fire in 2006 (Lopez 2006).

Unit 2: Southern Simi Hills Unit

This unit is located along the southern Simi Hills in Ventura and Los Angeles Counties and consists of 196 ac (80 ha) of Federal lands, 118 ac (48 ha) of State land, 427 ac (173 ha) of local agency lands (Conejo Open Space Conservation Authority (COSCA), City of Thousand Oaks, Santa Monica Mountains Conservancy, and Rancho Simi Recreation and District), and 278 ac (113 ha) of private land. This unit is divided into six subunits mapped from records known at the time of listing and occurrences identified after listing. These subunits are all within 3.2 mi (5.2 km) of each other and occur along the southern perimeter of the geologic Chatsworth Formation. Overall, these subunits contain all of the PCEs, provide connectivity between several occurrences known at the time of listing, and represent the southernmost portion of the species' range within the Simi Hills. Inclusion of these subunits reduces fragmentation, maintains genetic connectivity between populations, and increases the chance of recolonization from neighboring populations if one patch becomes extirpated (Noss *et al.* 1997). Threats that may require special management in this unit include road and trail maintenance that could result in disturbances that are too frequent and prevent replenishment of the seed bank, invasion of nonnative plants that could crowd out *Astragalus brauntonii,* edge effects from urban development, and recreation activities such as off-road vehicles and equestrian and foot traffic, which could result in trampling of plants.

Subunit 2a: This subunit consists of 118 ac (48 ha) of State land managed by COSCA, 221 ac (89 ha) of local agency lands designated as open space in Oakbrook Regional Park and owned and managed by COSCA, and 71 ac (29 ha) of private land. This subunit is mapped from occurrences known at the time of listing and it contains all of the PCEs. It includes small numbers of plants found in several locations along a ridge; we believe a seed bank exists within and between known occurrences because the locations are near each other and the habitat is contiguous between them and close enough for genetic connectivity through insect pollination.

Subunit 2b: This subunit consists of 1 ac (0.5 ha) of local agency land owned by the City of Thousand Oaks. This subunit occurs within a Southern California Edison easement and adjacent to a trail in Conejo Open Space District surrounded by a residential neighborhood. It is mapped from an occurrence identified after listing and it contains all of the PCEs. Despite the small size of the subunit, it likely contains a relatively large population; approximately 68 plants were observed at this location in 2003. The population is enclosed by permanent fencing, and the area receives periodic vegetation clearing for fire control.

Subunit 2c: This subunit consists of 144 ac (58 ha) of local agency land in Oak Canyon Community Park owned and managed by Rancho Simi Recreation and Parks District. This subunit is mapped from an occurrence known at the time of listing and it contains all of the PCEs. It includes plants found in several locations along both sides of Medea Creek and contains a relatively large area. Approximately 400 plants were observed in this area in 1993, although few plants have been observed since then. This subunit is threatened by additional park development, which may require special management.

Subunit 2d: This subunit consists of 111 ac (45 ha) of Federal land within the Santa Monica Mountains National Recreation Area. It includes plants that were found at two separate locations on both sides of Palo Comado Canyon, and is mapped from an occurrence known at the time of listing. Fewer than 30 plants were observed in this area in 1987, and fewer than 10 plants at a time have been observed since then, however, the unit continues to remain occupied and contains a seed bank. This subunit contains all of the PCEs.

Subunit 2e: This subunit consists of 85 ac (35 ha) of Federal land within the Santa Monica Mountains National Recreation Area, and 61 ac (25 ha) of local agency land owned and managed as open space by Santa Monica Mountains Conservancy. This subunit is located on the east side of Cheseboro Canyon in an area that is relatively isolated from urban development. It is mapped from an occurrence identified after listing. Approximately 30 plants were observed at this location in 2000, hundreds of plants were observed

during post-fire surveys in 2006, and this subunit contains all of the PCEs.

Subunit 2f: This subunit consists of 207 ac (84 ha) of private land located east of the City of Chatsworth along Dayton Canyon in the eastern Simi Hills. It is mapped from one occurrence known at the time of listing and additional occurrences identified since the time of listing, although these occurrences are within the same population. A portion of one of the populations was removed during development in 1999. This subunit contains all of the PCEs. Approximately 14 plants were observed in this area in 1999, and 27 plants were observed during post-fire surveys in 2006.

Unit 3: Santa Monica Mountains Unit

This unit is located in the eastern Santa Monica Mountains in upper Zuma Canyon, north of Point Dume in Los Angeles County. It consists of 172 ac (70 ha) of Federal land within the Santa Monica Mountains National Recreation Area, and 56 ac (23 ha) of private land. It includes an area where more than 300 plants were found in 1999 after a prescribed burn, and the entire unit is mapped from an occurrence identified after listing. This unit contains all of the PCEs, is occupied, is the only known location in the western Santa Monica Mountains, and represents the western edge of the species' range. We also believe this area supports a large seed bank based on the observed post-fire germination that occurred here in 1999. This unit is essential because it represents a previously unknown portion of the species' range, and inclusion of multiple populations within the entire range increases a species' chance of persistence (Noss *et al.* 1997). Threats that may require special management in this unit include road maintenance that could result in disturbances that are too frequent, preventing establishment or replenishment of the seed bank.

Unit 4: Pacific Palisades Unit

This unit is located in the Santa Ynez Canyon north of Pacific Palisades in Los Angeles County and consists of 439 ac (178 ha) of State lands within Topanga State Park and 66 ac (27 ha) of private land. It includes plants found in three separate locations that are part of a single population complex, and is mapped from occurrences known at the time of listing. This is thought to be a large population; over 1,000 plants were observed at one of these locations in 1998. That site is cleared annually for a powerline and fuel break, a disturbance that likely causes large numbers of plants to germinate each year. This unit contains all of the PCEs, represents the eastern edge of the species' range within the Santa Monica Mountains, provides connectivity between the three separate locations, is a relatively large good-quality site, and the area likely incorporates a large existing seed bank. Threats that may require special management in this unit include road maintenance that could result in disturbances that are too frequent, preventing establishment or replenishment of the seed bank, and growth of nonnative plants that could crowd out *Astragalus brauntonii*.

Unit 5: Monrovia Unit

This unit is located in the San Gabriel Mountains in the City of Monrovia in Los Angeles County and consists of 218 ac (88 ha) of local agency land owned by the City of Monrovia and managed as open space (Monrovia Wilderness Preserve) and 64 ac (26 ha) of private land. It includes plants found in several locations that are part of a single population complex, and is mapped from an occurrence known at the time of listing. This is a large population; approximately 700 plants were observed in this area in 2004. This unit contains all of the PCEs, represents a unique and disjunct (separated) piece of the species' range, is a relatively large, good-quality site, and the area likely incorporates a large existing seed bank. Threats that may require special management in this unit include maintenance of fire roads, the growth of nonnative plants that could crowd out *Astragalus brauntonii*, and recreation activities such as foot and bicycle traffic, which could result in trampling of plants.

Unit 6: Coal Canyon Unit

This unit is located south of the City of Yorba Linda in Coal Canyon and Gypsum Canyon in Orange County and consists of 589 ac (238 ha) of State land (Chino Hills State Park and California Department of Fish and Game—Coal Canyon Ecological Reserve) and 243 ac (98 ha) of private land. This unit includes plants found in several locations that are part of a large population complex, and is mapped from occurrences known at the time of listing. This population was very small and declining until a fire in 2003, after which more than 5,000 plants were reported. This unit contains all of the PCEs, represents a disjunct portion of the species' range, is a relatively large area isolated from urban development, and provides genetic connectivity between plants found at several locations within the unit. We also believe the site supports a large seed bank, based on the post-fire germination that occurred here in 2003. Threats that may require special management in this unit include maintenance of fire roads and the growth of shrubs and nonnative plants, which could crowd out *Astragalus brauntonii*.

Pentachaeta lyonii

We are designating 3,396 ac (1,372 ha) within 6 units as critical habitat for *Pentachaeta lyonii* in Los Angeles and Ventura Counties. The units described below constitute our best assessment currently of areas determined to be occupied at the time of listing, that contain the PCEs and that may require special management, and those additional areas that were not known at the time of listing but were found to be essential to the conservation of *P. lyonii*. All areas not known at the time of listing are in the same geographic area and within the range of those areas determined to be occupied at the time of listing. For reasons described previously (see Criteria Used To Identify Critical Habitat section), we have determined that inclusion of all known locations, with the exception of Unit 6, that still contain the PCEs is essential to the conservation of the species because this species is extremely limited in distribution, has a very small overall population size, and often occurs in very small disjunct populations, making it particularly vulnerable to extinction (Noss *et al.* 1997). Inclusion of these populations reduces fragmentation, maintains genetic connectivity between populations, prevents range collapse of the species, and increases the chance of recolonization from neighboring populations if one patch becomes extirpated (Noss *et al.* 1997).

Table 3 shows the differences in acreage between the proposed and final rule, and Table 4 provides the approximate area designated as critical habitat by land ownership.

TABLE 3.—PROPOSED AND FINAL CRITICAL HABITAT UNITS FOR PENTACHAETA LYONII (AC (HA))

Critical habitat units/subunits	County	Proposed rule (Nov. 10, 2005) ac (ha)	Final rule ac (ha)
Unit 1: Simi Valley	Ventura	458 (185)	390 (157)
Subunit 1a		283 (114)	245 (99)
Subunit 1b		19 (8)	18 (7)
Subunit 1c		50 (20)	33 (13)
Subunit 1d		106 (43)	94 (38)
Unit 2: Montclef Ridge	Ventura	1,317 (533)	1,157 (468)
Subunit 2a		1,196 (485)	1,051 (425)
Subunit 2b		47 (19)	40 (16)
Subunit 2c		74 (29)	66 (27)
Unit 3: Thousand Oaks	Ventura/Los Angeles	1,470 (594)	1,259 (510)
Subunit 3a		236 (96)	212 (86)
Subunit 3b		75 (30)	64 (26)
Subunit 3c		1,159 (468)	983 (398)
Unit 4: Triunfo Canyon	Los Angeles	236 (95)	206 (83)
Unit 5: Mulholland Drive	Los Angeles	396 (160)	292 (117)
Subunit 5a		82 (33)	68 (27)
Subunit 5b		163 (66)	107 (43)
Subunit 5c		78 (31)	62 (25)
Subunit 5d		73 (30)	55 (22)
Unit 6: Cornell Road	Los Angeles	233 (94)	0 (0)
Unit 7: Malibu Lake	Los Angeles	102 (41)	92 (37)
Total		4,212 (1,704)	3,396 (1,372)

TABLE 4.—APPROXIMATE ACREAGE BY LAND OWNERSHIP CATEGORIES WITHIN CRITICAL HABITAT UNITS/SUBUNITS FOR PENTACHAETA LYONII (AC (HA))

Critical habitat unit and subunit	Federal	State	Local agency	Private	Total
Unit 1: Simi Valley	0 (0)	0 (0)	0 (0)	390 (157)	390 (157)
Subunit 1a	0 (0)	0 (0)	0 (0)	245 (99)	245 (99)
Subunit 1b	0 (0)	0 (0)	0 (0)	18 (7)	18 (7)
Subunit 1c	0 (0)	0 (0)	0 (0)	33 (13)	33 (13)
Subunit 1d	0 (0)	0 (0)	0 (0)	94 (38)	94 (38)
Unit 2: Montclef Ridge	0 (0)	0 (0)	892 (361)	265 (107)	1,157 (468)
Subunit 2a	0 (0)	0 (0)	862 (349)	189 (76)	1,051 (425)
Subunit 2b	0 (0)	0 (0)	22 (9)	18 (7)	40 (16)
Subunit 2c	0 (0)	0 (0)	8 (3)	58 (24)	66 (27)
Unit 3: Thousand Oaks	0 (0)	0 (0)	671 (272)	588 (238)	1,259 (510)
Subunit 3a	0 (0)	0 (0)	149 (60)	63 (26)	212 (86)
Subunit 3b	0 (0)	0 (0)	26 (11)	38 (15)	64 (26)
Subunit 3c	0 (0)	0 (0)	496 (201)	487 (197)	983 (398)
Unit 4: Triunfo Canyon	0 (0)	0 (0)	197 (80)	9 (3)	206 (83)
Unit 5: Mulholland Drive	105 (42)	0 (0)	0 (0)	187 (75)	292 (117)
Subunit 5a	0 (0)	0 (0)	0 (0)	68 (27)	68 (27)
Subunit 5b	105 (42)	0 (0)	0 (0)	2 (1)	107 (43)
Subunit 5c	0 (0)	0 (0)	0 (0)	62 (25)	62 (25)
Subunit 5d	0 (0)	0 (0)	0 (0)	55 (22)	55 (22)
Unit 6: Cornell Road	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Unit 7: Malibu Lake	0 (0)	58 (23)	0 (0)	34 (14)	92 (37)
Total	105 (42)	58 (23)	1,760 (713)	1,473 (594)	3,396 (1,372)

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

Unit 1: Simi Valley Unit

This unit is located east of Moorpark and west of Simi Valley in Ventura County and consists of 390 ac (157 ha) of private land. This unit is divided into four subunits and mapped from occurrences known at the time of listing. The subunits are in the same geographic area; they are all within 2.5 mi (4000 m) of each other. These subunits are included because they contain features that are essential to the conservation of the species, contain at least two of the PCEs (1 and 3), and the unit as a whole represents the northernmost edge of the species' range. Inclusion of these subunits reduces fragmentation, maintains genetic connectivity between populations, and increases the chance of recolonization from neighboring populations if one patch becomes extirpated (Noss *et al.* 1997). Soils have not been sampled for microbiotic crusts at all locations, so it is unknown if every subunit contains PCE 2. Threats that may require special management in this unit include the invasion of annual grasses and nonnative plants that could crowd out *P. lyonii*, and grazing, edge effects from urban development, road maintenance,

and vehicle traffic, which could result in removal or trampling of plants.

Subunit 1a: This subunit is located east of Moorpark in the Tierra Rejada Hills and consists of 245 ac (99 ha) of private land. This subunit includes several patches within a single population complex; at least 1200 plants were recorded in this area in 1995. This subunit contains at least two of the PCEs (1 and 3); soils have not been sampled for microbiotic crusts, so whether it contains PCE 2 is unknown.

Subunit 1b: This subunit is located in eastern Moorpark and consists of 18 ac (7 ha) of private land within the Tierra Rejada Vernal Pool Preserve owned by Serenata Homeowners association and managed by Mountains Recreation and Conservation Authority. It includes one of the largest known populations of *Pentachaeta lyonii*, and is fenced and monitored annually. This subunit contains at least two of the PCEs (1 and 3); soils have not been sampled for microbiotic crusts, so whether it contains PCE 2 is unknown.

Subunit 1c: This subunit is located in western Simi Valley near Wood Ranch Reservoir and consists of 33 ac (13 ha) of private land. It includes at least two separate patches of plants within the same population complex. This subunit contains at least two of the PCEs (1 and 3); soils have not been sampled for microbiotic crusts, so whether it contains PCE 2 is unknown.

Subunit 1d: This subunit is located in western Simi Valley directly adjacent to Ronald Reagan Presidential Library. It consists of 94 ac (38 ha) of private land and includes at least two separate patches of plants within the same population complex. This subunit contains at least two of the PCEs (1 and 3); soils have not been sampled for microbiotic crusts, so whether it contains PCE 2 is unknown.

Unit 2: Montclef Ridge Unit

This unit is located along Montclef Ridge, northwest of Newbury Park in Ventura County. It consists of 892 ac (361 ha) of local agency land (Lynmere, Wildwood Park, and Mount Clef Ridge) owned and managed by COSCA and Conejo Recreation and Parks District, and 265 ac (107 ha) of private land. This unit is divided into three subunits that occur within the same geographic area, and are mapped from occurrences known at the time of listing and one occurrence identified after listing. These subunits are included because they contain features that are essential to the conservation of the species, contain all of the PCEs, and represent a large proportion of the species' range. Inclusion of these subunits reduces fragmentation, maintains genetic connectivity between populations, and increases the chance of recolonization from neighboring populations if one patch becomes extirpated (Noss *et al.* 1997). Threats that may require special management include invasion by annual grasses and nonnative plants that could crowd out *P. lyonii*; recreation, including equestrian activities, foot traffic, and off-road vehicles, which could result in trampling of plants; illegal dumping, urban development, which could result in removal of plants; and edge effects from existing urban development.

Subunit 2a: This subunit includes a large population complex with patches of plants from multiple locations, and is mapped from several occurrences known at the time of listing and one occurrence identified after listing, and consists of 862 ac (349 ha) of local agency land (Lynmere, Wildwood Park, and Mount Clef Ridge) designated as open space and owned by COSCA and Conejo Recreation and Parks District and 189 ac (76 ha) of private land. The occurrence identified after listing is known to be occupied, and provides connectivity between occurrences known at the time of listing. This subunit consists of a relatively large contiguous area with multiple populations of *Pentachaeta lyonii*, and it contains all of the PCEs.

Subunit 2b: This subunit includes at least two separate patches of plants within the same population complex and is mapped from an occurrence known at the time of listing. It consists of 22 ac (9 ha) of local agency land designated as open space and owned by COSCA, and 18 ac (7 ha) of private land, 6 ac (2 ha) of which is owned by California Lutheran University. This subunit contains all of the PCEs.

Subunit 2c: This subunit includes at least two separate patches of plants within the same population complex and is mapped from an occurrence known at the time of listing. It consists of 8 ac (3 ha) of local agency land designated as open space and owned by COSCA, and 58 ac (24 ha) of private land, 34 ac (14 ha) of which is owned by California Lutheran University. This subunit contains all of the PCEs.

Unit 3: Thousand Oaks Unit

This unit is located in Thousand Oaks near Lake Sherwood in Ventura and Los Angeles Counties. It consists of 671 ac (272 ha) of local agency land (COSCA, Las Virgenes Metropolitan Water District, and Mountain Resources Conservation Authority) and 588 ac (238 ha) of private land. This unit is divided into three subunits mapped from occurrences known at the time of listing and two occurrence identified after listing. These subunits are included because they contain features that are essential to the conservation of the species, contain at least two of the PCEs (1 and 3), and represent a large proportion of the species' range. Inclusion of these subunits reduces fragmentation, maintains genetic connectivity between populations, and increases the chance of recolonization from neighboring populations if one patch becomes extirpated (Noss *et al.* 1997). Soils have not been sampled for microbiotic crusts, so whether the subunits contain PCE 2 is unknown. Threats that may require special management include edge effects from urban development, removal of plants for urban development or fuel management, invasion by annual grasses and nonnative plants that could crowd out *Pentachaeta lyonii,* and equestrian and foot traffic that could result in trampling of plants.

