

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

RIN 1018-AU34

Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for *Piperia yadonii* (Yadon's piperia)**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 endangered *Piperia yadonii* (Yadon's piperia) pursuant to the Endangered Species Act of 1973, as amended (Act). In total, approximately 2,117 acres (ac) (857 hectares (ha)) fall within the boundaries of the critical habitat designation. The critical habitat is located in Monterey County, California.

DATES: This rule becomes effective on November 23, 2007.

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 (VFWO), 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, VFWO, at the above address (telephone (805) 644-1766, ext. 319; 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:**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 *Piperia yadonii*, refer to the proposed critical habitat rule published on October 18, 2006 (71 FR 61546) and the final listing rule published in the **Federal Register** on August 12, 1998 (63 FR 43100).

Previous Federal Actions

For more information on previous Federal actions concerning *Piperia yadonii*, refer to the final listing rule

published in the **Federal Register** on August 12, 1998 (63 FR 43100) and proposed critical habitat rule published in the **Federal Register** on October 18, 2006 (71 FR 61546). On August 7, 2007, we published a notice announcing the availability of the draft economic analysis (DEA), and reopening of the public comment period (72 FR 44069). This comment period closed on September 6, 2007.

Summary of Comments and Recommendations

We requested written comments from the public on the proposed designation of critical habitat for *Piperia yadonii* in the proposed rule published on October 18, 2006 (71 FR 61546). 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 December 18, 2006. We published newspaper notices on October 26, 2006, in the *Monterey Herald*, Monterey, California, inviting public comment on the proposed critical habitat designation.

During the comment period that opened on October 18, 2006, and closed on December 18, 2006, we received 9 comments directly addressing the proposed critical habitat designation: 3 from peer reviewers, 1 from a State agency, and 5 from organizations or individuals. During the comment period that opened on August 7, 2007, and closed on September 6, 2007, we received 8 comments directly addressing the proposed critical habitat designation and the draft economic analysis. All of these latter comments were from organizations or individuals and some organizations and individuals provided comments during both comment periods. Overall, 12 commenters supported a designation of critical habitat for *P. yadonii*, and 3 commenters opposed parts of the proposed designation. All comments and new information relating to the proposed critical habitat designation for *P. yadonii* are addressed in the following summary and incorporated into the final rule as appropriate. We did not receive any requests for a public hearing.

Peer Review

In accordance with our policy published on July 1, 1994 (59 FR 34270), we solicited expert opinions from three knowledgeable individuals with scientific expertise that included familiarity with the species, the geographic region in which the species occurs, and conservation biology

principles. We received responses from all three peer reviewers. The peer reviewers generally agreed that the technical information and primary constituent elements (PCEs) identified in the proposed designation were accurate and that those areas that we did propose as critical habitat should be included. However, all three peer reviewers suggested that the designation should be expanded to include additional areas and increase the size of existing units. They also provided additional information, clarifications, and suggestions to improve the final critical habitat rule and the conservation of the species. 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 *Piperia yadonii*, and address them in the following summary.

Peer Reviewer Comments

1. *Comment:* One peer reviewer indicated that the proposed designation emphasizes land ownership and proposed land use over biological or ecological factors in determining the size and boundaries of units. The peer reviewer replicated the process we identified in the rule and provided an analysis of six of our proposed subunits in Units 1, 2, and 3 as support for this assertion. The peer reviewer showed that those subunits that were on, or surrounded by, typical (non-conservation oriented) private lands encompassed a substantially smaller proportion of the appropriate surrounding habitat for *Piperia yadonii* than those subunits that were on, or surrounded by, lands owned by a conservation-oriented organization. The peer reviewer further stated that an unbiased designation of critical habitat could provide great conservation benefit to *P. yadonii*, as evidenced by four policies in the County of Monterey General Plan update. These policies emphasize conservation of designated critical habitat areas in evaluating and approving proposed land uses. The peer reviewer recommended that we redo the designation, focusing solely on the presence of PCEs and eliminating any bias introduced by assigning preference to a hierarchy of land ownership types.

Our Response: Our method for designating areas as critical habitat was described in the proposed rule under the sections "Criteria Used to Identify Critical Habitat" and "Mapping" and is reiterated here. See our answer to comment 18. In determining the extent

of lands necessary to ensure the conservation and persistence of *Piperia yadonii*, we identified all areas that contain those biological and physical features essential to the conservation of the species. These lands include those that are either already protected, managed, or otherwise unencumbered by conflicting use (e.g., undeveloped County or City parks, proposed preservation areas). These populations are most likely to persist into the future and to contribute to the species' survival and recovery. We also included undeveloped Federal and State lands, then local agency and private lands with recognized resource conservation emphasis (e.g., lands owned by a conservation-oriented organization, undeveloped County or City parks), and finally other agency and private lands.

We agree that land use considerations were a factor used to delineate the boundaries of some units or subunits; however, we did not exclude from consideration any subunits based solely on land ownership. In those cases where we determined that a site had the features essential to the conservation of *Piperia yadonii*, we designated the site (e.g., Units 2b and 7). Where a site included a mix of land ownership (i.e., lands that were owned or proposed for conservation by the State and lands that were not), we typically reduced the subunit to the boundaries of the conservation-oriented lands, in an effort to minimize the designation of lands that were private or were used or proposed for activities that would not be conducive to conservation (e.g., development) while ensuring that sufficient lands were designated in each unit to enable the unit to serve its conservation function. We ensured that our designation included areas distributed throughout the geographic range of the species and encompassed the habitat variation in elevation, soil types, plant communities, and distance from the coast (inland versus coastal) present in *P. yadonii* occupied habitat.

2. *Comment:* One peer reviewer supported our inclusion of multiple subunits east of Highway 101 in the Prunedale Hills (Unit 3). The peer reviewer agreed with the Service's reasons for including these subunits (to conserve genetic variation and prevent range collapse) and further stated that the plant community at these somewhat xeric, less coastally influenced sites may be more stable in the long term, with slower rates of successional conversion to oak woodland, than those sites to the west. The peer reviewer stated that gradual, successional loss of suitable habitat may be a significant threat over the long term and suggested that, at a

minimum, we scan high-resolution aerial photographs of currently occupied sites to identify and delineate regions where patches of broken canopy and scattered areas of bare ground are visible. The peer reviewer provided historical and current aerial photography of four subunits in chaparral and one subunit in Monterey pine forest to support the assertion that canopy cover throughout the range of *Piperia yadonii* has increased since the 1930s and 1940s.

Our Response: We have considered the information the peer reviewer provided and agree that increased canopy cover in the ridgetop maritime chaparral of the Prunedale Hills may threaten *Piperia yadonii* by reducing available habitat. We discussed this in the proposed rule under the "Background" and "Special Management Considerations or Protections" sections. Although the vegetation cover in the region in which Unit 3 is designated may be increasing more slowly than in those areas to the west (in the region of Units 1 and 2), the natural lands in and around Unit 3 are also more highly fragmented and developed than those areas west of Highway 1, around Units 1 and 2. With increasing development, the opportunities to use vegetation management tools, such as prescribed fire, which both reduce the vegetation canopy and alter soil nutrient availability in ways with which the chaparral plant community has evolved, are much reduced. Given the information we currently have, that greater fragmentation exists and that known population sizes of *P. yadonii* are generally smaller as one moves east in Unit 3, we are not proposing to increase the size of the subunits in Unit 3 in an attempt to capture areas of more open canopy. We have added discussion to the description of Unit 3, recognizing the potentially slower successional changes in Unit 3, and will consider this information in making conservation recommendations for the entire Prunedale Hills area.

3. *Comment:* Two peer reviewers questioned our decision not to include in the critical habitat designation those areas where *Piperia yadonii* populations inhabit less than 5 acres and are surrounded by development. One peer reviewer stated that not including these smaller populations is not conducive to the long-term conservation of the species, because they may have large impacts on gene flow and genetic diversity and because they can provide connectivity to larger populations that we did include in the designation. The peer reviewer specifically cited areas

that support the Fort Ord, Skyline Drive, and Monterey Airport populations, none of which we included in the proposal. The peer reviewer urged the Service to work with landowners and other entities to develop a coordinated conservation strategy for these smaller populations.

Our Response: We recognize that all populations of *Piperia yadonii* may provide conservation value to the species and we indicated this in the proposed rule, as the Peer Reviewer acknowledged, by stating " * * * those populations that have become isolated as a result of development may contribute to the conservation of the species through educational, research, and other mechanisms, but overall have a lower potential for long-term preservation and lesser conservation value to the species." We believe that small areas with surrounding development have a lower conservation value to the species because they are less likely to have and maintain the features that are essential to the conservation of the species. In general, we seek to identify the minimum amount and optimum distribution of lands that support the PCEs to designate as critical habitat. Therefore, we did not include all populations in this designation.

In determining which sites to select, we concluded that those populations that are in highly developed areas are less likely to act as intermediaries in facilitating gene flow between populations, because pollinators are less likely to successfully move through residential and commercial areas to reach these islands of native vegetation and because wind-dispersed seeds are less likely to land in areas suitable for germination in highly fragmented landscapes. Of the specific sites mentioned by the peer reviewer, the Monterey Airport property and those fragmented populations along Garden Road are surrounded by the greatest level of development. The Skyline Drive site (California Natural Diversity Database (CNDDDB) element occurrence (EO) 19) is on the Monterey Peninsula where we designated the larger expanses of Monterey pine forest with larger populations of *P. yadonii* (Subunit 6a) and those smaller sites, like Crocker Grove (Subunit 6d), that include plant associations not represented elsewhere.

The Fort Ord site in Marina (CNDDDB EO 9) had not been found in over a decade, when a single plant was rediscovered in 2006, while we were drafting this rule. The second, more recently discovered Fort Ord site, near the boundary of the Monterey Airport,

consists of fewer than 10 plants. We recognize that the Fort Ord sites, particularly the northern one, are geographically isolated from other concentrations of *Piperia yadonii* and, if the northern site is found to support a population, it may therefore harbor genetic diversity not found elsewhere in the range of *P. yadonii*. As further information on the genetic diversity of this species becomes available, we will evaluate it and refine our conservation strategy for *P. yadonii*. However, we cannot determine at this time that the area has the features that are essential for the conservation of the species. 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 this reason, critical habitat designations do not signal that habitat outside the designation is unimportant or may not be required for recovery. We will continue to work with landowners on the conservation of *P. yadonii* throughout its range, including in those areas that are not designated as critical habitat.

4. *Comment:* One peer reviewer indicated that there are substantial gaps in the scientific information available on the genetics, seed dispersal, plant associations, and fire ecology of *Piperia yadonii*. The peer reviewer recommended that we collect this data in order to complete the critical habitat designation and to develop management strategies for *P. yadonii*. The peer reviewer provided observations on the response of two other *Piperia* species in California to fire. In one example, a small population of *P. leptopetala* may have been substantially reduced in abundance by a chaparral fire and in the other, a chaparral fire appears to have stimulated the above-ground expression of *P. cooperi*.

Our Response: We recognize that information on many attributes of the life history, genetics, and habitat needs of *Piperia yadonii* is extremely limited. Our critical habitat designations are based on the best scientific and commercial data available at the time of the designation. As more complete information becomes available for *P. yadonii*, we will incorporate it into our recovery strategy for this species. We appreciate the information the peer reviewer provided on fire ecology and recognize that genetic research is being conducted that may influence our understanding of genetic diversity within *P. yadonii*. While we do not develop management strategies as part of the designation of critical habitat, we do consider site-specific management

strategies important to the conservation of the species and work with land owners, researchers, and others, to develop and implement them as part of the recovery process.

5. *Comment:* One peer reviewer recommended that we gather more information on pollinator flight range and seed dispersal in an attempt to determine if the critical habitat units are close enough to allow gene flow between them.

Our Response: We have contacted several research scientists who specialize in moths and have reevaluated the available literature on pollinators and seed dispersal in orchids. We believe there are no additional data available, beyond what we cited in the proposed rule, on either the seed dispersal distances of orchids or the flight distances of potential pollinators, that would allow us to determine the likelihood of gene flow between critical habitat units or subunits. While data on the flight distance of relatively large moths in the family Sphingidae (sphinx moths) exist, very few data are available on the distances small moths may transport pollen. In our designation, we attempted to address the need to maintain gene flow between patches of plants that are within meters of one another. We did so by encompassing within the same subunits (e.g., in Units 1 and 2) those patches of *Piperia yadonii* plants that occur on the same ridgeline in maritime chaparral, and by encompassing multiple patches of plants within the same subunits (e.g., in Unit 6) in Monterey pine forest.

6. *Comment:* Two peer reviewers indicated that genetic diversity was not adequately considered in the criteria used to designate critical habitat. One peer reviewer suggested it could be considered a PCE, or that environmental proxies could be used in the absence of information on the spatial pattern of genetic variation in *Piperia yadonii*. One peer reviewer noted that genetic research on *P. yadonii* is underway and some results should soon be available.

Our Response: We agree that little is known about the spatial pattern of genetic variation in *Piperia yadonii* populations, and we are aware of, and are interested in, the genetic research on *P. yadonii* being conducted. Based on the Act, PCEs are always habitat features rather than intrinsic population characteristics. Therefore, genetic diversity cannot be considered a PCE. However, in this designation, we did consider that genetic variation may be a reflection of environmental variation. We have attempted to encompass variation in habitat, as an indicator of

populations that may be exposed to differing selective pressures, and therefore may have diverged genetically and represent a range of genetic variation in *P. yadonii*. As we discussed in the proposed rule under "Criteria Used to Identify Critical Habitat," our methods included designating sites that encompass the range of elevational differences, plant communities, and soil types in which *P. yadonii* occurs.

7. *Comment:* One peer reviewer stated that the designation should be more conservation-oriented toward *Piperia yadonii*, given that the species is dependent on biological associates, such as mycorrhizal (fungal) associates, Monterey pines, and pollinators. The peer reviewer indicated that these close associations make *Piperia yadonii* more vulnerable to environmental changes, such as climate change. The peer reviewer, therefore, recommended that the rule contain larger areas and additional areas beyond what was included in the proposed designation.

Our Response: We recognize that relatively little specific information exists on the relationship of *Piperia yadonii* to other biological associates within its habitat and the vulnerability of those associates to broad-scale environmental changes, such as forest structure changes due to pathogens or climate change. We previously funded research on *P. yadonii*'s breeding system and pollinators in an effort to determine the need for, and potential vulnerability of, pollinators. This research found that *P. yadonii* requires pollinators to set seed and is, therefore, highly dependent on pollinators, and that several of the likely pollinators of *P. yadonii* in the Monterey pine forest are moth species that have broad ranges and habitat preferences. Therefore, we are less concerned about the potential for environmental changes to affect pollinators in the Monterey pine forest plant communities. We recognize that little is known about the relative importance of the various species that pollinate *P. yadonii*, and that virtually nothing is known about pollination of *P. yadonii* in maritime chaparral. Therefore we have attempted to encompass the mosaic of adjacent plant community types in which patches of *P. yadonii* occur. Recognizing that larger sized units may potentially reduce the risk to *P. yadonii* from environmental change, we have attempted to designate as critical habitat areas of sufficient size to accommodate potential environmental changes. We have included reference to climate change in the discussion of how the PCEs were derived, but have not increased the size of any units beyond what we proposed.

8. *Comment:* One peer reviewer commented that the uncertainty of *Piperia yadonii's* actual range, its patchy distribution, and expected impacts of climate change constitute sufficient justification to designate units outside *P. yadonii's* known range. The peer reviewer did not provide specific suggestions of locations that should be included.

Our Response: While we generally agree with the rationale presented by the reviewer, we only designate critical habitat in areas outside the geographical area occupied by the species at the time of listing where the best available information indicates that these areas are essential to the conservation of the species. We have included areas throughout the range of *Piperia yadonii* within this designation, although not every population has been included. Within each portion of *P. yadonii's* range, we reviewed known locations and surrounding habitat that support the PCEs. Based on our current information, we have concluded that there are no areas outside the species' known range that are essential to the conservation of the species and that therefore should be included in the designation.

Comments From the Public

9. *Comment:* Two commenters noted the thoroughness and quality of the technical information in the background section of the proposed rule and in the discussion of the PCEs and generally supported a designation of critical habitat for *Piperia yadonii*. However, one commenter questioned why the proposed designation did not include all or part of every occurrence of *P. yadonii*. They recommended that the designation include all occurrences of *P. yadonii* and urged the Service to add suitable unoccupied habitat to the designation.

Our Response: See response to comment 3, above.

10. *Comment:* Several commenters stated that the level of detail in the maps provided was insufficient to determine what proposed areas are included or not included in the designation, both on the Monterey Peninsula and in northern Monterey County.

Our Response: We agree that it is often difficult to distinguish unit boundaries based on the resolution of maps published in the **Federal Register**. To provide additional clarity, we attempted to include adequate descriptions of the units in the proposed rule. We have reviewed those unit descriptions and have provided additional clarifying information to

them in this final designation. For example, for units on the Peninsula, we included area names used in the environmental impact report for the Pebble Beach Company's proposed development (Monterey County 2005). The public can request more explicit maps of the designation by contacting our office using any one of the methods listed in the **FOR FURTHER INFORMATION CONTACT** section listed above.

11. *Comment:* One commenter requested that the 6-acre portion of Stevenson School campus be deleted from critical habitat Subunit 6a, on the Monterey Peninsula, because the school intends to convert the property to an athletic field for student use in the future. The commenter states that, due to the property's small size and location, this area is not essential to the conservation of *Piperia yadonii*, that enough habitat is being conserved on the Monterey Peninsula via the Pebble Beach Company's proposed mitigation for their development plan, and that the inclusion of school property in the proposed designation will have adverse impacts on the school. They provided materials describing the school and its proposed site plan.

Our Response: As we developed the designation, we evaluated all areas on the Monterey Peninsula that support the PCEs, including the area owned by Stevenson School. The Monterey Peninsula is the center of distribution of *Piperia yadonii* and supports over 70 percent of all known plants. The Stevenson School property supports Monterey pine forest contiguous with a larger extent of Monterey pine forest encompassed within Subunit 6a. Because of its connection to other Monterey pine forest with a natural understory, we do not consider it too small to have the features that are essential to the conservation of *P. yadonii*. Although it has abundant shrub cover in some areas, in other areas it supports a more open herbaceous understory with scattered patches of *P. yadonii* (Steeck, 2007). We evaluated the materials submitted by the commenter and the potential economic costs to Stevenson School from the proposed designation in our draft economic analysis. Based on the School's proposed plans for the site, we have decided to exclude this property from the final designation of critical habitat (see Exclusions Under Section 4(b)(2) of the Act section below for more information). We are available to work with Stevenson School representatives on the conservation and recovery of *P. yadonii* and their future school development plans.

12. *Comment:* One commenter stated that critical habitat on the Pebble Beach Company's property should include only those areas designated by the Pebble Beach Company for conservation purposes. They asserted that other areas are not essential to the conservation of *P. yadonii*. They provided specific recommendations for modifications to several subunits, including excising all current and proposed roads that pass through the subunits of Unit 6.

Our Response: We reviewed the materials submitted and grouped the requested modifications into four categories: (a) Requests to remove all current and proposed roads from the subunits of Unit 6; (b) small adjustment in boundaries where the designation appeared to extend beyond the boundaries of a proposed conservation or open space area into, or just beyond, existing roads or the golf course; (c) requests to remove areas supporting existing Monterey pine forest that the commenter indicates are "lots of record" but that Monterey County required be conserved, as mitigation, in the final environmental impact report (Monterey County 2005) for the Pebble Beach Company's proposed development; and (d) more substantial modifications, which we individually discuss in the response to Comment 13, below.

We addressed the former three categories in the following ways:

(a) Roads: The Service does not typically map critical habitat at this level of detail, due to the time involved in attempting to exclude small, linear areas that lack the PCEs and would divide polygons. Lands covered by roads or other structures that do not support the PCEs are excluded by text in the final rule, as explained in the Mapping section. We recognize that some roads currently exist, but that adjustments to their current alignments are proposed that would eliminate habitat containing the PCEs. We have excluded, under Section 4(b)(2) of the Act, proposed and existing roads in Unit 6 in recognition of the conservation agreement signed by the Service and Pebble Beach Company. This agreement and the exclusions are discussed further in the section, *Relationship of Critical Habitat to Approved Management Plans—Exclusions Under Section 4(b)(2) of the Act*, below. See Summary of Changes from Proposed Rule, below, for more information.

(b) We have made some adjustments to the boundary of critical habitat in Subunit 6a around the corporate yard (a proposed development parcel (Monterey County 2005)), along Congress Road near the quarry site (extension of

boundary over a road), and north of area I-1 (where a relatively recently constructed structure is visible in 2005 aerial photography).

(c) We have excluded areas within Subunits 6a and 6c, including those referred to by the Pebble Beach Company as areas F-1, J, and part of Area L, that support the PCEs of critical habitat and are identified as required mitigation areas, with some allowance for development, in the FEIR for Pebble Beach Company's proposed development (Monterey County 2005). We make these exclusions in recognition of the conservation agreement signed by the Service and Pebble Beach Company. This agreement and the exclusions are discussed further in the section, *Relationship of Critical Habitat to Approved Management Plans—Exclusions Under Section 4(b)(2) of the Act*, below. See Summary of Changes from Proposed Rule, below, for more information.

13. *Comment:* A commenter representing the Pebble Beach Company suggested that we consider that two areas included in Unit 6 of the proposal, Indian Village/Area L (Subunit 6c) and Area B (Subunit 6e), contain greater shrub cover or riparian habitat than *Piperia yadonii* typically prefers. They also recommended we remove a portion of Subunit 6a referred to as Area D and reduce Unit 4 (Aguajito), to encompass only the suitable low-growing maritime chaparral habitat contiguous with the existing occurrence.

Our Response: We have retained both Area B and its adjacent forested areas in Subunit 6e, as well as part of Area L and adjacent forest (Indian Village) in subunit 6c in this designation, because they contain the PCEs for *Piperia yadonii*. We have concluded that these areas have the features that are essential to conserve *P. yadonii*. We have excluded 2 ac (0.8 ha) of Subunit 6e (Area B) and about 9 acres (4 ha) of Area L in recognition of the overall benefits that designated critical habitat areas will receive under the conservation agreement signed by the Service and the Pebble Beach Company (see the section *Relationship of Critical Habitat to Approved Management Plans—Exclusions Under Section 4(b)(2) of the Act* below for a discussion of this exclusion).

For Unit 4 (Aguajito), we have reviewed the habitat proposed in the subunits and have considered the unique nature of the maritime chaparral on the shale and sandstone-derived soils within a large expanse of maritime chaparral and Monterey pine forest and concluded that the subunits we are designating contain the features

essential to the conservation of *P. yadonii*. However, we have excluded 49 acres of this unit in recognition of the overall benefits that Unit 4 will receive under the conservation agreement signed by the Service and the Pebble Beach Company (see the section *Relationship of Critical Habitat to Approved Management Plans—Exclusions Under Section 4(b)(2) of the Act* below for a discussion of this exclusion).

We have reviewed the habitat in subunit 6a, Area D, and agree with the commenter that it does not contain the features essential for the conservation of *Piperia yadonii*. We conclude that the dominance of coast live oak and open canopy with relatively few Monterey pines makes it less suitable for *P. yadonii*. Therefore, we have removed 35 ac (14 ha) of Subunit 6a that do not contain the PCEs from this final critical habitat designation. See Summary of Changes from Proposed Rule, below, for more information.

14. *Comment:* Three commenters recommended expansion of Subunit 6a to include Area F-2, about 17 acres (7 ha) in Area F3, and an additional 13 ac (5 ha) of Area PQR, as defined in the Pebble Beach Company's proposed development.

Our Response: We did not propose or designate Areas F-2, most of F-3, or the 13 ac (5 ha) in PQR because these locations support fewer *Piperia yadonii* plants compared to other locations in the Del Monte Forest that we are designating as critical habitat. These areas are also proposed for development by the Pebble Beach Company. Although we proposed conservation area F-1 as critical habitat, it is part of the exclusion we are making in this final designation, based on the conservation agreement we have signed with the Pebble Beach Company. See the section *Relationship of Critical Habitat to Approved Management Plans—Exclusions Under Section 4(b)(2) of the Act* below for a discussion of this exclusion. Please also see our response to Comment 1 and 18.

15. *Comment:* One commenter suggested that the Service should expand Subunit 6b to include all of Area MNOUV, which supports one of the two largest occurrences of *Piperia yadonii* known to exist. Area MNOUV is the name given to the collective areas that support 116 acres of Monterey pine forest and are proposed for development as a golf course by the Pebble Beach Company. The commenter referred to language in our proposed designation in which we indicated that the conservation role of *P. yadonii* critical habitat units is to support viable core

populations. The commenter stated that Area MNOUV supports one of two viable core populations on the Peninsula and, as such, the Service should follow its own guidelines and include it in the designation.

Our Response: Please see our response to Comment 18 for a description of how we designated critical habitat. We recognize that Subunit 6b is just one part of the large *Piperia yadonii* population found in Area MNOUV. Area MNOUV supports one of the two largest occurrences known to exist and is distributed within the second largest expanse of Monterey pine forest known to support *P. yadonii*. However, the Service determined the area did not have the features that are essential to the conservation of the species. We determined the quantity and spatial characteristics of habitat needed for conservation, and this area was determined not to meet the definition of critical habitat. Please also see our response to Comment 1.

16. *Comment:* One commenter asked if Subunits 3b and 3c were verified to support *Piperia yadonii*.

Our Response: According to data supplied by the California Department of Transportation (Caltrans) during the preparation of the proposed rule (Robison 2006), populations of *Piperia yadonii* in Subunits 3b and 3c were visited while in flower and were verified to support the species.

