

DEPARTMENT OF THE INTERIOR**Fish and Wildlife Service****50 CFR Part 17****RIN 1018-AHO4****Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for *Chorizanthe pungens* var. *pungens* (Monterey Spineflower)**

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), designate critical habitat for *Chorizanthe pungens* var. *pungens* (Monterey spineflower) pursuant to the Endangered Species Act of 1973, as amended (Act). A total of approximately 7,620 hectares (18,830 acres) of land in Santa Cruz and Monterey Counties, California, are within the boundaries of the critical habitat designation.

Critical habitat identifies specific areas, both occupied and unoccupied, that are essential to the conservation of a listed species and that may require special management considerations or protection.

Section 7(a)(2) of the Act requires that each Federal agency shall, in consultation with and with the assistance of the Service, insure that any action authorized, funded or carried out by such agency is not likely to jeopardize the continued existence of an endangered or threatened species or result in the destruction or adverse modification of critical habitat. Section 4 of the Act requires us to consider economic and other relevant impacts of specifying any particular area as critical habitat.

We solicited data and comments from the public on all aspects of this proposal, including data on economic and other impacts of the designation.

DATES: This rule is effective June 28, 2002.

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 at the Ventura Fish and Wildlife Office, U.S. Fish and Wildlife Service, 2493 Portola Road, Suite B, Ventura, CA 93003.

FOR FURTHER INFORMATION CONTACT: Field Supervisor, Ventura Fish and Wildlife Office (see **ADDRESSES** section) (telephone 805/644-1766; facsimile 805/644-3958).

SUPPLEMENTARY INFORMATION:

Background

Chorizanthe pungens var. *pungens* (Monterey spineflower) is endemic to sandy soils in coastal areas in southern Santa Cruz and northern Monterey Counties, and in the Salinas Valley in interior Monterey County. In California, the spineflower genus, *Chorizanthe*, in the buckwheat family (Polygonaceae) is comprised of species of slender, stiff, and tough annual herbs that inhabit dry sandy soils. They occur along the coast and inland, but because of the patchy and limited distribution of such soils, many species of *Chorizanthe* tend to be highly localized in their distribution.

Chorizanthe pungens var. *pungens* is one of two varieties of the species *Chorizanthe pungens*. The other variety, *C. p. var. hartwegiana* (Ben Lomond spineflower) is restricted to the Santa Cruz Mountains, generally between Scotts Valley and Ben Lomond. The ranges of these two varieties of *C. pungens* do not overlap. The range of *C. p. var. pungens* partially overlaps with another closely related taxon, *Chorizanthe robusta* var. *robusta* (robust spineflower), in southern Santa Cruz County. *Chorizanthe pungens* var. *hartwegiana* and *C. r. var. robusta* are both endangered species (59 FR 5499). A detailed description of these related taxa is available in the Recovery Plan for Seven Coastal Plants and the Myrtle's Silverspot Butterfly (Service 1998), the Draft Recovery Plan for the Robust Spineflower (Service 2000), and references within these plans.

The overall appearance of *Chorizanthe pungens* var. *pungens* is of a low-growing herb that is soft, hairy and grayish or reddish in color. The plant generally grows flat along the ground or curves upward from the base. Large individuals may reach 50 centimeters (cm) (20 inches (in)) or more in diameter. This taxon is distinguished by white (rarely pinkish) scarious (translucent) margins on the lobes of the involucle (circle or collection of modified leaves surrounding a flower cluster) or head that occur immediately below the white-to rose-colored flowers. The aggregate of flowers (heads) tend to be small (less than 1 cm (0.4 in) in diameter) and either distinctly or indistinctly aggregate.

Chorizanthe pungens var. *pungens* is a short-lived annual species. It germinates during the winter months and flowers from April through June. Although pollination ecology has not been studied for this taxon, *C. p. var. pungens* is likely visited by a wide array of pollinators. Observations of pollinators on other species of

Chorizanthe that occur in Santa Cruz County have included leaf cutter bees (megachilids) and at least six species of butterflies, flies, and sphecid wasps (R. Morgan, biologist, Soquel, CA, pers. comm., 2000). In other annual species of *Chorizanthe*, the flowers are protandrous, a reproductive strategy in which the anthers (part of flower that produces pollen) mature and shed pollen prior to the maturation of the style (part of the female reproductive structure of a flower) to receive pollen, with a delay of style receptivity being 1 or 2 days. Protandry facilitates cross-pollination by insects. However, if cross-pollination does not occur within 1 or 2 days, self-pollination may occur as the flower closes at the end of the day (Reveal 2001). The relative importance of cross-pollination by insects and self-pollination to seed set or development is unknown; however, in *C. p. var. pungens*, the importance of pollinator activity to production of viable seed was indicated by the production of seed with low viability where pollinator access was limited (Harding Lawson Associates 2000).