Subunit 3a: This subunit is located north of Lake Sherwood and consists of 149 ac (60 ha) of local agency land designated as open space owned by COSCA, and 63 ac (26 ha) of private land. It is mapped from a relatively large population (11,000 plants in 1991) known at the time of listing. This subunit contains at least two of the PCEs (1 and 3); soils have not been sampled for microbiotic crusts, so whether it contains PCE 2 is unknown.

Subunit 3b: This subunit is located on the north side of Lake Sherwood and consists of 26 ac (11 ha) of local agency land owned by COSCA and 38 ac (15 ha) of private land. It is mapped from an occurrence known at the time of listing. Two of the three patches within this population were removed by development in 1997; the only remaining patch of occupied habitat has been designated. This subunit contains at least two of the PCEs (1 and 3); soils have not been sampled for microbiotic crusts, so whether it contains PCE 2 is unknown.

Subunit 3c: This subunit is located south of Lake Sherwood and consists of 496 ac (201 ha) of local agency land designated as open space owned by COSCA, and 487 ac (197 ha) of private land. It is mapped from occurrences known at the time of listing and two occurrences identified after listing, and includes numerous patches of plants within one population complex. Overall, this subunit contains at least 16 known populations of *Pentachaeta lyonii.* This subunit contains at least two of the PCEs (1 and 3); soils have not been sampled for microbiotic crusts, so whether it contains PCE 2 is unknown.

Unit 4. Triunfo Canyon Unit

This unit is located in unincorporated Los Angeles County. It consists of 197 ac (80 ha) of local agency land owned by Mountains Recreation and Conservation Authority, and 9 ac (3 ha) of private land. It is mapped from an occurrence known at the time of listing and includes multiple patches within a large, single population complex. This unit is included because it contains the features essential to the conservation of the species, contains all of the PCEs, is currently occupied, and represents a relatively large population complex of *Pentachaeta lyonii* (37,300 individuals estimated in 2000), and is a good-quality site. Inclusion of this unit reduces fragmentation, maintains genetic connectivity between populations, and increases the chance of recolonization from neighboring populations if one patch becomes extirpated (Noss *et al.* 1997). Threats that may require special management include invasion by annual grasses and nonnative plants, which could crowd out *P. lyonii*, fuel management, which could result in removal of plants, and foot traffic, which could result in trampling of plants.

Unit 5: Mullholland Drive Unit

This unit is located in the Santa Monica Mountains in Los Angeles County and consists of 105 ac (42 ha) of Federal land (Santa Monica Mountains National Recreation Area) and 187 ac (75 ha) of private land. It is divided into 4 subunits mapped from occurrences known at the time of listing and occurrences identified after listing. These subunits are included because they contain features essential to the conservation of the species, are currently occupied, contain at least two of the PCEs (1 and 3), and represent the southernmost locations within the species' range. Inclusion of these subunits reduces fragmentation, maintains genetic connectivity between populations, and increases the chance of recolonization from neighboring populations if one patch becomes extirpated (Noss *et al.* 1997). Soils have not been sampled for microbiotic crusts, so whether these subunits contain PCE 2 is unknown. Threats that may require special management include the potential for development, which could result in removal of plants; fuel management, which could also result in removal of plants; and invasion by annual grasses and nonnative plants, which could crowd out *Pentachaeta lyonii*.

Unit 5a: This subunit consists of 68 ac (27 ha) of private land along the south side of Mulholland Drive. It is mapped from an occurrence known at the time of listing. This population contained at least 3000 individual plants in 2000. This subunit contains at least two of the PCEs (1 and 3); soils have not been sampled for microbiotic crusts, so whether it contains PCE 2 is unknown.

Unit 5b: This subunit consists of 105 ac (42 ha) of Federal land (Santa Monica Mountains National Recreation Area) in Rocky Oaks Park and 2 ac (1 ha) of private land on the west side of Kanan Road. This subunit contains at least two remaining patches of plants within a population complex. One patch within this population was extirpated by equestrian activities (although the habitat remains), so the remaining patches have been fenced. It is mapped from an occurrence known at the time of listing. This subunit contains at least two of the PCEs (1 and 3); soils have not been sampled for microbiotic crusts, so whether it contains PCE 2 is unknown.

Unit 5c: This subunit consists of 62 ac (25 ha) of private land designated as open space and managed by Santa Monica Mountains Conservancy on Mulholland Drive. It includes at least two patches of plants within a single population complex, and is mapped from an occurrence identified after listing. This subunit is occupied and contains at least two of the PCEs (1 and 3); soils have not been sampled for microbiotic crusts, so whether it contains PCE 2 is unknown.

Unit 5d: This subunit consists of 55 ac (22 ha) of private land on Kanan Road. It is mapped from an occurrence identified after listing. This subunit is occupied and contains at least two of the PCEs (1 and 3); soils have not been sampled for microbiotic crusts, so whether it contains PCE 2 is unknown.

Unit 6: Cornell Road Unit

All essential lands in Unit 6 are excluded from critical habitat designation under section 4(b)(2) of the Act for economic reasons (see the Exclusions Under Section 49b)(2) of the Act section). This unit is located in the Santa Monica Mountains in Los Angeles County and consists of 233 ac (94 ha) of private land. It includes plants found in several locations and is mapped from an occurrence known at the time of listing. This unit contains all of the PCEs, represents one of the southernmost locations within the species' range, contains numerous distinct patches and a very large population of individuals (> 3 million plants estimated in 1999), is genetically distinct from the other populations, and contains more genetic variability than the other populations. Threats that may require special management include the potential for grading and development, which could result in removal of plants, edge effects from nearby developments, and invasion by annual grasses and nonnative plants, which could crowd out *P. lyonii*.

Unit 7: Malibu Lake Unit

This unit is located in the Santa Monica Mountains in Los Angeles County and consists of 58 ac (23 ha) of State land (Malibu Creek State Park) and 34 ac (14 ha) of private land. It is mapped from an occurrence known at the time of listing. This unit is included because it contains features that are essential to the conservation of the species, contains at least two of the PCEs (PCEs 1 and 3), represents the easternmost known location within the species' range, is currently occupied, and contains a relatively large population (100,000–200,000 plants estimated in 1998). Inclusion of this unit reduces fragmentation, maintains genetic connectivity between populations, and increases the chance of recolonization from neighboring populations if one patch becomes extirpated (Noss *et al.* 1997). Soils have not been sampled for microbiotic crusts, so whether the subunits contain PCE 2 is unknown. Threats that may require special management include recreation activities such as foot traffic, which may result in trampling of plants.

Effects of Critical Habitat Designation

Section 7 Consultation

Section 7 of the Act requires Federal agencies, including the Service, to ensure that actions they fund, authorize, or carry out are not likely to destroy or adversely modify critical habitat. In our regulations at 50 CFR 402.02, we define destruction or adverse modification as ''a direct or indirect alteration that appreciably diminishes the value of critical habitat for both the survival and recovery of a listed species. Such alterations include, but are not limited to, alterations adversely modifying any of those physical or biological features that were the basis for determining the habitat to be critical.'' However, recent decisions by the 5th and 9th Circuit Court of Appeals have invalidated this definition. Pursuant to current national policy and the statutory provisions of the Act, destruction or adverse modification is determined on the basis of whether, with implementation of the proposed Federal action, the affected critical habitat would remain functional (or retain the current ability for the primary constituent elements to be functionally established) to serve the

intended conservation role for the species.

Section 7(a) of the Act requires Federal agencies, including the Service, to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is proposed or designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402.

Section 7(a)(4) of the Act requires Federal agencies to confer with us on any action that is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed critical habitat. This is a procedural requirement only. However, once a proposed species becomes listed, or proposed critical habitat is designated as final, the full prohibitions of section 7(a)(2) apply to any Federal action. The primary utility of the conference procedures is to maximize the opportunity for a Federal agency to adequately consider proposed species and critical habitat and avoid potential delays in implementing their proposed action because of the section 7(a)(2) compliance process, should those species be listed or the critical habitat designated.

Under conference procedures, the Service may provide advisory conservation recommendations to assist the agency in eliminating conflicts that may be caused by the proposed action. The Service may conduct either informal or formal conferences. Informal conferences are typically used if the proposed action is not likely to have any adverse effects to the proposed species or proposed critical habitat. Formal conferences are typically used when the Federal agency or the Service believes the proposed action is likely to cause adverse effects to proposed species or critical habitat, inclusive of those that may cause jeopardy or adverse modification.

The results of an informal conference are typically transmitted in a conference report, while the results of a formal conference are typically transmitted in a conference opinion. Conference opinions on proposed critical habitat are typically prepared according to 50 CFR 402.14, as if the proposed critical habitat were designated. We may adopt the conference opinion as the biological opinion when the critical habitat is designated, if no substantial new information or changes in the action alter the content of the opinion (see 50 CFR 402.10(d)). As noted above, any conservation recommendations in a conference report or opinion are strictly advisory.

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

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

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

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

Application of the Jeopardy and Adverse Modification Standards for Actions involving Effects to Astragalus brauntonii and Pentachaeta lyonii and Their Critical Habitat

Jeopardy Standard

Prior to and following designation of critical habitat, the Service has applied an analytical framework for *Astragalus brauntonii* and *Pentachaeta lyonii* jeopardy analyses that relies heavily on the importance of core area populations to the survival and recovery of *A. brauntonii* and *P. lyonii.* The section 7(a)(2) analysis is focused not only on these populations but also on the habitat conditions necessary to support them.

The jeopardy analysis usually expresses the survival and recovery needs of the *Astragalus brauntonii* and *Pentachaeta lyonii* in a qualitative fashion without making distinctions between what is necessary for survival and what is necessary for recovery. Generally, if a proposed Federal action is incompatible with the viability of the affected core area population(s), inclusive of associated habitat conditions, a jeopardy finding is warranted because of the relationship of each core area population to the survival and recovery of the species as a whole.

Adverse Modification Standard

For the reasons described in the Director's December 9, 2004 memorandum the key factor related to the adverse modification determination is whether, with implementation of the proposed Federal action, the affected critical habitat would remain functional

(or retain the current ability for the primary constituent elements to be functionally established) to serve the intended conservation role for the species. Generally, the conservation role of *A. brauntonii* and *P. lyonii* critical habitat units are to support viable core area populations.

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

Activities that may destroy or adversely modify critical habitat are those that alter the PCEs to an extent that the conservation value of critical habitat for *Astragalus brauntonii* or *Pentachaeta lyonii* is appreciably reduced. However, as discussed in the PCE section for *A. brauntonii*, periodic disturbances that stimulate seed germination (e.g., fire, flooding, erosion) and reduce vegetative cover are characteristic of the species' habitat. Activities that, when carried out, funded, or authorized by a Federal agency, may affect critical habitat and therefore result in consultation for *A. brauntonii* and *P. lyonii* include, but are not limited to:

(1) Removing, thinning, or destroying *A. brauntonii* and *P. lyonii* plants. This may occur through burning, mechanical, chemical, or other means, including plowing, grading, livestock grazing, construction, road building, mechanical weed control, herbicide application, and firefighting activities;

(2) Activities that appreciably degrade or destroy *A. brauntonii* or *P. lyonii* habitat (and its PCEs). Such activities include, but are not limited to: livestock grazing, clearing, discing, farming, residential or commercial development, introducing or encouraging the spread of nonnative species, off-road vehicle use;

(3) Activities that appreciably diminish habitat value or quality through indirect effects (e.g., edge effects, invasion of exotic plants or animals, or fragmentation) due to construction of buildings or roads;

(4) Any activity, including the regulation of activities by the Corps of Engineers under section 404 of the Clean Water Act or activities carried out by or licensed by the Environmental Protection Agency (EPA), that could alter watershed or soil characteristics in ways that would appreciably alter or reduce the quality or quantity of surface and subsurface flow of water needed to maintain *A. brauntonii* or *P. lyonii.* These activities include, but are not limited to: Altering the natural fire regime by using prescribed fires that are too frequent or poorly-timed; development, including road building and other direct or indirect activities; agricultural activities; livestock grazing; and vegetation manipulation such as clearing or grubbing in the watershed upslope from *A. brauntonii* or *P. lyonii.*

(5) Road construction and maintenance, right-of-way designation, and regulation of agricultural activities, or any activity funded or carried out by the Department of Transportation or Department of Agriculture that could result in excavation, or mechanized land clearing of *A. brauntonii* or *P. lyonii* habitat; and

(6) Licensing of construction of communication sites by the Federal Communications Commission or funding of construction or development activities by the U.S. Department of Housing and Urban Development that could result in excavation, or mechanized land clearing, of *A. brauntonii* or *P. lyonii* habitat.

We consider all of the units designated as critical habitat, as well as those that have been excluded or not included, to contain features essential to the conservation of the species. All units are within the geographical area of the species and are currently occupied. Four of the six units for *Astragalus brauntonii* were occupied at the time of listing, although three subunits within Unit 2 contain additional populations not known at the time of listing but are currently occupied. Units 1 and 4 were not known to be occupied at the time of listing but are currently occupied. All seven units for *Pentachaeta lyonii* were occupied at the time of listing, although four subunits within these units contain additional populations not known at the time of listing but are currently occupied. Federal agencies already consult with us on activities in areas currently occupied by *A. brauntonii* and *P. lyonii*, or if the species may be affected by the action, to ensure that their actions do not jeopardize the continued existence of *A. brauntonii* or *P. lyonii.*

Exclusions Under Section 4(b)(2) of the Act

Section 4(b)(2) of the Act states that critical habitat shall be designated, and revised, on the basis of the best available scientific data after taking into consideration the economic impact, national security impact, and any other relevant impact, of specifying any particular area as critical habitat. The Secretary may exclude an area from critical habitat if he determines that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless [s]he determines, based on the best scientific data available, that the failure to designate such area as critical habitat will result in the extinction of the species. In making that determination, the Secretary is afforded broad discretion and the Congressional record is clear that in making a determination under the section the Secretary has discretion as to which factors and how much weight will be given to any factor.

Under section 4(b)(2), in considering whether to exclude a particular area from the designation, we must identify the benefits of including the area in the designation, identify the benefits of excluding the area from the designation, determine whether the benefits of exclusion outweigh the benefits of inclusion. If an exclusion is contemplated, then we must determine whether excluding the area would result in the extinction of the species. In the following sections, we address a number of general issues that are relevant to the exclusions we considered.

Application of Section 4(b)(2) of the Act for Astragalus brauntonii

Pursuant to section 4(b)(2) of the Act, we must consider relevant impacts in addition to economic ones. We determined that the lands within the designation of critical habitat for *Astragalus brauntonii* are not owned or managed by the Department of Defense, there are currently no habitat conservation plans for *A. brauntonii*, and the designation does not include any Tribal lands or trust resources. We anticipate no impact to national security, Tribal lands, partnerships, or habitat conservation plans from this critical habitat designation. Based on the best available information including the prepared economic analysis, we believe that all of these units contain the features that are essential for the conservation of this species. Our economic analysis indicates an overall low cost resulting from the designation. Therefore, we have found no areas for which the benefits of exclusion outweigh the benefits of inclusion, and so have not excluded any areas from this designation of critical habitat for *A. brauntonii* based on economic impacts. As such, we have considered but not excluded any lands from this designation for *A. brauntonii* based on the potential impacts to these factors.

Application of Section 4(b)(2) of the Act for Pentachaeta lyonii

Conservation Partnerships on Non-Federal Lands

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

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

Many non-Federal landowners derive satisfaction in contributing to endangered species recovery. The Service promotes these private-sector efforts through the Four Cs philosophy—conservation through communication, consultation, and cooperation. This philosophy is evident in Service programs such as HCPs, Safe Harbor Agreements, Candidate Conservation Agreements, Candidate Conservation Agreements with Assurances, and conservation challenge cost-share. Many private landowners, however, are wary of the possible consequences of encouraging endangered species to their property, and there is mounting evidence that some regulatory actions by the Federal government, while well-intentioned and required by law, can under certain circumstances have unintended negative consequences for the conservation of species on private lands (Wilcove *et al.* 1996, Bean 2002, Conner and Mathews 2002, James 2002, Koch 2002, Brook *et al.* 2003). Many landowners fear a decline in their property value due to real or perceived restrictions on land-use options where threatened or endangered species are found. Consequently, harboring endangered species is viewed by many landowners as a liability, resulting in anti-conservation incentives because maintaining habitats that harbor endangered species represents a risk to future economic opportunities (Main *et al.* 1999, Brook *et al.* 2003).

The purpose of designating critical habitat is to contribute to the conservation of threatened and endangered species and the ecosystems upon which they depend. The outcome of the designation, triggering regulatory requirements for actions funded, authorized, or carried out by Federal agencies under section 7 of the Act, can sometimes be counterproductive to its intended purpose on non-Federal lands. According to some researchers, the designation of critical habitat on private lands significantly reduces the likelihood that landowners will support and carry out conservation actions (Main *et al.* 1999, Bean 2002, Brook *et al.* 2003). The magnitude of this negative outcome is greatly amplified in situations where active management measures (e.g., reintroduction, fire management, control of invasive species) are necessary for species conservation (Bean 2002).

The Service believes that the judicious use of excluding specific areas of non-federally owned lands from critical habitat designations can contribute to species recovery and provide a superior level of conservation than critical habitat alone. The Department of Interior Four C's philosophy—conservation through communication, consultation, and cooperation—is the foundation for developing the tools of conservation. These tools include conservation grants, funding for Partners for Fish and Wildlife Program, the Coastal Program, and cooperative-conservation challenge cost-share grants. Our Private Stewardship Grant program and Landowner Incentive Program provide assistance to private landowners in their voluntary efforts to protect threatened, imperiled, and endangered species, including the development and implementation of HCPs.

Conservation agreements with non-Federal landowners (*e.g.*, Habitat Conservation Plans (HCPs), contractual conservation agreements, easements, and stakeholder-negotiated State regulations) enhance species conservation by extending species protections beyond those available through section 7 consultations. In the past decade we have encouraged non-Federal landowners to enter into conservation agreements, based on a view that we can achieve greater species conservation on non-Federal land through such partnerships than we can through coercive methods (61 FR 63854; December 2, 1996).

General Principles of Section 7 Consultations Used in the 4(b)(2) Balancing Process

The most direct, and potentially largest, regulatory benefit of critical habitat is that federally authorized, funded, or carried out activities require consultation pursuant to section 7 of the Act to ensure that they are not likely to destroy or adversely modify critical habitat. There are two limitations to this regulatory effect. First, it only applies where there is a Federal nexus—if there is no Federal nexus, designation itself does not restrict actions that destroy or adversely modify critical habitat. Second, it only limits destruction or adverse modification. By its nature, the prohibition on adverse modification is designed to ensure those areas that contain the physical and biological features essential to the conservation of the species or unoccupied areas that are essential to the conservation of the species are not eroded. Critical habitat designation alone, however, does not require specific steps toward recovery.