17. *Comment:* One commenter provided observations of habitat and population conditions of *Piperia yadonii* in and around Subunit 3a and suggested the designation be expanded to include a site near Subunit 3a that may contain many more *P. yadonii* than previously documented. The commenter stated that the planning process for the parcel where the population occurs did not appear to involve adequate surveys for *P. yadonii*, because the surveys were conducted during the fall. The commenter provided suggestions for protecting this site.

Our Response: We appreciate the technical information supplied and have incorporated it into the discussion of Subunit 3a, where appropriate. The population in question near Subunit 3a should be surveyed to get a positive identification of the *Piperia* species occurring there. Because we cannot determine at this time that the area meets the definition of critical habitat, we are not designating it in this final rule. The process of designating critical habitat does not involve the creation of preserves or management strategies; however, we frequently provide conservation recommendations to local agencies, and work with Federal

agencies through the section 7 consultation process, as we promote recovery of listed species. We will consider the technical information and suggestions provided by the commenter in planning and implementing recovery for this species.

Comments Related to the Draft Economic Analysis

18. *Comment:* The Draft Economic Analysis (DEA) fails to present a baseline that describes the conditions that would exist in the absence of critical habitat designation. Specifically, NPCC commented that the DEA estimated a large portion of the costs would be incurred by the Pebble Beach Company (PBC), but PBC would incur these costs with or without designation. While the DEA “directly attributed” PBC’s costs of invasive species control to designation, invasive species control provides many benefits, is required by CEQA, and was conducted in all areas, whether or not the species was present. Others commented that the DEA attributes delays to the designation that might be due to other sources.

Our Response: The Final Economic Analysis (FEA) includes an Appendix which describes impacts expected to result because of the designation of critical habitat. That is, the Appendix presents the incremental impacts that would not be expected to occur in the absence of critical habitat. This appendix recognizes that most of the impacts quantified as coextensive impacts in the report are expected to occur regardless of the designation of critical habitat.

19. *Comment:* The DEA makes no attempt to estimate how many projects or actions would involve a Federal nexus in the 20-year analysis and that the FEA should base estimates on such a prediction.

Our Response: Appendix A of the FEA identifies projects that involve a Federal nexus to estimate the incremental impacts of the designation apart from the coextensive impacts quantified in the DEA.

20. *Comment:* It is unlikely that the restriction on development in unit 2b is due to the proposed rule. It is also unlikely that the development in unit 2b would have been completely prevented.

Our Response: The DEA does not attribute these impacts from lost development to the proposed rule, but describes them as impacts “coextensive” with the designation of critical habitat. The FEA includes an Appendix describing incremental impacts. As described in Appendix A, the foregone development impacts in unit 2 are not considered to be

incremental impacts of the critical habitat designation. Further, in the specific case of the proposed development in unit 2b, the FEA omits most of the impact from lost development that was originally included in the DEA, as information suggests it is unlikely that the entity will be prevented from developing.

21. *Comment:* To estimate the cost of delay, the DEA solely relies on conversations with the developer and uses an interest rate of fifteen percent without explanation.

Our Response: The DEA relied as much as possible on the County Planning and Building Department to determine what development had occurred in the past, what development was currently under review, and what development was planned for the future. The developer provided reasonable estimates of delay time. An interest rate of fifteen percent is a standard interest rate used to calculate the risk adjusted cost of capital to private developers.

22. *Comment:* The DEA estimates on page 34 and 44 costs to PBC of as much as \$4.5 million associated with invasive species control. Commenter states that it is unclear how the overall \$4.5 million figure was determined.

Our Response: The DEA does not include any estimated impacts of \$4.5 million as described. Total impacts to the PBC over 20 years in undiscounted dollars of invasive species removal efforts is estimated to be \$0.97 million in units 4 and 5 (see page 34 of the DEA) and \$2.87 million in unit 6 (see page 44 of the DEA). As cited in footnotes 92 and 104 of the DEA, impacts to the PBC are based on annual budget estimates provided by PBC.

23. *Comment:* Commenter states that the DEA does not evaluate the evidence the Stevenson School provided on the large adverse impacts to the School. The commenter also noted that DEA does not comply with the Regulatory Flexibility Act (RFA) or Small Business Regulatory Fairness Act (SBREFA) as it does not adequately analyze the impacts to the Stevenson School.

Our Response: The FEA incorporates the previous comments made by the Stevenson School and evaluates impacts of piperia conservation on the School. Section V.F of the FEA estimates impacts to range from \$0.006 million to \$9.2 million (present value, three percent discount rate) as a result of possible restrictions on the implementation of the School’s Master Plan. The FEA also considers the impacts to the Stevenson School in the RFA and SBREFA.

Comments from the State

24. *Comment:* The California Coastal Commission questioned why the critical habitat designation on the Monterey Peninsula did not include any areas proposed for development by the Pebble Beach Company, including that part of the Monterey pine forest that supports roughly one-third of the known population of *Piperia yadonii* and is proposed for a golf course. The Coastal Commission noted that the Service provided no biological justification for the absence of this area in the designation. They recommended that the critical habitat be redrawn to include Monterey pine forest areas on the Monterey Peninsula that support *P. yadonii* and its habitat.

Our Response: During the process of selecting critical habitat boundaries, we determined the PCEs for the species, and identified the quantity and spatial characteristics of PCEs needed for conservation. These are the physical and biological features essential to the conservation of the species. In determining the appropriate spatial arrangement of PCEs, we identified areas where there were conflicts with development projects and assessed the likelihood of the species’ persistence and recovery absent designation of those areas. We determined that there was sufficient habitat for the species conservation without these lands. Therefore, our critical habitat designation does not include Pebble Beach Company development lands.

We used a multi-step process to identify and delineate critical habitat units. First, we reviewed and mapped all known occurrences of *Piperia yadonii*, using the best available information. Next, we determined the physical and biological features essential to the conservation of the species. To do this we defined the PCEs and then determined which areas contain PCEs that are essential to the conservation of the species. We evaluated which occupied areas were most likely to contribute to the long-term persistence of the species. We focused on locations with larger occurrences in larger areas of contiguous native habitat (greater than 5 acres (2 ha), see below) that are more likely to support intact ecosystem processes and biotic assemblages, provide areas for population growth, and opportunities for colonization of adjacent areas. We then selected sites with the PCEs that: (a) Represented the geographic range of the species; (b) captured peripheral populations; (c) included the range of plant communities and soil types in which *P.*

yadonii is found; (d) encompassed the elevation range over which the species occurs; and (e) maintained the connectivity of occurrences that grow on continuous ridgelines. From these areas we selected populations are most likely to persist into the future and to contribute to the species' survival and recovery. Other areas that we determined to have the PCEs, that were not included in the proposed designation or this final designation, did not have the features that are essential to the conservation of the species. For more information on how critical habitat was determined, see Criteria Used To Identify Critical Habitat section, below.

Summary of Changes From Proposed Rule

In preparing the final critical habitat designation for *Piperia yadonii*, we reviewed and considered comments from the public and peer reviewers on the proposed designation of critical habitat published on October 18, 2006 (71 FR 61546), and public comments on the draft economic analysis published on August 7, 2007 (72 FR 44069). As a result of comments received on the proposed rule and the DEA, and a reevaluation of the proposed critical habitat boundaries, we made changes to our proposed designation, as follows:

(1) Based on exclusions under section 4(b)(2) of the Act, we reduced the size of several subunits of Unit 6 on the Monterey Peninsula and both subunits of Unit 4 (Aguajito) as discussed in responses to Comments 12 and 13 and in recognition of the development of a conservation agreement signed by the Service and the Pebble Beach Company. Collectively, this resulted in a reduction of Unit 6 from 1,059 acres (428 ha) to 920 acres (372 ha) and Unit 4 from 157 acres (63.5 ha) to 108 acres (43.7 ha). The acreages of the changes are provided in Table 2. We also excluded the Stevenson School for economic reasons. Further discussion of the conservation agreement and exclusions under the Act can be found later in this document starting with the section *Application of Section 4(a)(3) and Exclusions Under Section 4(b)(2) of the Act*.

(2) We added the names of parcels of land, where available, to the unit descriptions, to help readers understand the boundaries of the designation, given the rather low resolution of the maps. We added technical information, as discussed in the comments, to the descriptions of Unit 3.

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 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 under the Act are no longer necessary.

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(a)(2) of the Act requires consultation on Federal actions that may affect critical habitat. The designation of critical habitat does not affect land ownership or establish a refuge, wilderness, reserve, preserve, or other conservation area. Such designation does not allow government or public access to private lands. Section 7 of the Act is a purely protective measure and does not require implementation of restoration, recovery, or enhancement measures.

To be included in a critical habitat designation, habitat within the geographical 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 (areas on which are found the primary constituent elements, as defined at 50 CFR 424.12(b)).

Unoccupied areas can be designated as critical habitat. However, we will designate unoccupied areas only when the best available scientific data demonstrate that the conservation needs of the species require additional areas.

Section 4 of the Act requires that we designate critical habitat on the basis of the best scientific and commercial data available. Further, 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 may include the recovery plan for the species, articles in peer-reviewed journals, conservation plans developed by States and counties, scientific status surveys and studies, biological assessments, or other unpublished materials and expert opinion or personal knowledge. 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.

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 of *Piperia yadonii*, 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.

Methods

As required by section 4(b)(2) of the Act, we use the best scientific data available in determining areas that contain features that are essential to the conservation of *Piperia yadonii*. This includes information from the final listing rule; data from research and survey observations published in peer-reviewed articles; reports and survey forms prepared for Federal, State, and local agencies, and private corporations; site visits; regional Geographic Information System (GIS) layers, including soil and species coverages; and data submitted to the CNDDDB. We have also reviewed available information that pertains to the ecology, life history, and habitat requirements of this species. This material included information and data in peer-reviewed articles, reports of monitoring and habitat characterizations, reports submitted during section 7 consultations, the recovery plan for *P. yadonii*, and information received from local species experts. We did not designate as critical habitat any areas outside the geographical area occupied by the species at the time of listing.

The range of *Piperia yadonii* extends through Monterey County from the Las Lomas area near the Santa Cruz County border in the north to approximately 15 miles (25 kilometers) south of the Monterey Peninsula near Palo Colorado Canyon (Morgan and Ackerman 1990, 208–210; Allen 1996, unpaginated). This range has been divided into the following five geographic areas for the purposes of recovery planning efforts: (1) The Monterey Peninsula; (2) the area interior of the Monterey Peninsula; (3) northern Monterey County-Prunedale-Elkhorn; (4) the Point Lobos Ranch area; and (5) the Palo Colorado Canyon area (USFWS 2004, pp. 16–26, 50–52). We make reference to these geographic areas when describing the locations of *P. yadonii* populations and lands in this critical habitat designation.

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 propose as critical habitat, we consider those physical or 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 or 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 *Piperia yadonii* are derived from the biological needs of *P. yadonii* as described in the Background section of the proposed rule and below.

Space for Individual and Population Growth, Including Sites for Seed Dispersal and Germination

Piperia yadonii depends on adequate space for growth, reproduction between near and far neighbors, and for movement of seeds via wind to unoccupied microsites within populations, to population boundaries, and to new sites. Once dispersed, seeds must settle into sites with characteristics appropriate for germination, including the presence of fungal associates necessary for post-germination development. Maritime chaparral and pine forest communities in which *P. yadonii* and its fungal symbionts occur, exhibit considerable variability in vegetation density, species composition, and unvegetated gaps such that microsites appropriate for germination and growth are distributed unevenly throughout this mosaic.

Plant communities such as maritime chaparral, Monterey pine forest, and coast live oak woodland are dynamic; in the absence of fire, maritime chaparral succeeds to oak woodland in mesic sites and to low-diversity stands of large old-age manzanitas in drier sites (Van Dyke et al. 2001). The patchy distribution of *P. yadonii* in a given forest or chaparral site in a single year is a reflection of the habitat conditions at that particular time. Habitat sites that contain the same soil characteristics and plant community may become suitable and occupied in future decades as vegetation structure changes due to shrub or tree death and growth or herbivore population sizes or movements. In the same manner, a currently occupied location may diminish in value due to these changing conditions. The mosaic of vegetation height, density, and species composition in a given area provides opportunities for gene flow between occurrences of *P. yadonii* through seed dispersal on prevailing winds, and promotes continuation of ecosystem processes, such as the biological interactions necessary to maintain forest canopy and dominant

manzanita species, and pollinator assemblages.

Maintaining large and small populations of *Piperia yadonii* is essential for the long-term conservation of the species. Large occurrences of plants and those with higher densities of individuals are more likely to attract insect pollinators necessary for the production of viable seed and promote gene flow (Kunin 1997, p. 232–233) and withstand periodic extreme environmental stresses (e.g., drought, disease), and may act as important “source” populations to allow recolonization of surrounding areas following periodic extreme environmental stresses. Small populations of plants may serve as corridors for gene flow between larger populations, and may harbor greater levels of genetic diversity than predicted for their size (Lesica and Allendorf 1995, pp. 172–175).

Nutritional and Physiological Requirements, Including Light and Soil Requirements

Piperia yadonii occurs in maritime chaparral, a coastal shrub association dominated by endemic species of manzanitas. It is most often found on ridges where exposed sandstone or decomposed granitic soils are shallow and where the dominant manzanita species are low-growing (preliminary measurements indicate an average of 6 inches (15 centimeters) tall (Graff 2006, pp. 5–6)), allowing *P. yadonii* leaves to receive filtered sun and the inflorescence to extend above the decumbent manzanita branches. In the Elkhorn-Prunedale area, the transition from the low-growing manzanitas of the ridgetops to the surrounding slopes that support deeper soils and higher vegetation canopies is often abrupt (Van Dyke et al. 2001, p. 222).

Although *Piperia yadonii* grows among manzanitas, the specific manzanita species vary among the geographic areas within the species range. Hooker’s manzanita (*Arctostyphlos hookeri* ssp. *hookeri*) is the manzanita species with which *P. yadonii* most commonly grows at its most northern distribution in the hills around Prunedale. Pajaro manzanita (*A. pajaroensis*) and chamise (*Adenostoma fasciculatum*) are other dominant shrubs in maritime chaparral there. On and south of the Monterey Peninsula, several manzanitas (*A. hookeri*, *A. tomentosa*, and *A. glandulosa* ssp. *zacaensis*) are reportedly the dominant shrubs among which it grows (Graff 2006, p. 4; EcoSystems West 2006, p. 64). Other species of manzanita (*A. glandulosa*) and manzanita hybrids are

the dominant low-growing forms at the southernmost occurrence of *P. yadonii* near Palo Colorado Canyon, where Hooker's manzanita is absent (Norman 1995, Graff 2006, p. 4).

In Monterey pine forest, *Piperia yadonii* grows through pine needle duff where the native herbaceous vegetation cover is typically sparse, but diverse, and the Monterey pine canopy is of moderate density (20 to 70 percent on the Monterey Peninsula), providing filtered sunlight to the forest floor (EcoSystems West 2006, pp. 43, 62–68). The understory plant species most frequently associated with *P. yadonii* in the Monterey pine forest are the perennial herb common sanicle (*Sanicula laciniata*), leafy bent grass (*Agrostis pallens*), and spindly forms of bush monkey flower (*Mimulus aurantiacus*). In a habitat characterization of *P. yadonii* on the Monterey Peninsula, microsites occupied by *P. yadonii* had five times greater cover by other native geophytes (perennial plants with underground storage organs, such as bulbs, tubers, or corms), such as golden brodiaea (*Tritelia ixiodes*), blue dicks (*Dichelostemma capitatum*), and mariposa lilies (*Calochortus* spp.) than did microsites lacking *P. yadonii*. Where a maritime chaparral understory exists with scattered pines, *P. yadonii* occurs with other native herbs in gaps between the shrubs. It occurs in similar gaps associated with trails and fire roads in the Bishop pine-Gowen cypress forest stand within the Monterey pine forest on the Monterey Peninsula. It is not typically found in areas with a coast live oak canopy or those with high understory cover of shrubs or vines (EcoSystems West 2006, pp. 50–51, 62–68).

It is likely that in some areas the composition and cover of the Monterey pine herbaceous understory may remain relatively stable for decades due to abiotic factors (e.g., soils, hydrology); in others, these appropriate microhabitats may be ephemeral, disappearing as shrubs establish or increase in size and appearing elsewhere when understory fire; burrowing, trailing, and browsing animals; or shrub death, create new gaps. Areas should be of sufficient size to sustain the plant communities in which *Piperia yadonii* grows, given that climate change may eventually alter forest composition (and thus availability of filtered sunlight), available soil moisture, and mycorrhizal associates (Perry *et al.* 1990, pp. 266–274; Field *et al.* 1999, pp. 1–3; Noss 2001, pp. 581–586).

Although soils supporting native mycorrhizal symbionts are believed to

be a requirement for successful growth in *Piperia yadonii*, this is not a habitat feature easily observable in the field or about which we have specific information. Therefore, we have not included it as a primary constituent element for *P. yadonii*, but assume that mycorrhizal associates will be represented in areas that encompass appropriate vegetation and soils.

Piperia yadonii occupies soils that are primarily characterized as sands, fine sands, and sandy loams by the Soil Conservation Service mapping (United States Department of Agriculture (USDA) 1978, maps; EcoSystems West 2006, pp. 23–26). Soils where *P. yadonii* occurs in the Monterey pine forest are typically characterized as sands, rather than loams and, on the Monterey Peninsula, are frequently underlain by a claypan that is 1 to 5 feet (0.3 to 1.5 m) below the surface (USDA 1978, pp. 53–54; Jones and Stokes Associates 1994b, pp. 16–21; EcoSystems West 2006, pp. 23–26)). In a comparison of Monterey pine forest sites on and east of the Monterey Peninsula, *P. yadonii* was present in soils that tended to have lower organic matter, lower nutrient levels, and lower summer soil moisture levels than areas where it was absent (EcoSystems West 2006, pp. 43, 59–61). It is not known if *P. yadonii* actually prefers nutrient-poor soils or if it is unable to compete with the denser understory vegetation found on more nutrient-rich soils. The presence of *P. yadonii* is correlated with the drier of the forest soils. It is not found in riparian areas or wetlands on the Monterey Peninsula (Allen, unpaginated; EcoSystems West 2006, pp. 59–61, 64–65).

In the maritime chaparral at its northern distributional limit, *Piperia yadonii* occurs on ridges supporting shallow, weathered, sandy soils with sandstone outcrops, where shrubs are small-statured (USDA 1978, pp. 10–11; Allen 1996 unpaginated; Graff 2006, p. 4). The average shrub canopy height in areas where *P. yadonii* occurs on these ridges is about 6 inches, according to preliminary sampling (Graff 2006, pp. 5–6). Soils in this region are typically derived from weathered marine deposits. These sites often support cryptogamic soil crusts (soil surface communities primarily composed of cyanobacteria, lichens, mosses, and algae) (Graff 2006, p. 4). Cryptogamic crusts have been found to increase nutrient availability to plants, reduce erosion, improve plant-water relations, and provide germination and seedling growth sites (USDA 1997, pp. 8–11).

Pollinators

Piperia yadonii also requires pollinators for the production of viable seeds (PCE 2) (Doak and Graff 2001, p. 15). Size and configuration of plant populations, and associated flowering species, may influence the degree to which pollinators are attracted to an area (Sipes and Tepedino 1995, p. 937). The abundance of pollinators may affect reproductive success and persistence of small plant populations (Groom 1998, pp. 487–495). As a group, the reproductive output of orchids is limited by pollinator availability or activity (Tremblay *et al.* 2005, p. 24), and *P. yadonii* had reduced seed set under natural pollination as compared to manual pollination (Doak and Graff 2001, p. 12–13), an indication that seed set in this species may be pollinator limited. When populations of flowering individuals are small or flowering is restricted to a specific season, the individual plant population may not be able to sustain a population of insect pollinators by itself (Groom 1998, pp. 493–495); therefore, habitats that support a variety of other flowering plant species that provide nectar and pollen sources throughout spring and summer for pollinator populations are likely needed to sustain *P. yadonii* populations.

Doak and Graff (2001, p. 13) found that pollinators of *Piperia yadonii* are predominantly nocturnal, short-tongued moths (e.g., in the families Pyralidae, Geometridae, Noctuidae, Pterophoridae) that are most active between the hours of 8:30 p.m. and 10:00 p.m. Some of these pollinator species (e.g., *Agrotis ipsilon*, *Udea profundalis*) are generalists regarding larval host plants, but others (e.g., *Elpiste marcescaria*, *Drepanulatrix baueraia*) feed on specific host plants in the larval stage (e.g., coyote bush, wild lilac, respectively). *Piperia yadonii* exists within several plant communities that sustain insect pollinators. They do so by supporting those flowering plant species needed by pollinators as larval hosts or nectar sources (e.g., coyotebush, wild lilac, and species in the mint family).

Primary Constituent Elements for *Piperia yadonii*

Pursuant to our regulations, we are required to identify the known physical or biological features (Primary Constituent Elements; PCEs, laid out in sufficient quantity and appropriate spatial arrangement for conservation) essential to the conservation of *Piperia yadonii*. All areas being designated as critical habitat for *P. yadonii* are occupied, within the species' historic

geographic range, and contain sufficient PCEs to support life history functions for this species.

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 *Piperia yadonii* PCEs are:

1. A vegetation structure providing filtered sunlight on sandy soils:
 - a. Coastal pine forest (primarily Monterey pine) with a canopy cover of 20 to 70 percent, and a sparse herbaceous understory on Baywood sands, Narlon loamy fine sands, Sheridan coarse sandy loams, Tangair fine sands, Santa Lucia shaly clay loams and Chamise shaley clay loams underlain by a hardpan; or
 - b. Maritime chaparral ridges with dwarfed shrubs (primarily Hooker's manzanita) on Reliz shaly clay loams, Sheridan sandy loams, Narlon sandy loams, Arnold loamy sands and soils in the Junipero-Sur complex, Rock Outcrop-Xerorthents Association, and Arnold-Santa Ynez complex often underlain by rock outcroppings.
2. Presence of nocturnal, short-tongued moths in the families Pyralidae, Geometridae, Noctuidae, and Pterophoridae.

This designation is designed for the conservation of areas supporting the PCEs necessary to support the life history functions that were the basis for the proposal. In general, critical habitat units are designated based on sufficient PCEs being present to support one or more of the species' life history functions. Each area designated in this rule has been determined to contain sufficient PCEs to provide for one or more of the life history functions of *P. yadonii*. Because not all life history functions require all the PCEs, not all critical habitat will uniformly contain all the PCEs.

Criteria Used To Identify Critical Habitat

As required by section 4(b)(2) of the Act, we used the best scientific data available in determining areas that contain features that are essential to the conservation of *Piperia yadonii*. This includes information from the final listing rule; data from research and survey observations published in peer-reviewed articles; reports and survey forms prepared for Federal, State, and local agencies, and private corporations; site visits; regional Geographic Information System (GIS) layers, including soil and species coverages; and data submitted to the California Natural Diversity Database (CNDDB).

We are not designating as critical habitat any areas outside the geographical area presently occupied by the species.

We have also reviewed available information that pertains to the ecology, life history, and habitat requirements of this species. This material included information and data in peer-reviewed articles, reports of monitoring and habitat characterizations, reports submitted during section 7 consultations, our recovery plan, and information received from local species experts.

We are designating critical habitat on lands within the geographic area occupied by the species at the time of listing that continues to be occupied to date. All critical habitat units contain habitat with features essential to the conservation of *Piperia yadonii*. We did not designate any units that are unoccupied.

We used a multi-step process to identify and delineate critical habitat units. First, we mapped and reviewed all known occurrences of *Piperia yadonii*, using the best available information. To be meaningful for the purposes of determining critical habitat units, survey information had to be evaluated in light of the species' life history. Not all individuals produce leaves or flower every year. A below-ground *P. yadonii* tuber can do one of four things in any given year: Die, remain dormant, send up leaves but not flower, or leaf out and flower (Graff 2006, pp. 7 and 8). The length of tuber dormancy is not known, but may be from 1 to 4 years based upon data from other orchid species with a similar life history. The *P. yadonii* flower is diagnostic (with regard to other *Piperia* species), and the proportion of vegetative plants that flower in any given year has been estimated to be from 0.4 percent to 22 percent (Graff 2006, p. 8), with the lowest estimates coming from those in the chaparral community. Thus it is difficult to precisely determine the extent and abundance of the species both within individual occurrences and throughout its geographic range. Because a positive identification requires a flowering individual, we did not include any occurrences in the designation that had not been identified during the flowering season as *P. yadonii*.

Occurrence information included the results of several different types of surveys for the species in various locations within its range. Allen (1996, unpaginated) conducted a two-consecutive-year survey to better understand the extent of the range, distribution, and overall population size of the species. The Allen (1996) study

estimated populations of *Piperia yadonii* within polygons overlaid on topographic maps, but did not indicate areas where the author looked for, but did not find occurrences. Graff (2006, e.g., pp. 14 and 15) developed a long-term monitoring program for *P. yadonii*, using specific test plots in several areas featuring known occurrences, and georeferenced individual patches of *P. yadonii*. Various other surveys were designed and conducted for specific purposes, including assessing potential land subdivisions/development projects and potential State highway realignment. In the case of Pebble Beach Company lands on the Monterey Peninsula and areas inland from the peninsula, intensive surveys have been conducted in multiple years to aid in formulating their Del Monte Forest Preservation and Development Plan.