Once consultation under section 7 of the Act is triggered, the process may conclude informally when the Service concurs in writing that the proposed Federal action is not likely to adversely affect the listed species or its critical habitat. However, if the Service determines through informal consultation that adverse impacts are likely to occur, then formal consultation would be initiated. Formal consultation concludes with a biological opinion issued by the Service on whether the proposed Federal action is likely to jeopardize the continued existence of a listed species or result in destruction or adverse modification of critical habitat, with separate analyses being made under both the jeopardy and the adverse modification standards. For critical habitat, a biological opinion that concludes in a determination of no destruction or adverse modification may contain discretionary conservation recommendations to minimize adverse effects to primary constituent elements, but it would not contain any mandatory reasonable and prudent measures or terms and conditions. Mandatory reasonable and prudent alternatives to the proposed Federal action would only be issued when the biological opinion results in a jeopardy or adverse modification conclusion.

We also note that for 30 years prior to the Ninth Circuit Court's decision in *Gifford Pinchot*, the Service equated the

jeopardy standard with the standard for destruction or adverse modification of critical habitat. The Court ruled that the Service could no longer equate the two standards and that adverse modification evaluations require consideration of impacts on the recovery of species. Thus, under the *Gifford Pinchot* decision, critical habitat designations may provide greater benefits to the recovery of a species. However, we believe the conservation achieved through implementing habitat conservation plans (HCPs) or other habitat management plans is typically greater than would be achieved through multiple site-by-site, project-by-project, section 7 consultations involving consideration of critical habitat. Management plans commit resources to implement long-term management and protection to particular habitat for at least one and possibly other listed or sensitive species. Section 7 consultations only commit Federal agencies to prevent adverse modification to critical habitat caused by the particular project, and they are not committed to provide conservation or long-term benefits to areas not affected by the proposed project. Thus, any HCP or management plan which considers enhancement or recovery as the management standard will always provide as much or more benefit than a consultation for critical habitat designation conducted under the standards required by the Ninth Circuit in the *Gifford Pinchot* decision.

Educational Benefits of Critical Habitat

A benefit of including lands in critical habitat is that the designation of critical habitat serves to educate landowners, State and local governments, and the public regarding the potential conservation value of an area. This helps focus and promote conservation efforts by other parties by clearly delineating areas of high conservation value for *Pentachaeta lyonii*. In general the educational benefit of a critical habitat designation always exists, although in some cases it may be redundant with other educational effects. For example, HCPs have significant public input and may largely duplicate the educational benefit of a critical habitat designation. This benefit is closely related to a second, more indirect benefit: That designation of critical habitat would inform State agencies and local governments about areas that could be conserved under State laws or local ordinances.

However, we believe that there would be little additional informational benefit gained from the designation of critical habitat for the exclusion we are making in this rule because the area being excluded was included in the proposed rule as having habitat containing the features essential to the conservation of the species. Consequently, we believe that the informational benefits are already provided even though this area is not designated as critical habitat. Additionally, the purpose normally served by the designation, that of informing State agencies and local governments about areas that would benefit from protection and enhancement of habitat for *Astragalus brauntonii* and *Pentachaeta lyonii* is already well established among State and local governments and Federal agencies in those areas that we are excluding from critical habitat in this rule on the basis of other existing habitat management protections.

Section 4(b)(2) of the Act allows the Secretary to take into consideration potential economic impacts of a critical habitat designation and to exclude areas from critical habitat for economic reasons if he determines that the benefits of such exclusion exceed the benefits of designating the area as critical habitat, unless the exclusion will result in the extinction of the species concerned. This is a discretionary authority Congress has provided to the Secretary with respect to critical habitat. Although economics may not be considered when listing a species, Congress has expressly required this consideration when designating critical habitat.

In conducting economic analyses, we are guided by the Tenth Circuit Court of Appeal's ruling in the *New Mexico Cattle Growers Association* case (248 F.3d at 1285), which directed us to consider all impacts, ''regardless of whether those impacts are attributable co-extensively to other causes.'' The Ninth Circuit has recently ruled (*Gifford Pinchot*, 378 F.3d at 1071) that the Service's regulations defining ''adverse modification'' of critical habitat are invalid because they define adverse modification as affecting both survival and recovery of a species. The Court directed us to consider that determinations of adverse modification should be focused on impacts to recovery. While we have not yet proposed a new definition for public review and comment, compliance with the Court's direction may result in additional costs associated with the designation of critical habitat (depending upon the outcome of the rulemaking). In light of the uncertainty concerning the regulatory definition of adverse modification, our current methodological approach to conducting economic analyses of our critical habitat designations is to consider all conservation-related costs. This approach would include costs related to sections 4 and 7 of the Act, as well as other protections under State and local laws and regulations, and should encompass costs that would be considered and evaluated in light of the *Gifford Pinchot* ruling.

Unit 6, the Cornell Road Unit, includes approximately 233 ac (94 ha) in an unincorporated area of Los Angeles County, California. The land within this unit is owned and managed by Sage Community Group (''Sage''), a private landowner. Sage has proposed to build 81 homes on approximately 40 ac (16 ha) of their 320-acre (129.5 ha) property, and all of these homes would occur within the proposed critical habitat unit. Since July 5, 2005, the Service has been in formal consultation with the U.S. Army Corps of Engineers to address impacts to *Pentachaeta lyonii* that may occur on the property as a result of this proposed development. Sage has proposed to preserve approximately 280 ac (113 ha) of the property in open space, and the majority of the existing *P. lyonii* on the property will be protected in perpetuity and managed within this open space area. The management plan for the property will address management of the open space areas, fuel modification zones around the proposed homes, and landscaping activities on the private lots. In addition, a memorandum to CRA International, the economic contractor for the Service, dated March 3, 2006, Sage stated the potential cost to them of designating their lands in Unit 6 as critical habitat for *Pentachaeta lyonii* could be as high as $78 million. Therefore, we are excluding the Cornell Road Unit (Unit 6) under section 4(b)(2).

Benefits of Inclusion of Lands Within Unit 6: Cornell Road

The area excluded in Unit 6 is currently occupied by *Pentachaeta lyonii*. The potential benefits of inclusion of lands within Unit 6 in the critical habitat designation are discussed above in the ''General Principles of Section 7 Consultations Used in the 4(b)(2) Balancing Process'' and ''Educational Benefits of Critical Habitat'' sections.

The designation of Unit 6 as critical habitat could result in approximately $78 million in costs, the majority of which are directly related to residential development impacts. Any decrease in residential housing development that might occur as a result of the designation of critical habitat for *Pentachaeta lyonii* in Unit 6 could minimize impacts to and potentially

provide incrementally greater protection to the species and to the physical and biological features essential to the species' conservation (i.e., the primary constituent elements). A decrease in residential housing development would directly translate into a potential benefit to the species that would result from this designation.

In summary, we believe that inclusion of Unit 6 as critical habitat could provide some additional Federal regulatory benefits for the species. However, that benefit is limited to some degree by the fact that the areas within Unit 6 are occupied by the species and, therefore, consultation with the Service for any Federal action that may affect the species in Unit 6 is already now required. The additional educational benefits that might arise from critical habitat designation are largely accomplished through the multiple opportunities for public notice-and-comment, which accompanied the development of this regulation; publicity associated with prior litigation; and public outreach associated with the development and the implementation of the Recovery Plan for *Pentachaeta lyonii.*

Benefits of Exclusion of lands Within Unit 6: Cornell Road

The development of a conservation strategy for the lands within Unit 6 has been a collaborative effort that has promoted the development of a positive relationship between the Service and Sage Community Group. The Service believes that exclusion of Unit 6 will allow us to continue working with Sage in a spirit of cooperation and partnership. In addition the designation of Unit 6 as critical habitat could result in approximately $78 million in costs to the landowner. By excluding Unit 6, some of these costs may be avoided.

The development of a conservation strategy through the section 7 consultation that is already in process will create a tangible and quantifiable benefit within the 233 ac (94 ha) unit. The unit will be placed in a conservation easement with funding for managing the easement in perpetuity. The management of this easement will include control of non-native plants and restricted access to human activities (i.e., no ORVs or horses). The conservation strategy will also provide a commitment by Sage and Service to review the management periodically to determine if the strategy is successful and determine if there are additional protective measures that need to be added.

We also believe that the benefits of excluding these lands from the designation of critical habitat and thereby avoiding the potential economic costs of designation, exceed the educational and regulatory benefits that could result from including those lands in this designation of critical habitat.

We also believe that excluding these lands, and thus helping the landowner to avoid the additional costs that would result from the designation, will contribute to a more positive climate for HCPs and other active conservation measures that provide greater conservation benefits than would result from designation of critical habitat—even in the post-Gifford Pinchot environment—which requires only that there be no destruction or adverse modification resulting from actions with a Federal nexus. We, therefore, find that the benefits of excluding Unit 6 from this designation of critical habitat outweigh the benefits of including it in the designation.

Benefits of Exclusion Outweigh the Benefits of Inclusion of Unit 6: Cornell Road

We believe that the recovery planning process has already provided information about habitat that contains those features considered essential to the conservation of *Pentachaeta lyonii* and has facilitated conservation efforts through heightened public awareness of the plight of the listed species to the public, State and local governments, scientific organizations, and Federal agencies. The Recovery Plan contains explicit objectives for ongoing public education, outreach, and collaboration at local, State, and Federal levels, and between the private and public sectors, in recovering *P. lyonii.*

In conclusion, we have evaluated the potential benefits that will result from the section 7 process and conservation strategy for the lands within Unit 6 and determined that the benefit of exclusion outweighs the benefit of inclusion. We also evaluated and considered the potential economic costs relative to the potential benefit for *Pentachaeta lyonii* and its primary constituent elements derived from the designation of critical habitat. We believe that the potential economic cost of approximately $78 million significantly outweighs the potential conservation and protective benefits for the species and its primary constituent elements derived from avoiding residential development as a result of this designation. Therefore, for these reasons we have excluded Unit 6 from critical habitat for *P. lyonii.*

Exclusion Will Not Result in Extinction of the Species

Because lands excluded from within this unit are considered occupied habitat, actions that might adversely affect *Pentachaeta lyonii* are expected to have a Federal nexus, and thus would trigger a section 7 consultation with the Service. The jeopardy standard of section 7 of the Act, and routine implementation of habitat preservation through the section 7 process, as discussed in the economic analysis, would be applied. The section 7 consultation with the Service that is already in process regarding potential impacts of the proposed development project on *P. lyonii* will ensure the continued persistence of the species within Unit 6. As part of this consultation, the landowner has proposed to preserve the majority of the *P. lyonii* that occurs on the property in open space, in perpetuity, and implement a management plan to ensure the continued persistence of the species.

The total 233 acres (94 ha) of critical habitat excluded from within Unit 6 is small relative to the 3,396 ac (1,372 ha) which would remain designated as critical habitat. This unit also represents a small proportion of the species' range. This small proportion, together with the protections afforded to *Pentachaeta lyonii* due to designation of critical habitat on other lands, and protections afforded to *P. lyonii* through the draft management plan and through the section 7 process already initiated in Unit 6, leads us to conclude that exclusion of this unit will not result in extinction of the species.

Economic Analysis

Section 4(b)(2) of the Act requires us to designate critical habitat on the basis of the best scientific information available and to consider the economic and other relevant impacts of designating a particular area as critical habitat. We may exclude areas from critical habitat upon a determination that the benefits of such exclusions outweigh the benefits of specifying such areas as critical habitat. We cannot exclude such areas from critical habitat when such exclusion will result in the extinction of the species concerned.

Following the publication of the proposed critical habitat designation, we conducted economic analyses to estimate the potential economic effects of the designation. The draft analyses were made available for public review on July 21, 2006 (71 FR 41410). We accepted comments on the draft analysis until August 21, 2006.

The primary purpose of the economic analyses is to estimate the potential economic impacts associated with the designation of critical habitat for *Astragalus brauntonii* and *Pentachaeta lyonii.* This information is intended to assist the Secretary in making decisions about whether the benefits of excluding particular areas from the designation outweigh the benefits of including those areas in the designation. This economic analysis considers the economic efficiency effects that may result from the designation, including habitat protections that may be co-extensive with the listing of the species. It also addresses distribution of impacts, including an assessment of the potential effects on small entities and the energy industry. This information can be used by the Secretary to assess whether the effects of the designation might unduly burden a particular group or economic sector.

This analysis focuses on the direct and indirect costs of the rule. However, economic impacts to land use activities can exist in the absence of critical habitat. These impacts may result from, for example, local zoning laws, State and natural resource laws, and enforceable management plans and best management practices applied by other State and Federal agencies. Economic impacts that result from these types of protections are not included in the analysis as they are considered to be part of the regulatory and policy baseline.

We received comments on the draft economic analysis of the proposed designation. Following the close of the comment period, we reviewed and considered the public comments and information we received and prepared responses to those comments (see Responses to Comments section above) or incorporated the information or changes directly into this final rule or our final economic analysis.

The July 21, 2006, notice (71 FR 41410) provides a detailed economics section that identifies a total surplus (sum of producer and consumer surplus), from housing development forecasted to be built within the area of *Astragalus brauntonii* proposed critical habitat, of approximately $91.87 million over a 20-year period (approximately $8.11 million annually at a 7 percent discount rate, or approximately $5.99 million annually at a 3 percent discount rate). A total surplus (sum of producer and consumer surplus), from housing development forecasted to be built within the area of *Pentachaeta lyonii* proposed critical habitat of approximately $121.21 million over a 20-year period, (approximately $10.69 million annually at a 7 percent discount rate, or $7.91 million annually at a 3 percent discount rate) was also identified. We evaluated the potential economic impact of this designation as identified in the draft analysis. Based on this evaluation, we believe that there are no disproportionate economic impacts that warrant exclusion pursuant to section 4(b)(2) of the Act at this time.

A copy of the final economic analyses with supporting documents are included in our administrative record and may be obtained by contacting U.S. Fish and Wildlife Service, Branch of Endangered Species (see **ADDRESSES** section) or for downloading from the Internet at *http://www.fws.gov/ventura.*

Required Determinations

Regulatory Planning and Review

In accordance with Executive Order 12866, this document is a significant rule in that it may raise novel legal and policy issues. However, because the final economic analysis indicates the potential economic surplus from lands contained within these units is $92 million over a 20-year period for *Astragalus brauntonii* and $121 million over a 20-year period for *Pentachaeta lyonii,* and the economic impact of designating critical habitat would be only a fraction of this amount, we do not anticipate that this final rule will have an annual effect on the economy of $100 million or more or affect the economy in a material way. Due to the tight timeline for publication in the **Federal Register**, the Office of Management and Budget (OMB) did not formally review this rule. The availability of the draft economic analysis was announced in the Federal Register on July 21, 2006 (71 FR 41410), and was made available for public review and comment.

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

Under the Regulatory Flexibility Act (RFA) (as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996), whenever an agency is required to publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effect of the rule on small entities (small businesses, small organizations, and small government jurisdictions). However, no regulatory flexibility analysis is required if the head of an agency certifies the rule will not have a significant economic impact on a substantial number of small entities. The SBREFA amended the RFA to require Federal agencies to provide a statement of factual basis for certifying that the rule will not have a significant economic impact on a substantial number of small entities. The SBREFA also amended the RFA to require a certification statement.

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

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

Designation of critical habitat only affects activities conducted, funded, or permitted by Federal agencies. Some kinds of activities are unlikely to have

any Federal involvement and so will not be affected by critical habitat designation. In areas where the species is present, Federal agencies already are required to consult with us under section 7 of the Act on activities they fund, permit, or implement that may affect *Astragalus brauntonii* and *Pentachaeta lyonii.* Federal agencies also must consult with us if their activities may affect critical habitat. Designation of critical habitat, therefore, could result in an additional economic impact on small entities due to the requirement to reinitiate consultation for ongoing Federal activities.

To determine if the proposed designation of critical habitat for *Astragalus brauntonii* and *Pentachaeta lyonii* would affect a substantial number of small entities, we considered the number of small entities affected within particular types of economic activities (e.g., residential and commercial development). We considered each industry or category individually to determine if certification is appropriate. In estimating the numbers of small entities potentially affected, we also considered whether their activities have any Federal involvement; some kinds of activities are unlikely to have any Federal involvement and so will not be affected by the designation of critical habitat. Designation of critical habitat only affects activities conducted, funded, permitted, or authorized by Federal agencies; non-Federal activities are not affected by the designation.

In our economic analyses of the final critical habitat designation, we evaluate the potential economic effects on small business entities resulting from conservation actions related to the listing of *Astragalus brauntonii* and *Pentachaeta lyonii* and proposed designation of critical habitat. We determined from our analyses that the small business entities that may be affected are firms in the new home construction sector. Small business effects have been calculated on the total surplus generated from new housing construction within critical habitat. This assumption is conservative because it is the worst-case scenario of how critical habitat will affect small businesses. In the event that conservation is achieved without requiring developers to completely avoid critical habitat, impacts on small businesses will be lower.

To estimate the number of firms potentially affected, these analyses use the following steps. First, they calculate the number of homes built by small businesses annually. Average revenues for a small construction firm are $694,000 annually. The mean new home price for the study area of these analyses is approximately $970,000 for *Astragalus brauntonii* and $920,000 for *Pentachaeta lyonii.* Small construction firms are assumed to build one new home per year. Second, they calculate the proportion of new home construction that would be undertaken by small businesses. Prior analyses of permitting data in Sacramento County found that 22 percent of building permits for single family dwellings were issued to builders classified as small businesses. A total of 156 new homes are projected to be built within *Astragalus brauntonii* proposed critical habitat over the next 20 years. Accordingly, 34 are projected to be built by small businesses. Since each firm builds one home per year, 34 small firms are potentially affected within *Astragalus brauntonii* proposed critical habitat over the 20-year time frame of this analysis. A total of 222 new homes are projected to be built within *Pentachaeta lyonii* proposed critical habitat over the next 20 years. Accordingly, 49 are projected to be built by small businesses. Since each firm builds one home per year, 49 small firms are potentially affected within *Pentachaeta lyonii* proposed critical habitat over the 20-year time frame of this analysis. These firms may be affected by activities associated with the conservation of *Astragalus brauntonii* and *Pentachaeta lyonii,* inclusive of activities associated with listing, recovery, and critical habitat. Critical habitat is not expected to result in significant small business impacts.