Next, we evaluated which occupied areas were most likely to contribute to the long-term persistence of the species. We focused on locations with larger occurrences in larger areas of contiguous native habitat (greater than 5 acres (2 ha), see below) that are more likely to support intact ecosystem processes and biotic assemblages, provide areas for population growth, and opportunities for colonization of adjacent areas. These areas also have the highest likelihood of persisting through the environmental extremes that characterize California's climate and of retaining the genetic variability to withstand future introduced stressors (e.g., new diseases, pathogens, or climate change). We believe that areas less than 5 acres in size that are surrounded by high-density development (e.g., office parks, residential neighborhoods, commercial buildings, and parking lots) and have become isolated as a result of development may contribute to the conservation of the species through educational, research, and other mechanisms, but overall have a lower potential for long-term preservation and lesser conservation value to the species. Therefore, we do not believe these areas have the features essential to the conservation of the species and thus we did not further consider these areas in the designation. Although we have not included these areas within the critical habitat designation, because they are occupied they may still receive protection under other provisions of the Act.

We then selected sites from among the data set resulting from the above evaluation that contain the features essential to the conservation of *Piperia yadonii*, and may require special management considerations or

protection. These areas result in a designation that: (a) Represents the geographic range of the species; (b) captures peripheral populations; (c) includes the range of plant communities and soil types in which *P. yadonii* is found; (d) encompasses the elevation range over which the species occurs; and (e) maintains the connectivity of occurrences that grow on continuous ridgetops.

Species and plant communities that are protected across their ranges are expected to have lower likelihoods of extinction (Soule and Simberloff 1986; Scott *et al.* 2001, pp.1297–1300); therefore, essential habitat should include multiple locations across the entire range of the species to prevent range collapse. Protecting peripheral or isolated populations is highly desirable because they may contain genetic variation not found in core populations. The genetic variation results from the effects of population isolation and adaptation to locally distinct environments (Lesica and Allendorf 1995, pp. 754–757; Fraser 2000, pp. 49–51; Hamrick and Godt, pp. 291–295). We also sought to include the range of plant communities, soil types, and elevational gradients in which *Piperia yadonii* is found to preserve the genetic variation that may result from adaptation to local environmental conditions, as documented in other plant species (e.g., see Hamrick and Godt pp. 299–301; Millar and Libby 1991 pp. 150, 152–155). Finally, habitat fragmentation can result in loss of genetic variation (Young *et al.* 1996, pp. 413–417); therefore, we sought to maintain connectivity between patches of plants distributed along ridgetops.

In determining the extent of lands necessary to ensure the conservation and persistence of this species, we identified all areas that contain PCEs and are either already protected, managed, or otherwise unencumbered by conflicting use (e.g., undeveloped County or City parks, proposed preservation areas). These populations are most likely to persist into the future and to contribute to the species' survival and recovery. We added ownership categories to the designation in the following manner: First we included undeveloped Federal and State lands, then local agency and private lands with recognized resource conservation emphasis (e.g., lands owned by a conservation-oriented organization, undeveloped County or City parks), and finally other agency and private lands.

As a result of the above process, we did not include all occupied areas in the critical habitat designation. About 13 occurrences or parts of occurrences,

beyond those in the Pebble Beach Company's proposed development areas, are known to the Service and are not included in the critical habitat designation: Two of these are in the Elkhorn–Prunedale area, 10 are on the Monterey Peninsula or interior of the Monterey Peninsula, and one is in the Point Lobos Ranch area. These occurrences were not included in the designation due to the above-discussed reasons of small size, lack of surrounding native or appropriate habitat, or because we lacked evidence that *Piperia yadonii* are extant or accurately identified in those areas.

Mapping

To map the units of critical habitat, we overlaid *Piperia yadonii* records on soil series data, topographic contours and, where available, vegetation data (e.g., maritime chaparral mapped by Van Dyke and Holl (2003)). Although *P. yadonii* occurs predominately on soils with a substantial sand component (e.g., Arnold and Narlon series), the mapped distribution of such soils extends well beyond the species' range. *Piperia yadonii* also frequently occurs in areas of relatively low relief (typically less than 30 percent slope) along ridgetops or in patches of low relief amid steeper slopes. Using digital elevation data, we mapped the distribution of *P. yadonii* relative to areas with low relief and found that topographic relief, when combined with soils and plant community data, is a more accurate predictor of the species' distribution. Therefore, as a first step, we tailored unit boundaries using geomorphologic features, vegetation data, and soil series data.

In areas dominated by maritime chaparral, such as the Elkhorn–Prunedale area, *Piperia yadonii* occurs primarily among low-growing manzanitas on ridgetops underlain by sandstone. In areas with this geomorphic setting, we determined that digitizing the centerline of the ridgetops where *P. yadonii* occurs and adding 150 meters (492 feet) on either side of the centerline most consistently encompassed known *P. yadonii* occurrences, appropriate soils, and suitable habitat contiguous with known occurrences. The resulting 300 meter- (984 foot-) wide area encompasses the flat or gently sloping ridgetops with low-growing manzanitas and the adjacent slopes supporting maritime chaparral. These ridgetops support the *P. yadonii* occurrences, areas for population expansion, germination sites for wind-dispersed seeds, and appropriate soils. When maritime chaparral did not extend 150 meters

from the centerline of the ridgetop, we used closer geographic (e.g., streams) and manmade features (e.g., roads, development boundaries, farmed land) to constrain and more accurately delineate a unit area boundary.

In areas dominated by Monterey pine forest, particularly on the Monterey Peninsula, topographic features are less distinct, and consequently less useful for mapping purposes than in the chaparral-covered hills of northern Monterey County. The Monterey Peninsula's Monterey pine and Gowen cypress-Bishop pine forest stands exist in an expanse of residential and recreational development. Additional residential and recreational development is proposed. As a consequence, on the Monterey Peninsula, we began by delineating the occurrences as defined by the most recent set of comprehensive surveys. We then encompassed the forested stands and fragments that were within existing or proposed conservation or open space areas. In two locations where forest connections still existed between forest stands, we included these to help maintain continued gene flow between *Piperia yadonii* occurrences. We also used landscape features such as streams, roads, and developed areas to delineate unit boundaries on appropriate soils.

Using the above criteria we identified eight units that contain features essential to the conservation of *Piperia yadonii*: Three units are in north Monterey County in the Elkhorn–Prunedale area; one is on the Monterey Peninsula; two units are interior from the Monterey Peninsula; one unit is at Point Lobos Ranch; and the most southerly unit is near Palo Colorado Canyon.

When determining critical habitat boundaries, we made every effort to avoid including within the boundaries of the maps contained within this rule developed areas, tilled fields, row crops, golf course turfgrass, buildings, paved areas, and other areas that lack PCEs for *Piperia yadonii*. The scale of the maps prepared under the parameters for publication within the Code of Federal Regulations may not reflect the exclusion of all such developed areas. Any such structures and the land under them inadvertently left inside critical habitat boundaries shown on the maps of this designation have been excluded by text in the rule and are not included in the designation as critical habitat. Therefore, Federal actions limited to these structures and underlying lands would not trigger section 7 consultation, unless they affect the species and/or primary constituent elements in adjacent critical habitat.

Special Management Considerations or Protections

When designating critical habitat, we assess whether the occupied areas contain the features essential to the conservation of the species that may require special management considerations or protection. Many of the known occurrences of *Piperia yadonii* are threatened by one or a combination of the following: habitat fragmentation or loss due to residential, commercial, or recreational development; competition with nonnative plants for light, space, or water; deer and rabbit herbivory; vegetation cutting for fire prevention; changes in light, space, and soil moisture availability due to loss or alteration of adjacent vegetation or forest canopy; changes in fecundity

(number and viability of offspring) or genetic variability resulting from loss and fragmentation of populations or potentially low pollinator abundance or activity; disease; and trampling (PCE 1, PCE 2). In maritime chaparral associations of the Prunedale-Elkhorn region where fire has not occurred in many decades, shrub diversity appears to be declining as coast live oak or large-canopied manzanitas become dominant (Van Dyke et al. 2001, pp. 225–227). This conversion may be slow in the shallow ridgetop soils where *P. yadonii* occurs, but increasing development surrounding these ridgetops reduces the opportunity to use fire as a management tool should it be deemed necessary to maintain the open, low-canopy conditions of *P. yadonii*'s preferred habitat (PCE 1). These threats may

require special management and are addressed under the critical habitat unit descriptions below.

Critical Habitat Designation

We are designating eight units as critical habitat for *Piperia yadonii*. The critical habitat areas described below constitute our best assessment currently of areas that meet the definition of critical habitat for *Piperia yadonii*. Table 1, below, identifies the approximate area exempt from critical habitat for *P. yadonii* pursuant to section 4(a)(3) of the Act. Exemptions are discussed later in this rule under the section *Application of Section 4(a)(3) and Exclusions Under Section 4(b)(2) of the Act*. Table 2, below, identifies units that we reduced in size between the proposed and final rules.

TABLE 1.—APPROXIMATE AREA EXEMPT FROM CRITICAL HABITAT FOR PIPERIA YADONII PURSUANT TO SECTION 4(A)(3) OF THE ACT

Location (Unit)	Size of area meeting the definition of critical habitat (Acres/Hectares)	Size of exemption area (Acres/Hectares)
Presidio of Monterey, Monterey Peninsula	121 ac (49 ha)	121 ac (49 ha)

TABLE 2.—REDUCTIONS IN THE UNIT SIZE BY TYPE OF LAND BETWEEN THE PROPOSED AND FINAL RULE [Only the unit that was reduced is shown. Area estimates reflect all land within critical habitat unit boundaries in ac (ha).]

Critical habitat unit and subunit	State	Local agency	Private	Total reduction
Unit 4: Aguajito	0	0	49 (20)	49 (20)
Subunit 4a	0	0	28 (11)	28 (11)
Subunit 4b	0	0	21 (9)	21 (9)
Unit 6: Monterey Peninsula	0	0	139 (57)	139 (57)
Subunit 6a	0	0	95 (38)	95 (38)
Subunit 6b	0	0	3 (1)	3 (1)
Subunit 6c	0	0	39 (16)	39 (16)
Subunit 6d	0	0	0	0
Subunit 6e	0	0	2 (1)	2 (1)
Total				189 (75)

The approximate area encompassed within each designated critical habitat unit is shown in table 3.

TABLE 3.—CRITICAL HABITAT UNITS DESIGNATED FOR PIPERIA YADONII BY TYPE OF LAND OWNERSHIP [Area estimates reflect all land within critical habitat unit boundaries in ac (ha).]

Critical habitat unit and subunit	State	Local agency	Private		Total
			Conservation-oriented NGO	Other (private)	
Unit 1: Blohm Ranch					128 (52)
subunit 1a	0	0	72 (29)	0	72 (29)
subunit 1b	0	0	56 (23)	0	56 (23)
Unit 2: Manzanita Park					497 (201)
subunit 2a	0	0	231 (93)	0	231 (93)
subunit 2b	0	0	0	83 (34)	83 (34)
subunit 2c	0	183 (74)	0	0	183 (74)
Unit 3: Vierra Canyon					50 (20)
subunit 3a	0	0	0	17 (7)	17 (7)

TABLE 3.—CRITICAL HABITAT UNITS DESIGNATED FOR PIPERIA YADONII BY TYPE OF LAND OWNERSHIP—Continued
 [Area estimates reflect all land within critical habitat unit boundaries in ac (ha).]

Critical habitat unit and subunit	State	Local agency	Private		Total
			Conservation-oriented NGO	Other (private)	
subunit 3b	12 (5)	0	0	0	12 (5)
subunit 3c	21 (8)	0	0	0	21 (8)
Unit 4: Aguajito					108 (44)
subunit 4a	0	0	0	49 (20)	49 (20)
subunit 4b	0	0	0	59 (24)	59 (24)
Unit 5: Old Capitol	0	0	0	16 (6)	16 (6)
Unit 6: Monterey Peninsula					920 (372)
subunit 6a	0	0	435 (176)	375 (152)	810 (328)
subunit 6b	0	0	0	6 (2)	6 (2)
subunit 6c	0	0	23 (9)	8 (3)	31 (13)
subunit 6d	0	0	12 (5)	0	12 (5)
subunit 6e	0	19 (8)	29 (12)	13 (5)	61 (25)
Unit 7: Point Lobos	228 (93)	0	97 (39)	0	325 (131)
Unit 8: Palo Colorado	0	0	0	73 (29)	73 (29)
Total	261 (105)	202 (81)	955 (387)	699 (283)	2117 (857)

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

Unit 1: Blohm Ranch

Unit 1 consists of 128 ac (52 ha) of private lands in northern Monterey County in the Elkhorn Slough watershed. It is divided into two ridgeline subunits, separated by intervening agricultural fields. The two subunits support similar plant communities and need similar types of special management considerations or protection; therefore, we discuss them as a unit, except to define land ownership or acreage. Unit 1 was occupied at the time of listing (Service 1998) and is currently occupied. It supports one of the two largest occurrences of *Piperia yadonii* plants in the Prunedale Elkhorn area (several thousand plants (Allen 1996 unpaginated)) and the northernmost occurrences in the known range of the species. This unit contains features that are essential for the conservation of *P. yadonii*, including soils from weathered marine sediments that are classified as an Arnold Santa Ynez complex on the ridgetops and as Arnold series soils on the slopes (PCE 1). Vegetation is primarily high quality maritime chaparral, with ridgetops dominated by low-growing Hooker's manzanita. This unit provides habitat that supports germination, growth, and reproduction of *P. yadonii*. It contains ridgetop habitat openings, between and among patches of *P. yadonii*, to allow for population expansion and for shifts in population location, should successional vegetation or other changes

occur that alter microhabitat conditions. Features essential to the conservation of *P. yadonii* in this unit may require special management considerations or protection due to: the growth and spread of invasive plant species (such as jubata grass); erosion from old roadbeds or past earth-moving activities; and herbivory (PCE 1, PCE 2). Herbivory of flowering stalks was 36 percent in 1999, although predators (mountain lion (*Puma concolor*)) of herbivores were recently sighted on these lands (Doak and Graff 2001, p. 28; Graff 2006, Appendix IV). Given that pollen deposition rates and seed production were low for the one site studied in this unit, special management may also be needed to ensure that the abundance of potential pollinators, such as moths or bees, are maintained or enhanced (PCE 2).

Subunit 1a: This subunit consists of 72 ac (29 ha) of private land owned by the Elkhorn Slough Foundation and The Nature Conservancy. Although restoration and removal of nonnative invasive plant populations are ongoing, a management plan specifically addressing *Piperia yadonii* on properties owned by the Elkhorn Slough Foundation and The Nature Conservancy has not yet been developed (Hayes 2006).

Subunit 1b: This subunit consists of 56 ac (23 ha) of land owned by The Nature Conservancy and managed by the Elkhorn Slough Foundation, or owned and managed by the Elkhorn Slough Foundation. A management plan specifically addressing *Piperia yadonii* has not yet been developed.

Unit 2: Manzanita Park

Unit 2 consists of 498 ac (201 ha) of Monterey County lands north of Prunedale. It is divided into 3 subunits that support similar soils and vegetation communities and need similar types of special management considerations or protection; therefore, we discuss these characteristics for the whole unit. Unit 2 was occupied at the time of listing (Service 1998) and is currently occupied. The lands in this unit support several thousand *Piperia yadonii* plants scattered along the ridges, separated by intervening lower-elevation areas of oak woodland, farmed lands, and residential development (Allen 1996 unpaginated; Environmental Science Associates 2003; CNDDDB 2005; Graff 2006 appendix IV). This unit contains features that are essential for the conservation of *P. yadonii*, including soils from weathered marine sediments that are classified as an Arnold-Santa Ynez complex on the ridgetops and as Arnold series soils on the slopes and on more undulating topography within Manzanita County Park (PCE 1). Vegetation within the subunits is primarily maritime chaparral, with some coast live oak woodland at the lower elevations. The ridgetops are dominated by low-growing Hooker's manzanita. This unit contains the PCEs for *P. yadonii* that promote germination, growth, and reproduction (PCE 1). This unit encompasses a cluster of three ridgelines primarily oriented east-west that rise in elevation from west to east, which support *P. yadonii* and which may be close enough for genetic exchange via wind-dispersed seed. In conjunction with the Blohm Ranch unit (Unit 1), this unit encompasses the majority of the *P.*

yadonii plants known in the northern half of the range of *P. yadonii*. The ridgetop habitat openings, between and among patches of *P. yadonii*, allow for population expansion and for shifts in population location, should successional vegetation or other changes occur that alter microhabitat conditions. This unit is the central of the three in the Elkhorn Prunedale geographic area. This unit supports one of the two largest occurrences in the species' northern range, and the subunits of Unit 2 include the largest occupied ridgelines relatively unfragmented by residential development in the heart of the species' northern distribution. Due to their relatively unfragmented condition, lands in this unit may support dormant plants among the patches of currently known *P. yadonii*. Features in this unit may require special management considerations or protection due to: the growth and spread of invasive plant species, such as jubata grass, French broom, and eucalyptus; elimination or further fragmentation of habitat from residential, recreational, or agricultural development; vegetation removal for fuel reduction purposes; disease; and herbivory (PCE 1, PCE 2). Habitat with features essential to the conservation of *P. yadonii* in this unit may require special management considerations or protection to ensure the abundance of potential pollinators, such as moths or bees, are maintained or enhanced, to ensure the production of sufficient viable seed (PCE 2).

Subunit 2a: This subunit consists of 231 ac (93 ha) of land owned and managed by the Elkhorn Slough Foundation.

Subunit 2b: This subunit consists of 83 ac (34 ha) of private lands. Some of the lands in this subunit were proposed for a 10-lot subdivision, residential development, and open space designation in 2000 (Mercurio 2000, p. 2); this project may be moving forward in the near future (Schubert 2006).

Subunit 2c: This subunit consists of 183 ac (74 ha) within Manzanita County Park, owned and managed by the County of Monterey. Part of the park has been developed into a sports complex and is not part of the designation. A portion of the park within the unit is used for hiking and equestrian use. Although volunteers have recently begun removing nonnative invasive plants from the park, we are not aware of the existence of any management plan that specifically addresses *Piperia yadonii* on properties owned by Monterey County.

Unit 3: Vierra Canyon

Unit 3 consists of 50 ac (20 ha) consisting primarily of State lands in northern Monterey County north of Prunedale. It is divided into 3 subunits with similarities in vegetation and special management considerations or protection needs. Unit 3 was occupied at the time of listing (Service 1998) and is currently occupied (Childs 2004). The easternmost *Piperia yadonii* occurrences in unit 3 (subunits 3b and 3c) are reported to be small, with fewer than 10 flowering individuals; this likely represents up to several hundred individuals, based on the observed proportion of flowering to vegetative individuals (Doak and Graff 2001). This unit contains features that are essential for the conservation of *P. yadonii*, including the following: Lands in this unit support soils from weathered marine sediments that are classified as an Arnold-Santa Ynez complex on the ridgetops and the Arnold series on the slopes (PCE 1). Vegetation is primarily maritime chaparral, with coast live oak woodland in the lower elevation areas. The ridgetops are dominated by low-growing Hooker's manzanita. Analysis of aerial photographs suggests that chaparral vegetation on the ridgetops in this region maintains a more open canopy than in areas to the west, in the areas of Units 1 and 2 (Van Dyke 2006). Therefore, these areas may support openings that are more persistent, and can be occupied by *P. yadonii* for a longer time, than areas to the west, even in the absence of fire (Van Dyke 2006). The lands surrounding these subunits are more extensively developed for residential use than are those to the west, severing the once continuous maritime chaparral that dominated the ridges. Consequently the subunits are smaller and lack the additional habitat for population expansion found in the other northern units. This unit contains the PCEs for *P. yadonii* that promote germination, growth, and reproduction. It supports the easternmost occurrences of *P. yadonii* in the Elkhorn Prunedale region, on the northeast periphery of the species' range. Features essential to the conservation of *P. yadonii* in this unit may require special management considerations or protection due to elimination or further fragmentation of habitat from development, grading or other vegetation removal (e.g., for fuel reduction purposes or roads), and the spread of invasive plant species (PCE 1, PCE 2).

Subunit 3a: This subunit consists of 17 ac (7 ha) of private lands that are overlain by a Pacific Gas and Electric Company easement. The occurrence in

this subunit is the largest documented in Unit 3, numbering several thousand plants (Childs 2004).

Subunit 3b: This subunit consists of 12 ac (5 ha) of State lands (California Department of Transportation (Caltrans)). The lands in this subunit and in subunit 3c were part of a previous study area for a highway alignment. This alignment was eventually excluded from further consideration and the State retains the lands (Robison 2006). We are not aware of any management plan that addresses *Piperia yadonii* on these State properties.

Subunit 3c: This subunit consists of 21 ac (8 ha) of State lands, owned by Caltrans.

Unit 4: Aguajito

Unit 4 consists of 108 ac (44 ha) of private land east of the Monterey Peninsula and north of Jack's Peak County Park. It is divided into 2 subunits separated by lower elevation lands. Unit 4 was occupied at the time of listing (Service 1998) and is currently occupied. *Piperia yadonii* occurs in these subunits on ridgetops, where it grows with Hooker's manzanita (EcoSystems West 2006, p. 61). This unit contains features that are essential for the conservation of *P. yadonii*, including the following: Soils in this unit are classified as the Santa Lucia-Reliz Association, where Reliz series soils occur on the ridgetops and Santa Lucia series soils on surrounding slopes (PCE 1). Reliz series soils are characterized as excessively drained shaley clay loams underlain by shale or sandstone (USDA 1978, p. 64). The vegetation in the unit is a mix of Monterey pine forest and maritime chaparral. Griffin (1978, p. 69) commented that this area was one of the only ones in the Monterey Bay area where maritime chaparral grows on shale. He also noted that sandstones exist within the shale beds and produce sandy loam soils. A related species, *Piperia elegans*, is more abundant in the surrounding Monterey pine forest (EcoSystems West 2005b, p. 7). This unit provides habitat that supports germination, growth, and reproduction. Unit 4 represents one of only two units in the region interior to the Monterey Peninsula. It supports the largest undeveloped easternmost occurrence of *P. yadonii* in the central and southern half of the species' range. Its preservation will help avoid range collapse. Features essential to the conservation of *P. yadonii* in this unit may require special management considerations or protection due to fragmentation of habitat from

development and the colonization and spread of invasive plant species (PCE 1, PCE 2). We are also excluding 49 acres (20 ha) from this subunit as a result of the Pebble Beach Company's conservation agreement.

Subunit 4a: This subunit consists of 49 ac (20 ha) of private lands (owned by the Pebble Beach Company). Lands in and/or adjacent to this subunit and subunit 4b are proposed for preservation in the Pebble Beach Company's recent development plan, but the configuration of the preservation areas is not yet determined (Monterey County 2005, pp. 2–89, 2–90).

Subunit 4b: This subunit consists of 56 ac (24 ha) of private lands (owned by the Pebble Beach Company) and proposed for preservation (see above), and 3 ac (1ha) of Monterey County road right-of-way.

Unit 5: Old Capitol

Unit 5 consists of 16 ac (7 ha) of private land (owned by the Pebble Beach Company) east of the Monterey Peninsula. Unit 5 was occupied at the time of listing (Service 1998) and is currently occupied. Surveys in 2005 revealed that the dominant *Piperia* species at this location is *P. elegans*, which number in the thousands; however, several hundred *P. yadonii* co-occur with *P. elegans* throughout the unit (EcoSystems West 2005b, pp. 5–7). This unit contains features that are essential for the conservation of *P. yadonii*, including the Chamise shaley clay loam (PCE 1) soil type. The vegetation is Monterey pine forest and coast live oak woodland. This unit provides habitat that supports germination, growth, and reproduction of *P. yadonii*. It is the only unit designated between the Monterey Peninsula (Unit 6) and Aguajito (Unit 4) to the east and, therefore, provides connectivity between these other two units.

Features essential to the conservation of *P. yadonii* may require special management considerations or protection in this unit due to: Fragmentation or loss of habitat from development, habitat degradation by motorized vehicles and encampments, debris dumping, and competition from nonnative invasive plants (PCE 1, PCE 2). The land in Unit 5 is proposed for preservation in the Pebble Beach Company's recent development plan (Monterey County 2005, pp. 2–89, 2–90).

Unit 6: Monterey Peninsula

Unit 6 consists of 920 ac (372 ha) of private and City lands on the Monterey Peninsula. This unit is divided into 5

subunits due to intervening development. Most of the lands surrounding this unit are developed for residential and recreational (golf) use. The similarities among the subunits in soils and vegetation community are discussed here; subunit specific details are discussed below. Unit 6 was occupied at the time of listing (Service 1998) and is currently occupied. It supports the greatest abundance and largest aerial extent of *Piperia yadonii* in the species' range, with close to 100,000 vegetative plants (Zander Associates and WWD Corporation 2004, all pp.; EcoSystems West 2004, pp. 1–9; EcoSystems West 2005a, 2005b, all pp.). This unit contains features that are essential for the conservation of *P. yadonii* including sands or sandy loam soils that belong to at least 5 soil series on the Monterey Peninsula unit (Baywood sands, Narlon loamy fine sands, Sheridan coarse sandy loams, Tangair fine sands, and Santa Lucia shaley clay loam). Vegetation in this unit is primarily Monterey pine forest, with maritime chaparral, and Bishop pine/Gowen cypress forest in two subunits (PCE 1). Pollinator observations and collections were made on lands in this unit (PCE 2) (Doak and Graff 2001). This unit provides habitat that supports germination, growth, reproduction, and space for shifts in the location of *P. yadonii*, as microhabitat conditions change. Features essential to the conservation of *P. yadonii* may require special management in this unit due to: Adverse effects from adjacent existing and future development, including the loss of adjacent forest canopy, increased trampling, potential hydrologic changes, overspray of pesticides, the introduction of pathogens or disease, mowing, and the introduction and spread of invasive plant species; continuing high and/or increasing deer populations resulting in high herbivory levels; and increased growth of understory vegetation due to exclusion of wildfire (PCE 1, PCE 2).

Subunit 6a: This subunit consists of 810 ac (328 ha) of private lands owned by the Pebble Beach Company and other private owners, including 17 ac (7 ha) owned by the Del Monte Forest Foundation (DMFF). Protected lands in this subunit include the SFB Morse Botanical Reserve (owned by the DMFF) and the Huckleberry Hill Natural Reserve (easement held by the DMFF). It also includes lands identified in the Pebble Beach Company's most recent development proposal for preservation or conservation: Areas PQR, G, H, I, the Corporate Yard Preservation Area, and Area D (Monterey County 2005). The

Department of the Army's Presidio of Monterey is contiguous with the northeastern edge of this subunit; those lands are exempted from this designation, as described later in this rule. We have also excluded 54 acres (22 ha) from this subunit as a result of the Pebble Beach Company's conservation agreement and 6 ac (2.4 ha) from the Stevenson School property. We have also removed 35 acres (including Area D) because they do not support the PCEs. Please see the section *Relationship of Critical Habitat to Approved Management Plans—Exclusions Under Section 4(b)(2) of the Act* and our responses to Comments 12 and 13, for a discussion of these exclusions.

Plant communities in the Huckleberry Hill Natural Area and SFB Morse Botanical Preserve are Gowen cypress/Bishop pine forest, maritime chaparral, and Monterey pine forest. The remaining lands support primarily Monterey pine forest. Lands in this subunit support about 90,000 vegetative *Piperia yadonii* plants (Zander Associates and WWD Corporation 2004 all pp.; EcoSystems West 2004, pp. 1–9; EcoSystems West 2005a, 2005b, all pp.). Although the DMFF conducts some monitoring and removal of nonnative invasive plant populations, a management plan specifically addressing *P. yadonii* on properties owned by the DMFF has not been developed.

Subunit 6b: This subunit consists of 6 ac (2 ha) of private lands. It is identified in the Pebble Beach Company's most recent development proposal as the Bristol Curve Conservation Area (Monterey County 2005 Fig. ES–2). This subunit is part of a larger area identified by the Pebble Beach Company as Area MNOUV, which supports about 116 ac (47 ha) of Monterey pine forest and one of the two largest known occurrences of *Piperia yadonii* (about 57,000 plants (Zander Associates and WWD Corporation 2004)). The Monterey pine forest of MNOUV outside the proposed Bristol Curve conservation area is proposed for development as a golf course (Monterey County 2005). Vegetation in this subunit is Monterey pine forest with an herbaceous understory. We are excluding 1 acre (1 ha) from this subunit as a result of the Pebble Beach Company's conservation agreement, and as a result of boundary adjustments, we have not included 2 acres of proposed critical habitat within this subunit that do not support the PCEs. Please see the section *Relationship of Critical Habitat to Approved Management Plans—Exclusions Under Section 4(b)(2) of the*

Act and our responses to Comments 12 and 13, for a discussion of these exclusions.

Subunit 6c: This subunit consists of 31 ac (13 ha) of private lands, of which about 23 acres (9 ha) are owned by the DMFF. Lands within this unit are referred to as Indian Village (owned by the DMFF) and, in the Pebble Beach Company's recent development proposal, as Conservation Area K and Preservation Areas J and L (Monterey County 2005 Fig. ES-2). Adjacent lands (Part of Area K) that are proposed for development are not included in this subunit. We are excluding 37 acres (15 ha) from this subunit as a result of the Pebble Beach Company's conservation agreement, and we have removed 2 acres (1 ha) as a result of boundary adjustments to account for areas that do not support the PCEs. Please see the section *Relationship of Critical Habitat to Approved Management Plans—Exclusions Under Section 4(b)(2) of the Act* and our responses to Comments 12 and 13, for a discussion of these exclusions. The vegetation in this subunit is primarily Monterey pine forest. This subunit supports several thousand *Piperia yadonii* plants (Zander Associates and WWD Corporation 2004). Along with subunits 6b and 6d, it encompasses lands in the westernmost region of the Monterey Peninsula.

Subunit 6d: This subunit consists of 12 ac (5 ha) of private lands owned by the DMFF. It encompasses the Crocker Grove, an area of Monterey cypress forest with some adjacent Monterey pine forest (PCE 1). This is the westernmost subunit on the peninsula, closest to the ocean, and lands it occurs on are mapped as marine terrace 2 (Jones and Stokes 1994b, p. 11). It has been documented to support about 50 flowering *Piperia yadonii* plants (Van Dyke et al. 2006), which typically equates to several hundred vegetative plants.

Subunit 6e: This subunit consists of 42 ac (17 ha) of private lands and 19 ac (7 ha) owned by the City of Pacific Grove. About 29 ac (12 ha) of the private lands are owned by the DMFF. Lands within this unit are referred to as the Navajo tract and as Preservation Area B in the Pebble Beach Company's most recent development proposal (Monterey County 2005 Fig. ES-2). We are excluding 2 acres (1 ha) from this subunit as a result of the Pebble Beach Company's conservation agreement. Please see the section *Relationship of Critical Habitat to Approved Management Plans—Exclusions Under Section 4(b)(2) of the Act* for a discussion of this exclusion. The

vegetation in this subunit is a mix of coast live oak and Monterey pine forest (PCE 1). It is the northernmost unit we are designating on the Peninsula. It supports several hundred plants of *Piperia yadonii* (Zander Associates and WWD Corporation 2004).

Unit 7: Point Lobos Ranch

Unit 7 consists of 228 ac (92 ha) of State land south of the Monterey Peninsula on the Big Sur coast, and 97 ac (39 ha) owned by the Big Sur Land Trust that are intended to be added to the State Parks system in the future. Unit 7 was occupied at the time of listing (Service 1998) and is currently occupied. The lands in this unit support several thousand *Piperia yadonii* plants (Graff et al. 2003, Nedeff et al. 2003). This unit contains features that are essential for the conservation of *P. yadonii*, including the sandy loam soils in the Sheridan, Narlon, Junipero Sur complex series, underlain by granitic substrates from which terrace sands have been eroded (Griffin 1978, p. 69, USDA 1978 map no. 35). Vegetation is a composite of Monterey pine forest, maritime chaparral, Gowen cypress Bishop pine forest, with some redwood forest. *Piperia yadonii* occurs in this unit in Monterey pine forest; on exposed granitic soils in maritime chaparral dominated by Hooker's manzanita; and under a canopy of Monterey pine, Gowen cypress, and redwood (*Sequoia sempervirens*) (PCE 1). This unit provides habitat that supports germination, growth, and reproduction of *P. yadonii*, as well as population expansion and shifts in population location. This unit supports *P. yadonii* growing on soils not found in other units and in association with a varied mix of forest tree species. This is the second highest unit in elevation and supports the largest occurrence of *P. yadonii* south of the Monterey Peninsula (Graff 2006). Features essential to the conservation of *P. yadonii* may require special management in this unit due to: the growth and spread of invasive plant species, such as French broom; loss of habitat from residential development; and erosion (PCE 1, PCE 2). Access by park visitors may need to be managed to avoid creation of trails in Monterey pine forest populations and use of herbicides should be controlled to avoid or minimize effects to *P. yadonii* (PCE 1).

Unit 8: Palo Colorado

Unit 8 consists of 73 ac (29 ha) of private land on the Big Sur coast. Unit 8 was occupied at the time of listing (Service 1998) and is currently occupied. The lands in this unit were

reported to support 38 flowering *Piperia yadonii* plants (Norman 1995), which likely represents a population of several hundred to several thousand vegetative individuals, based on the observed proportions of flowering to vegetative individuals (Doak and Graff 2001). This unit contains features that are essential for the conservation of *P. yadonii* including the following: A mix of sandy loam soils, shallow soils less than 20 inches deep, and rock outcrops classified as the Junipero-Sur complex and Rock Outcrop—Xerotherents Association (PCE 1) (USDA 1978, p. 38). Vegetation in this unit has been described as a unique association of maritime chaparral, with low-growing hybrid *Arctostaphylos glandulosa* as the dominant manzanita under which *P. yadonii* occurs (Norman 1995). This unit provides habitat that supports germination, growth, and reproduction of *P. yadonii*. This unit supports the most southern and highest elevation (1,000 to 1,400 feet (300 to 430 m)) occurrence in the species' range. Features essential to the conservation of *P. yadonii* may require special management in this unit due to habitat fragmentation and habitat degradation from road and trail grading and from future development, such as the introduction and spread of nonnative plants, removal of native vegetation, erosion, and hydrologic changes (PCE 1, PCE 2).

Effects of Critical Habitat Designation

Section 7 Consultation

Section 7(a)(2) of the Act requires Federal agencies, including the Service, to ensure that actions they fund, authorize, or carry out are not likely to destroy or adversely modify critical habitat. Decisions by the Fifth and Ninth Circuit Court of Appeals have invalidated our definition of adversely modify (see *Gifford Pinchot Task Force v. U.S. Fish and Wildlife Service*, 378 F.3d 1059 (9th Cir 2004) and *Sierra Club v. U.S. Fish and Wildlife Service et al.*, 245 F.3d 434, 442F (5th Cir 2001)), and we do not rely on this regulatory definition when analyzing whether an action is likely to destroy or adversely modify critical habitat. Pursuant to 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 its intended conservation role for the species.

Section 7(a)(4) of the Act requires Federal agencies to confer with us on any action that is likely to jeopardize the continued existence of a species proposed for listing or result in destruction or adverse modification of proposed critical habitat. This is a procedural requirement only. However, once a species proposed for listing 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 species proposed for listing 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 species proposed for listing 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 species proposed for listing 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 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 *Piperia yadonii* or its designated critical habitat require consultation under section 7(a)(2) of 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 Adverse Modification Standard for Actions Involving Effects to the Critical Habitat of Piperia yadonii

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 its intended conservation role for 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 *Piperia yadonii* is appreciably reduced. Generally, the conservation role of *Piperia yadonii* critical habitat units is 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, when carried out, funded, or authorized by a Federal agency, may affect critical habitat and, therefore, should result in consultation for *Piperia yadonii* include, but are not limited to:

(1) Actions that would remove or destroy *Piperia yadonii* plants or remove flowering stalks. Such activities could include, but are not limited to, grading, plowing, mowing, burning during the growing or flowering season, driving over plants, unrestricted creation of trails through occurrences, unrestricted mechanical weed control, and/or unlimited use of herbicides.

(2) Actions that would increase the establishment and spread of invasive nonnative species in *Piperia yadonii* habitat or increase the invasability of the plant community within which *P. yadonii* occurs. Such activities could include, but are not limited to: Grading; plowing; road building and maintenance; introducing seeds or other propagules of invasive species during erosion-control practices and/or

landscaping practices; isolating habitat patches within a matrix of residential or other development; off road vehicle traffic; and/or livestock grazing. These activities could encourage the establishment and spread species such as French broom or jubata grass, which can compete with *P. yadonii* for light and other resources.

(3) Actions that would directly remove or destroy the low-growing maritime chaparral and Monterey pine forest plant communities on which *Piperia yadonii* depends. Such activities could include, but are not limited to: Road construction; grading; development; plowing; burning out-of-season or too frequently; and/or off-road vehicle traffic. These activities could reduce or eliminate space and the appropriate light and hydrologic conditions for *P. yadonii* germination, growth, and reproduction.

(4) Actions that would indirectly reduce the presence of low-growing manzanitas in maritime chaparral, openings in maritime chaparral, or forested areas with a diverse assemblage (but low cover) of native herbs. Such activities could include, but are not limited to: Those that isolate or fragment habitat through development; road construction that promotes such development; exclusion of fire; reduced opportunity for prescribed burns during the fall season; and/or increased potential for human-caused fire during the growing season of *Piperia yadonii*. These activities could result in less diverse, consistently old-age maritime chaparral stands with fewer openings or areas that support low-growing manzanitas and reduced abundance of forest patches with filtered light canopies and low cover by vines and shrubs.

(5) Actions that would alter the soil hydrology in *Piperia yadonii* habitat. Such activities could include, but are not limited to: Grading or excavation that disrupts subsurface hardpan layers that influence soil saturation; conversion to agricultural lands; development of golf courses, ball fields, or other areas that require irrigation; and/or development that increases impermeable surfaces. These activities could result in soils that do not retain sufficient moisture through the growing season, excessive irrigation that influences *P. yadonii* through altered water availability or indirectly through changes in associated vegetation, and changes in drainage patterns that influence soil saturation during the growing season.

(6) Actions that would increase the abundance of herbivores (such as deer and rabbits) of *Piperia yadonii* leaves

and flowers or encourage the spread and abundance of nonnative species that consume pollen (e.g., nonnative earwigs). Such activities could include, but are not limited to: Residential or commercial development that introduces landscaping that favors nonnative garden invertebrates but not their predators (e.g., lizards); and/or fencing that excludes predators, but not herbivores. These actions could result in increased levels of herbivory of *P. yadonii* leaves and flowers and correspondingly reduced levels of reproduction.

(7) Actions that would diminish the variety or abundance of pollinators needed for seed set in *Piperia yadonii*. Such actions could include, but are not limited to: Removal of the native maritime chaparral and forest plant communities within which *P. yadonii* grows, night-lighting adjacent to areas supporting *P. yadonii*, and/or unlimited pesticide applications. These actions could indirectly reduce reproduction in *P. yadonii* through reduced pollen transfer and could alter gene flow between occurrences through changes in pollinator composition.

All of the units designated as critical habitat, as well as that portion of one which has been exempted under section 4(a)(3) of the Act contain features essential to the conservation of *Piperia yadonii*. All units are within the geographic range of the species and all units were occupied by the species at the time of listing and are occupied now. In some cases, the level of detail regarding the precise location of plants within the units was not documented until after the listing. Because all critical habitat units are occupied, Federal agencies already consult with us on activities in areas currently occupied by *P. yadonii*, or if the species may be affected by their actions, to ensure that their actions do not jeopardize the continued existence of *P. yadonii*.

Application of Section 4(a)(3) and Exclusions Under Section 4(b)(2) of the Act

Section 4(a)(3)

The Sikes Act Improvement Act of 1997 (Sikes Act) (16 U.S.C. 670a) required each military installation that includes land and water suitable for the conservation and management of natural resources to complete, by November 17, 2001, an Integrated Natural Resource Management Plan (INRMP). An INRMP integrates implementation of the military mission of the installation with stewardship of the natural resources found on the base. Each INRMP includes an assessment of

the ecological needs on the installation, including the need to provide for the conservation of listed species; a statement of goals and priorities; a detailed description of management actions to be implemented to provide for these ecological needs; and a monitoring and adaptive management plan. Among other things, each INRMP must, to the extent appropriate and applicable, provide for fish and wildlife management, fish and wildlife habitat enhancement or modification, wetland protection, enhancement, and restoration where necessary to support fish and wildlife and enforcement of applicable natural resource laws.

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

We consult with the military on the development and implementation of INRMPs for installations with listed species. INRMPs developed by military installations located within the range of the critical habitat designation for *Piperia yadonii* were analyzed for exemption under the authority of 4(a)(3) of the Act.

Approved INRMPs

The Presidio of Monterey (POM) has an INRMP and Endangered Species Management Plan (ESMP) in place that provides a benefit for *Piperia yadonii*. The ESMP and INRMP were completed, and the Army began implementing each of them, in 1999 and 2001, respectively (Harding ESE 1999; Harding ESE 2001; Cairns 2006). The conservation goal of the ESMP that addresses *P. yadonii* is to maintain the two occurrences on POM lands and protect them from impacts during use of the nearby obstacle/orienteering course. The plan identifies the following actions that will benefit *P. yadonii*: Monitoring; protecting the populations from foot traffic by installing signs and by other means; removing nonnative plant species from documented and potential habitat; monitoring deer browsing and providing caging, if necessary; and establishing a propagation program, if necessary. The

POM has carried out the following in the past 5 years: Annual population monitoring since 2000, installation and maintenance of educational signs, creation of an educational brochure highlighting *P. yadonii*, construction and installation of outdoor bulletin boards on which the brochures are posted, and removal of infestations of nonnative French broom in over 13 acres of Monterey pine forest habitat (Cairns 2006).

Based on the above considerations, and in accordance with section 4(a)(3)(B)(i) of the Act, we have determined that conservation efforts identified in the ESMP and INRMP will provide benefits to *Piperia yadonii* occurring in habitats within the POM. Therefore, this installation is exempt from critical habitat designation under section 4(a)(3) of the Act.

Approximately 121 acres (49 ha) of habitat for *P. yadonii* is not included in this critical habitat designation due to this exemption.

Application of 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 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 Congressional record is clear that the Secretary is afforded broad discretion regarding which factor(s) to use and how much weight to give any factor.

Under section 4(b)(2) of the Act, in considering whether to exclude a particular area from the designation, we must identify the benefits of including the area in the designation, identify the benefits of excluding the area from the designation, and determine whether the benefits of exclusion outweigh the benefits of inclusion. If 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.

Benefits of Designating Critical Habitat

The information provided in this section applies to all the discussions below that discuss the benefits of inclusion and exclusion of critical habitat in that it provides the framework for the consultation process.

Regulatory Benefits

The consultation provisions under section 7(a) of the Act constitute the regulatory benefits of critical habitat. As discussed above, Federal agencies must consult with the Service on actions that may affect critical habitat and must avoid destroying or adversely modifying critical habitat. Prior to the designation of critical habitat, consultation for a listed species occurs on actions that may affect the listed species, and Federal agencies must refrain from undertaking actions that jeopardize the continued existence of the species. Thus the analysis of effects to critical habitat is a separate and different analysis from that of the effects to the species. Therefore, the difference in outcomes of these two analyses represents the regulatory benefit of critical habitat. For some species, and in some locations, the outcome of these analyses will be similar, because effects to habitat will often also result in effects to the species. However, the regulatory standard is different, as the jeopardy analysis looks on the action's impact to survival and recovery of the species and the adverse modification analysis looks at the effects to the designated habitat's contribution to conservation of the species. This will, in many instances, lead to different results, and different regulatory requirements.

We note that, for 30 years prior to the Ninth Circuit Court's decision in *Gifford Pinchot*, the Service essentially conflated the jeopardy standard with the standard for destruction or adverse modification of critical habitat when evaluating Federal actions that affect occupied critical habitat. The Court ruled that the two standards are distinct and that adverse modification evaluations require consideration of impacts on the recovery of species. Thus, critical habitat designations may provide greater benefits to the recovery of a species.

There are two limitations to the regulatory effect of critical habitat. First, consultation is only required 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(a)(2) 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 critical habitat. However, if the Service determines through informal consultation that adverse impacts are likely to occur, then formal consultation is initiated. Formal consultation concludes with a biological opinion issued by the Service on whether the proposed Federal action is likely to result in destruction or adverse modification of critical habitat. For critical habitat, a biological opinion that reaches a "no destruction or adverse modification" determination may contain discretionary conservation recommendations to minimize adverse effects to primary constituent elements.

We believe that in many instances the regulatory benefit of critical habitat is low when compared to voluntary conservation efforts or management plans. The conservation achieved through implementing Habitat Conservation Plans (HCPs) under Section 10 of the Act 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, an HCP or management plan that incorporates enhancement or recovery as the management standard will often 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

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 *Piperia yadonii*. 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 benefit: That the designation of critical habitat would inform State agencies and local governments about areas that could be conserved under State laws or local ordinances.

Recovery Benefits

The process of designating critical habitat as described in the Act requires that the Service identify those lands on which are found the physical or biological features essential to the conservation of the species which may require special management considerations or protection. In identifying those lands, the Service must consider the recovery needs of the species, such that the habitat that is identified, if managed, could provide for the survival and recovery of the species. Furthermore, once critical habitat has been designated, Federal agencies must consult with the Service under section 7(a)(2) of the Act to ensure that their actions will not adversely modify designated critical habitat or jeopardize the continued existence of the species. As noted in the Ninth Circuit's *Gifford Pinchot* decision, the Court ruled that the jeopardy and adverse modification standards are distinct, and that adverse modification evaluations require consideration of impacts to the recovery of species. Thus, through the section 7(a)(2) consultation process, critical habitat designations provide recovery benefits to species by ensuring that Federal actions will not destroy or adversely modify designated critical habitat.

It is beneficial to identify those lands that are necessary for the conservation of the species and that, if managed appropriately, would further recovery measures for the species. The process of proposing and finalizing a critical habitat rule provides the Service with the opportunity to determine lands essential for conservation as well as identify the primary constituent elements or features essential for conservation on those lands. The designation process includes peer review and public comment on the identified features and lands. This process is valuable to landowners and

managers in developing conservation management plans for identified lands, as well as any other occupied habitat or suitable habitat that may not have been included in the Service's determination of essential habitat.

However, the designation of critical habitat does not require that any management or recovery actions take place on the lands included in the designation. Even in cases where consultation has been initiated under section 7(a)(2) of the Act, the end result of consultation is to avoid jeopardy to the species and adverse modification of its critical habitat, but not specifically to manage remaining lands or institute recovery actions on remaining lands. Conversely, management plans institute proactive actions over the lands they encompass intentionally to remove or reduce known threats to a species or its habitat and, therefore, implement recovery actions. We believe that the conservation of a species and its habitat that could be achieved through the designation of critical habitat, in some cases, is less than the conservation that could be achieved through the implementation of a management plan that includes species-specific provisions and considers enhancement or recovery of listed species as the management standard over the same lands. Consequently, implementation of any HCP or management plan that considers enhancement or recovery as the management standard will often 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.

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 percent of the United States is privately owned (National Wilderness Institute 1995, p. 2), and at least 80 percent of endangered or threatened species occur either partially or solely on private lands (Crouse *et al.* 2002, p. 720). Stein *et al.* (1995, p. 400) found that only about 12 percent of listed species were found almost exclusively on Federal lands (90 to 100 percent of their known occurrences restricted to Federal lands) and that 50 percent of federally listed species are not known to occur on Federal lands at all.

Given the distribution of listed species with respect to land ownership, conservation of listed species in many parts of the United States is dependent upon working partnerships with a wide

variety of entities and the voluntary cooperation of many non-Federal landowners (Wilcove and Chen 1998, p. 1407; Crouse *et al.* 2002, p. 720; James 2002, p. 271). Building partnerships and promoting voluntary cooperation of landowners 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 Department of the Interior's Cooperative Conservation philosophy. Conservation agreements with non-Federal landowners (HCPs, safe harbor agreements, other conservation agreements, easements, and State and local 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 regulatory methods (61 FR 63854; December 2, 1996).

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, pp. 5–6; Bean 2002, pp. 2–3; Conner and Mathews 2002, pp. 1–2; James 2002, pp. 270–271; Koch 2002, pp. 2–3; Brook *et al.* 2003, pp. 1639–1643). Many landowners fear a decline in their property value due to real or perceived restrictions on land-use options where threatened or endangered species are found. Consequently, harboring endangered species is viewed by many landowners as a liability, resulting in anti-conservation incentives because maintaining habitats that harbor endangered species represents a risk to future economic opportunities (Main *et al.* 1999, pp. 1264–1265; Brook *et al.* 2003, pp. 1644–1648). 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, p. 1263; Bean 2002, p. 2; Brook *et al.*

2003, pp. 1644–1648). The magnitude of this negative outcome is greatly amplified in situations where active management measures (such as reintroduction, fire management, and control of invasive species) are necessary for species conservation (Bean 2002, pp. 3–4). The Service believes that the judicious exclusion of 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 purpose of designating critical habitat is to contribute to the conservation of threatened and endangered species and the ecosystems upon which they depend. The outcome of the designation, triggering regulatory requirements for actions funded, authorized, or carried out by Federal agencies under section 7(a)(2) of the Act, can sometimes be counterproductive to its intended purpose on non-Federal lands. Thus the benefits of excluding areas that are covered by partnerships or voluntary conservation efforts can often be high.

Benefits of Excluding Lands With HCPs or Other Management Plans From Critical Habitat

The benefits of excluding lands with HCPs or other management plans from critical habitat designation include relieving landowners, communities, and counties of any additional regulatory burden that might be imposed by a critical habitat designation. Most HCPs and other conservation plans take many years to develop and, upon completion, are consistent with the recovery objectives for listed species that are covered within the plan area. Many conservation plans also provide conservation benefits to unlisted sensitive species. Imposing an additional regulatory review as a result of the designation of critical habitat may undermine these conservation efforts and partnerships designed to proactively protect species to ensure that listing under the Act will not be necessary. Designation of critical habitat within the boundaries of management plans that provide conservation measures for a species could be viewed as a disincentive to those entities currently developing these plans or contemplating them in the future, because one of the incentives for undertaking conservation is greater ease of permitting where listed species are affected. Addition of a new regulatory requirement would remove a significant incentive for undertaking the time and expense of management planning. In fact, designating critical habitat in areas

covered by a pending HCP or conservation plan could result in the loss of some species' benefits if participants abandon the planning process, in part because of the strength of the perceived additional regulatory compliance that such designation would entail. The time and cost of regulatory compliance for a critical habitat designation do not have to be quantified for them to be perceived as additional Federal regulatory burden sufficient to discourage continued participation in plans targeting listed species' conservation.

A related benefit of excluding lands within management plans from critical habitat designation is the unhindered, continued ability to seek new partnerships with future plan participants including States, counties, local jurisdictions, conservation organizations, and private landowners, which together can implement conservation actions that we would be unable to accomplish otherwise. If lands within approved management plan areas are designated as critical habitat, it would likely have a negative effect on our ability to establish new partnerships to develop these plans, particularly plans that address landscape-level conservation of species and habitats. By preemptively excluding these lands, we preserve our current partnerships and encourage additional conservation actions in the future.

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

After consideration under section 4(b)(2) of the Act, we are proposing to exclude the following areas of habitat from the critical habitat designation for *Piperia yadonii*: 49 acres in Unit 4 and 100 acres in Unit 6. There are two exclusions: One for areas proposed for development under a conservation agreement with Pebble Beach Company, and the other for an area owned by the Stevenson School.