In general, two different mechanisms in section 7 consultations could lead to additional regulatory requirements for the approximately four small businesses, on average, that may be required to consult with us each year regarding their projects impacts on *Astragalus brauntonii* and *Pentachaeta lyonii* and its habitat. First, if we conclude, in a biological opinion, that a proposed action is likely to jeopardize the continued existence of a species or adversely modify its critical habitat, we can offer ''reasonable and prudent alternatives.'' Reasonable and prudent alternatives are alternative actions that can be implemented in a manner consistent with the scope of the Federal agency's legal authority and jurisdiction, that are economically and technologically feasible, and that would avoid jeopardizing the continued existence of listed species or result in adverse modification of critical habitat. A Federal agency and an applicant may elect to implement a reasonable and prudent alternative associated with a biological opinion that has found jeopardy or adverse modification of critical habitat. An agency or applicant could alternatively choose to seek an exemption from the requirements of the Act or proceed without implementing the reasonable and prudent alternative. However, unless it obtains an exemption the Federal agency or applicant would be at risk of violating section 7(a)(2) of the Act if it chose to proceed without implementing the reasonable and prudent alternatives.

Second, if we find that a proposed action is not likely to jeopardize the continued existence of a listed animal or plant species, we may identify reasonable and prudent measures designed to minimize the amount or extent of take and require the Federal agency or applicant to implement such measures through nondiscretionary terms and conditions. We may also identify discretionary conservation recommendations designed to minimize or avoid the adverse effects of a proposed action on listed species or critical habitat, help implement recovery plans, or to develop information that could contribute to the recovery of the species.

Based on our experience with consultations under section 7 of the Act for all listed species, virtually all projects—including those that, in their initial proposed form, would result in jeopardy or adverse modification determinations in section 7 consultations—can be implemented successfully with, at most, the adoption of reasonable and prudent alternatives. These measures, by definition, must be economically feasible and within the scope of authority of the Federal agency involved in the consultation. We can only describe the general kinds of actions that may be identified in future reasonable and prudent alternatives. These are based on our understanding of the needs of the species and the threats it faces, as described in the final listing rule and this critical habitat designation. Within the final critical habitat units, the types of Federal actions or authorized activities that we have identified as potential concerns are:

(1) Regulation of activities affecting waters of the United States by the U.S. Army Corps Engineers under section 404 of the Clean Water Act;

(2) Regulation of water flows, damming, diversion, and channelization implemented or licensed by Federal agencies;

(3) Regulation of fire management plans by the NPS;

(4) Road construction and maintenance, right-of-way designation, and regulation of agricultural activities;

(5) Hazard mitigation and post-disaster repairs funded by the Federal Emergency Management Agency (FEMA); and

(6) Activities regulated or funded by the EPA, U.S. Department of Energy, the FAA, or any other Federal agency.

It is likely that a developer or other project proponent could modify a project or take measures to protect *Astragalus brauntonii* and *Pentachaeta lyonii.* The kinds of actions that may be included if future reasonable and prudent alternatives become necessary include conservation set-asides, management of competing nonnative species, restoration of degraded habitat, and regular monitoring. These are based on our understanding of the needs of the species and the threats it faces, as described in the final listing rule and proposed critical habitat designation. These measures are not likely to result in a significant economic impact to project proponents.

In summary, we have considered whether this would result in a significant economic effect on a substantial number of small entities. We have determined, for the above reasons and based on currently available information, that it is not likely to affect a substantial number of small entities. Federal involvement, and thus section 7 consultations, would be limited to a subset of the area designated. The most likely Federal involvement could include U.S. Army Corps of Engineers permits and FHA funding for road improvements. A regulatory flexibility analysis is not required.

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

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

Executive Order 13211

On May 18, 2001, the President issued Executive Order 13211 (Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use) on regulations that significantly affect energy supply, distribution, and use. Executive Order 13211 requires agencies to prepare Statements of Energy Effects when undertaking certain actions. There are transmission power lines within at least two units for *Astragalus brauntonii;* however, this final rule to designate critical habitat for *A. brauntonii* and *Pentachaeta lyonii* 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:

(a) This rule will not produce a Federal mandate. In general, a Federal mandate is a provision in legislation, statute, or regulation that would impose an enforceable duty upon State, local, 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; AFDC work programs; Child Nutrition; Food Stamps; Social Services Block Grants; Vocational Rehabilitation State Grants; Foster Care, Adoption Assistance, and Independent Living; Family Support Welfare Services; and Child Support Enforcement.) ''Federal private sector mandate'' includes a regulation that ''would impose an enforceable duty upon the private sector, except (i) a condition of Federal assistance; or (ii) a duty arising from participation in a voluntary Federal program.''

The designation of critical habitat does not impose a legally binding duty on non-Federal government entities or private parties. Under the Act, the only regulatory effect is that Federal agencies must ensure that their actions do not destroy or adversely modify critical habitat under section 7. While non-Federal entities who receive Federal funding, assistance, or permits or otherwise require approval or authorization from a Federal agency for an action may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency. Furthermore, to the extent that non-Federal entities are indirectly impacted because they receive Federal assistance or participate in a voluntary Federal aid program, the Unfunded Mandates Reform Act would not apply, nor would critical habitat shift the costs of the large entitlement programs listed above on to State governments.

(b) We do not believe that this rule will significantly or uniquely affect small governments because it will not produce a Federal mandate of $100 million or greater in any year; that is, it is not a ''significant regulatory action'' under the Unfunded Mandates Reform Act. The designation of critical habitat imposes no obligations on State or local governments. As such, a Small Government Agency Plan is not required.

Federalism

In accordance with Executive Order 13132 (Federalism), the rule does not have significant Federalism effects. A Federalism assessment is not required. In keeping with the Department of the Interior and Department of Commerce policy, we requested information from, and coordinated development of, this final critical habitat designation with appropriate State resource agencies in California. The designation of critical habitat in areas currently occupied by *Astragalus brauntonii* and *Pentachaeta lyonii* may impose nominal additional regulatory restrictions to those currently in place and, therefore, may have little incremental impact on State and local governments and their activities. The designation may have some benefit to these governments in that the areas that contain the features essential to the conservation of the species are more clearly defined, and the primary constituent elements of the habitat necessary to the conservation of the species are specifically identified. While making this definition and identification does not alter where and what federally sponsored activities may occur, it may assist these local

governments in long-range planning (rather than waiting for case-by-case section 7 consultations to occur).

Civil Justice Reform

In accordance with Executive Order 12988 (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 requirements of sections 3(a) and 3(b)(2) of the Order. We are designating critical habitat in accordance with the provisions of the Endangered Species Act. This final rule uses standard property descriptions and identifies the primary constituent elements within the designated areas to assist the public in understanding the habitat needs of *Astragalus brauntonii* and *Pentachaeta lyonii.*

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. 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

It is our position that, outside the Tenth Circuit, we do not need to prepare environmental analyses as defined by the NEPA in connection with designating critical habitat under the Endangered Species Act. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244). This assertion was upheld in the courts of the Ninth Circuit [*Douglas County* v. *Babbitt,* 48 F.3d 1495 (9th Cir. Ore. 1995), cert. denied 116 S. Ct. 698 (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, and the Department of 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. We have determined that there are no tribal lands occupied by *Astragalus brauntonii* or *Pentachaeta lyonii* at the time of listing that contain the features essential for conservation of either species, and there are no tribal lands that contain unoccupied areas for either species that are essential for the conservation of these species. Therefore, critical habitat for *A. brauntonii* and *P. lyonii* has not been designated on Tribal lands.

References Cited

A complete list of all references cited in this rulemaking is available upon request from the Field Supervisor, Ventura Fish and Wildlife Office (see **ADDRESSES** section).

Author

The primary author of this package is the 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; 16 U.S.C. 1531–1544; 16 U.S.C. 4201–4245; Pub. L. 99–625, 100 Stat. 3500; unless otherwise noted.

■ 2. In § 17.12(h), revise the entries for ''*Astragalus brauntonii*'' and ''*Pentachaeta lyonii*'' 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							
*	*	*	*	*	*	*	
Astragalus brauntonii	Braunton's milk-vetch.	U.S.A. (CA)	Fabaceae	E	606	17.96(a)	NA
*	*	*	*	*	*	*	
Pentachaeta lyonii ...	Lyon's pentachaeta	U.S.A. (CA)	Asteraceae	E	606	17.96(a)	NA
*	*	*	*	*	*	*	

■ 3. In § 17.96(a), add critical habitat for *Pentachaeta lyonii*, in alphabetical order under Family Asteraceae, and add critical habitat for *Astragalus brauntonii* in alphabetical order under Family Fabaceae, to read as follows:

§ 17.96 Critical habitat—plants.

(a) *Flowering Plants.*

* * * * *

Family Asteraceae: *Pentachaeta lyonii* (Lyon's pentachaeta)

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

(2) Critical habitat includes the plant communities within the range of *Pentachaeta lyonii* that are characterized by the following primary constituent elements:

(i) Clay soils of volcanic origin;

(ii) Exposed soils that exhibit a microbiotic crust, which may inhibit invasion by other plant competitors; and

(iii) A mosaic of bare ground (>10%) patches in an area with less than 60 percent cover.

(3) Critical habitat does not include manmade structures existing on the effective date of this rule and not containing one or more of the primary

constituent elements, such as buildings, aqueducts, airports, and roads, and the land on which such structures are located.

(4) Data layers defining map units were created on base maps using the following aerial imagery: For eastern Ventura County, we used Air Photo USA, Inc., aerial imagery captured in October 2002; for westernmost Los Angeles county populations, we used Air Photo USA, Inc., aerial imagery captured in August 1999. Both were projected to Universal Transverse Mercator (UTM) zone 11, North American Datum (NAD) 1927.

(5) Index map for *Pentachaeta lyonii* (Map 1) follows:

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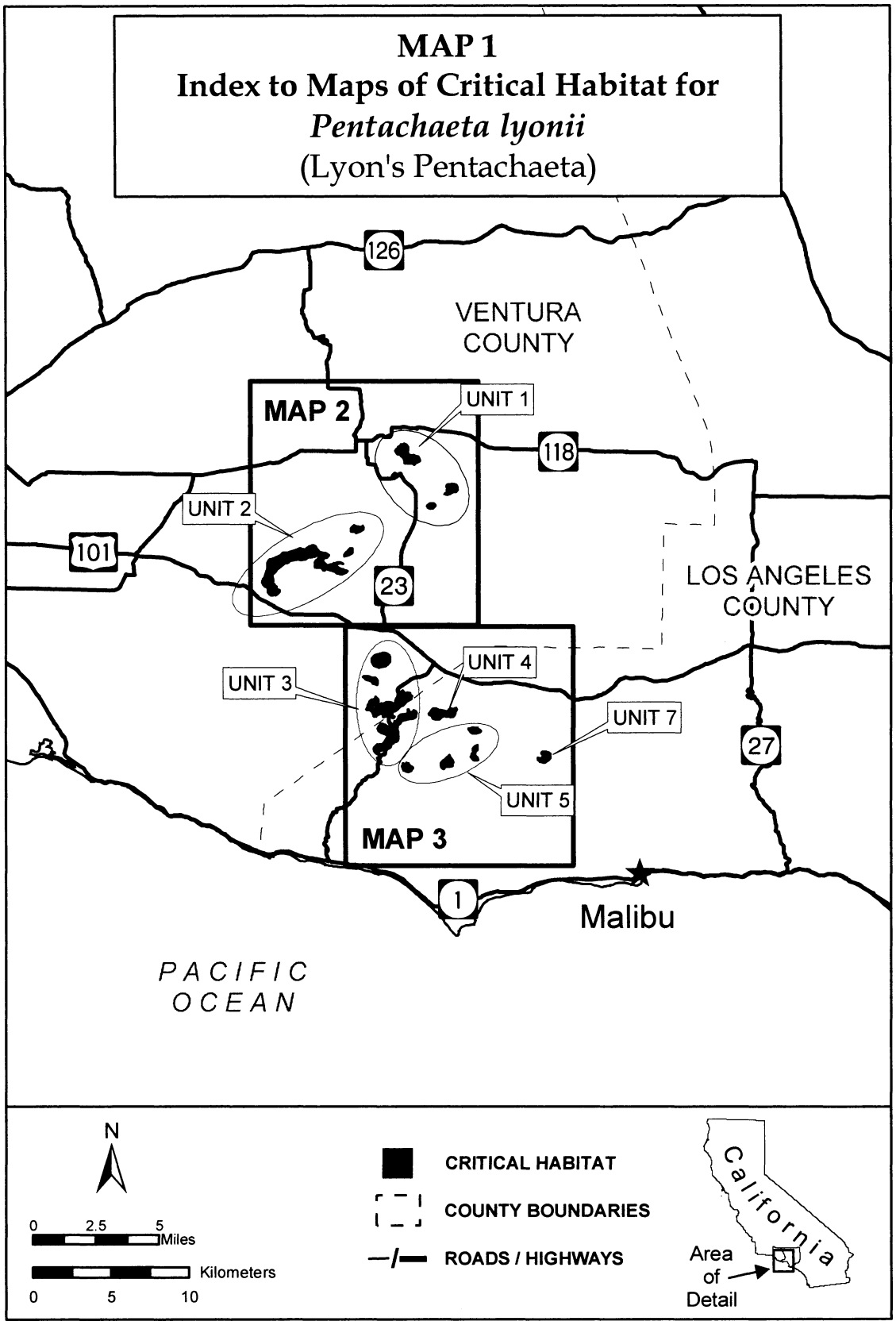

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(6) Unit 1 for *Pentachaeta lyonii:* Simi Valley Unit, Ventura County, California.

(i) Subunit 1a: From USGS 1:24,000 scale quadrangle Simi. Land bounded by the following UTM zone 11, NAD83 coordinates (E, N): 329277, 3794756; 329285, 3794822; 329318, 3794831; 329332, 3794857; 329491, 3794890; 329464, 3795033; 329514, 3795052; 329552, 3795059; 329610, 3795117; 329654, 3795148; 329703, 3795171; 329756, 3795183; 329827, 3795184; 329893, 3795174; 329960, 3795146; 330015, 3795107; 330062, 3795053; 330093, 3794995; 330111, 3794926; 330113, 3794872; 330099, 3794802; 330070, 3794739; 330169, 3794478; 330260, 3794458; 330323, 3794428; 330386, 3794441; 330429, 3794445; 330501, 3794440; 330581, 3794421; 330703, 3794370; 330747, 3794338; 330772, 3794313; 330817, 3794247; 330849, 3794174; 330865, 3794090; 330651, 3793969; 330487, 3793935; 330497, 3793889; 330511, 3793869; 330501, 3793823; 330338, 3793940; 330301, 3793941; 329854, 3793954; 329852, 3794025; 329850, 3794079; 329805, 3794148; 329811, 3794213; 329768, 3794273; 329576, 3794445; 329558, 3794507; 329442, 3794481; 329388, 3794513; 329337, 3794563; 329301, 3794626; 329283, 3794687; returning to 329277, 3794756.

(ii) Subunit 1b: From USGS 1:24,000 scale quadrangle Simi. Land bounded by the following UTM zone 11, NAD83 coordinates (E, N): 328955, 3793028; 329079, 3793108; 329065, 3793154; 329075, 3793194; 329151, 3793294; 329199, 3793334; 329213, 3793342; 329235, 3793310; 329338, 3793280; 329368, 3793229; 329386, 3793188; 329255, 3793079; 329165, 3793021; 329111, 3793000; 329057, 3792995; 328958, 3792998; returning to 328955, 3793028.

(iii) Subunit 1c; From USGS 1:24,000 scale quadrangle Thousand Oaks. Land bounded by the following UTM zone 11, NAD83 coordinates (E, N): 331295, 3791187; 331295, 3791210; 331330, 3791275; 331362, 3791302; 331444, 3791341; 331497, 3791349; 331712, 3791342; 331763, 3791351; 331806, 3791304; 331842, 3791246; 331852, 3791219; 331641, 3791016; 331597, 3791023; 331461, 3791044; 331335, 3791130; returning to 331295, 3791187.

(iv) Subunit 1d; From USGS 1:24,000 scale quadrangle Simi. Land bounded by the following UTM zone 11, NAD83 coordinates (E, N): 332406, 3791975; 332519, 3792037; 332583, 3792085; 332606, 3792133; 332606, 3792174; 332583, 3792177; 332569, 3792227; 332623, 3792286; 332635, 3792347; 332558, 3792379; 332554, 3792419; 332553, 3792470; 332570, 3792525; 332599, 3792563; 332653, 3792568; 332706, 3792563; 332748, 3792551; 332789, 3792575; 332853, 3792600; 332905, 3792612; 332941, 3792615; 333048, 3792601; 333098, 3792582; 333144, 3792554; 333183, 3792517; 333234, 3792451; 333261, 3792385; 333270, 3792331; 333265, 3792260; 333242, 3792181; 333216, 3792134; 333172, 3792083; 333091, 3792116; 333051, 3792116; 333025, 3792111; 332985, 3792088; 332921, 3792041; 332846, 3792013; 332827, 3792000; 332805, 3791981; 332800, 3791967; 332616, 3791898; 332577, 3791898; 332524, 3791910; 332452, 3791942; returning to 332406, 3791975.

(v) Note: Unit 1 for *Pentachaeta lyonii* is depicted on Map 2—see paragraph (a)(7)(iv) of this section.

(7) Unit 2 for *Pentachaeta lyonii:* Montclef Ridge Unit, Ventura County, California.