The Pebble Beach Company has submitted a conservation agreement for its lands that are within *P. yadonii* critical habitat units on the Monterey Peninsula (Unit 6), and interior to the Monterey Peninsula (Unit 4 and Unit 5). We have considered this conservation strategy in our designation and have excluded from critical habitat approximately 143 ac (58 ha) we had proposed for critical habitat that are currently owned and managed by the Pebble Beach Company in subunits 4a, 4b, 6a, 6b, 6c, and 6e. We are also excluding from the designation approximately 6 ac (2 ha) owned by Stevenson School on the Monterey Peninsula. We believe that these areas

are appropriate for exclusion under the "other relevant factor" provisions of section 4(b)(2) of the Act. A detailed analysis of our exclusion of these lands under section 4(b)(2) of the Act is provided in the paragraphs below.

Relationship of Critical Habitat to Approved Management Plans—Exclusions Under Section 4(b)(2) of the Act

Pebble Beach Company Lands

A Memorandum of Understanding between the Service and the Pebble Beach Company serves as the conservation agreement addressing *Piperia yadonii* on Pebble Beach Company (Company) lands. It identifies different management strategies and conservation benefits to *P. yadonii*, depending on whether or not the Company receives government approvals for their proposed development project. The conservation agreement essentially summarizes and commits the Company to the preservation, management, avoidance, minimization, and enhancement measures for *P. yadonii* in the Company's Del Monte Forest Preservation and Development Plan (DMF/PDP) and the additional mitigations included by the County of Monterey in the 2005 FEIR (Monterey County 2005), providing that the Company receives local, State, and Federal government agency approvals for the development portion of their proposed project. Almost all of the Company lands in the Del Monte Forest (Subunits 6a, 6b, 6c, and 6e), and Old Capitol (Unit 5), that were proposed as critical habitat were required to be conserved as mitigation for development in that planning process. With these approvals, the conservation agreement would provide a benefit to *P. yadonii* that is beyond that of the FEIR-defined project, in that it includes the Company's commitment to preserve and manage lands identified in the conservation agreement in perpetuity, superseding the provision described in the FEIR that requires the County Supervisors to decide on the need for continued management after 20 years of implementation (Monterey County 2005 (PRDEIR), p. P2–19). By including this requirement, the conservation agreement recognizes that management activities, such as control of nonnative species and recreational access, should occur in perpetuity, given that the effects of surrounding development occur in perpetuity. The conservation agreement references the FEIR and its suite of actions designed to conserve *P. yadonii* and offset adverse effects of

proposed development on the species. They include the Company's commitment to:

a. Preserve Monterey pine forest and maritime chaparral habitat occupied by *Piperia yadonii*, in the areas identified as mitigation for Yadon's piperia in the FEIR and the County's mitigation conditions (Monterey County 2005);

b. Maintain the quality and acreage of habitat occupied by *Piperia yadonii* within the lands identified in (a), above, through resource management;

c. Reduce the loss of *Piperia yadonii* through siting and design of development project components;

d. Reduce the direct and indirect effects on extant *Piperia yadonii* adjacent to development areas, through staff education, and implementation of protective measures addressing golf course use, maintenance, and construction;

e. Salvage and transplant *Piperia yadonii* as described in the FEIR (Monterey County 2005);

f. Enhance and expand occupied habitat for *Piperia yadonii* on the lands identified in (a) above, by convening an Adaptive Management Team and developing and implementing the Piperia Plan and a program of management-oriented research and testing. The Piperia Plan would be developed by a third-party consultant, agreed to by the Service, and would describe a scientifically sound, coordinated approach to preservation, enhancement, and management of *P. yadonii* on the lands addressed in the FEIR. Following the initial County approvals, the Adaptive Management Team convened, and the Pebble Beach Company has begun funding a program of management and enhancement-oriented research for *P. yadonii*.

In June 2007, the California Coastal Commission denied approval of a Monterey County measure that was needed for the Company to secure project approvals. The eventual outcome of this process is unknown. In the absence of approvals on the current project, the Company may pursue an alternate project. The conservation agreement describes alternate actions, in the event that the Company's project does not receive government approvals. Under the conservation agreement, if they receive approvals for an alternative project that lacks an 18-hole golf course, the Company would preserve and manage at least 511 ac (207 ha) of land in the Del Monte Forest, Old Capitol and Aguajito areas, as identified in the conservation agreement exhibits. The areas the Conservation Agreement identifies for dedication include all Company lands in designated critical

habitat on the Del Monte Forest (in Subunits 6a, 6b, 6c, and 6e) and at Old Capitol (Unit 5), as well as designated critical habitat at Aguajito (all of Subunit 4a and half of Subunit 4b). The conservation agreement allows some flexibility in which specific parcels of Monterey pine forest habitat will be preserved. If the Pebble Beach Company obtains approval for a future project, the company will not begin developing any area supporting *P. yadonii* until they dedicate the lands to be preserved. The conservation agreement includes no time requirement on the dedications, other than that they must occur prior to development that would adversely affect *P. yadonii*.

Under the conservation agreement, the Company has committed to manage, for the interim period until a future project approval and dedication occur, the lands they own that are designated as critical habitat and identified as future dedication areas in the agreement. They will also manage Areas N and O for the benefit of *P. yadonii*, until the development approvals are secured and the land dedication takes place. Areas N and O are part of the contiguous forested area known as MNOUV, are adjacent to Subunit 6b, and support abundant *P. yadonii*. The management actions the Company will carry out include removing nonnative species from occupied *P. yadonii* habitat; controlling runoff and erosion; installing and maintaining vehicle barriers to stop entrance into populations; removing debris and encampments from *P. yadonii* locations; and educating landowners, utility workers, and golf course personnel about practices to reduce impacts to *P. yadonii*. To improve the success of these and other management actions, the Company has also committed to conduct management-oriented research (not to exceed \$25,000 annually), during that interim period, similar to what the Company has already begun through the Adaptive Management Team. The conservation agreement specifies that the Company will fully fund, with a written guarantee, the components of the conservation agreement if a future dedication of lands occurs.

The benefits of including lands in critical habitat can be regulatory, educational, or to aid in recovery of species as generally discussed earlier in this rule. In the case of *Piperia yadonii* on the Monterey Peninsula, there may be some Federal regulatory benefit to the designation only if a Federal action triggers a consultation under section 7 of the Act. The Federal nexus would most likely occur due to either wetland impacts in the Monterey pine forest that

require a Corps permit, or via a consultation on an HCP that was initiated for a listed animal species in the Del Monte forest, such as the California red-legged frog (*Rana aurora draytonii*). To date, there have been no consultations or HCPs that addressed *P. yadonii* and its upland habitat in the Del Monte forest. However, in a recent Corps consultation on the California red-legged frog, only wetland habitats were addressed, and consideration of impacts to adjacent upland habitat that support *P. yadonii* were determined to be beyond the scope of consultation. The likelihood of future consultations or HCPs would depend largely on the configuration of future proposed development that might adversely affect the red-legged frog and trigger these actions. However, because the Act does not restrict the take of plants on private lands, the likelihood of future HCPs covering this species is low.

The educational benefits of critical habitat in this case are relatively low for most of the lands we are excluding, because previous publications have already identified and discussed their importance to the conservation of *Piperia yadonii*. The primary regulatory agencies that have permitting authority related to land use in this area are Monterey County and the Coastal Commission. These agencies and the landowner are well aware of where the *P. yadonii* and its Monterey pine forest habitat occur, due to the publication of the environmental impact statement for the Pebble Beach Company's DMF/PDP (Monterey County 2005) and California Coastal Commission staff reports on the proposed project. Therefore, we believe that the educational benefits that inclusion of these lands would provide for *P. yadonii* are relatively low.

Under the *Gifford Pinchot* decision, critical habitat designations may provide greater benefits to the recovery of a species than was previously believed. However, the protection provided is still a limitation on the adverse effects that may occur to designated critical habitat, as opposed to a requirement to affirmatively provide a conservation benefit on those lands. As outlined above, the Company has committed to definite conservation actions on lands covered under the conservation agreement. Therefore, we believe the benefits to recovery based on inclusion of these lands in critical habitat for *Piperia yadonii* are low.

Therefore, we find that because of the agreement with Pebble Beach Company, the benefits of including the excluded Pebble Beach areas as critical habitat are low. The conservation stipulated in the agreement would likely not be

forthcoming if these areas were designated. Since the Act's protection of plants on private lands is low, the Service believes that it will achieve more conservation from this agreement than it would from a critical habitat designation on these lands.

Benefits of Exclusion

Implementation of the conservation agreement will provide benefits to *P. yadonii* as discussed earlier. The company has committed to manage *P. yadonii* and its Monterey Forest habitat and to conduct additional management-oriented research in areas identified for conservation in the conservation agreement until future approval of a development project is obtained. Once a future development project is approved, the Company has agreed to permanently preserve 511 acres of land on which *P. yadonii* occurs and to provide management of all conserved habitat areas in perpetuity. Because the interim management will be well-informed by management-oriented research, we expect it to promote the viability and growth of *P. yadonii* populations during the period prior to a future land dedication.

Benefits of Exclusion Outweigh the Benefits of Inclusion

The Pebble Beach Company committed to the conservation measures in the conservation agreement in recognition that some of its lands will not be designated as critical habitat while others will. It is probable that the Company would elect not to continue with the conservation commitments if the 143 acres to be excluded under Section 4(b)(2) were included in the final designation. We believe the proactive management of *P. yadonii* and its designated habitat provided under the conservation agreement provides significant benefits to this species that would be foregone in the absence of exclusion of the 143 acres. In contrast to the important benefits to designated habitat realized by exclusion of the 143 acres, the benefits of inclusion are, as noted above, likely to be minor because of the lack of a federal nexus that would serve to trigger section 7 consultation for projects affecting the 143 acres, and because, even in situations where consultation might occur, it would be unlikely to result in proactive management of the species and its Monterey pine forest habitat. Even with the exclusion of these lands, over 1,000 ac (405 ha) of critical habitat will still be designated in Units 4, 5, and 6. Over 900 ac (364 ha) are in Unit 6 on the Monterey Peninsula in the Del Monte Forest.

Further, because we have already come to agreement about how to manage the development at Pebble Beach and avoid adverse impacts to the status of the species, the further effort involved in consultations or other regulatory actions with respect to this site would be unnecessary. Therefore, a benefit of exclusion is avoiding additional regulatory uncertainty and process.

In conclusion, we have evaluated the potential regulatory and educational benefits that would result from inclusion of the 143 ac (58 ha) in Subunits 4a, 4b, 6a, 6b, 6c, and 6e. We have weighed these against the more tangible conservation benefits that would occur for the designated lands in Units 4, 5, and 6 under the conservation agreement and conclude that, due to the configuration and size of the area considered for exclusion, the large acreage in Unit 6 that would still be designated as critical habitat, and the benefits that could accrue on those designated lands under the conservation agreement, the benefits of exclusion outweigh the benefits of inclusion; therefore, we are excluding the 143 ac (58 ha) under section 4(b)(2) of the Act.

Exclusion Will Not Result in Extinction of the Species

We do not believe that the exclusion of the 143 ac (58 ha) from Units 4 and 6 based on the conservation agreement from the final designation of critical habitat will result in the extinction of *P. yadonii*. Overall, this area represents less than 15 percent of the proposed designation in Units 4, 5, and 6, and does not support the greatest concentrations of plants or the highest quality habitat of the lands we are designating as critical habitat. In addition, because the 143 acres we are excluding from critical habitat are occupied by *P. yadonii*, consultations under Section 7 that involve these lands will occur even in the absence of their designation as critical habitat. Application of the jeopardy standard of section 7 of the Act also provides assurances that the species will not go extinct.

Relationship of Critical Habitat to Other Lands—Exclusions Under Section 4(b)(2) of the Act

Stevenson School Property

Section 4(b)(2) of the Act allows the Secretary to exclude areas from critical habitat for economic reasons if the Secretary determines that the benefits of such exclusion exceed the benefits of designating the area as critical habitat. However, this exclusion cannot occur if

it will result in the extinction of the species concerned.

In making the following exclusion, we have considered in general that all of the costs and other impacts predicted in the economic analysis might not be avoided by this exclusion. This is because the area in question is currently occupied by *P. yadonii* and there will be requirements for consultation under section 7 of the Act. In conducting economic analyses, we are guided by the ruling in *New Mexico Cattle Growers Assn. v. U.S. Fish and Wildlife Service*, 248F.3d 1285 (10th Cir 2001), which directed us to consider all impacts "regardless of whether those impacts are attributable co-extensively to other causes." As explained in the economic analysis, due to possible overlapping regulatory schemes and other reasons, some elements of the analysis may also overstate some costs.

Conversely, in *Gifford Pinchot*, the court ruled that our regulations 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. Compliance with the court's direction may result in additional costs associated with critical habitat designation. In light of the *New Mexico Cattle Growers* decision, our current 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, 7, and 10 of the Act, and should encompass costs that we would consider and evaluate in light of the *Gifford Pinchot* ruling.

Application of Section 4(b)(2) of the Act—Economic Exclusion of Stevenson School Property

The Stevenson School is a non-profit, non-sectarian, independent, K-12 school that owns approximately 6 ac (2.4 ha) in unit 6a. The Stevenson School has plans to develop a portion of its campus (called the "Forested Area" in its Master Plan) into an athletic field. The Master Plan for the Campus was developed in the 1980s and submitted to the Monterey County Board of Supervisors in 1983. The Master Plan, which includes plans for new educational facilities, residence halls, as well as athletic facilities, has been implemented in stages since 1983. Although the Stevenson School has not developed the Forested Area yet, it has stated that it intends to do so in the future, as planned out in the Master Plan. The Stevenson School currently

uses a nearby athletic field owned by the PBC called Collins Field. However, the PBC can revoke this agreement at any time. The Stevenson School plans to develop the Forested Area according to the timeline laid out in the Master Plan to ensure its students are guaranteed an additional on-campus athletic field to use. If the PBC revokes its agreement and the Stevenson School cannot develop the Forested Area, the alternatives, according to the Stevenson School, include bussing students to an alternative field or eliminating some sports programs.

The final economic analysis identifies estimated potential costs to the Stevenson School could range from \$0.006 to \$9.2 million (present value at a three percent discount rate) over 20 years. At the low end of the range, the Stevenson School may require a permit from the U.S. Army Corps of Engineers (ACOE) to comply with section 404 of the Clean Water Act because the Stevenson School property contains drainages on the border that may be considered waters of the United States. If the Stevenson School designs its athletic field in such a way that it would impact the drainages, Federal nexus resulting from the ACOE permitting of the activity may require a section 7 consultation with the Service regarding *P. yadonii*. The consultation would result in administrative costs to the Stevenson School of approximately \$5,579 (present value at a three percent discount rate). At the upper end of the range, economic impacts are the result of the disutility cost of transporting student athletes to the alternative field during school hours plus the cost of purchasing more buses and fuel, and hiring more drivers. In addition, the Stevenson School may lose other benefits associated with the athletic field; however, those benefits are unknown and too hypothetical to quantify. If the student athletes are transported to the alternative field, the total cost to the Stevenson School could be as high as \$9.2 million (present value at a three percent discount rate) over the next 20 years.

Benefits of Inclusion

The benefits of including lands in critical habitat can be regulatory, educational, or to aid in recovery of species as generally discussed earlier in this rule. In the case of *P. yadonii* on the Stevenson School property, the Federal nexus would most likely occur due to either wetland impacts that require a Corps permit, or via a consultation on an HCP that was initiated for a listed animal species. To date, there have been no consultations or HCPs that addressed

P. yadonii and its upland habitat. In a recent Corps consultation on the California red-legged frog, only wetland habitats were addressed, and consideration of impacts to adjacent upland habitat that support *P. yadonii* were determined to be beyond the scope of consultation. The likelihood of future consultations or HCPs would depend largely on the configuration of future proposed development that might adversely affect the California red-legged frog and trigger these actions. However, because the Act does not restrict the take of plants on private lands, the likelihood of future HCPs covering this species is low. Therefore we have determined that the regulatory benefits of designating critical habitat on the Stevenson School property would be low.

Additionally, including the Stevenson School parcel in critical habitat could provide an educational benefit, signaling the importance of those lands to others, including the Coastal Commission and the County of Monterey. However, both of these entities already recognize and consider the importance of conserving sensitive resources, including *P. yadonii*, in their project review process and future buildout on the Stevenson School parcel would be subject to the requirements of those agencies. Therefore, we have determined that the educational benefits of designating critical habitat on the Stevenson School property would be low.

The primary benefit of including an area within a critical habitat designation is the protection provided by section 7(a)(2) of the Act that directs Federal agencies to ensure that their actions do not result in the destruction or adverse modification of critical habitat. The designation of critical habitat may provide a different level of protection under section 7(a)(2) for *P. yadonii* that is separate from the obligation of a Federal agency to ensure that their actions are not likely to jeopardize the continued existence of a listed species. Under the *Gifford Pinchot* decision, critical habitat designations may provide greater benefits to the recovery of a species than was previously believed, but it is not possible to quantify this benefit at present. However, the protection provided limits adverse effects as opposed to a requirement to provide a conservation benefit.

Benefits of Exclusion

We believe that the benefits of excluding the Stevenson School property from the designation of critical habitat—avoiding the potential

economic impacts predicted in the economic analysis—exceed the educational, regulatory, and recovery benefits which could result from including those lands in the designation of critical habitat.

We have evaluated and considered the potential economic costs on the Stevenson School relative to the potential benefit for *P. yadonii* and its primary constituent elements that could result from the designation of critical habitat. We believe that the potential economic impact of up to approximately \$9.2 million (undiscounted, over the next 20 years) on the school significantly outweighs the potential conservation and protective benefits for the species and its primary constituent elements derived from the potential restrictions as a result of this designation on educational facilities constructed on this site.

We believe that excluding the Stevenson School property, and thus relieving the school of additional costs that would result from compliance with the designation, will allow the School the flexibility to plan for the best use of their lands for the educational benefits of their students. We therefore find that the benefits of excluding these areas from the designation of critical habitat outweigh the benefits of including them in the designation.

Exclusion Will Not Result in Extinction of the Species

We do not believe that the exclusion of the 6 ac (2.4 ha) from subunit 6a will result in the extinction of *P. yadonii*. Overall, this area represents less than 0.5 percent of the proposed designation in Unit 6, and does not support the greatest concentrations of plants or the highest quality habitat of the lands we are designating as critical habitat. In addition, because the 6 ac (2.4 ha) we are excluding from critical habitat are occupied by *P. yadonii*, if a Federal nexus is present, consultations under Section 7 that involve these lands may occur even in the absence of their designation as critical habitat. Application of the jeopardy standard of section 7 of the Act, if consultation occurs, also provides assurances that the species will not go extinct.

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 an economic analysis to estimate the potential economic effects of the designation. The draft analysis was made available for public review on August 7, 2007 (72 FR 44069). We accepted comments on the draft analysis until September 6, 2007. 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 primary purpose of the economic analysis is to estimate the potential economic impacts associated with the designation of critical habitat for *Piperia yadonii*. 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.

The final economic analysis attempts to isolate those direct and indirect impacts that are expected to be triggered specifically by the critical habitat designation. That is, the incremental conservation efforts and associated impacts included in this appendix would not be expected to occur absent the designation of critical habitat for the species.

The proposed rule may impact two landowners, the Pebble Beach Company (PBC), and the Stevenson School. Incremental impacts to PBC are estimated to range from \$0 to \$2.6 million, depending on the scenarios described in section V of this analysis. The Stevenson School may bear incremental administrative impacts as a result of addressing adverse modification in section 7 consultation. The Stevenson School may bear additional incremental impacts associated with the modifications that

may be placed on the project to address adverse modification, but these project modifications are too hypothetical to quantify. The remaining impacts quantified in the report, which are discussed below, are expected to occur regardless of the designation of critical habitat.

Coextensive Future Impacts: The economic analysis forecasts future coextensive impacts associated with conservation efforts for the piperia within areas of proposed critical habitat to range from \$6.6 to \$16.1 million (present value at a three percent discount rate) over the next 20 years (\$0.43 to \$1.0 million annualized). Impacts to PBC, and the Stevenson School comprise the majority of the total quantified impacts in the areas of proposed critical habitat.

- **Pebble Beach Company:** PBC, which manages land in units 4a, 4b, 5, 6a, 6b, 6c, and 6e, has implemented management techniques designed to conserve the piperia and its habitat. Efforts include ongoing open space management and maintenance, golf course and residential area management and maintenance, site clean up and restoration, and monitoring and patrolling. As a result, total impacts to the Pebble Beach Company of protecting and restoring the piperia habitat are \$5.5 million (present value at a three percent discount rate) over 20 years.

- **Stevenson School:** The Stevenson School, which owns land in unit 6a, plans to develop an area of proposed critical habitat into an athletic field in the future. Currently, the Stevenson School is in an agreement to use a field owned by the PBC, but an approved PBC development plan will eliminate the School's ability to use the PBC field. If the Stevenson School cannot develop the field, the School would have to transport student athletes to an alternative off-campus site. If the Stevenson School can develop the field, section 7 of the ESA will likely apply because of the Clean Water Act, which will trigger a federal nexus, and require the ACOE to consult with the Service, leading to administrative costs to the Stevenson School. After the designation of critical habitat, the outcome of the biological opinion from the section 7 consultation may be more costly due to additional measures to address the potential for adverse modification of critical habitat. As a result, the potential economic impacts to the Stevenson School could range from \$0.006 to \$9.2 million (present value at a three percent discount rate) over 20 years.

We evaluated the potential economic impact of this designation as identified in the draft analysis. Based on this

evaluation, we have excluded Stevenson School for economic reasons. We have also excluded Pebble Beach Company lands for conservation partnership reasons.

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, but will not 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) has not formally reviewed this rule. As explained above, we prepared an economic analysis of this action. We used this analysis to meet the requirement of section 4(b)(2) of the Act to determine the economic consequences of designating the specific areas as critical habitat. We also used it to help determine whether to exclude any area from critical habitat, as provided for under section 4(b)(2), if we determine that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless we determine, 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.

Further, E.O. 12866 directs Federal agencies promulgating regulations to evaluate regulatory alternatives (OMB Circular A-4, September 17, 2003). Under Circular A-4, once an agency determines that the Federal regulatory action is appropriate, the agency must consider alternative regulatory approaches. Because the determination of critical habitat is a statutory requirement under the Act, we must evaluate alternative regulatory approaches, where feasible, when promulgating a designation of critical habitat.

In developing our designations of critical habitat, we consider economic impacts, impacts to national security, and other relevant impacts under section 4(b)(2) of the Act. Based on the discretion allowable under this provision, we may exclude any particular area from the designation of critical habitat providing that the

benefits of such exclusion outweigh the benefits of specifying the area as critical habitat and that such exclusion would not result in the extinction of the species. As such, we believe that the evaluation of the inclusion or exclusion of particular areas, or a combination of both, constitutes our regulatory alternative analysis for designations.

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

Under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*, 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 effects of the rule on small entities (i.e., small businesses, small organizations, and small government jurisdictions). However, no regulatory flexibility analysis is required if the head of the agency certifies the rule will not have a significant economic impact on a substantial number of small entities. The SBREFA amended the Regulatory Flexibility Act (RFA) to require Federal agencies to provide a statement of the factual basis for certifying that the rule will not have a significant economic impact on a substantial number of small entities.

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(a)(2) of the Act on activities they fund, permit, or implement that may affect *Piperia yadonii*. 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 reinstate consultation for ongoing Federal activities.

To determine if the proposed designation of critical habitat for *Piperia yadonii* 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). There is only one entity that qualifies as a small entity under SBRFA, the Stevenson School. The economic impacts to the Stevenson School are presented as a range, with the upper end of the range calculated under the assumption that the Stevenson School cannot develop the athletic field and the lower end of the range calculated under the assumption that the Stevenson School can develop the athletic field and thereby impacted by the administrative costs of section 7 consultation. The potential economic impacts to the Stevenson School could range from \$0.006 to \$9.2 million

present value at a three percent discount rate) over 20 years.

These impacts are attributed to the presence of the piperia in the Forested Area, not to the proposed rule. The incremental impacts are therefore only those expected to result from considering adverse modification in addition to jeopardy in the case that consultation occurs for the project (\$1,335, present value at a three percent discount rate). Project modifications that may be placed on the project to address adverse modification could add additional costs to the Stevenson School. We have excluded the Stevenson School in the final rule, so these impacts will not occur as a result of this designation. Therefore we certify that this rule will not have a significant economic impact on a substantial number of small business entities.

Executive Order 13211

On May 18, 2001, the President issued an Executive Order 13211, "Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use". Executive Order 13211 requires agencies to prepare Statements of Energy Effects when undertaking certain actions. While this final rule to designate critical habitat for *Piperia yadonii* is a significant regulatory action under Executive Order 12866 in that it may raise novel legal and policy issues, our economic analysis determined that it 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), the Service makes 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, 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 that receive Federal funding, assistance, or permits, or that otherwise require approval or authorization from a Federal agency for an action, may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency. Furthermore, to the extent that non-Federal entities are indirectly impacted because they receive Federal assistance or participate in a voluntary Federal aid program, the Unfunded Mandates Reform Act would not apply; nor would critical habitat shift the costs of the large entitlement programs listed above on to State governments.

(b) We do not believe that this rule will significantly or uniquely affect small governments because only 0.9 percent (19 ac/8 ha) of the total critical habitat designation for *Piperia yadonii* is owned by a small government entity, the City of Pacific Grove. Furthermore, a large portion of these lands are designated as parks or open space and are managed at least in part for conservation of natural resources. As such, a Small Government Agency Plan is not required.

Takings

In accordance with Executive Order 12630 ("Government Actions and Interference with Constitutionally Protected Private Property Rights"), we have analyzed the potential takings implications of designating critical habitat for *Piperia yadonii* in a takings implication assessment. The takings implications assessment concludes that this final designation of critical habitat for *P. yadonii* does not pose significant takings implications.