(i) *Subunit 2a;* From USGS 1:24,000 scale quadrangle Newbury Park. Land bounded by the following UTM zone 11, NAD83 coordinates (E, N): 320757, 3786338; 320759, 3786395; 320768, 3786445; 320784, 3786492; 320806, 3786536; 320864, 3786609; 321086, 3787190; 321083, 3787252; 321091, 3787318; 321068, 3787390; 321061, 3787460; 321065, 3787514; 321081, 3787584; 321104, 3787635; 321132, 3787681; 321169, 3787720; 321217, 3787759; 321248, 3787777; 321299, 3787796; 321382, 3787807; 321935, 3788068; 321973, 3788114; 322015, 3788151; 322063, 3788181; 322115, 3788203; 322167, 3788216; 322218, 3788222; 322272, 3788219; 322321, 3788209; 322913, 3788371; 322947, 3788402; 322993, 3788431; 323043, 3788453; 323095, 3788465; 323160, 3788468; 323214, 3788459; 323280, 3788438; 323338, 3788405; 323380, 3788417; 323436, 3788426; 323518, 3788421; 323565, 3788467; 323629, 3788506; 323672, 3788542; 323725, 3788570; 323756, 3788601; 323800, 3788633; 323870, 3788663; 323940, 3788677; 324012, 3788673; 324069, 3788656; 324118, 3788634; 324162, 3788602; 324209, 3788548; 324245, 3788474; 324286, 3788420; 324308, 3788371; 324388, 3788292; 324434, 3788259; 324667, 3788223; 324708, 3788206; 324672, 3788145; 324747, 3788150; 324770, 3788180; 325020, 3788065; 324898, 3787879; 324839, 3787849; 324733, 3787850; 324577, 3787713; 324716, 3787572; 324832, 3787428; 324845, 3787362; 325048, 3787448; 325169, 3787468; 325297, 3787527; 325410, 3787537; 325521, 3787580; 325597, 3787587; 325717, 3787590; 325849, 3787553; 325894, 3787510; 325885, 3787482; 325790, 3787526; 325534, 3787512; 325442, 3787433; 325513, 3787354; 325683, 3787214; 325703, 3787231; 325819, 3787188; 325815, 3787138; 325887, 3787125; 325937, 3787145; 325982, 3787128; 326178, 3787035; 326145, 3786988; 326097, 3786938; 326053, 3786907; 326018, 3786889; 325956, 3786865; 325861, 3786842; 325732, 3786836; 325687, 3786838; 325572, 3786861; 325514, 3786882; 325468, 3786911; 325396, 3786978; 324815, 3787144; 324735, 3787089; 324647, 3787055; 324638, 3787071; 324526, 3787250; 324442, 3787263; 324152, 3787281; 324122, 3787369; 324111, 3787460; 324120, 3787553; 324149, 3787640; 324197, 3787721; 324259, 3787787; 324337, 3787840; 324424, 3787874; 324377, 3787917; 324346, 3787960; 324318, 3788027; 324304, 3788112; 324284, 3788124; 324264, 3788094; 324227, 3788055; 324156, 3788006; 324112, 3787983; 324020, 3787949; 323930, 3787931; 323803, 3787926; 323719, 3787933; 323678, 3787883; 323605, 3787826; 323533, 3787792; 323472, 3787779; 323428, 3787754; 323351, 3787724; 323298, 3787715; 323244, 3787717; 323166, 3787735; 323108, 3787763; 322524, 3787671; 322414, 3787565; 322318, 3787523; 322221, 3787562; 321715, 3787174; 321691, 3787100; 321654, 3787044; 321486, 3786890; 321401, 3786883; 321382, 3786733; 321407, 3786714; 321440, 3786486; 321455, 3786312; 321426, 3786200; 321452, 3786148; 321520, 3786182; 321595, 3786032; 321665, 3786035; 321698, 3785934; 321660, 3785903; 321679, 3785865; 321725, 3785853; 321880, 3785811; 321872, 3785762; 321860, 3785728; 321835, 3785681; 321813, 3785652; 321769, 3785609; 321717, 3785573; 321665, 3785520; 321608, 3785485; 321523, 3785626; 321467, 3785627; 321419, 3785719; 321373, 3785722; 321377, 3785628; 321385, 3785572; 321432, 3785450; 321370, 3785460; 321304, 3785487; 321274, 3785507; 321227, 3785549; 321185, 3785598; 321142, 3785681; 321125, 3785744; 321117, 3785816; 321127, 3785920; 321117, 3786000; 321070, 3786002; 321021, 3786011; 320974, 3786027; 320914, 3786059; 320862, 3786102; 320829, 3786140; 320793, 3786197; 320774, 3786244; 320762, 3786292; returning to 320757, 3786338.

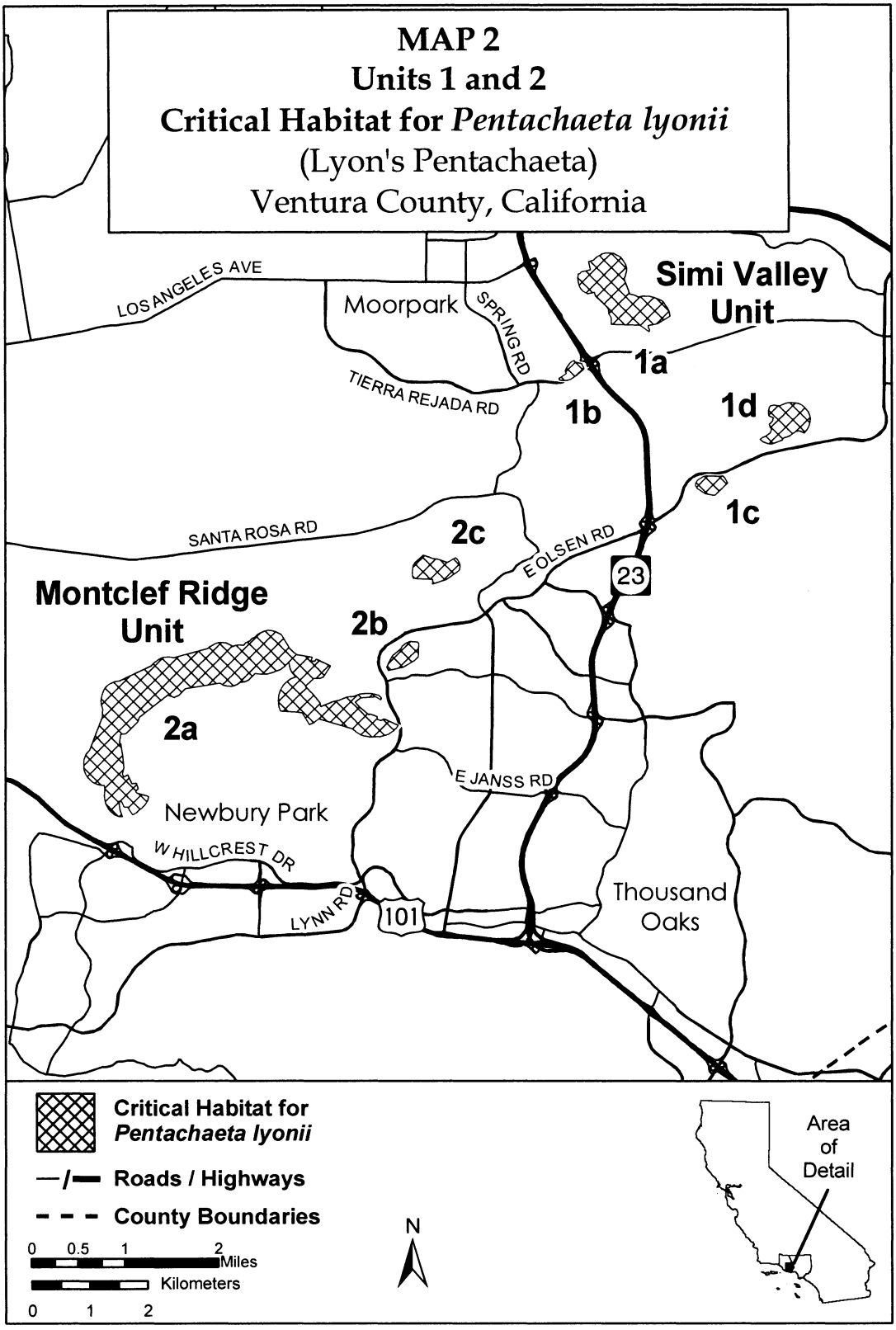
(ii) *Subunit 2b:* From USGS 1:24,000 scale quadrangle Newbury Park. Land bounded by the following UTM zone 11, NAD83 coordinates (E, N): 325989, 3788043; 326019, 3788123; 326091, 3788240; 326227, 3788353; 326250, 3788403; 326324, 3788464; 326386, 3788484; 326514, 3788481; 326536, 3788451; 326532, 3788204; 326524,

3788204; 326477, 3788163; 326370, 3788097; 326277, 3788045; 326016, 3787984; returning to 325989, 3788043.

(iii) *Subunit 2c:* From USGS 1:24,000 scale quadrangles Newbury Park and Thousand Oaks. Land bounded by the following UTM zone 11, NAD83 coordinates (E, N): 326429, 3789621; 326431, 3789704; 326432, 3789786; 326434, 3789791; 326465, 3789836; 326496, 3789863; 326625, 3789975; 326793, 3789915; 326860, 3789913; 327037, 3789851; 327170, 3789936; 327203, 3789898; 327221, 3789867; 327241, 3789818; 327251, 3789778; 327236, 3789712; 327019, 3789561; 326772, 3789480; 326771, 3789566; 326524, 3789567; 326447, 3789579; returning to 326429, 3789621.

(iv) Note: Unit 2 for *Pentachaeta lyonii* is depicted on Map 2, which follows:

BILLING CODE 4310–55–P



BILLING CODE 4310–55–C

(8) Unit 3 for *Pentachaeta lyonii*: Thousand Oaks Unit, Ventura and Los Angeles Counties, California.

(i) *Subunit 3a:* From USGS 1:24,000 scale quadrangle Thousand Oaks. Land bounded by the following UTM zone 11, NAD83 coordinates (E, N): 327757, 3781188; 327763, 3781472; 327769, 3781489; 327794, 3781536; 327828, 3781578; 327855, 3781602; 327960, 3781663; 328124, 3781731; 328228, 3781763; 328344, 3781771; 328413, 3781781; 328587, 3781782; 328721, 3781760; 328755, 3781748; 328802, 3781723; 328856, 3781676; 328888, 3781632; 328926, 3781543; 328940, 3781472; 328940, 3781436; 328929, 3781344; 328909, 3781262; 328891, 3781214; 328810, 3781152; 328769, 3781055; 328742, 3781034; 328712, 3781014; 328629, 3780971; 328578, 3780955; 328421, 3780930; 328338, 3780900; 328240, 3780880; 328187, 3780882; 328048, 3780909; 327956, 3780939; 327896, 3780978; 327806, 3781078; 327781, 3781125 returning to 327757, 3781188.

(ii) *Subunit 3b:* From USGS 1:24,000 scale quadrangle Thousand Oaks. Land bounded by the following UTM zone 11, NAD83 coordinates (E, N): 327196, 3780235; 327199, 3780252; 327212, 3780261; 327243, 3780279; 327299, 3780302; 327352, 3780314; 327424, 3780315; 327464, 3780310; 327537, 3780289; 327636, 3780240; 327681, 3780211; 327737, 3780220; 327827, 3780225; 327881, 3780220; 327915, 3780210; 327965, 3780188; 328020, 3780152; 328059, 3780115; 328081, 3780087; 328106, 3780039; 328122, 3779988; 328127, 3779934; 328120, 3779865; 328104, 3779813; 328079, 3779765; 328057, 3779739; 328002, 3779771; 327815, 3779812; 327801, 3779852; 327736, 3779926; 327751, 3779983; 327645, 3779966; 327555, 3779999; 327434, 3780068; 327338, 3780132; 327305, 3780172; returning to 327196, 3780235.

(iii) *Subunit 3c (western portion):* From USGS 1:24,000 scale quadrangle Thousand Oaks. Land bounded by the following UTM zone 11, NAD83 coordinates (E, N): 327396, 3778203; 327408, 3778287; 327447, 3778379; 327461, 3778440; 327532, 3778533; 327578, 3778594; 327605, 3778648; 327610, 3778680; 327641, 3778709; 327649, 3778743; 327691, 3778780; 327753, 3778799; 327794, 3778817; 327872, 3778831; 327910, 3778850; 327928, 3778830; 327932, 3778806; 327926, 3778765; 327916, 3778737; 327892, 3778695; 327857, 3778658; 327846, 3778629; 327817, 3778591; 327826, 3778565; 327891, 3778516; 327883, 3778465; 327877, 3778451; 327865, 3778434; 327819, 3778410; 327788, 3778387; 327771, 3778373; 327755, 3778351; 327816, 3778259; 327877, 3778169; 327908, 3778135; 327964, 3778215; 327986, 3778235; 328041, 3778408; 328011, 3778500; 327980, 3778599; 327990, 3778640; 328023, 3778696; 328033, 3778731; 328022, 3778796; 328025, 3778837; 328007, 3778882; 327993, 3778920; 327980, 3779003; 328028, 3778975; 328102, 3778910; 328133, 3778866; 328160, 3778800; 328170, 3778729; 328160, 3778658; 328130, 3778583; 328112, 3778552; 328081, 3778514; 328065, 3778492; 328059, 3778465; 328072, 3778393; 328160, 3778487; 328171, 3778505; 328218, 3778530; 328305, 3778555; 328359, 3778557; 328418, 3778550; 328470, 3778535; 328513, 3778512; 328571, 3778584; 328613, 3778618; 328644, 3778636; 328677, 3778650; 328730, 3778662; 328847, 3778668; 328900, 3778659; 329018, 3778625; 329065, 3778600; 329105, 3778568; 329118, 3778549; 329022, 3778458; 329113, 3778394; 329152, 3778431; 329247, 3778487; 329263, 3778533; 329287, 3778569; 329306, 3778708; 329296, 3778761; 329301, 3778793; 329311, 3778820; 329383, 3778893; 329400, 3778943; 329408, 3779001; 329427, 3779030; 329444, 3779045; 329490, 3779073; 329526, 3779088; 329531, 3779148; 329546, 3779199; 329575, 3779253; 329605, 3779295; 329644, 3779331; 329739, 3779397; 329838, 3779285; 329839, 3779285; 329870, 3779235; 329901, 3779225; 329917, 3779225; 330001, 3779225; 330001, 3779244; 330186, 3779218; 330199, 3779172; 330196, 3779100; 330324, 3779030; 330304, 3778967; 330291, 3778864; 330186, 3778781; 330029, 3778696; 329967, 3778657; 329918, 3778611; 329796, 3778488; 329768, 3778464; 329722, 3778435; 329592, 3778380; 329510, 3778323; 329433, 3778215; 329217, 3778063; 329172, 3778065; 329073, 3777994; 329078, 3777947; 329065, 3777920; 329063, 3777872; 329085, 3777817; 329142, 3777731; 329190, 3777706; 329148, 3777617; 329126, 3777608; 329085, 3777627; 329047, 3777666; 329017, 3777707; 329007, 3777729; 328967, 3777758; 328963, 3777772; 328967, 3777811; 328945, 3777844; 328891, 3777860; 328853, 3777860; 328802, 3777844; 328740, 3777780; 328688, 3777740; 328513, 3777659; 328476, 3777715; 328447, 3777801; 328443, 3777873; 328457, 3777950; 328420, 3777928; 328370, 3777909; 328317, 3777900; 328277, 3777900; 328227, 3777861; 328189, 3777838; 328139, 3777819; 328094, 3777811; 328050, 3777753; 328013, 3777723; 327933, 3777739; 327916, 3777711; 327884, 3777723; 327844, 3777749; 327834, 3777887; 327789, 3777917; 327781, 3777953; 327780, 3777984; 327611, 3778114; 327401, 3778151; returning to 327396, 3778203.

(iv) *Subunit 3c (eastern portion):* From USGS 1:24,000 scale quadrangles Thousand Oaks and Point Dume. Land bounded by the following UTM zone 11, NAD83 coordinates (E, N): 327881, 3775578; 327888, 3775677; 327911, 3775745; 327942, 3775796; 327976, 3775838; 328032, 3775884; 328099, 3775921; 328151, 3775937; 328235, 3775945; 328289, 3775939; 328350, 3775920; 328407, 3775947; 328456, 3775959; 328753, 3776379; 328780, 3776511; 328313, 3776697; 328244, 3776736; 328193, 3776788; 328169, 3776823; 328153, 3776859; 328141, 3776901; 328135, 3776940; 328142, 3777020; 328154, 3777061; 328172, 3777096; 328217, 3777156; 328278, 3777202; 328330, 3777225; 328397, 3777237; 328464, 3777234; 328522, 3777217; 328576, 3777187; 328628, 3777139; 329046, 3776893; 329096, 3777123; 329161, 3777223; 329179, 3777242; 329206, 3777246; 329244, 3777250; 329262, 3777272; 329235, 3777307; 329228, 3777342; 329223, 3777395; 329199, 3777423; 329195, 3777440; 329212, 3777453; 329238, 3777447; 329263, 3777440; 329287, 3777438; 329315, 3777432; 329339, 3777447; 329366, 3777477; 329380, 3777522; 329380, 3777550; 329434, 3777608; 329445, 3777701; 329445, 3777773; 329607, 3777846; 329988, 3777882; 330019, 3777911; 330048, 3777935; 330049, 3777994; 330035, 3778082; 330037, 3778129; 330054, 3778161; 330071, 3778180; 330092, 3778181; 330120, 3778146; 330166, 3778048; 330194, 3777983; 330321, 3777987; 330370, 3778025; 330388, 3778069; 330417, 3778116; 330461, 3778107; 330508, 3778102; 330547, 3778075; 330551, 3778059; 330536, 3777988; 330543, 3777968; 330554, 3777961; 330574, 3777959; 330619, 3777961; 330594, 3777814; 330563, 3777726; 330535, 3777680; 330511, 3777653; 330484, 3777629; 330438, 3777601; 330377, 3777578; 330324, 3777569; 330270, 3777571; 330201, 3777589; 329628, 3777445; 329620, 3777399; 329608, 3777365; 329592, 3777333; 329565, 3777294; 329524, 3777246; 329467, 3777199; 329437, 3777179; 329388, 3777157; 329398, 3776787; 329433, 3776728; 329452, 3776662; 329454, 3776584; 329435, 3776511; 329456, 3776439; 329462, 3776377; 329460, 3776334; 329451, 3776284; 329435, 3776237; 329403, 3776177; 329373, 3776138; 329337,

3776103; 329263, 3776055; 329193, 3776077; 329011, 3776090; 328911, 3776079; 328757, 3776035; 328685, 3775801; 328675, 3775764; 328677, 3775688; 328681, 3775635; 328688, 3775608; 328661, 3775594; 328617, 3775599; 328202, 3775501; 328159, 3775259; 328129, 3775265; 328050, 3775303; 327982, 3775354; 327939, 3775411; 327895, 3775508; returning to 327881, 3775578.

(v) Note: Unit 3 for *Pentachaeta lyonii* is depicted on Map 3—see paragraph (a)(12)(ii) of this section.

(9) Unit 4 for Pentachaeta lyonii: Triunfo Canyon Unit, Los Angeles County, California.

(i) *Unit 4:* From USGS 1:24,000 scale quadrangles Thousand Oaks and Point Dume. Land bounded by the following UTM zone 11, NAD83 coordinates (E, N): 331377, 3777912; 331406, 3777957; 331557, 3778148; 331611, 3778195; 331665, 3778224; 331749, 3778248; 331803, 3778250; 331847, 3778243; 331869, 3778239; 331996, 3778182; 332097, 3778144; 332192, 3778116; 332404, 3778078; 332519, 3778051; 332592, 3778045; 332671, 3778027; 332717, 3778041; 332732, 3778075; 332724, 3778098; 332686, 3778135; 332671, 3778195; 332794, 3778230; 332809, 3778107; 332859, 3778111; 332861, 3778240; 332899, 3778243; 332935, 3778196; 333040, 3778224; 333177, 3778261; 333181, 3778243; 333186, 3778172; 333173, 3778096; 333135, 3778008; 333100, 3777961; 333095, 3777904; 333072, 3777836; 333044, 3777790; 333007, 3777751; 332963, 3777720; 332931, 3777704; 332845, 3777680; 332774, 3777680; 332704, 3777699; 332629, 3777743; 332583, 3777732; 332513, 3777729; 332460, 3777738; 332408, 3777758; 332311, 3777716; 332257, 3777704; 332211, 3777644; 332136, 3777584; 332062, 3777545; 332010, 3777529; 331956, 3777524; 331921, 3777526; 331885, 3777533; 331836, 3777552; 331796, 3777526; 331646, 3777565; 331598, 3777666; 331538, 3777747; 331494, 3777785; 331398, 3777791; 331398, 3777855; returning to 331377, 3777912.