Federalism

In accordance with Executive Order 13132, the rule does not have significant Federalism effects. A Federalism assessment is not required. In keeping with DOI policy, we requested information from, and coordinated development of, this critical habitat designation with appropriate State resource agencies in California. A large portion of these lands are designated as parks or open space and are managed at least in part for conservation of natural resources and a small proportion (0.9 percent) occurs within the jurisdiction of a single small government entity. 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, the Office of the Solicitor has determined that the rule does not unduly burden the judicial system and meets the requirements of sections 3(a) and 3(b)(2) of the Order. We are designating critical habitat in accordance with the provisions of the 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 *Piperia yadonii*.

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 (NEPA) (42 U.S.C. 4321 et. seq.)

It is our position that, outside the Tenth Federal Circuit, we do not need to prepare environmental analyses as defined by the NEPA in connection with designating critical habitat under the Act. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244). This assertion was upheld in the courts of the Ninth Circuit Court of Appeals (*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 the Interior's manual at 512 DM 2, we readily acknowledge our responsibility to communicate meaningfully with recognized Federal Tribes on a government-to-government basis. We have determined that there are no Tribal lands occupied at the time of listing or currently that contain the features essential for the conservation of *Piperia yadonii* and no Tribal lands that are unoccupied that are essential for the conservation of *P. yadonii*. Therefore, critical habitat for *P. yadonii* has not been proposed for designation 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(s)

The primary author of this package is the Ventura Fish and Wildlife Office (see **ADDRESSES** section).

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:

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.

§ 17.12 Endangered and threatened plants.

* * * * *
(h) * * *

PART 17—[AMENDED]

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

■ 2. In § 17.12(h), revise the entry for “*Piperia yadonii*” under “FLOWERING PLANTS” to read as follows:

Species		Historic range	Family	Status	When listed	Critical habitat	Special rules
Scientific name	Common name						
FLOWERING PLANTS							
* <i>Piperia yadonii</i>	* Yadon's piperia	* U.S.A (CA)	* Orchidaceae (Orchid)	* E	* 1998	* 17.96(a)	* NA
*	*	*	*	*	*	*	*

■ 3. In § 17.96(a), amend paragraph (a) by adding in alphabetical order an entry for Family Orchidaceae consisting of *Piperia yadonii* to read as follows:

§ 17.96 Critical habitat—plants.

(a) *Flowering plants.*

* * * * *

Family Orchidaceae: *Piperia yadonii* (Yadon's piperia)

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

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

(i) A vegetation structure providing filtered sunlight on sandy soils:

(A) Coastal pine forest (primarily Monterey pine) with a canopy cover of

20 to 70 percent, and a sparse herbaceous understory on Baywood sands, Narlon loamy fine sands, Sheridan coarse sandy loams, Tangair fine sands, Santa Lucia shaly clay loams and Chamise shaley clay loams underlain by a hardpan; or

(B) Maritime chaparral ridges with dwarfed shrubs (primarily Hooker's manzanita) on Reliz shaly clay loams, Sheridan sandy loams, Narlon sandy loams, Arnold loamy sands and soils in the Junipero–Sur complex, Rock Outcrop–Xerorthents Association, and Arnold–Santa Ynez complex, often underlain by rock outcroppings.

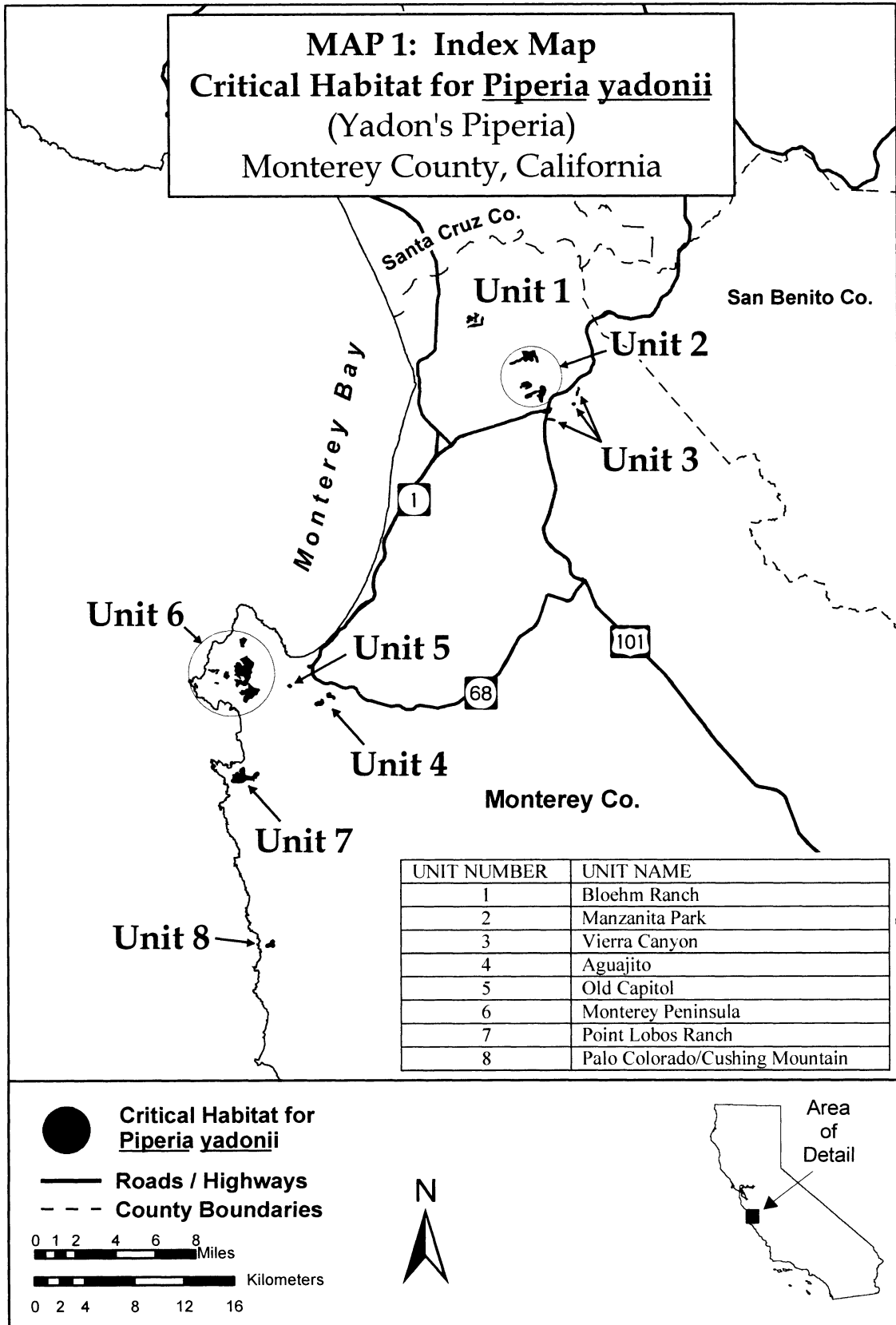
(ii) Presence of nocturnal, short-tongued moths in the families Pyralidae, Geometridae, Noctuidae, and Pterophoridae.

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

(4) Critical Habitat Map Units—Data layers defining map units were created on base maps using aerial imagery from the National Agricultural Imagery Program; aerial imagery captured June 2005. Data were project to Universal Transverse Mercator (UTM) zone 10, North American Datum (NAD) 1983.

(5) Note: Index map of critical habitat for *Piperia yadonii* (Map 1) follows:

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(6) Unit 1: Blohm Ranch, Monterey County, California.

(i) Subunit 1a: From USGS 1:24,000 scale quadrangle Prunedale. Land bounded by the following UTM Zone 10, NAD83 coordinates (E, N): 611901, 4079098; 611902, 4079137; 611917, 4079156; 611974, 4079198; 612002, 4079216; 612037, 4079247; 612049, 4079272; 612042, 4079293; 611982, 4079311; 611952, 4079324; 611943, 4079354; 611929, 4079419; 611930, 4079454; 611972, 4079486; 611987, 4079543; 612012, 4079583; 612011, 4079594; 612038, 4079619; 612190, 4079608; 612190, 4079539; 612216, 4079511; 612324, 4079491; 612343, 4079504; 612387, 4079471; 612456, 4079471; 612514, 4079509; 612558, 4079614; 612558, 4079724; 612489, 4079761; 612455, 4079807; 612459, 4079821; 612511, 4079847; 612550, 4079852; 612589, 4079847; 612625, 4079832; 612654, 4079812; 612673, 4079796; 612655, 4079782; 612630, 4079752; 612603, 4079744; 612647, 4079619; 612734, 4079691; 612754, 4079691; 612762, 4079710; 612785, 4079745; 612846, 4079723; 612827, 4079702; 612815, 4079690; 612804, 4079670; 612797, 4079645; 612795, 4079611; 612746, 4079599; 612716, 4079588; 612674, 4079586; 612655, 4079569; 612683, 4079496; 612666, 4079450; 612629, 4079411; 612638, 4079375; 612651, 4079353; 612661, 4079323; 612665, 4079286; 612624, 4079249; 612624, 4079222; 612635, 4079209; 612646, 4079194; 612662, 4079183; 612713, 4079155; 612682, 4079133; 612642, 4079112; 612585, 4079109; 612530, 4079112; 612521, 4079147; 612509, 4079197; 612576, 4079313; 612588, 4079337; 612589, 4079337; 612580, 4079358; 612579, 4079358; 612563, 4079371; 612537, 4079381; 612497, 4079398; 612474, 4079403; 612398, 4079417; 612367, 4079417; 612350, 4079399; 612346, 4079383; 612357, 4079360; 612369, 4079340; 612383, 4079316; 612395, 4079275; 612390, 4079255; 612380, 4079233; 612350, 4079218; 612286, 4079200; 612233, 4079178; 612196, 4079184; 612165, 4079184; 612143, 4079168; 612128, 4079150; 612128, 4079119; 612127, 4079094; 611959, 4078999; 611958, 4078999; 611931, 4079027; 611911, 4079061; returning to 611901, 4079098.

(ii) Subunit 1b: From USGS 1:24,000 scale quadrangle Prunedale. Land bounded by the following UTM Zone 10, NAD83 coordinates (E, N): 611998, 4078651; 611999, 4078664; 611999, 4078665; 612044, 4078765; 612187, 4078803; 612213, 4078825; 612254, 4078844; 612284, 4078853; 612336, 4078871; 612385, 4078907; 612423,

4078925; 612458, 4078940; 612479, 4078947; 612520, 4078956; 612604, 4078959; 612662, 4078959; 612704, 4078960; 612812, 4078958; 612850, 4078951; 612897, 4078953; 612988, 4078967; 613045, 4078913; 613060, 4078936; 613099, 4078949; 613101, 4078961; 613094, 4078978; 613084, 4079005; 613073, 4079060; 613062, 4079129; 613051, 4079222; 613044, 4079306; 613056, 4079376; 613064, 4079397; 613082, 4079431; 613099, 4079501; 613130, 4079602; 613168, 4079601; 613177, 4079580; 613180, 4079551; 613198, 4079533; 613212, 4079488; 613220, 4079438; 613212, 4079355; 613203, 4079303; 613176, 4079297; 613165, 4079281; 613166, 4079253; 613195, 4079224; 613195, 4079212; 613176, 4079198; 613174, 4079174; 613177, 4079155; 613196, 4079139; 613205, 4079091; 613208, 4079041; 613195, 4078982; 613186, 4078964; 613182, 4078941; 613177, 4078906; 613172, 4078906; 613162, 4078914; 613153, 4078927; 613130, 4078938; 613103, 4078930; 613086, 4078918; 613073, 4078906; 613061, 4078885; 613061, 4078882; 612802, 4078842; 612765, 4078826; 612627, 4078767; 612606, 4078767; 612578, 4078759; 612552, 4078744; 612445, 4078722; 612278, 4078704; 612253, 4078701; 612170, 4078702; 612124, 4078719; 612110, 4078724; 612055, 4078722; 612071, 4078638; returning to 611998, 4078651.

(iii) Note: Unit 1 is depicted on Map 2 in paragraph (9)(iv) of this entry.

(7) [Reserved]

(8) Unit 2: Manzanita Park, Monterey County, California.

(i) Subunit 2a: From USGS 1:24,000 scale quadrangle Prunedale. Land bounded by the following UTM Zone 10, NAD83 coordinates (E, N): 615541, 4076005; 615651, 4076047; 615859, 4076125; 616111, 4076311; 616209, 4076287; 616278, 4076318; 616316, 4076335; 616416, 4076435; 616503, 4076520; 616659, 4076565; 616566, 4076763; 616534, 4076874; 616515, 4076874; 616454, 4077003; 616562, 4077020; 616677, 4077028; 616820, 4077021; 616876, 4077008; 616925, 4076975; 617013, 4076959; 617053, 4076962; 617137, 4077017; 617176, 4077025; 617224, 4077020; 617259, 4077038; 617271, 4077094; 617286, 4077095; 617333, 4077097; 617481, 4077105; 617482, 4077105; 617488, 4076972; 617540, 4076890; 617565, 4076771; 617594, 4076701; 617703, 4076645; 617728, 4076486; 617830, 4076204; 617787, 4076190; 617729, 4076197; 617671, 4076233; 617643, 4076273; 617579, 4076433; 617565, 4076533; 617468, 4076615; 617445, 4076631; 617435, 4076657; 617402,

4076656; 617361, 4076620; 617305, 4076601; 617309, 4076651; 617377, 4076484; 617396, 4076450; 617407, 4076402; 617403, 4076354; 617377, 4076301; 617341, 4076268; 617287, 4076245; 617229, 4076245; 617167, 4076273; 617079, 4076356; 616934, 4076322; 616910, 4076259; 616884, 4076229; 616851, 4076207; 616814, 4076195; 616775, 4076192; 616737, 4076200; 616702, 4076217; 616655, 4076267; 616599, 4076383; 616511, 4076307; 616465, 4076283; 616430, 4076225; 616388, 4076189; 616213, 4076130; 616160, 4076127; 616111, 4076139; 616092, 4076133; 615967, 4076012; 615897, 4075959; 615835, 4075931; 615776, 4075922; 615706, 4075898; 615620, 4075896; 615575, 4075879; returning to 615541, 4076005.

(ii) Subunit 2b: From USGS 1:24,000 scale quadrangle Prunedale. Land bounded by the following UTM Zone 10, NAD83 coordinates (E, N): 616488, 4074150; 616505, 4074167; 616533, 4074172; 616573, 4074209; 616573, 4074219; 616555, 4074267; 616557, 4074347; 616567, 4074401; 616736, 4074502; 616746, 4074512; 616760, 4074521; 616779, 4074536; 616804, 4074543; 616826, 4074543; 616853, 4074543; 616876, 4074540; 616890, 4074537; 616915, 4074552; 616943, 4074575; 617092, 4074595; 617327, 4074410; 617348, 4074387; 617367, 4074354; 617374, 4074335; 617379, 4074301; 617380, 4074258; 617379, 4074219; 617379, 4074218; 617346, 4074185; 617298, 4074145; 617219, 4074073; 617199, 4074072; 617186, 4074083; 617159, 4074076; 617134, 4074069; 617131, 4074058; 617114, 4074034; 616994, 4073984; 616944, 4073991; 616918, 4074001; 616981, 4074157; 617003, 4074188; 616891, 4074250; 616860, 4074246; 616845, 4074178; 616845, 4074160; 616853, 4074117; 616747, 4074137; 616712, 4074146; 616701, 4074171; 616673, 4074179; 616646, 4074104; 616652, 4074081; 616642, 4074056; 616620, 4074046; 616591, 4074041; 616568, 4074035; 616546, 4074023; 616532, 4074006; 616531, 4074006; 616490, 4074054; returning to 616488, 4074150.

(iii) Subunit 2c: From USGS 1:24,000 scale quadrangle Prunedale. Land bounded by the following UTM Zone 10, NAD83 coordinates (E, N): 616931, 4073371; 616936, 4073410; 616951, 4073446; 616975, 4073477; 617003, 4073500; 617077, 4073542; 617094, 4073556; 617142, 4073581; 617382, 4073670; 617411, 4073676; 617450, 4073676; 617435, 4073712; 617512, 4073743; 617549, 4073763; 617598, 4073810; 617636, 4073830; 617694, 4073860; 617739, 4073865; 617774, 4073887; 617847, 4073880; 617879,

4073885; 617960, 4073894; 618016, 4073916; 618064, 4073947; 618117, 4073965; 618279, 4073927; 618244, 4074007; 618138, 4074038; 618106, 4074053; 618104, 4074059; 618103, 4074108; 618076, 4074150; 618071, 4074184; 618081, 4074204; 618095, 4074224; 618117, 4074247; 618176, 4074299; 618229, 4074318; 618261, 4074316; 618307, 4074300; 618370, 4074293; 618407, 4074278; 618448, 4074248; 618468, 4074227; 618507, 4074173; 618519, 4074146; 618533, 4074088; 618553, 4074051; 618566, 4074011; 618572, 4073986; 618574, 4073952; 618568, 4073913; 618533, 4073788; 618521, 4073761; 618495, 4073722; 618496, 4073601; 618482, 4073567; 618369, 4073570; 618365, 4073277; 618364, 4073029; 618261, 4072958; 618212, 4072996; 618157, 4073061; 618131, 4073086; 618090, 4073147; 618078, 4073173; 618064, 4073256; 618067, 4073314; 618081, 4073377; 618072, 4073413; 618044, 4073404; 618015, 4073401; 617985, 4073404; 617957, 4073413; 617931, 4073426; 617902, 4073452; 617885, 4073476; 617873, 4073501; 617927, 4073549; 618040, 4073586; 618063, 4073730; 618123, 4073826; 618134, 4073831; 618168, 4073834; 618228,

4073818; 618235, 4073822; 618191, 4073875; 618082, 4073823; 618062, 4073827; 618042, 4073815; 618025, 4073781; 617967, 4073798; 617970, 4073818; 617934, 4073823; 617913, 4073790; 617874, 4073780; 617778, 4073781; 617786, 4073711; 617701, 4073663; 617644, 4073637; 617551, 4073622; 617545, 4073563; 617491, 4073517; 617470, 4073382; 617262, 4073305; 617237, 4073287; 617138, 4073233; 617100, 4073222; 617071, 4073221; 617032, 4073229; 616997, 4073246; 616968, 4073272; 616946, 4073305; 616934, 4073342; returning to 616931, 4073371.

(iv) Note: Unit 2 is depicted on Map 2 in paragraph (9)(iv) of this entry.

(9) Unit 3: Vierra Canyon, Monterey County, California.

(i) Subunit 3a: From USGS 1:24,000 scale quadrangle Prunedale. Land bounded by the following UTM Zone 10, NAD83 coordinates (E, N): 618886, 4071622; 618896, 4071742; 619157, 4071722; 619431, 4071664; 619441, 4071576; 619441, 4071573; 619385, 4071569; 619171, 4071553; 619166, 4071601; 618901, 4071615; 618892, 4071615; returning to 618886, 4071622.

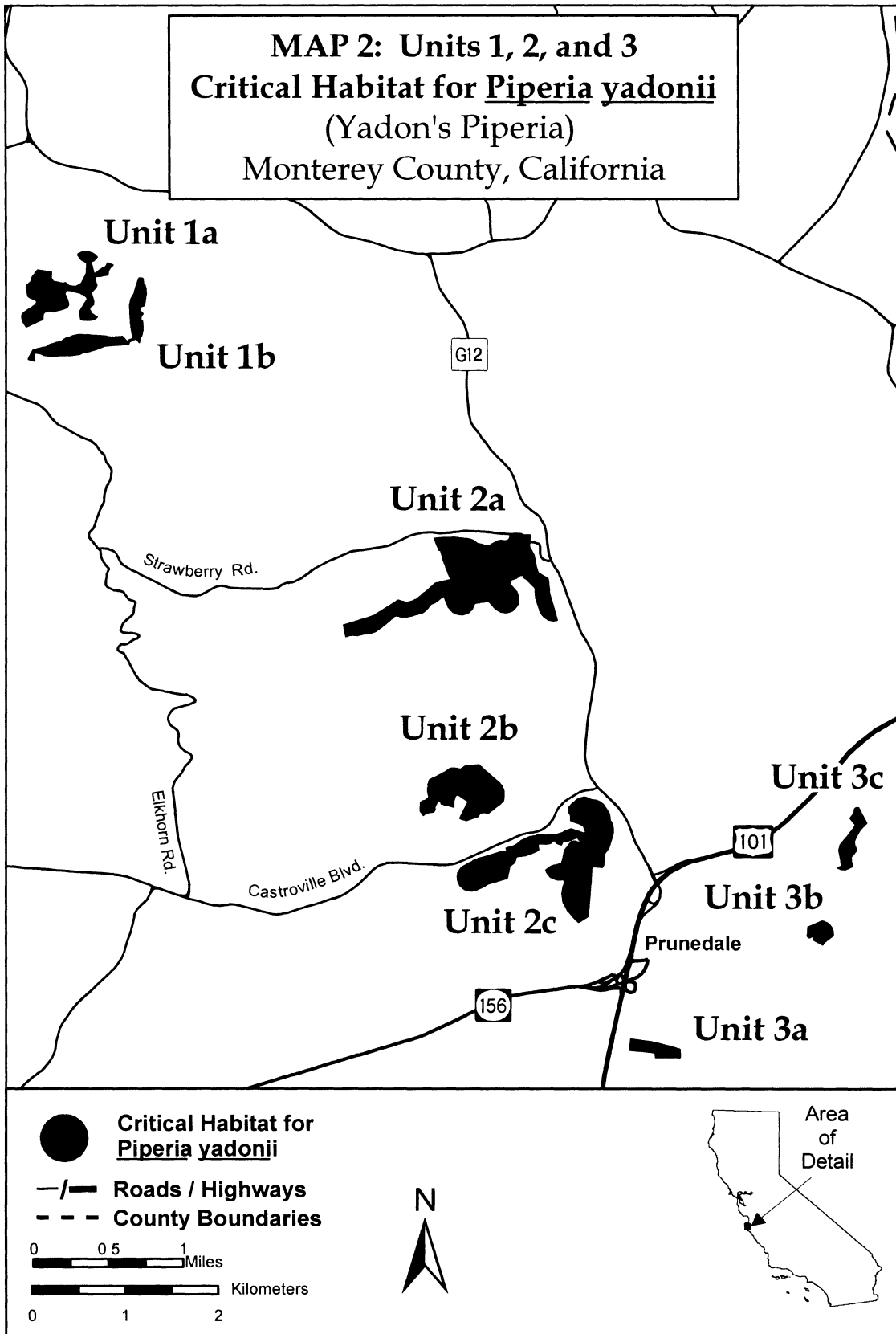
(ii) Subunit 3b: From USGS 1:24,000 scale quadrangle Prunedale. Land bounded by the following UTM Zone

10, NAD83 coordinates (E, N): 620707, 4073069; 620865, 4073146; 620890, 4073140; 620917, 4073128; 620941, 4073111; 620961, 4073089; 620977, 4073064; 620987, 4073037; 620992, 4072992; 620897, 4072908; 620886, 4072879; 620778, 4072930; 620784, 4072971; 620736, 4072950; 620709, 4072963; returning to 620707, 4073069.

(iii) Subunit Unit 3c: From USGS 1:24,000 scale quadrangle Prunedale. Land bounded by the following UTM Zone 10, NAD83 coordinates (E, N): 620984, 4073724; 621030, 4073752; 620987, 4073916; 620997, 4073968; 620996, 4073974; 621079, 4074094; 621133, 4074174; 621144, 4074209; 621084, 4074270; 621123, 4074335; 621127, 4074380; 621146, 4074396; 621173, 4074395; 621273, 4074227; 621256, 4074215; 621246, 4074203; 621206, 4074150; 621177, 4074089; 621151, 4074025; 621163, 4073968; 621171, 4073965; 621179, 4073920; 621159, 4073901; 621160, 4073898; 621124, 4073845; 621131, 4073829; 621129, 4073827; 621153, 4073753; 621073, 4073708; 621025, 4073710; returning to 620984, 4073724.

(iv) Note: Map of Units 1, 2, and 3 (Map 2) follows:

BILLING CODE 4310-55-P



(10) Unit 4: Aguajito, Monterey County, California.

(i) Subunit 4a: From USGS 1:24,000 scale quadrangle Seaside. Land bounded by the following UTM Zone 10, NAD83 coordinates (E, N): 602332, 4048354; 602347, 4048427; 602354, 4048439; 602362, 4048452; 602366, 4048456; 602401, 4048489; 602508, 4048576; 602697, 4048582; 602735, 4048574; 602762, 4048562; 602786, 4048545; 602817, 4048507; 602832, 4048471; 602858, 4048345; 603034, 4048312; 603069, 4048294; 603115, 4048262; 603136, 4048241; 603158, 4048209; 603171, 4048172; 603173, 4048133; 603166, 4048094; 603143, 4048051; 603107, 4048018; 603072, 4048000; 603024, 4047993; 602966, 4048004; 602522, 4048105; 602451, 4048153; 602400, 4048198; 602373, 4048240; 602351, 4048287; returning to 602332, 4048354.

(ii) Subunit 4b: From USGS 1:24,000 scale quadrangle Seaside. Land bounded by the following UTM Zone 10, NAD83 coordinates (E, N): 601574, 4047589; 601594, 4047664; 601625, 4047701; 601657, 4047723; 601695, 4047736; 601778, 4047749; 601839, 4047778; 601926, 4047801; 601965, 4047804; 602014, 4047795; 602048, 4047863; 602058, 4047918; 602064, 4047991; 602022, 4048044; 602000, 4048080; 601988, 4048107; 601973, 4048163; 601962, 4048239; 602022, 4048231; 602007, 4048253; 602060, 4048243; 602206, 4048211; 602231, 4048211; 602246, 4048135; 602250, 4048108; 602256, 4048082; 602264, 4048071; 602278, 4048051; 602309, 4048008; 602318, 4047990; 602345, 4047913; 602355, 4047883; 602350, 4047838; 602325, 4047746; 602278, 4047654; 602262, 4047623; 602199, 4047551; 602130, 4047497; 602054, 4047470; 601996, 4047474; 601864, 4047460; 601773, 4047445; 601743, 4047440; 601704, 4047440; 601657, 4047454; 601611, 4047490; 601582, 4047540; returning to 601574, 4047589.

(iii) Note: Unit 4 is depicted on Map 3 in paragraph (12)(xv) of this entry.

(11) Unit 5: Old Capitol, Monterey County, California.

(i) From USGS 1:24,000 scale quadrangle Monterey. Land bounded by the following UTM Zone 10, NAD83 coordinates (E, N): 599314, 4048918; 599497, 4049056; 599551, 4048997; 599551, 4048976; 599552, 4048959; 599562, 4048939; 599593, 4048923; 599625, 4048931; 599640, 4048934; 599655, 4048928; 599675, 4048937; 599685, 4048913; 599666, 4048844; 599649, 4048821; 599603, 4048784; 599561, 4048761; 599516, 4048757; 599437, 4048777; 599370, 4048808;

599329, 4048864; returning to 599314, 4048918.

(ii) Note: Unit 5 is depicted on Map 3 in paragraph (12)(xv) of this entry.

(12) Unit 6: Monterey Peninsula, Monterey County, California.

(i) Subunit 6a (portion between Forest Lake Road and Lopez Road): From USGS 1:24,000 scale quadrangle Monterey. Land bounded by the following UTM Zone 10 NAD83 coordinates (E, N): 594289.967, 4049237.581; 594267.618, 4049251.760; 594263, 4049271; 594241.397, 4049281.713; 594230.805, 4049278.096; 594214.503, 4049291.804; 594166.894, 4049364.694; 594176.917, 4049369.673; 594186.521, 4049380.709; 594196.880, 4049403.089; 594210.082, 4049442.288; 594216.994, 4049476.435; 594229.293, 4049570.617; 594241.651, 4049610.586; 594287.923, 4049701.637; 594338.715, 4049801.237; 594339.817, 4049802.777; 594348, 4049799; 594354, 4049797; 594354, 4049795; 594355, 4049717; 594451, 4049718; 594500, 4049735; 594512, 4049669; 594516.717, 4049635.323; 594514.946, 4049608.292; 594510.651, 4049578.721; 594505.106, 4049541.754; 594500.823, 4049516.756; 594500.581, 4049505.979; 594501.352, 4049498.500; 594502.886, 4049491.140; 594505.184, 4049484.320; 594508.514, 4049476.166; 594512.335, 4049469.471; 594516.239, 4049464.140; 594520.679, 4049459.245; 594525.606, 4049454.841; 594531.898, 4049450.388; 594539.672, 4049446.666; 594548.703, 4049443.138; 594554.822, 4049441.050; 594564.127, 4049438.323; 594572.946, 4049436.064; 594582.012, 4049431.785; 594588.766, 4049426.645; 594594.416, 4049420.310; 594598.418, 4049413.711; 594600.523, 4049407.460; 594603.006, 4049397.784; 594604.979, 4049387.614; 594607.304, 4049381.221; 594609.935, 4049375.747; 594584, 4049338; 594573, 4049333; 594557, 4049321; 594544, 4049303; 594544, 4049289; 594547, 4049272; 594547, 4049253.000; 594538, 4049237; 594472, 4049167; 594453, 4049150; 594446.759, 4049141.029; 594441.513, 4049144.159; 594348, 4049199; 594355, 4049219; returning to 594289.967, 4049237.581.

(ii) Subunit 6a (portion north of Morris Drive): From USGS 1:24,000 scale quadrangle Monterey. Land bounded by the following UTM Zone 10 NAD83 coordinates (E, N): 596121, 4050849; 596117.233, 4050841.631; 596114.620, 4050840.555; 596109.729, 4050839.063; 596103.326, 4050838.039; 596096.103, 4050838.069; 596088.735, 4050839.482; 596080.383, 4050841.481; 596072.392, 4050843.713; 596064.531, 4050846.222; 596058.663, 4050848.305; 596051.053, 4050851.282; 596044.058, 4050854.305; 596033.962, 4050859.130;

596016.951, 4050866.753; 596001.620, 4050872.806; 595985.651, 4050878.329; 595968.711, 4050883.356; 595953.831, 4050887.092; 595943.540, 4050889.313; 595936.170, 4050889.798; 595925.089, 4050890.098; 595911.434, 4050889.762; 595897.656, 4050888.628; 595886.642, 4050887.141; 595874.824, 4050884.959; 595863.953, 4050882.401; 595853.066, 4050879.170; 595840.011, 4050874.858; 595824.735, 4050869.336; 595809.054, 4050863.117; 595794.290, 4050856.734; 595779.189, 4050850.247; 595765.663, 4050843.950; 595755.155, 4050838.710; 595744.162, 4050832.891; 595733.283, 4050826.778; 595724.193, 4050820.701; 595713.698, 4050813.076; 595702.950, 4050804.528; 595693.694, 4050796.502; 595686.111, 4050789.421; 595678.697, 4050782.009; 595670.691, 4050774.057; 595662.547, 4050766.912; 595653.948, 4050760.193; 595643.427, 4050752.976; 595634.919, 4050747.856; 595625.202, 4050742.712; 595616.147, 4050738.537; 595605.957, 4050734.502; 595595.897, 4050731.216; 595579.392, 4050726.890; 595558.919, 4050722.484; 595541.632, 4050719.570; 595525.140, 4050717.462; 595510.317, 4050716.119; 595497.922, 4050715.394; 595486.247, 4050715.162; 595474.894, 4050715.805; 595465.549, 4050717.074; 595432, 4050797; 595946, 4051094; 595954, 4051085; 595953, 4051067; 595953, 4051053; 595956, 4051034; 595963, 4051011; 595972, 4050989; 595984, 4050968; 596000, 4050950; 596035, 4050912; returning to 596121, 4050849.

(iii) Subunit 6a (Huckleberry Hill portion): From USGS 1:24,000 scale quadrangle Monterey. Land bounded by the following UTM Zone 10 NAD83 coordinates (E, N): 596121, 4048995; 596114.435, 4048981.020; 596111.136, 4048973.151; 596108.122, 4048965.208; 596105.454, 4048957.114; 596103.071, 4048948.946; 596100.993, 4048940.704; 596099.068, 4048932.387; 596097.601, 4048924.073; 596096.727, 4048918.049; 596094.961, 4048908.666; 596093.180, 4048901.722; 596090.941, 4048894.850; 596090.194, 4048892.559; 596075.586, 4048855.180; 596044.639, 4048787.944; 596040.015, 4048778.903; 596034.930, 4048770.237; 596030.582, 4048763.941; 596026.078, 4048757.872; 596021.113, 4048752.103; 596017.649, 4048748.408; 596014.185, 4048744.789; 596010.566, 4048741.320; 596004.831, 4048736.381; 596000.751, 4048733.288; 595998.787, 4048731.742; 595994.706, 4048728.802; 595988.352, 4048724.693; 595983.962, 4048722.131; 595981.689, 4048720.962; 595979.416, 4048719.795; 595975.023, 4048717.536; 595970.322, 4048715.427; 595965.619, 4048713.546; 595963.344, 4048712.607; 595956.209, 4048710.166; 595948.918, 4048708.104; 595943.903,

4048706.982; 595939.037, 4048706.013; 595934.018, 4048705.196; 595928.997, 4048704.530; 595923.974, 4048704.018; 595918.949, 4048703.734; 595835.009, 4048702.117; 595829.978, 4048702.289; 595824.945, 4048702.691; 595817.470, 4048703.522; 595814.875, 4048703.874; 595809.990, 4048704.734; 595802.505, 4048706.404; 595800.376, 4048706.944; 595798, 4048708; 595762, 4048723; 595761, 4048724; 595739, 4048743; 595733.894, 4048751.431; 595730.885, 4048761.683; 595730.310, 4048772.343; 595731.877, 4048782.112; 595734.506, 4048792.426; 595734.563, 4048800.960; 595733.119, 4048807.573; 595728.590, 4048817.426; 595725.142, 4048826.074; 595722.591, 4048836.331; 595721.878, 4048845.617; 595722.245, 4048853.774; 595723.678, 4048861.865; 595726.474, 4048870.810; 595729.744, 4048878.237; 595735.436, 4048887.137; 595741.604, 4048894.292; 595748.688, 4048901.227; 595756.387, 4048907.712; 595764.398, 4048913.668; 595772.266, 4048918.555; 595779.212, 4048924.270; 595783.576, 4048929.194; 595788.071, 4048936.101; 595790.747, 4048942.149; 595792.648, 4048949.332; 595793.481, 4048956.655; 595792.933, 4048964.878; 595788.510, 4048978.999; 595781.840, 4048989.592; 595773.660, 4048998.948; 595765.407, 4049005.918; 595876, 4049140; 595883, 4049146; 595891, 4049158; 595930, 4049207; 595924, 4049215; 595929, 4049224; 595759, 4049460; 595749, 4049453; 595718, 4049483; 595671, 4049449; 595594, 4049477; 595482, 4049468; 595462, 4049369; 595546, 4049277; 595476, 4049214; 595407, 4049320; 595398, 4049332; 595379, 4049348; 595360, 4049358; 595245, 4049402; 595234, 4049415; 595234, 4049456; 595169, 4049482; 595110, 4049477; 595063, 4049474; 595058, 4049541; 595079, 4049565; 595102, 4049571; 595119, 4049575; 595140, 4049584; 595150, 4049615; 595159, 4049642; 595130, 4049674; 595090, 4049729; 595067, 4049769; 595039, 4049811; 595027, 4049835; 595027, 4049851; 595037, 4049882; 595060, 4049943; 595074, 4050018; 595084, 4050058; 595081, 4050093; 595057.323, 4050156.455; 594990.554, 4050158.347; 594967.842, 4050159.586; 594941.815, 4050161.163; 594939.740, 4050161.513; 594954, 4050173; 594969, 4050191; 594986, 4050216; 594995, 4050239; 595012, 4050254; 595029, 4050260; 595045, 4050258; 595063, 4050252; 595089, 4050249; 595114, 4050261; 595129, 4050283; 595135, 4050315; 595127, 4050348; 595118, 4050375; 595115, 4050400; 595117, 4050427; 595121, 4050447; 595131, 4050460; 595146, 4050469; 595168, 4050477; 595183, 4050486; 595190, 4050498; 595195, 4050513; 595192, 4050538; 595193, 4050538; 595299, 4050514; 595411, 4050490; 595535, 4050334; 595574, 4050254; 595621, 4050215; 595661, 4050192; 595699, 4050182; 595718, 4050203; 595735, 4050221; 595728, 4050282; 595737, 4050294; 595873, 4050317; 595931, 4050395; 595865, 4050456; 595764, 4050427; 595708, 4050454; 595647, 4050505; 595634, 4050565; 595491, 4050688; 595495.370, 4050690.280; 595496.493, 4050690.314; 595508.038, 4050690.905; 595520.374, 4050691.863; 595533.349, 4050693.238; 595546.186, 4050694.972; 595557.882, 4050696.879; 595569.523, 4050699.092; 595580.577, 4050701.486; 595593.215, 4050704.582; 595607.463, 4050708.587; 595620.527, 4050713.299; 595632.385, 4050718.427; 595645.083, 4050724.897; 595657.059, 4050732.019; 595668.185, 4050739.632; 595678.590, 4050747.738; 595687.611, 4050755.653; 595697.731, 4050765.724; 595707.498, 4050775.246; 595717.389, 4050784.009; 595727.809, 4050792.397; 595739.767, 4050801.074; 595750.271, 4050807.692; 595761.985, 4050814.082; 595774.723, 4050820.556; 595787.346, 4050826.503; 595803.552, 4050833.485; 595819.808, 4050840.511; 595835.796, 4050846.786; 595850.746, 4050852.106; 595863.800, 4050856.332; 595878.326, 4050860.141; 595893.138, 4050862.843; 595909.227, 4050864.579; 595923.931, 4050865.100; 595940.058, 4050864.509; 595955.311, 4050861.023; 595973.024, 4050856.090; 595989.675, 4050850.553; 596006.554, 4050844.003; 596020.972, 4050837.619; 596035.257, 4050830.854; 596050.951, 4050824.504; 596064.953, 4050819.844; 596081.870, 4050815.399; 596091.460, 4050813.429; 596095.984, 4050813.012; 596102.710, 4050812.958; 596111.615, 4050813.930; 596118.244, 4050815.455; 596127.446, 4050818.812; 596132.377, 4050821.278; 596136.011, 4050823.439; 596140.866, 4050832.937; 596142.583, 4050836.764; 596411, 4050626; 596492, 4050567; 596500, 4050556; 596506, 4050545; 596510, 4050531; 596514, 4050505; 596513, 4050484; 596493, 4050421; 596437, 4050262; 596404, 4050199; 596364, 4050134; 596358, 4050092; 596367, 4050043; 596370, 4050008; 596348, 4049956; 596334, 4049923; 596339, 4049885; 596365, 4049836; 596420, 4049812; 596418, 4049789; 596387, 4049778; 596366, 4049762; 596351, 4049725; 596344, 4049706; 596332, 4049696; 596302, 4049685; 596300, 4049646; 596303, 4049619; 596311, 4049598; 596310, 4049570; 596299, 4049556; 596283, 4049542; 596269, 4049528; 596260, 4049516; 596258, 4049492; 596272, 4049460; 596282, 4049429; 596299, 4049389; 596298, 4049372; 596274, 4049352; 596258, 4049329; 596166, 4049101; returning to 596121, 4048995.

(iv) Subunit 6a (Pescadero Canyon portion): From USGS 1:24,000 scale quadrangle Monterey. Land bounded by the following UTM Zone 10 NAD83 coordinates (E, N): 596202.421, 4048820.398; 596202.251, 4048823.977; 596201.106, 4048831.050; 596198.745, 4048837.881; 596195.323, 4048844.166; 596189.449, 4048851.720; 596181.453, 4048858.259; 596174.403, 4048861.914; 596168.285, 4048863.980; 596159.736, 4048865.409; 596150.776, 4048866.138; 596139.514, 4048869.809; 596131.375, 4048875.207; 596125.615, 4048881.289; 596120.666, 4048889.708; 596116.970, 4048898.758; 596115.407, 4048904.538; 596115.082, 4048907.507; 596114.880, 4048914.971; 596115.601, 4048920.919; 596117.073, 4048928.699; 596119.738, 4048940.221; 596121.820, 4048947.778; 596123.208, 4048952.171; 596149, 4048917; 596171, 4048889; 596214, 4048863; 596295, 4048862; 596318, 4048787; 596334, 4048726; 596363, 4048682; 596382, 4048673; 596405, 4048693; 596418, 4048724; 596441, 4048708; 596482, 4048660; 596510, 4048642; 596536, 4048625; 596561, 4048606; 596597, 4048578; 596651, 4048555; 596671, 4048551; 596715, 4048542; 596829, 4048531; 596878, 4048531; 596924.858, 4048521.004; 596936.135, 4048509.789; 596944.053, 4048516.909; 596953, 4048515; 597028, 4048494; 597074, 4048468; 597083, 4048454; 597096, 4048441; 597102, 4048435; 597103.186, 4048434.138; 597103.230, 4048432.889; 597122.598, 4048407.776; 597125.173, 4048401.474; 597125.117, 4048396.220; 597123.538, 4048391.757; 597121.041, 4048388.365; 597119.042, 4048386.644; 597115.317, 4048384.679; 597106.016, 4048382.581; 597099.373, 4048380.712; 597089.681, 4048377.084; 597078.307, 4048371.300; 597062.710, 4048362.620; 597050.160, 4048348.145; 597042.036, 4048336.655; 597037.007, 4048327.373; 597034.190, 4048320.921; 597026.181, 4048298.414; 597026, 4048298; 597008, 4048250; 596999, 4048220; 596952, 4048162; 596941, 4048146; 596932, 4048120; 596924, 4048090; 596907, 4048062; 596894, 4048049; 596833, 4048022; 596756, 4048000; 596740, 4047994; 596728, 4047994; 596689, 4047954; 596685, 4047941; 596674, 4047920; 596662, 4047900; 596648, 4047881; 596634, 4047862; 596542, 4047755; 596522, 4047739; 596506, 4047734; 596458, 4047725; 596449, 4047723; 596433, 4047716; 596297, 4047645; 596283, 4047635; 596220, 4047585; 596204, 4047568; 596197, 4047557; 596190, 4047539; 596163, 4047442; 596143, 4047425; 596133, 4047420;

596115, 4047406; 596103, 4047389;
 596086, 4047360; 596074, 4047347;
 596049, 4047337; 596017, 4047368;
 595973, 4047400; 595910, 4047426;
 595872, 4047443; 595867, 4047523;
 595864, 4047594; 595870, 4047667;
 595880, 4047728; 595887.445,
 4047772.169; 595896.900, 4047807.905;
 595923.997, 4047835.258; 595982.485,
 4047890.602; 596001.110, 4047917.832;
 596009.167, 4047943.965; 596008.899,
 4047989.340; 596008.385, 4048016.218;
 595998.060, 4048035.162; 595980.074,
 4048045.653; 595962.288, 4048046.253;
 595934.059, 4048032.734; 595906.862,
 4048017.073; 595878.916, 4047992.590;
 595843.991, 4047964.452; 595820.544,
 4047955.446; 595781.236, 4047949.719;
 595706.444, 4047946.467; 595701,
 4047953; 595605, 4048051; 595588,
 4048057; 595526, 4048090; 595504,
 4048118; 595501, 4048132; 595502,
 4048132; 595524, 4048140; 595565,
 4048157; 595630, 4048169; 595634,
 4048198; 595676, 4048233; 595673,
 4048267; 595698, 4048322; 595840,
 4048309; 595893, 4048311; 595982,
 4048326; 595982, 4048327; 595973,
 4048417; 595974, 4048417; 596135,
 4048438; 596251, 4048453; 596208,
 4048594; 596220, 4048604; 596231,
 4048624; 596230, 4048641; 596215,
 4048727; 596218, 4048782; 596209,
 4048811; returning to 596202.421,
 4048820.

(v) Subunit 6a (portion between
 Sunridge Road and Spruance Road):
 From USGS 1:24,000 scale quadrangle
 Monterey. Land bounded by the
 following UTM Zone 10 NAD83
 coordinates (E, N): 595662.607,
 4048782.410; 595606.350, 4048793.214;
 595593.683, 4048794.978; 595581.024,
 4048795.981; 595576.755, 4048796.238;
 595555.424, 4048796.153; 595501.980,
 4048792.589; 595494.224, 4048791.208;
 595486.477, 4048789.065; 595479.043,
 4048786.088; 595472.075, 4048782.353;
 595464.363, 4048777.086; 595456.518,
 4048769.991; 595445.525, 4048758.212;
 595435.299, 4048745.984; 595425.842,
 4048733.156; 595417, 4048719.878;
 595406.232, 4048701.550; 595399.076,
 4048687.299; 595394.765, 4048677.576;
 595363.443, 4048602.869; 595358.414,
 4048589.176; 595349.695, 4048563.960;
 595302.138, 4048562.504; 595301.073,
 4048566.064; 595297.396, 4048581.566;
 595294.480, 4048597.228; 595292.475,
 4048613.053; 595291.233, 4048628.962;
 595290.750, 4048644.956; 595291.183,
 4048660.884; 595291.979, 4048671.483;
 595293.081, 4048682.085; 595294.641,
 4048692.616; 595296.926, 4048706.356;
 595298.350, 4048715.285; 595299.470,
 4048724.287; 595300.132, 4048733.285;
 595300.642, 4048742.281; 595300.693,
 4048751.348; 595300.573, 4048762.165;

595301.386, 4048771.317; 595305.088,
 4048780.957; 595309.740, 4048787.409;
 595316.836, 4048793.277; 595326.841,
 4048797.960; 595339.744, 4048802.370;
 595357.214, 4048807.211; 595374.849,
 4048810.835; 595397.370, 4048813.599;
 595411.528, 4048814.747; 595424.137,
 4048818.163; 595434.605, 4048823.670;
 595484.115, 4048850.827; 595495.005,
 4048858.109; 595502.701, 4048864.899;
 595506.769, 4048869.134; 595512.925,
 4048877.278; 595517.565, 4048884.797;
 595521.729, 4048894.062; 595538.984,
 4048938.367; 595541.571, 4048946.013;
 595543.020, 4048952.734; 595543.674,
 4048962.493; 595542.650, 4048972.310;
 595539.803, 4048981.725; 595534.506,
 4048992.180; 595527.091, 4049001.317;
 595516.619, 4049011.257; 595500.614,
 4049025.555; 595483.704, 4049038.929;
 595460.208, 4049055.429; 595441.798,
 4049066.653; 595430.144, 4049073.305;
 595423.232, 4049078.257; 595412.777,
 4049088.386; 595406.135, 4049094.828;
 595402.263, 4049100.499; 595400.808,
 4049107.949; 595402.256, 4049114.822;
 595406, 4049121; 595417, 4049126;
 595438, 4049124; 595459, 4049129;
 595480, 4049130; 595500, 4049127;
 595517, 4049127; 595527, 4049130;
 595546, 4049127; 595578, 4049111;
 595609, 4049086; 595612, 4049077;
 595622, 4049064; 595638, 4049045;
 595658, 4049031; 595679, 4049021;
 595703, 4049013; 595731, 4049004;
 595754, 4048992; 595761.777,
 4048985.026; 595769.192, 4048975.966;
 595773.393, 4048968.089; 595775.156,
 4048960.261; 595774.489, 4048951.721;
 595771.678, 4048944.147; 595767.928,
 4048938.772; 595761.284, 4048933.289;
 595755.383, 4048929.567; 595748.428,
 4048924.690; 595741.782, 4048919.436;
 595733.484, 4048911.953; 595727.456,
 4048905.944; 595720.990, 4048898.177;
 595715.891, 4048890.806; 595711.118,
 4048881.535; 595706.533, 4048868.989;
 595704.225, 4048857.307; 595703.595,
 4048845.414; 595704.641, 4048833.541;
 595707.208, 4048821.913; 595710.348,
 4048813.567; 595713.185, 4048805.066;
 595713.125, 4048796.760; 595710.460,
 4048789.721; 595706.253, 4048784.418;
 595698.078, 4048779.603; 595689.711,
 4048778.368; 595677.796, 4048779.563;
 returning to 595662.607, 4048782.

(vi) Subunit 6a (portion west of
 Spruance Road): From USGS 1:24,000
 scale quadrangle Monterey. Land
 bounded by the following UTM Zone 10
 NAD83 coordinates (E, N): 595323,
 4049123; 595368.117, 4049101.720;
 595382.240, 4049092.277; 595410.579,
 4049065.011; 595418.415, 4049059.232;
 595432.679, 4049050.857; 595444.489,
 4049043.827; 595456.001, 4049036.335;
 595467.211, 4049028.460; 595483.502,
 4049015.918; 595493.961, 4049007.120;

595504.272, 4048997.940; 595515.056,
 4048987.393; 595520.624, 4048979.912;
 595524.072, 4048971.342; 595525.218,
 4048964.116; 595524.719, 4048954.207;
 595521.124, 4048943.526; 595504.298,
 4048899.506; 595499.078, 4048889.315;
 595491.417, 4048879.402; 595484.782,
 4048873.157; 595475.253, 4048866.804;
 595424.286, 4048839.148; 595418.003,
 4048835.465; 595406.606, 4048832.596;
 595395.796, 4048831.866; 595381.337,
 4048830.335; 595367.040, 4048828.043;
 595348.039, 4048823.794; 595338.773,
 4048821.253; 595324.957, 4048816.757;
 595314.336, 4048812.602; 595302.378,
 4048805.459; 595294.389, 4048797.600;
 595286.759, 4048784.944; 595283.230,
 4048773.401; 595282.287, 4048762.267;
 595282.561, 4048751.299; 595282.244,
 4048738.649; 595281.317, 4048726.144;
 595279.779, 4048713.631; 595276.920,
 4048696.686; 595275.215, 4048685.544;
 595273.573, 4048668.688; 595272.604,
 4048646.202; 595272.943, 4048629.292;
 595274.197, 4048612.469; 595275.541,
 4048601.208; 595277.188, 4048590.103;
 595279.292, 4048579.003; 595281.851,
 4048568.060; 595283.456, 4048561.932;
 595253, 4048561; 595225, 4048650;
 595206, 4048683; 595203, 4048704;
 595204, 4048727; 595225, 4048781;
 595225, 4048914; 595222, 4048941;
 595134, 4049009; 595111, 4049027;
 595081, 4049069; 595056, 4049144;
 595117, 4049145; 595138, 4049144;
 595159, 4049140; 595178, 4049134;
 595194, 4049129; 595211, 4049127;
 595228, 4049128; 595275, 4049132;
 595292, 4049131; 595309, 4049128;
 returning to 595323, 4049123.

(vii) Note: Unit 6a is depicted on Map
 3 in paragraph (12)(xiv), and in detail on
 Map 4 in paragraph (12)(xv) of this
 entry.