(ii) Note: Unit 4 for *Pentachaeta lyonii* is depicted on Map 3—see paragraph (a)(12)(ii) of this section.

(10) Unit 5 for Pentachaeta lyonii: Mulholland Drive Unit, Los Angeles County, California.

(i) *Subunit 5a:* From USGS 1:24,000 scale quadrangle Point Dume. Land bounded by the following UTM zone 11, NAD83 coordinates (E, N): 329661, 3774511; 329686, 3774511; 329694, 3774579; 329707, 3774627; 329733, 3774681; 329759, 3774721; 329840, 3774646; 329898, 3774637; 329982, 3774727; 330035, 3774723; 330098, 3774711; 330117, 3774666; 330130, 3774615; 330149, 3774542; 330263, 3774514; 330333, 3774476; 330389, 3774437; 330369, 3774370; 330346, 3774325; 330306, 3774270; 330270, 3774236; 330215, 3774197; 330165, 3774174; 330104, 3774158; 330044, 3774152; 330001, 3774154; 329952, 3774163; 329904, 3774179; 329844, 3774211; 329792, 3774254; 329759, 3774292; 329723, 3774349; 329704, 3774395; 329689, 3774462; returning to 329686, 3774511.

(ii) *Subunit 5b:* From USGS 1:24,000 scale quadrangle Point Dume. Land bounded by the following UTM zone 11, NAD83 coordinates (E, N): 332156, 3774563; 332160, 3774661; 332179, 3774731; 332214, 3774793; 332339, 3774915; 332457, 3774998; 332632, 3775179; 332675, 3775210; 332724, 3775233; 332741, 3775237; 332789, 3775072; 332829, 3775010; 332930, 3774876; 332955, 3774819; 332955, 3774772; 332911, 3774777; 332907, 3774668; 332913, 3774512; 332757, 3774458; 332433, 3774465; 332364, 3774314; 332308, 3774334; 332249, 3774374; 332201, 3774428; 332170, 3774492; returning to 332156, 3774563.

(iii) *Subunit 5c:* From USGS 1:24,000 scale quadrangle Point Dume. Land bounded by the following UTM zone 11, NAD83 coordinates (E, N): 334109, 3775136; 334111, 3775191; 334129, 3775261; 334166, 3775325; 334191, 3775353; 334227, 3775384; 334293, 3775418; 334255, 3775484; 334239, 3775536; 334234, 3775572; 334235, 3775615; 334243, 3775663; 334260, 3775708; 334280, 3775745; 334329, 3775800; 334389, 3775840; 334458, 3775864; 334535, 3775868; 334529, 3775752; 334504, 3775732; 334507, 3775641; 334513, 3775577; 334512, 3775562; 334452, 3775507; 334383, 3775373; 334360, 3775305; 334385, 3775186; 334429, 3775162; 334491, 3775098; 334533, 3775067; 334559, 3774932; 334512, 3774904; 334460, 3774884; 334406, 3774875; 334334, 3774880; 334281, 3774896; 334227, 3774925; 334178, 3774970; 334146, 3775014; 334118, 3775082; returning to 334109, 3775136.

(iv) *Subunit 5d:* From USGS 1:24,000 scale quadrangle Point Dume. Land bounded by the following UTM zone 11, NAD83 coordinates (E, N): 333938, 3776910; 333946, 3776963; 333984, 3776973; 334040, 3776976; 334158, 3777014; 334515, 3777025; 334545, 3776941; 334561, 3776863; 334655, 3776845; 334747, 3776778; 334693, 3776730; 334628, 3776698; 334447, 3776638; 334394, 3776629; 334196, 3776640; 334145, 3776656; 334082, 3776692; 334031, 3776743; 333997, 3776802; 333973, 3776871; returning to 333938, 3776910.

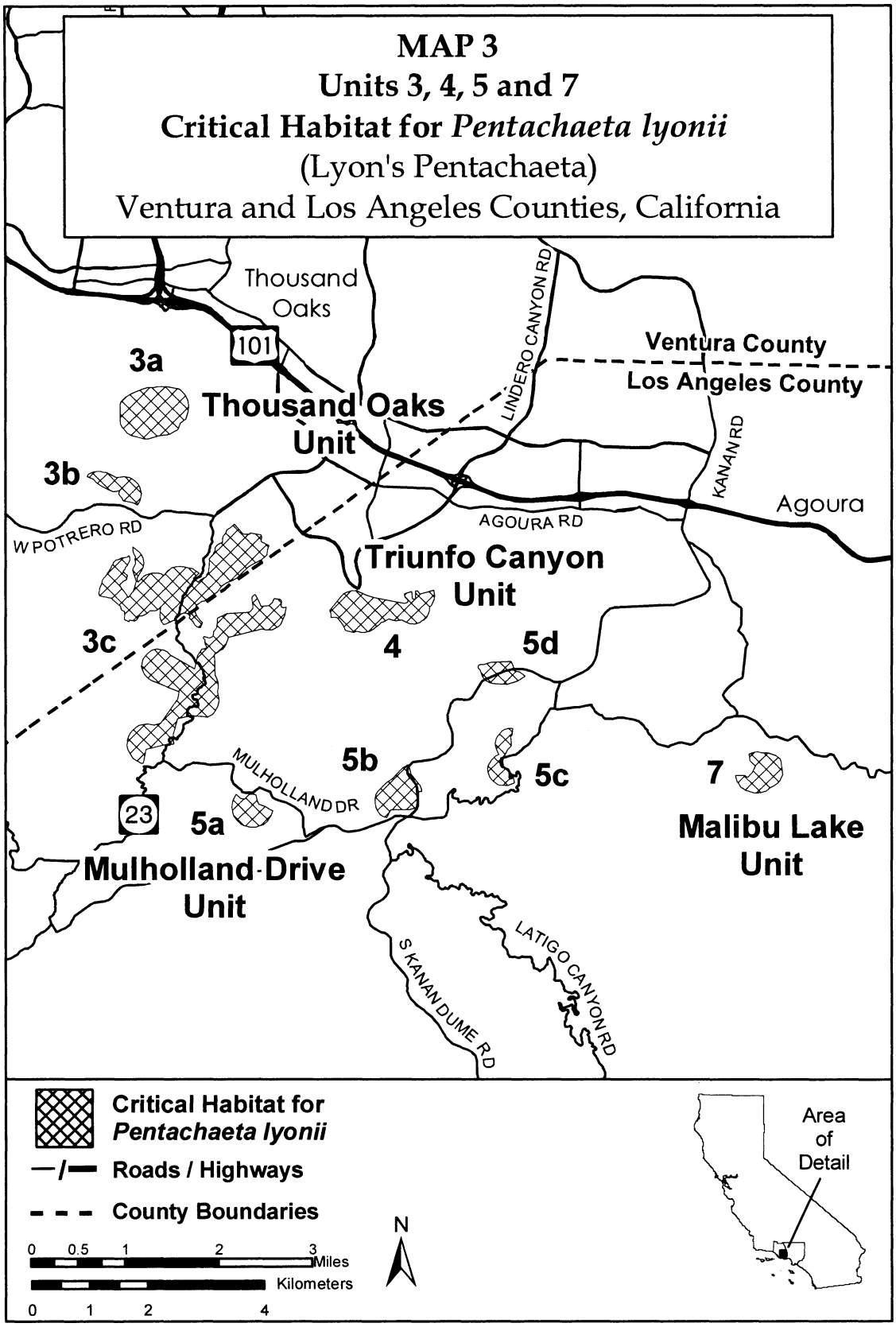
(v) Note: Unit 5 for *Pentachaeta lyonii* is depicted on Map 3—see paragraph (a)(12)(ii) of this section.

(11) Unit 7 for *Pentachaeta lyonii:* Malibu Lake Unit, Los Angeles County, California.

(i) *Unit 7:* From USGS 1:24,000 scale quadrangles Point Dume and Malibu Beach. Land bounded by the following UTM zone 11, NAD83 coordinates (E, N): 338380, 3775057; 338535, 3775051; 338571, 3775034; 338597, 3775025; 338662, 3775115; 338692, 3775172; 338711, 3775200; 338713, 3775218; 338701, 3775240; 338626, 3775315; 338619, 3775330; 338616, 3775391; 338606, 3775424; 338663, 3775446; 338720, 3775457; 338774, 3775459; 338827, 3775450; 338841, 3775446; 338893, 3775451; 338929, 3775449; 339016, 3775428; 339080, 3775397; 339134, 3775349; 339155, 3775323; 339164, 3775290; 339178, 3775202; 339185, 3775064; 339166, 3775015; 339138, 3774969; 339092, 3774917; 339036, 3774874; 338990, 3774847; 338942, 3774829; 338892, 3774791; 338831, 3774764; 338760, 3774750; 338689, 3774755; 338590, 3774784; 338541, 3774804; 338510, 3774822; 338469, 3774856; 338434, 3774898; 338401, 3774959; 338386, 3775011; returning to 338380, 3775057.

(ii) Note: Unit 7 for *Pentachaeta lyonii* is depicted on Map 3, which follows:

BILLING CODE 4310–55–P



BILLING CODE 4310–55–C

* * * * *

Family Fabaceae: *Astragalus brauntonii* (Braunton's milk-vetch).

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

(2) The primary constituent elements of critical habitat for *Astragalus brauntonii* are the habitat components that provide:

(i) Calcium carbonate soils derived from marine sediment;

(ii) Low proportion (less than 10 percent) of shrub cover directly around the plant; and

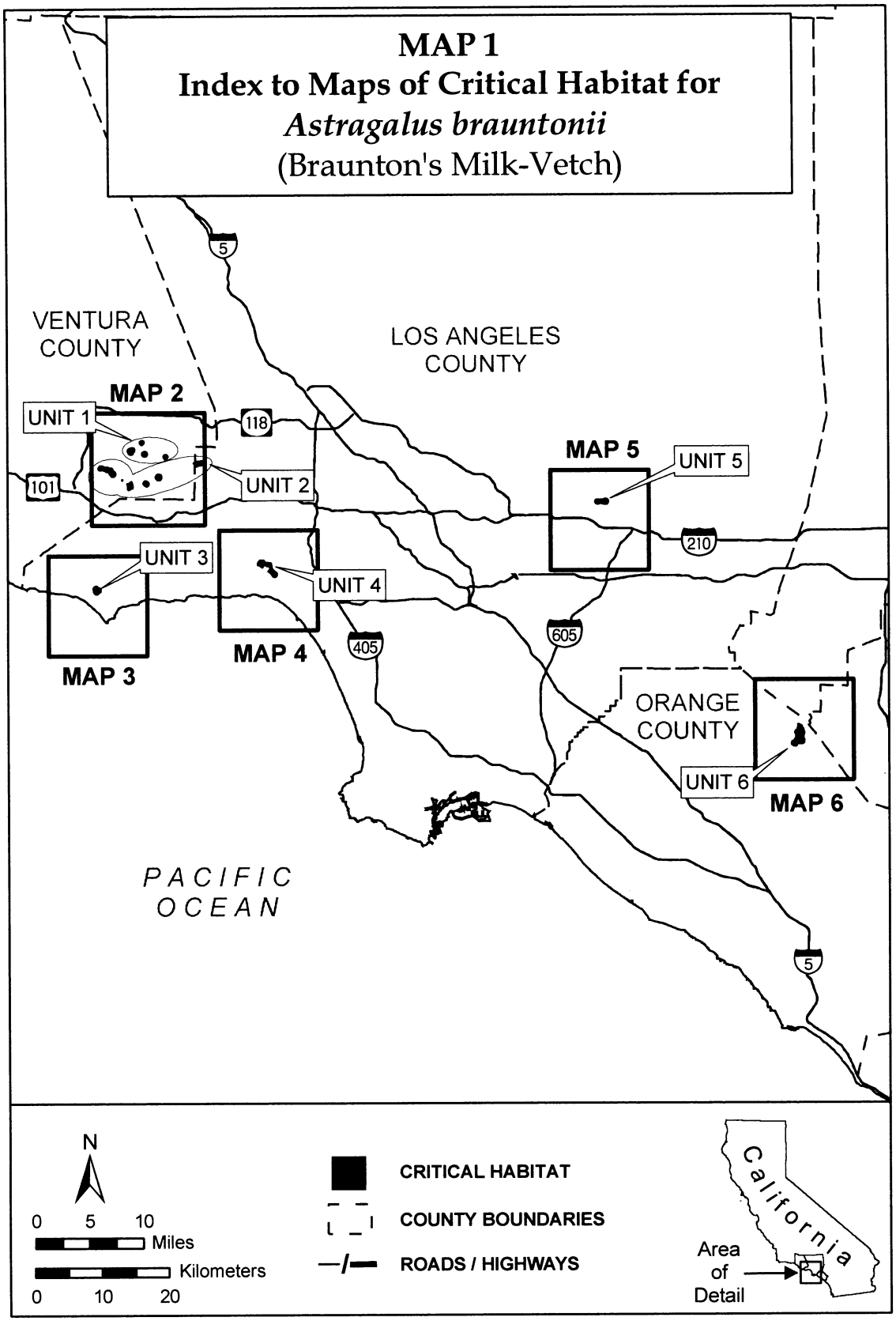
(iii) Chaparral and coastal sage scrub communities characterized by periodic disturbances that stimulate seed germination (e.g., fire, flooding, erosion) and reduce vegetative cover,

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

(4) Critical habitat units are described below. Data layers defining map units were created on base maps using the following aerial imagery: For eastern Ventura County, we used AirPhotoUSA, Inc., aerial imagery captured in October 2002; for western-most Los Angeles county populations, we used AirPhotoUSA, Inc., aerial imagery captured in August 1999; for populations near the City of Monrovia, in Los Angeles County, and for the population in Orange County, we used USGS Digital Orthophoto Quarter Quadrangles captured in the mid-1990's. All were projected to UTM zone 11, NAD27.

(5) Note: Index map for *Astragalus brauntonii* (Map 1) follows:

BILLING CODE 4310–55–P



BILLING CODE 4310–55–C

(6) Unit 1 for *Astragalus brauntonii*, Northern Simi Hills Unit, Ventura County, California.

(i) *Subunit 1a:* From USGS 1:24,000 scale quadrangle Thousand Oaks. Land bounded by the following UTM zone 11, NAD83 coordinates (E, N): 336376, 3789405; 336383, 3789477; 336415, 3789572; 336456, 3789634; 336519, 3789691; 336595, 3789729; 336688, 3789746; 336768, 3789741; 336813, 3789801; 336869, 3789850; 336949, 3789890; 337019, 3789906; 337075, 3789908; 337121, 3789902; 337174, 3789890; 337209, 3789876; 337252, 3789851; 337295, 3789816; 337320, 3789788; 337348, 3789743; 337375, 3789676; 337387, 3789605; 337385, 3789549; 337369, 3789478; 337339, 3789411; 337294, 3789352; 337220, 3789297; 337154, 3789268; 337167, 3789198; 337160, 3789100; 337136, 3789029; 337106, 3788977; 337083, 3788948; 337037, 3788905; 336990, 3788875; 336937, 3788856; 336874, 3788845; 336795, 3788849; 336741, 3788861; 336674, 3788890; 336628, 3788922; 336581, 3788973; 336551, 3789021; 336532, 3789073; 336521, 3789138; 336484, 3789165; 336437, 3789215; 336408, 3789263; 336388, 3789315; returning to 336376, 3789405.

(ii) *Subunit 1b:* From USGS 1:24,000 scale quadrangles Thousand Oaks and Calabasas. Land bounded by the following UTM zone 11, NAD83 coordinates (E, N): 338171, 3790635; 338173, 3790693; 338187, 3790754; 338211, 3790807; 338247, 3790857; 338290, 3790898; 338343, 3790930; 338398, 3790951; 338459, 3790961; 338518, 3790959; 338575, 3790945; 338631, 3790920; 338679, 3790886; 338721, 3790841; 338752, 3790791; 338774, 3790733; 338783, 3790675; 338782, 3790616; 338768, 3790556; 338743, 3790502; 338708, 3790452; 338665, 3790412; 338612, 3790379; 338557, 3790358; 338496, 3790349; 338437, 3790351; 338380, 3790364; 338324, 3790389; 338276, 3790424; 338233, 3790469; 338202, 3790519; 338181, 3790576; returning to 338171, 3790635.

(iii) *Subunit 1c:* From USGS 1:24,000 scale quadrangles Thousand Oaks and Calabasas. Land bounded by the following UTM zone 11, NAD83 coordinates (E, N): 338516, 3788952; 338527, 3789021; 338550, 3789087; 338594, 3789158; 338643, 3789208; 338700, 3789248; 338764, 3789277; 338832, 3789293; 338931, 3789297; 339000, 3789287; 339065, 3789263; 339137, 3789219; 339187, 3789171; 339227, 3789114; 339256, 3789050; 339272, 3788982; 339274, 3788912; 339263, 3788843; 339240, 3788777; 339196, 3788706; 339147, 3788656; 339090, 3788616; 339026, 3788587; 338959, 3788571; 338883, 3788566; 338808, 3788573; 338742, 3788594; 338680, 3788626; 338619, 3788676; 338591, 3788708; 338563, 3788751; 338534, 3788814; 338519, 3788882; returning to 338516, 3788952.

(iv) *Subunit 1d:* From USGS 1:24,000 scale quadrangle Calabasas. Land bounded by the following UTM zone 11, NAD83 coordinates (E, N): 341703, 3788492; 341705, 3788551; 341719, 3788610; 341743, 3788663; 341777, 3788710; 341819, 3788750; 341869, 3788781; 341925, 3788802; 341983, 3788812; 342041, 3788810; 342098, 3788797; 342151, 3788773; 342201, 3788737; 342240, 3788695; 342271, 3788645; 342292, 3788591; 342302, 3788531; 342300, 3788473; 342286, 3788416; 342262, 3788363; 342226, 3788312; 342184, 3788274; 342135, 3788243; 342080, 3788223; 342013, 3788212; 341962, 3788215; 341905, 3788228; 341852, 3788252; 341805, 3788286; 341765, 3788329; 341733, 3788380; 341712, 3788435; returning to 341703, 3788492.