(viii) Subunit 6b (east portion): From
 USGS 1:24,000 scale quadrangle
 Monterey. Land bounded by the
 following UTM Zone 10 NAD83
 coordinates (E, N): 593541.388,
 4048770.432; 593510.848, 4048805.177;
 593532.068, 4048818.876; 593548.960,
 4048826.486; 593570.875, 4048833.182;
 593586.397, 4048837.747; 593608.312,
 4048838.660; 593624.139, 4048838.965;
 593639.357, 4048836.834; 593659.141,
 4048830.747; 593680.751, 4048822.529;
 593727.015, 4048798.788; 593782.106,
 4048772.004; 593790.904, 4048768.133;
 593778.000, 4048727.000; 593772.946,
 4048696.679; 593772.083, 4048696.721;
 593715.333, 4048703.457; 593701.565,
 4048705.802; 593683.913, 4048711.031;
 593675.394, 4048714.531; 593667.133,
 4048718.602; 593659.167, 4048723.224;
 593651.533, 4048728.376; 593634.547,
 4048741.500; 593627.799, 4048746.427;
 593624.257, 4048748.773; 593616.962,
 4048753.136; 593609.188, 4048757.152;
 593605.208, 4048758.975; 593597.085,

4048762.239; 593592.951, 4048763.677; 593588.773, 4048764.984; 593584.556, 4048766.159; 593580.298, 4048767.201; 593575.860, 4048768.137; 593571.387, 4048768.928; 593566.891, 4048769.572; 593562.377, 4048770.069; 593557.849, 4048770.418; 593548.770, 4048770.669; 593544.229, 4048770.572; returning to 593541.388, 4048770.432.

(ix) Subunit 6b (west portion): From USGS 1:24,000 scale quadrangle Monterey. Land bounded by the following UTM Zone 10 NAD83 coordinates (E, N): 593522.950, 4048768.330; 593488.310, 4048763.587; 593468.619, 4048760.890; 593462.417, 4048760.143; 593456.341, 4048759.609; 593450.817, 4048759.302; 593488.543, 4048788.440; 593498.544, 4048796.096; returning to 593522.950, 4048768.330.

(x) Subunit 6c (east portion): From USGS 1:24,000 scale quadrangle Monterey. Land bounded by the following UTM Zone 10 NAD83 coordinates (E, N): 593678.031, 4049656.997; 593676.816, 4049655.549; 593657.430, 4049624.243; 593645.847, 4049580.582; 593642.129, 4049535.973; 593642.297, 4049535.749; 593636.462, 4049526.819; 593633.154, 4049523.033; 593630.739, 4049520.709; 593628.167, 4049518.558; 593625.453, 4049516.590; 593622.609, 4049514.816; 593618.129, 4049512.535; 593613.436, 4049510.732; 593610.214, 4049509.805; 593606.936, 4049509.104; 593501.928, 4049490.433; 593498.284, 4049510.927; 593545.854, 4049574.412; 593548.648, 4049578.141; 593566.979, 4049609.782; 593647.949, 4049681.627; returning to 593678.031, 4049656.997.

(xi) Subunit 6c (west portion): From USGS 1:24,000 scale quadrangle Monterey. Land bounded by the following UTM Zone 10 NAD83 coordinates (E, N): 593686.191, 4049823.525; 593718.176, 4049820.816; 593726.510, 4049844.038; 593779, 4049814.000; 593781.227, 4049812.692; 593779.785, 4049811.940; 593744.860, 4049740.544; 593707.564, 4049692.197; 593617.531, 4049767.523; 593559.935, 4049774.021; 593531, 4049764.000; 593486, 4049731.000; 593474, 4049707.000; 593460, 4049690.000; 593428, 4049662.000; 593408, 4049649.000; 593383, 4049632.000; 593351.999, 4049611.999; 593334.206, 4049625.645; 593326.515, 4049621.339; 593318.546, 4049617.573; 593306.155, 4049612.974; 593297.659, 4049610.629; 593284.662, 4049608.222; 593271.487, 4049607.167; 593258.273, 4049607.477; 593245.162, 4049609.148; 593232.293, 4049612.162; 593219.803, 4049616.488; 592978.342, 4049724.383; 592966.840, 4049728.949; 592959.041, 4049731.592; 592954.985, 4049732.755; 592941.323,

4049735.664; 592939, 4049733.000; 592930, 4049733.000; 592918, 4049760.000; 592920, 4049789.000; 592936.305, 4049827.951; 593018.581, 4049826.666; 593098.417, 4049780.812; 593207.036, 4049823.766; 593283.323, 4049815.508; 593358.944, 4049812.254; 593444.705, 4049788.911; 593458.448, 4049795.812; 593602.831, 4049855.126; 593635.133, 4049863.106; 593661.279, 4049846.810; returning to 593686.191, 4049823.525.

(xii) Subunit 6d: From USGS 1:24,000 scale quadrangle Monterey. Land bounded by the following UTM Zone 10, NAD83 coordinates (E, N): 591851, 4048564; 591855, 4048576; 591861, 4048580; 591868, 4048583; 591873, 4048588; 591879, 4048594; 591884, 4048602; 591887, 4048610; 591889, 4048617; 591889, 4048625; 591891, 4048632; 591918, 4048685; 591925, 4048690; 591925, 4048690; 591935, 4048688; 591945, 4048672; 591953, 4048660; 591961, 4048648; 591969, 4048636; 592120, 4048437; 592141, 4048411; 592144, 4048397; 592144, 4048351; 592144, 4048317; 592136, 4048297; 592116, 4048287; 592116, 4048287; 592116, 4048287; 592096, 4048293; 592073, 4048322; 592062, 4048334; 592050, 4048344; 592038, 4048354; 591992, 4048388; 591951, 4048418; 591951, 4048418; 591933, 4048448; 591931, 4048452; 591928, 4048456; 591924, 4048461; 591920, 4048466; 591920, 4048466; 591912, 4048476; 591908, 4048485; 591907, 4048489; 591905, 4048496; 591902, 4048503; 591899, 4048510; 591895, 4048517; 591891, 4048523; 591886, 4048529; 591882, 4048534; 591877, 4048538; 591872, 4048543; 591866, 4048548; 591860, 4048552; 591855, 4048556; returning to 591851, 4048564.

(xiii) Subunit 6e: From USGS 1:24,000 scale quadrangle Monterey. Land bounded by the following UTM Zone 10 NAD83 coordinates (E, N): 595552, 4051784; 595527, 4051833; 595413, 4051790; 595404, 4051837; 595404, 4051843; 595404, 4051846; 595403, 4051858; 595401, 4051873; 595399, 4051888; 595397, 4051903; 595395, 4051917; 595392, 4051932; 595389, 4051947; 595386, 4051961; 595382, 4051976; 595379, 4051990; 595375, 4052005; 595371, 4052019; 595370, 4052021; 595370, 4052022; 595366, 4052033; 595362, 4052047; 595357, 4052061; 595352, 4052075; 595346, 4052089; 595341, 4052103; 595334, 4052116; 595332, 4052121; 595330, 4052124; 595325, 4052130; 595324, 4052130; 595323, 4052138; 595292, 4052402; 595329, 4052407; 595339, 4052409; 595340, 4052409; 595342, 4052409; 595344, 4052409; 595345,

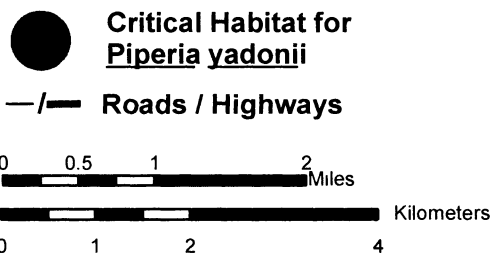
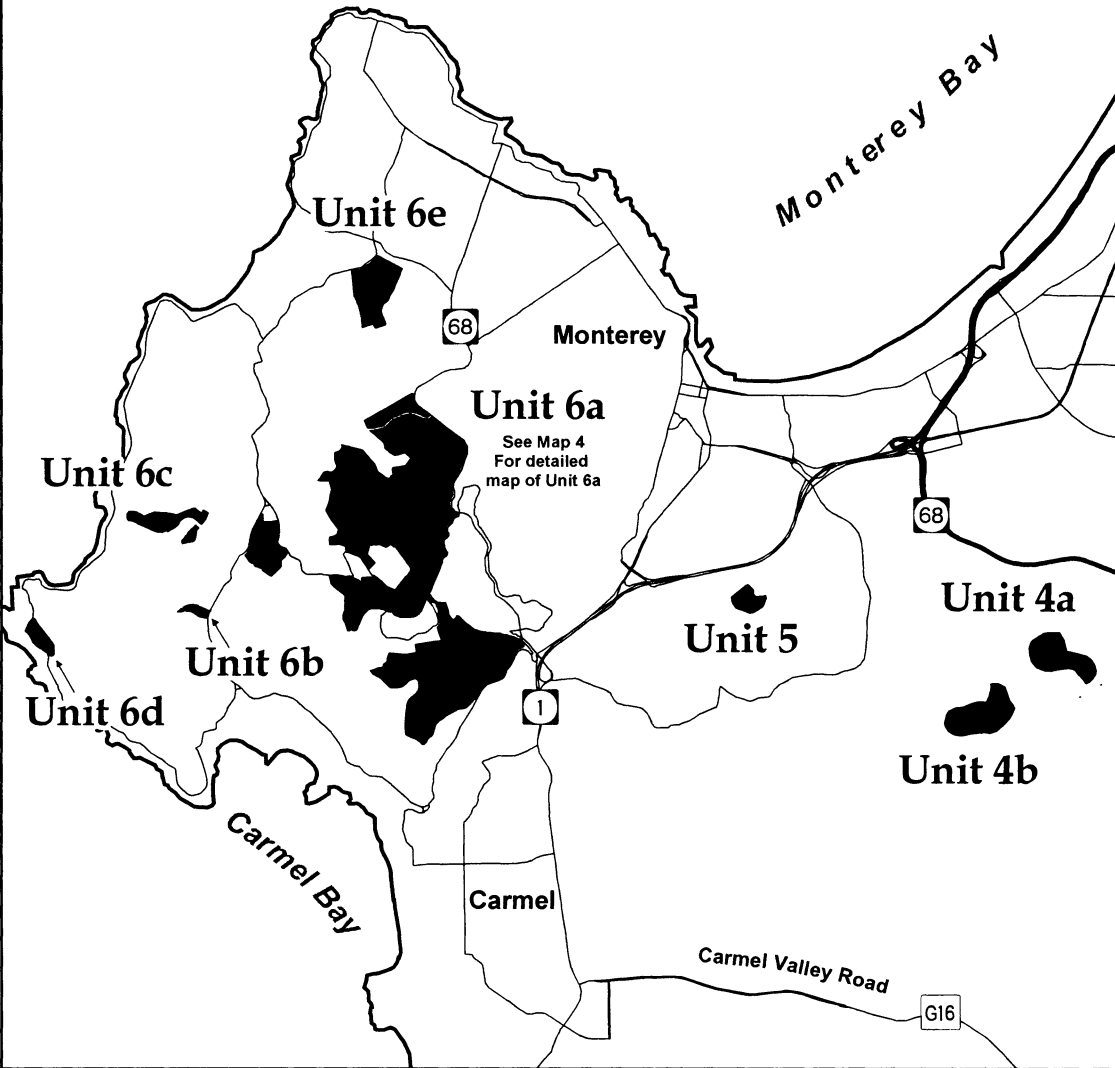
4052409; 595347, 4052409; 595348, 4052409; 595349, 4052409; 595351, 4052409; 595352, 4052409; 595354, 4052409; 595356, 4052409; 595358, 4052409; 595359, 4052409; 595361, 4052409; 595363, 4052409; 595365, 4052409; 595366, 4052409; 595367, 4052410; 595368, 4052410; 595370, 4052410; 595372, 4052410; 595373, 4052411; 595375, 4052411; 595377, 4052412; 595379, 4052412; 595380, 4052412; 595382, 4052413; 595384, 4052413; 595385, 4052414; 595387, 4052415; 595388, 4052415; 595390, 4052416; 595392, 4052416; 595393, 4052417; 595395, 4052418; 595397, 4052419; 595398, 4052419; 595400, 4052420; 595401, 4052421; 595403, 4052422; 595404, 4052423; 595406, 4052424; 595407, 4052425; 595409, 4052426; 595410, 4052427; 595412, 4052428; 595413, 4052429; 595414, 4052429; 595425, 4052438; 595487, 4052473; 595545, 4052519; 595569, 4052552; 595574, 4052559; 595785, 4052448; 595838, 4052420; 595829, 4052400; 595798, 4052339; 595762, 4052253; 595751, 4052224; 595736, 4052189; 595703, 4052125; 595688, 4052091; 595683, 4052085; 595672, 4052071; 595634, 4052047; 595633, 4052045; 595632, 4052043; 595631, 4052041; 595630, 4052039; 595628, 4052037; 595627, 4052035; 595626, 4052033; 595625, 4052030; 595624, 4052028; 595623, 4052026; 595622, 4052024; 595621, 4052021; 595621, 4052019; 595620, 4052017; 595619, 4052015; 595618, 4052012; 595618, 4052010; 595617, 4052008; 595616, 4052005; 595616, 4052003; 595615, 4052001; 595615, 4051998; 595614, 4051996; 595614, 4051993; 595614, 4051991; 595613, 4051989; 595613, 4051986; 595613, 4051984; 595613, 4051981; 595612, 4051979; 595612, 4051977; 595612, 4051974; 595612, 4051972; 595612, 4051969; 595612, 4051967; 595613, 4051964; 595613, 4051962; 595613, 4051960; 595613, 4051957; 595613, 4051955; 595614, 4051952; 595614, 4051950; 595614, 4051948; 595615, 4051945; 595615, 4051943; 595616, 4051940; 595617, 4051938; 595617, 4051936; 595618, 4051933; 595618, 4051931; 595619, 4051929; 595620, 4051926; 595621, 4051924; 595625, 4051914; 595629, 4051904; 595634, 4051892; 595638, 4051882; 595643, 4051871; 595655, 4051846; 595657, 4051842; 595663, 4051824; returning to 595552, 4051784.

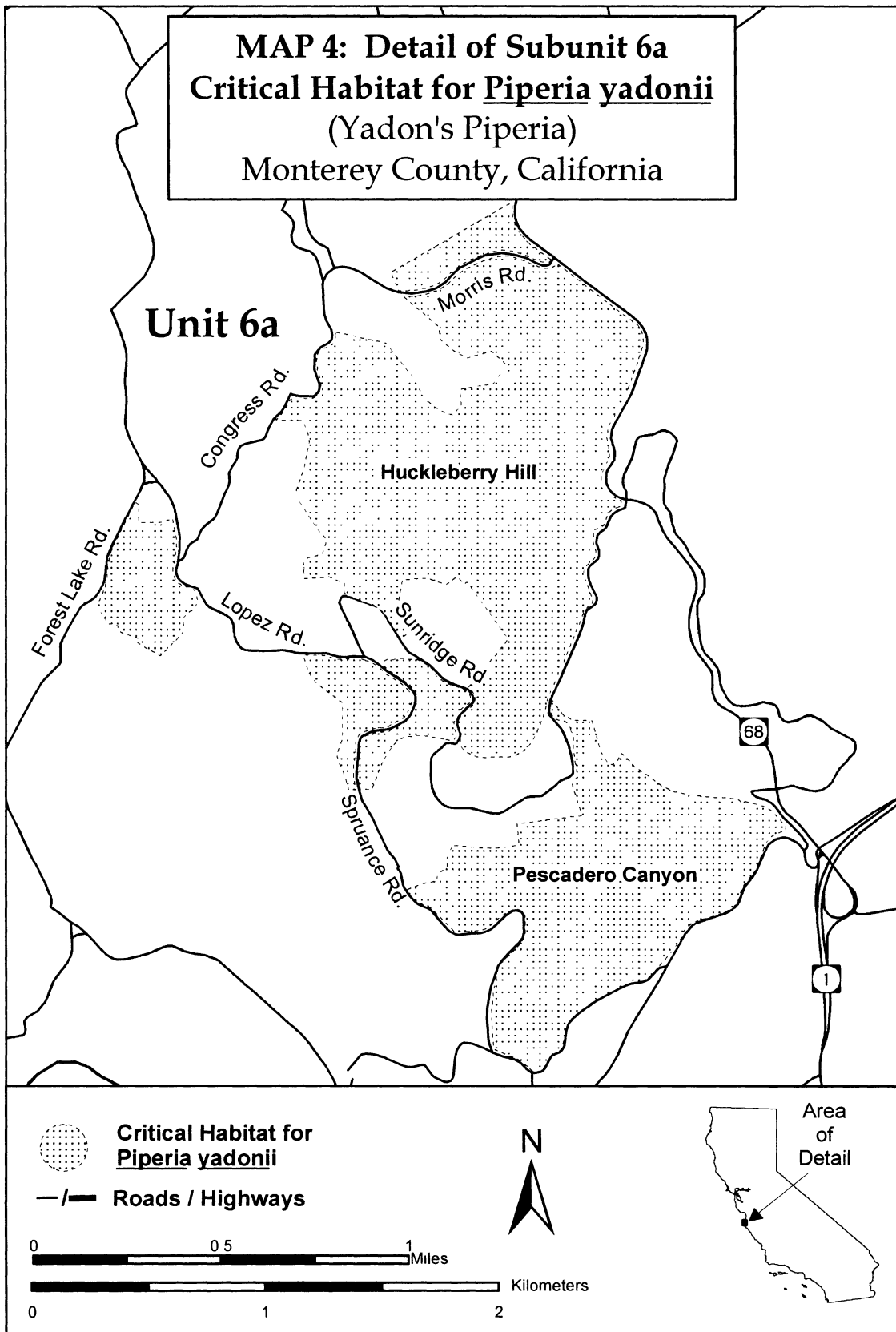
(xiv) Note: Map of Unit 6 (Map 3) follows:

(xv) Note: Detail map of Subunit 6a (Map 4) follows:

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**MAP 3: Units 4, 5, and 6
Critical Habitat for Piperia yadonii
(Yadon's Piperia)
Monterey County, California**





(13) Unit 7: Point Lobos Ranch, Monterey County, California.
(i) From USGS 1:24,000 scale quadrangles Monterey and Soberanes Point. Land bounded by the following UTM Zone 10, NAD83 coordinates (E, N): 595261, 4040950; 595269, 4041010; 595302, 4041071; 595344, 4041106; 595399, 4041136; 595410, 4041165; 595402, 4041291; 595387, 4041367; 595377, 4041400; 595365, 4041437; 595365, 4041463; 595389, 4041491; 595453, 4041513; 595516, 4041504; 595570, 4041472; 595597, 4041500; 595597, 4041536; 595602, 4041585; 595627, 4041649; 595635, 4041663; 595716, 4041696; 595759, 4041700; 595783, 4041693; 595801, 4041670; 595825, 4041613; 595827, 4041585; 595813, 4041551; 595807, 4041531; 595812, 4041518; 595844, 4041470; 595915, 4041508; 595889, 4041596;

595951, 4041638; 595966, 4041648; 595986, 4041664; 595850, 4041803; 595867, 4041802; 595891, 4041808; 595893, 4041869; 595904, 4041919; 595915, 4041930; 595910, 4041935; 595945, 4041988; 595990, 4042022; 596063, 4042063; 596142, 4042098; 596156, 4042104; 596211, 4042114; 596241, 4042109; 596269, 4042011; 596275, 4041978; 596276, 4041975; 596317, 4041764; 596343, 4041583; 596373, 4041510; 596515, 4041436; 596694, 4041433; 596927, 4041428; 597048, 4041584; 597068, 4041628; 597136, 4041714; 597204, 4041766; 597235, 4041783; 597291, 4041803; 597332, 4041812; 597381, 4041807; 597425, 4041787; 597461, 4041754; 597484, 4041711; 597492, 4041663; 597484, 4041614; 597467, 4041579; 597441, 4041550; 597408, 4041528; 597363, 4041511; 597341, 4041491;

597323, 4041415; 597248, 4041313; 597288, 4041280; 597098, 4041279; 597103, 4041079; 597060, 4041079; 597045, 4041092; 596996, 4041118; 596889, 4041130; 596702, 4041138; 596646, 4041140; 596553, 4041137; 596503, 4041119; 596451, 4041086; 596363, 4041006; 596211, 4040900; 596003, 4040843; 595913, 4040829; 595905, 4040827; 595884, 4040824; 595865, 4040825; 595753, 4040829; 595629, 4040826; 595611, 4040841; 595574, 4040832; 595575, 4040825; 595539, 4040822; 595537, 4040822; 595497, 4040858; 595465, 4040822; 595393, 4040831; 595371, 4040840; 595366, 4040838; 595297, 4040891; returning to 595261, 4040950.

(ii) Note: Unit 7 is depicted on Map 5 in paragraph (14)(ii) of this entry.

BILLING CODE 4310-55-P

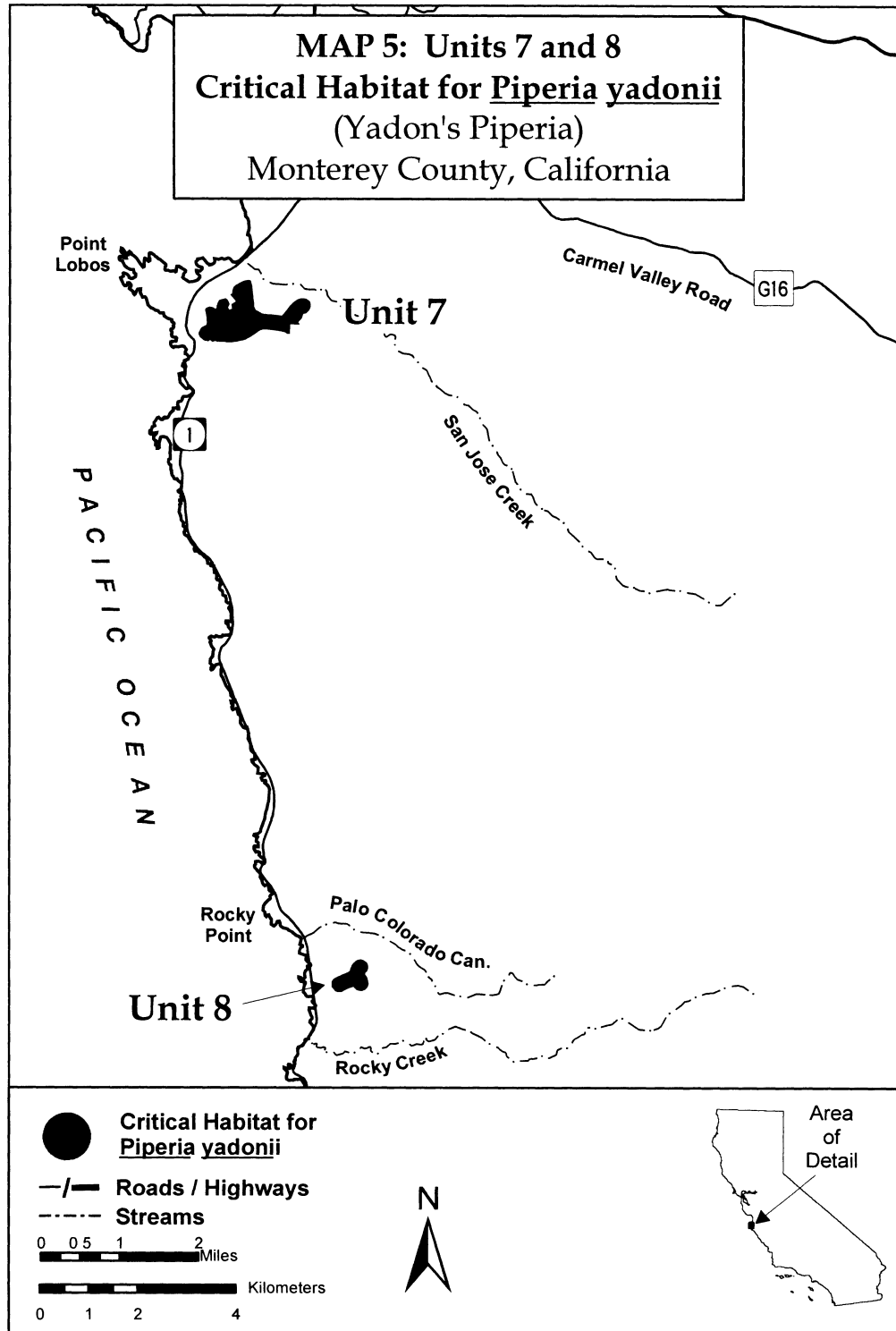
(14) Unit 8; Palo Colorado, Monterey County, California.

(i) From USGS 1:24,000 scale quadrangle Soberanes Point. Land bounded by the following UTM Zone 10, NAD83 coordinates (E, N): 598818, 4027785; 598823, 4027824; 598834, 4027852; 598855, 4027884; 598877, 4027904; 599017, 4027985; 599111, 4028022; 599176, 4028075; 599179,

4028121; 599198, 4028182; 599233, 4028238; 599262, 4028268; 599316, 4028304; 599373, 4028315; 599431, 4028304; 599479, 4028271; 599498, 4028249; 599518, 4028204; 599522, 4028146; 599508, 4028099; 599476, 4028056; 599471, 4028019; 599511, 4027964; 599527, 4027921; 599543, 4027880; 599551, 4027832; 599546, 4027793; 599531, 4027757; 599514,

4027733; 599484, 4027707; 599430, 4027685; 599362, 4027687; 599326, 4027702; 599282, 4027741; 599266, 4027766; 599135, 4027707; 599026, 4027647; 598988, 4027637; 598949, 4027637; 598893, 4027655; 598855, 4027686; 598830, 4027728; 598821, 4027756; returning to 598818, 4027785.

(ii) Note: Map of Units 7 and 8 (Map 5) follows:



* * * * *

Dated: October 5, 2007.

David M. Verhey,

*Acting Assistant Secretary for Fish and
Wildlife and Parks.*

[FR Doc. 07-5136 Filed 10-23-07; 8:45 am]

BILLING CODE 4310-55-C