(v) Note: Unit 1 for *Astragalus brauntonii* is depicted on Map 2—see paragraph (a)(7)(vii) of this section.

(7) Unit 2 for *Astragalus brauntonii*, Southern Simi Hills Unit, Ventura County and Los Angeles County, California.

(i) *Subunit 2a:* From USGS 1:24,000 scale quadrangle Thousand Oaks. Land bounded by the following UTM zone 11, NAD83 coordinates (E, N): 331967, 3786775; 332010, 3786796; 332036, 3786818; 332059, 3786815; 332143, 3786838; 332153, 3786872; 332032, 3786908; 332054, 3786949; 332107, 3787022; 332203, 3787105; 332274, 3787160; 332410, 3787127; 332550, 3787113; 332640, 3787122; 332652, 3787061; 333232, 3786946; 333316, 3786954; 333372, 3786949; 333423, 3786936; 333470, 3786916; 333531, 3786876; 333609, 3786872; 333661, 3786859; 333701, 3786843; 333773, 3786857; 333842, 3786856; 333914, 3786837; 333976, 3786804; 334019, 3786769; 334050, 3786734; 334079, 3786687; 334093, 3786652; 334106, 3786602; 334110, 3786554; 334104, 3786498; 334093, 3786456; 334138, 3786438; 334206, 3786397; 334285, 3786328; 334431, 3786159; 334452, 3786128; 334484, 3786061; 334504, 3785989; 334509, 3785940; 334508, 3785877; 334487, 3785777; 334454, 3785711; 334418, 3785666; 334377, 3785628; 334330, 3785598; 334277, 3785578; 334203, 3785566; 334148, 3785564; 334092, 3785573; 334017, 3785596; 333953, 3785634; 333914, 3785669; 333797, 3785891; 333752, 3785877; 333747, 3785883; 333691, 3786002; 333674, 3786074; 333668, 3786139; 333626, 3786150; 333575, 3786173; 333495, 3786232; 333453, 3786253; 333371, 3786305; 333326, 3786302; 333270, 3786305; 333210, 3786317; 333158, 3786337; 333126, 3786356; 333082, 3786391; 333024, 3786464; 332440, 3786601; 332403, 3786580; 332351, 3786561; 332296, 3786552; 332259, 3786552; 332186, 3786566; 332089, 3786613; 332046, 3786649; 332022, 3786677; 331988, 3786728; returning to 331967, 3786775.

(ii) *Subunit 2b:* From USGS 1:24,000 scale quadrangle Thousand Oaks. Land bounded by the following UTM zone 11, NAD83 coordinates (E, N): 335530, 3784984; 335546, 3785093; 335565, 3785110; 335590, 3785102; 335569, 3784979; 335559, 3784977; 335546, 3784977; returning to 335530, 3784984.

(iii) *Subunit 2c:* From USGS 1:24,000 scale quadrangle Thousand Oaks. Land bounded by the following UTM zone 11, NAD83 coordinates (E, N): 336280, 3784509; 336387, 3784488; 336664, 3784616; 336909, 3784789; 336942, 3784722; 336957, 3784641; 336984, 3784596; 336999, 3784562; 337017, 3784484; 337019, 3784432; 337084, 3784382; 337100, 3784363; 337093, 3784348; 337094, 3784270; 337026, 3784217; 337038, 3784151; 337045, 3784086; 337153, 3784041; 337115, 3784014; 337064, 3783816; 337012, 3783819; 336983, 3783806; 336973, 3783806; 336958, 3783843; 336954, 3783873; 336871, 3784003; 336869, 3784037; 336879, 3784082; 336883, 3784153; 336859, 3784238; 336838, 3784256; 336820, 3784262; 336755, 3784266; 336676, 3784283; 336658, 3784311; 336640, 3784317; 336613, 3784299; 336603, 3784281; 336603, 3784268; 336629, 3784222; 336640, 3784120; 336755, 3784049; 336844, 3783987; 336848, 3783952; 336883, 3783901; 336903, 3783853; 336873, 3783853; 336849, 3783833; 336856, 3783796; 336847, 3783768; 336850, 3783748; 336832, 3783715; 336793, 3783703; 336741, 3783721; 336686, 3783722; 336628, 3783708; 336647, 3783616; 336513, 3783551; 336338, 3783761; 336349, 3783854; 336373, 3783924; 336406, 3783980; 336412, 3784049; 336431, 3784110; 336393, 3784146; 336371, 3784176; 336344, 3784225; 336332, 3784261; 336320, 3784331; 336294, 3784396; 336281, 3784468; returning to 336280, 3784509.

(iv) *Subunit 2d:* From USGS 1:24,000 scale quadrangle Calabasas. Land bounded by the following UTM zone 11, NAD83 coordinates (E, N): 338707, 3784551; 338713, 3784618; 338729, 3784672; 338760, 3784729; 338796, 3784772; 338850, 3784817; 338900, 3784844; 338968, 3784864; 339024,

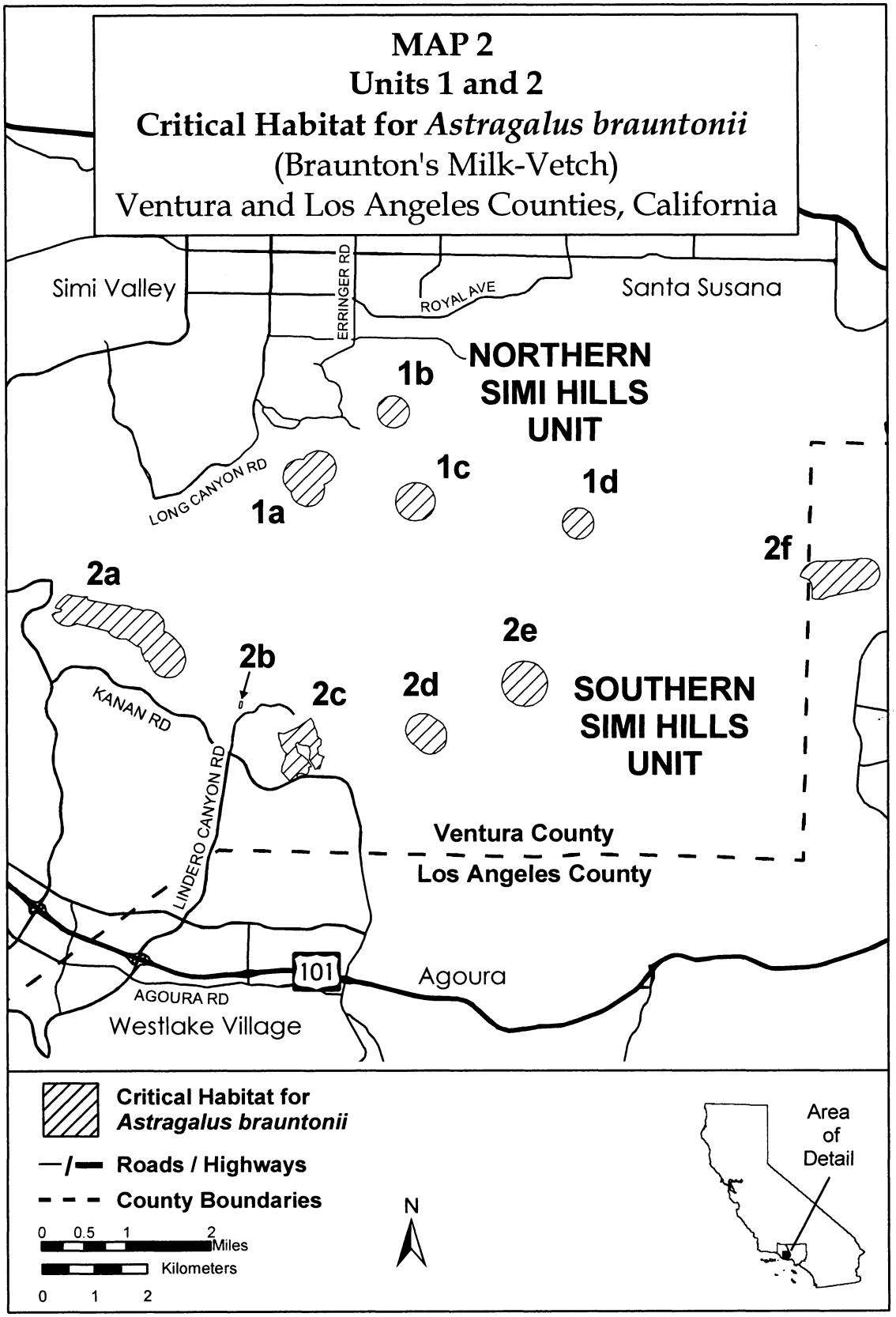
3784870; 339079, 3784864; 339147, 3784845; 339196, 3784818; 339259, 3784771; 339311, 3784751; 339359, 3784721; 339422, 3784659; 339459, 3784595; 339482, 3784509; 339485, 3784401; 339473, 3784323; 339444, 3784254; 339403, 3784198; 339347, 3784149; 339281, 3784116; 339193, 3784098; 339137, 3784099; 339071, 3784115; 339020, 3784138; 338981, 3784163; 338941, 3784201; 338911, 3784242; 338843, 3784285; 338802, 3784323; 338755, 3784387; 338729, 3784442; 338712, 3784496; returning to 338707, 3784551.

(v) *Subunit 2e:* From USGS 1:24,000 scale quadrangle Calabasas. Land bounded by the following UTM zone 11, NAD83 coordinates (E, N): 340541, 3785437; 340548, 3785524; 340571, 3785601; 340615, 3785684; 340666, 3785746; 340738, 3785805; 340810, 3785843; 340887, 3785867; 340964, 3785875; 341051, 3785869; 341133, 3785846; 341214, 3785804; 341274, 3785757; 341337, 3785683; 341376, 3785611; 341403, 3785522; 341410, 3785442; 341403, 3785361; 341376, 3785272; 341338, 3785201; 341288, 3785138; 341216, 3785078; 341145, 3785040; 341069, 3785016; 340985, 3785006; 340894, 3785013; 340820, 3785035; 340734, 3785079; 340671, 3785130; 340612, 3785202; 340574, 3785273; 340550, 3785351; returning to 340541, 3785437.

(vi) *Subunit 2f:* From USGS 1:24,000 scale quadrangle Calabasas. Land bounded by the following UTM zone 11, NAD83 coordinates (E, N): 346217, 3787493; 346231, 3787542; 346250, 3787586; 346281, 3787636; 346314, 3787675; 346353, 3787709; 346396, 3787737; 346477, 3787770; 346546, 3787782; 346630, 3787779; 347234, 3787813; 347300, 3787832; 347365, 3787835; 347416, 3787843; 347492, 3787839; 347529, 3787829; 347580, 3787805; 347626, 3787772; 347653, 3787745; 347687, 3787699; 347710, 3787647; 347720, 3787610; 347725, 3787554; 347720, 3787497; 347710, 3787460; 347687, 3787409; 347665, 3787377; 347622, 3787330; 347584, 3787298; 347541, 3787273; 347493, 3787256; 347443, 3787247; 347394, 3787247; 346752, 3787100; 346688, 3787072; 346639, 3787060; 346569, 3787054; 346500, 3787061; 346445, 3787077; 346445, 3787293; 346426, 3787376; 346382, 3787428 returning to 346217, 3787493.

(vii) Note: Unit 2 for *Astragalus brauntonii* is depicted on Map 2, which follows:

BILLING CODE 4310–55–P

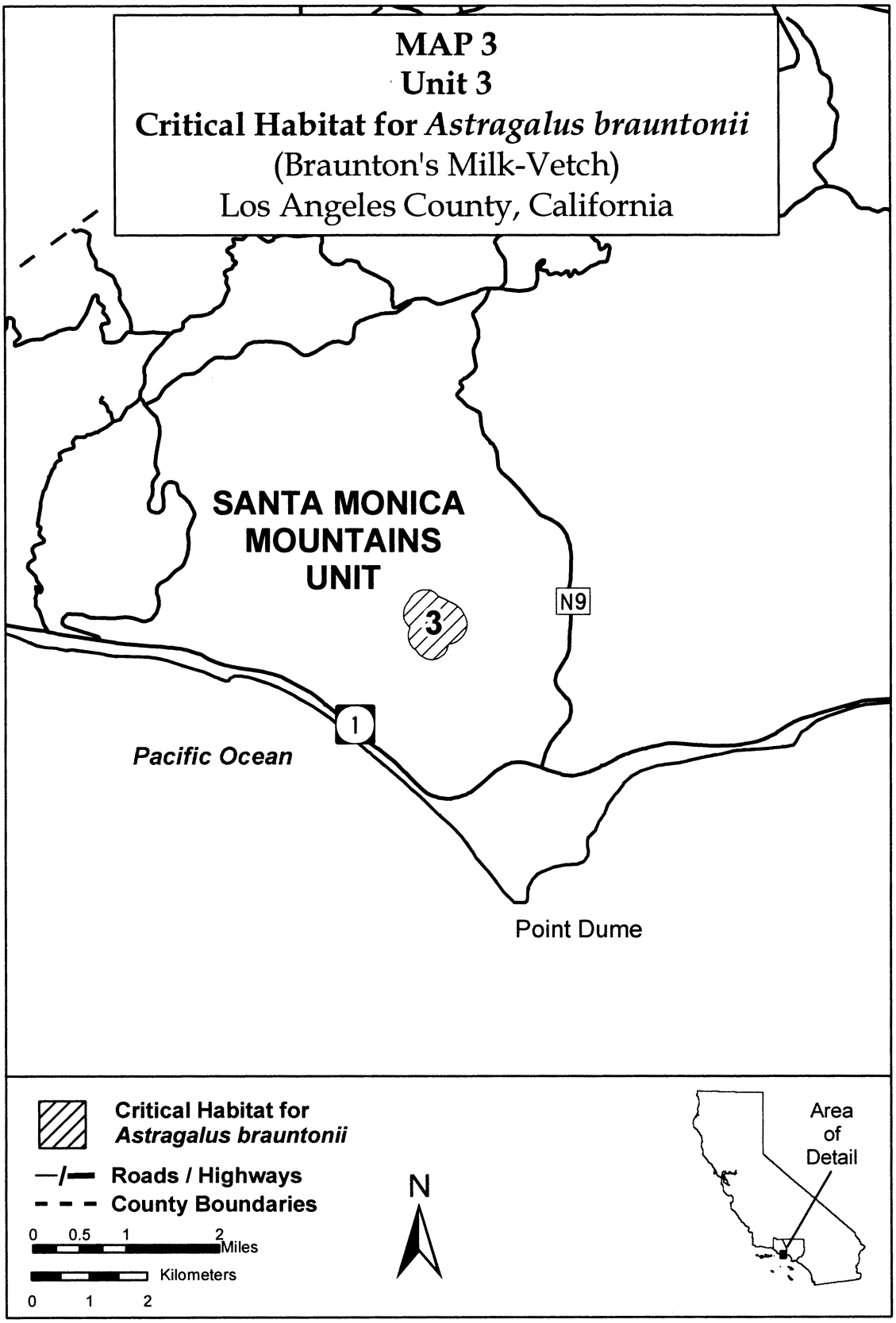


BILLING CODE 4310–55–C

(8) Unit 3 for *Astragalus brauntonii,* Santa Monica Mountains Unit, Los Angeles County, California.

(i) *Unit 3:* From USGS 1:24,000 scale quadrangle Point Dume. Land bounded by the following UTM zone 11, NAD83 coordinates (E, N): 331185, 3768655; 331185, 3768730; 331205, 3768803; 331237, 3768861; 331285, 3768913; 331301, 3768954; 331331, 3769002; 331370, 3769043; 331416, 3769076; 331468, 3769100; 331523, 3769112; 331599, 3769112; 331636, 3769105; 331683, 3769088; 331738, 3769055; 331794, 3768997; 331912, 3768949; 332085, 3768851; 332146, 3768802; 332187, 3768757; 332226, 3768705; 332257, 3768644; 332280, 3768561; 332280, 3768490; 332263, 3768398; 332240, 3768347; 332189, 3768277; 332133, 3768228; 332072, 3768195; 332020, 3768176; 331959, 3768166; 331946, 3768100; 331922, 3768046; 331888, 3768000; 331838, 3767954; 331799, 3767931; 331759, 3767915; 331719, 3767905; 331677, 3767901; 331633, 3767903; 331591, 3767912; 331542, 3767931; 331504, 3767954; 331452, 3768000; 331411, 3768061; 331353, 3768103; 331309, 3768156; 331274, 3768232; 331263, 3768305; 331265, 3768351; 331272, 3768389; 331301, 3768458; 331255, 3768501; 331221, 3768547; 331198, 3768599; returning to 331185, 3768655.

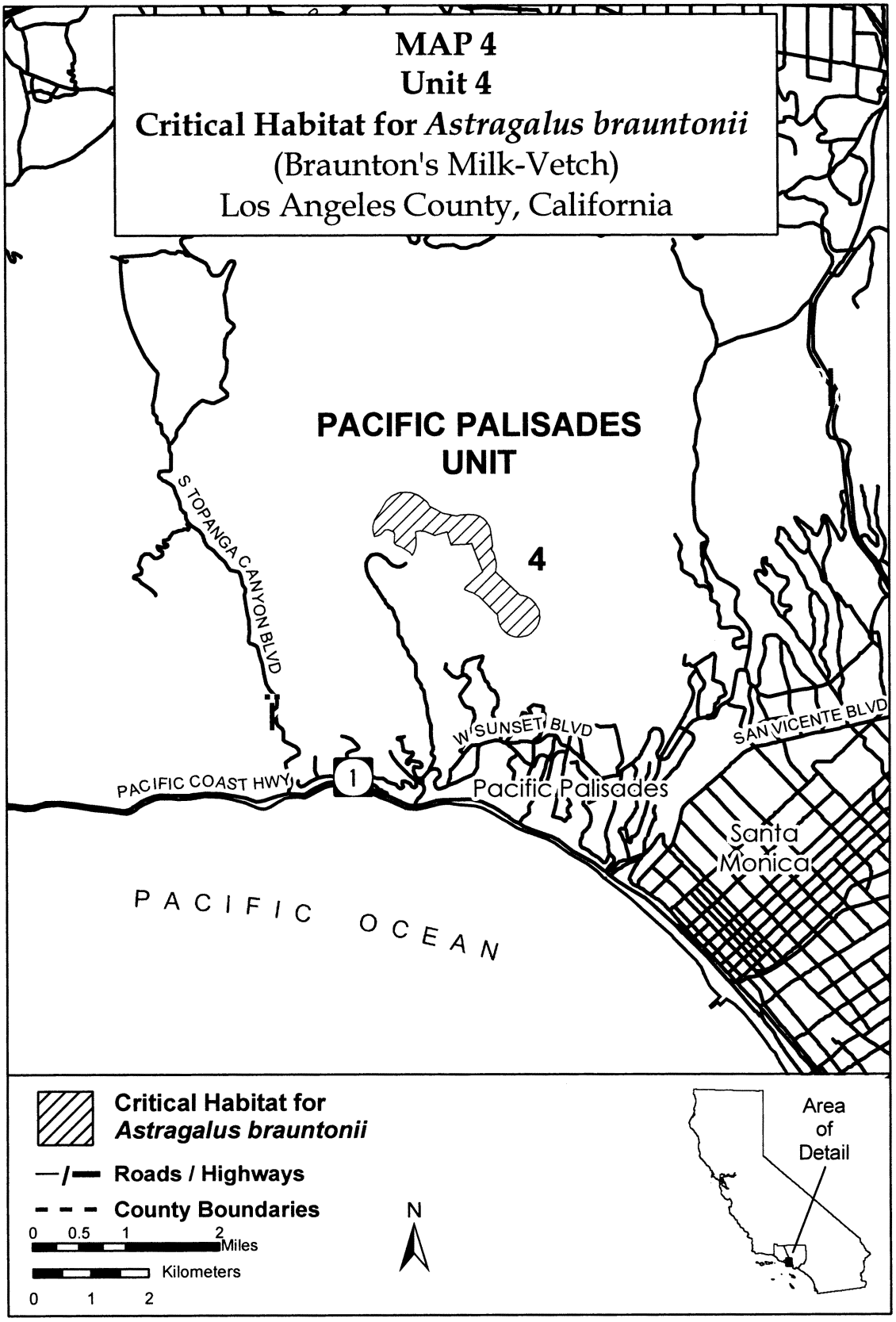
(ii) Note: Unit 3 (Map 3 for *Astragalus brauntonii*) follows:


MAP 3
Unit 3
Critical Habitat for *Astragalus brauntonii*
(Braunton's Milk-Vetch)
Los Angeles County, California
SANTA MONICA MOUNTAINS UNIT
3
N9
1
Pacific Ocean
Point Dume
Critical Habitat for *Astragalus brauntonii*
Roads / Highways
County Boundaries
0 0.5 1 2 Miles
0 1 2 Kilometers
N
Area of Detail

(9) Unit 4 for *Astragalus brauntonii:* Pacific Palisades Unit, Los Angeles County, California.

(i) *Unit 4:* From USGS 1:24,000 scale quadrangle Topanga. Land bounded by the following UTM zone 11, NAD83 coordinates (E, N): 355707, 3772295; 355707, 3772369; 355733, 3772467; 355774, 3772545; 355824, 3772609; 355871, 3772707; 355937, 3772804; 356000, 3772868; 356030, 3772891; 356142, 3772948; 356215, 3772962; 356318, 3772958; 356373, 3772949; 356454, 3772921; 356508, 3772891; 356613, 3772818; 356651, 3772777; 356687, 3772716; 356782, 3772664; 356801, 3772649; 356910, 3772595; 357152, 3772547; 357212, 3772558; 357361, 3772565; 357479, 3772557; 357532, 3772541; 357596, 3772508; 357639, 3772473; 357679, 3772428; 357708, 3772381; 357732, 3772311; 357764, 3772063; 357762, 3772007; 357751, 3771955; 357779, 3771909; 357800, 3771861; 357828, 3771720; 357831, 3771654; 357816, 3771572; 358249, 3771162; 358310, 3771152; 358358, 3771135; 358420, 3771102; 358460, 3771071; 358519, 3771005; 358559, 3770927; 358573, 3770879; 358581, 3770827; 358582, 3770775; 358571, 3770706; 358554, 3770658; 358521, 3770596; 358477, 3770542; 358439, 3770508; 358379, 3770472; 358332, 3770452; 358282, 3770440; 358235, 3770434; 358176, 3770436; 358125, 3770446; 358077, 3770462; 358015, 3770495; 357975, 3770526; 357939, 3770563; 357891, 3770637; 357862, 3770718; 357854, 3770771; 357853, 3770817; 357544, 3771137; 357417, 3771216; 357337, 3771239; 357284, 3771268; 357300, 3771301; 357591, 3771565; 357405, 3772067; 357349, 3772049; 357156, 3772046; 357117, 3772046; 357055, 3772037; 356986, 3772275; 356772, 3772203; 356631, 3772270; 356516, 3772291; 356445, 3772271; 356455, 3772138; 356450, 3772044; 356441, 3771989; 356407, 3771903; 356383, 3771858; 356345, 3771904; 356275, 3771953; 356181, 3772007; 356092, 3772042; 356068, 3772088; 356078, 3772228; 356061, 3772271; 355979, 3772303; 355961, 3772306; 355929, 3772303; 355911, 3772295; 355883, 3772262; 355849, 3772233; 355792, 3772204; 355735, 3772187; 355723, 3772218; returning to 355707, 3772295.

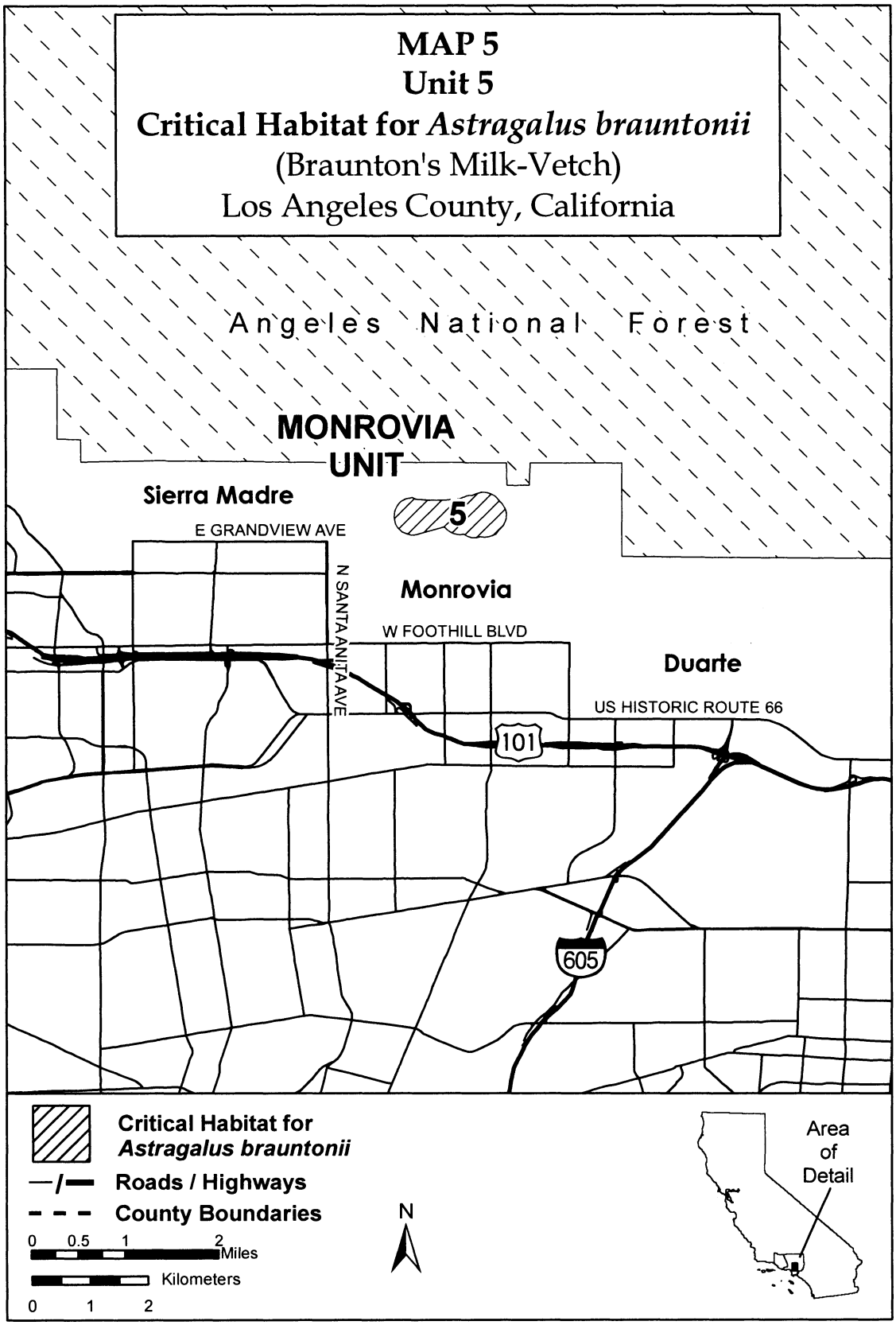
(ii) Note: Unit 4 (Map 4 for *Astragalus brauntonii*) follows:


MAP 4
Unit 4
Critical Habitat for *Astragalus brauntonii*
(Braunton's Milk-Vetch)
Los Angeles County, California
PACIFIC PALISADES UNIT
4
S TOPANGA CANYON BLVD
W SUNSET BLVD
SAN VICENTE BLVD
PACIFIC COAST HWY
1
Pacific Palisades
Santa Monica
PACIFIC OCEAN
Critical Habitat for *Astragalus brauntonii*
Roads / Highways
County Boundaries
0 0.5 1 2 Miles
Kilometers
0 1 2
N
Area of Detail

(10) Unit 5 for *Astragalus brauntonii:* Monrovia Unit, Los Angeles County, California.

(i) *Unit 5:* From USGS 1:24,000 scale quadrangle Azusa and Mount Wilson. Land bounded by the following UTM zone 11, NAD83 coordinates (E, N): 405974, 3781576; 405979, 3781650; 405995, 3781703; 406022, 3781753; 406076, 3781819; 406120, 3781855; 406169, 3781881; 406204, 3781893; 406262, 3781902; 406287, 3781909; 406341, 3781880; 406556, 3781863; 406865, 3781863; 407128, 3781894; 407227, 3781943; 407278, 3781950; 407327, 3781948; 407390, 3781979; 407480, 3782002; 407536, 3782004; 407591, 3781995; 407643, 3781975; 407716, 3781930; 407757, 3781892; 407790, 3781845; 407847, 3781789; 407877, 3781742; 407900, 3781675; 407910, 3781613; 407905, 3781538; 407889, 3781485; 407858, 3781425; 407788, 3781337; 407734, 3781284; 407670, 3781247; 407605, 3781228; 407533, 3781222; 407466, 3781231; 407393, 3781212; 407319, 3781212; 407234, 3781235; 407173, 3781271; 407131, 3781265; 407075, 3781267; 406986, 3781289; 406937, 3781316; 406891, 3781351; 406858, 3781385; 406830, 3781398; 406785, 3781386; 406355, 3781261; 406281, 3781256; 406208, 3781270; 406109, 3781318; 406066, 3781353; 406041, 3781381; 406004, 3781446; 405989, 3781494; returning to 405974, 3781576.

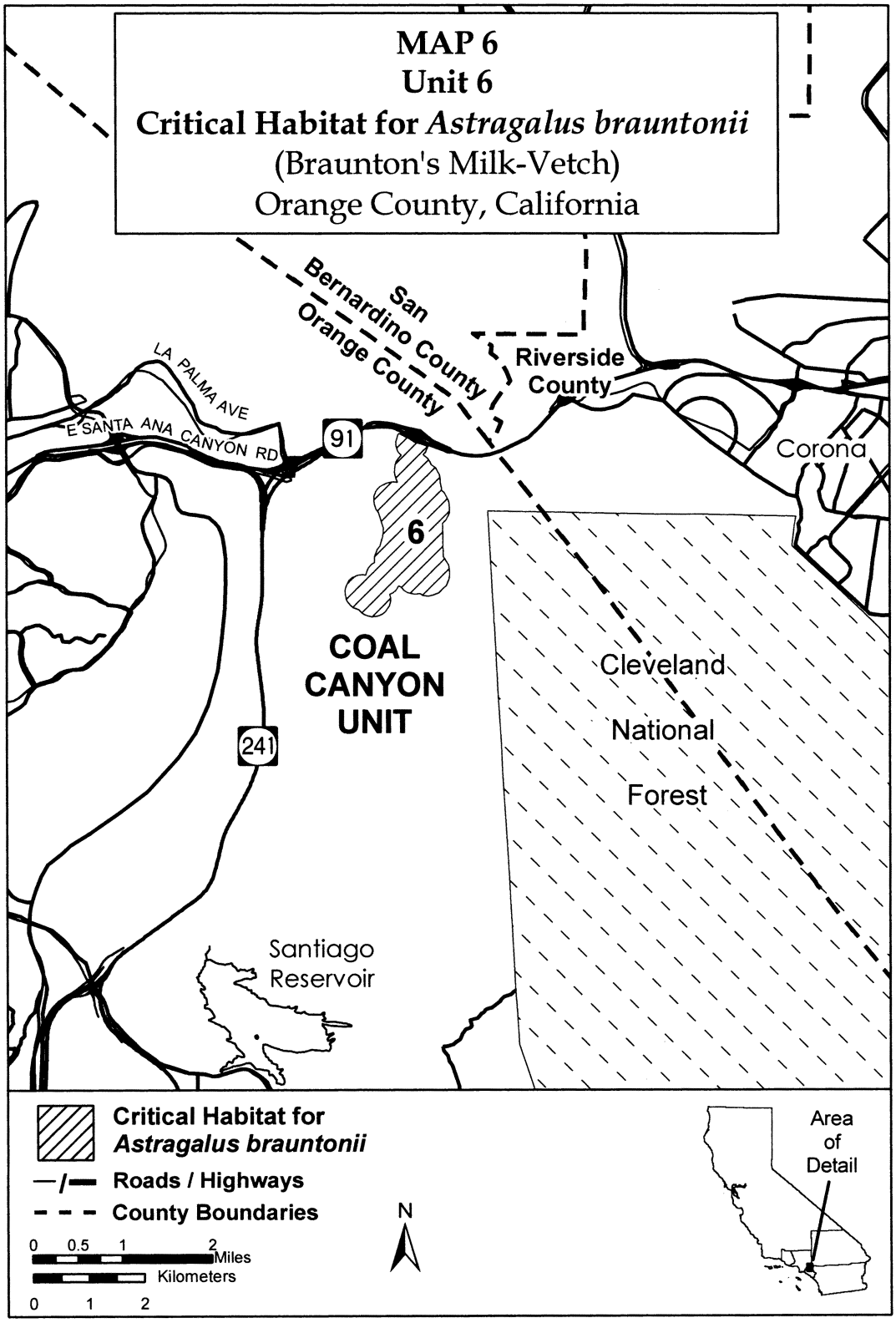
(ii) Note: Unit 5 (Map 5 for *Astragalus brauntonii*) follows:


MAP 5
Unit 5
Critical Habitat for *Astragalus brauntonii*
(Braunton's Milk-Vetch)
Los Angeles County, California
Angeles National Forest
MONROVIA UNIT
5
Sierra Madre
E GRANDVIEW AVE
N SANTA ANITA AVE
Monrovia
W FOOTHILL BLVD
Duarte
US HISTORIC ROUTE 66
101
605
Critical Habitat for *Astragalus brauntonii*
Roads / Highways
County Boundaries
0 0.5 1 2 Miles
Kilometers
0 1 2
N
Area of Detail

(11) Unit 6 for *Astragalus brauntonii,* Coal Canyon Unit, Orange County, California.

(i) *Unit 6:* From USGS 1:24,000 scale quadrangle Black Star Canyon. Land bounded by the following UTM zone 11, NAD83 coordinates (E, N): 435146, 3745336; 435148, 3745392; 435158, 3745441; 435178, 3745493; 435205, 3745541; 435241, 3745585; 435284, 3745620; 435343, 3745652; 435397, 3745668; 435464, 3745673; 435516, 3745669; 435536, 3745742; 435562, 3745791; 435608, 3745847; 435636, 3745872; 435675, 3745897; 435680, 3746003; 435692, 3746057; 435725, 3746124; 435780, 3746189; 435831, 3746385; 435841, 3746513; 435753, 3746808; 435709, 3746866; 435676, 3746949; 435666, 3747018; 435672, 3747092; 435696, 3747163; 435725, 3747210; 435782, 3747268; 435828, 3747301; 435879, 3747324; 435964, 3747349; 436020, 3747355; 436095, 3747350; 436066, 3747408; 436054, 3747444; 436047, 3747480; 436044, 3747530; 436050, 3747639; 436070, 3747711; 436107, 3747776; 436164, 3747831; 436126, 3747871; 436096, 3747919; 436076, 3747973; 436067, 3748023; 436069, 3748086; 436081, 3748141; 436105, 3748193; 436131, 3748231; 436428, 3748073; 436642, 3748002; 436631, 3747955; 436616, 3747919; 436593, 3747881; 436564, 3747846; 436645, 3747774; 436678, 3747729; 436703, 3747670; 436763, 3747625; 436798, 3747585; 436819, 3747554; 436842, 3747504; 436852, 3747464; 436859, 3747415; 436857, 3747352; 436880, 3747282; 436885, 3747245; 436884, 3747198; 436935, 3747153; 436986, 3747079; 437002, 3747040; 437019, 3746976; 437030, 3746895; 437023, 3746802; 437002, 3746738; 436963, 3746670; 436928, 3746629; 436902, 3746606; 436910, 3746001; 436959, 3745945; 437001, 3745869; 437017, 3745816; 437028, 3745730; 437028, 3745655; 437019, 3745600; 437001, 3745551; 436962, 3745475; 436939, 3745446; 436884, 3745392; 436831, 3745352; 436727, 3745306; 436691, 3745296; 436636, 3745291; 436562, 3745301; 436490, 3745331; 436443, 3745324; 436384, 3745323; 436311, 3745338; 436260, 3745361; 436220, 3745387; 436191, 3745409; 436154, 3745449; 436118, 3745474; 436097, 3745436; 436055, 3745385; 436012, 3745350; 435956, 3745321; 435966, 3745236; 435959, 3745173; 435940, 3745105; 435903, 3745041; 435864, 3745000; 435827, 3744971; 435778, 3744945; 435724, 3744929; 435626, 3744922; 435544, 3744938; 435468, 3744975; 435425, 3745011; 435396, 3745044; 435336, 3745064; 435286, 3745090; 435247, 3745121; 435209, 3745162; 435180, 3745209; 435165, 3745244; returning to 435146, 3745336.

(ii) Note: Unit 6 (Map 6 for *Astragalus brauntonii*) follows:



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Dated: October 31, 2006.

David M. Verhey,

Acting Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 06–9089 Filed 11–13–06; 8:45 am]

BILLING CODE 4310–55–C