Seed is mature by August. The plants turn a rusty hue as they dry through the summer months, eventually shattering during the fall. Seed dispersal is facilitated by the involucral spines, which attach the seed to passing animals. Black-tailed hares (*Lepus californicus*) and ground squirrels (*Otospermophilus beecheyi*) have been observed to browse on *Chorizanthe pungens* var. *pungens* (L. Otter, Coastal Commission, pers. comm., 2001; Schettler, in litt., 2000), and other animals likely to contribute to seed dispersal include, but are not limited to: mule deer (*Odocoileus hemionus*), gray foxes (*Urocyon cinereoargenteus*), coyotes (*Canis latrans*), bobcats (*Felis rufus*), striped skunks (*Mephitis mephitis*), opossums (*Didelphis virginiana*), raccoons (*Procyon lotor*), and other small mammals and small birds. While animal vectors most likely facilitate seed dispersal between colonies and populations of *C. p. var. pungens*, the prevailing coastal winds undoubtedly play a part in scattering seed within colonies and populations.

For annual plants, maintaining a seed bank (a reserve of dormant seeds, generally found in the soil) is important to year-to-year and long term survival (Baskin and Baskin 1978). A seed bank includes all of the seeds in a population, and the extent of the seed bank reserve is variable from population to population. Within any given population, the seed bank generally covers a larger area than the extent of observable plants seen in a given year.

(Given 1994) because the number and location of standing plants (the observable plants) varies annually due to factors such as the amount and timing of rainfall, temperature, soil conditions, and the extent and nature of the seed bank.

Each *Chorizanthe pungens* var. *pungens* flower produces one seed. Depending on the vigor of the individual plant and the effectiveness of pollination, dozens, if not hundreds of seeds could be produced from a single plant. For instance, in one study of a closely related spineflower, *Chorizanthe robusta* var. *robusta*, individual plants had an average of 126 flowers, and an average seed set of 51 seeds per plant (S. Baron, pers. comm., 2001). However, seed production does not guarantee production of future reproductive individuals for several reasons: seed viability may be low, as has been found in other species of *Chorizanthe* (Bauder 2000); proper conditions for germination may not be present in most years; and seedling mortality may result from withering before maturity, herbivory, or uprooting by gopher activity (Baron 1998).

The locations where *Chorizanthe pungens* var. *pungens* occurs, with the exception of the Soledad area, are subject to a mild maritime climate where fog helps keep summer temperatures cool and winter temperatures relatively warm and provides moisture in addition to the normal winter rains. *Chorizanthe pungens* var. *pungens* is found in a variety of seemingly disparate plant communities, including active coastal dunes, grassland, scrub, chaparral, woodland types on interior upland sites, and interior floodplain dunes. However, all of these areas include microhabitat characteristics favored by *C. p.* var. *pungens*. First, all sites where it is found are on sandy soils; whether the origin of the soils is from active dunes, interior fossil dunes, or floodplain alluvium is apparently unimportant. The most prevalent soil series represented are Baywood, Oceano, Elder, Elkhorn, Arnold, Santa Ynez, and Metz (SCS 1978, 1980). Second, these sites are relatively open and free of other vegetation. In scrub and chaparral communities, *C. p.* var. *pungens* does not occur under dense stands of vegetation, but does occur between more widely spaced shrubs. In grassland and oak woodland communities, abundant annual grasses may outcompete *C. p.* var. *pungens*, but in places where grass species are affected or managed through grazing, mowing or fire, the result may be less competition, thus allowing the spineflower to persist.

Chorizanthe pungens var. *pungens* is generally distributed along the rim of Monterey Bay in southern Santa Cruz and northern Monterey Counties, and inland along the coastal plain of the Salinas Valley. At coastal sites ranging from the Monterey Peninsula north to Manresa State Beach in Santa Cruz County, *C. p.* var. *pungens* is found in active coastal dune systems and on coastal bluffs upon which windblown sand has been deposited.

On coastal dunes, the distribution of suitable habitat is subject to dynamic shifts caused by patterns of dune mobilization, stabilization, and successional trends in coastal dune scrub that result in increased vegetation cover over time. Accordingly, over time there are shifts in the distribution and size of individual colonies of *Chorizanthe pungens* var. *pungens* found in gaps between stands of scrub vegetation. Other native plants associated with *C. p.* var. *pungens* include: *Ambrosia chamissonis* (beach bur); *Artemisia pycnocephala* (coastal sagewort); *Ericameria ericoides* (mock heather); *Castilleja latifolia* (Monterey Indian paintbrush); and *Lathyrus littoralis* (beach pea). At some northern Monterey County locations, *C. p.* var. *pungens* occurs in close proximity to *Gilia tenuiflora* ssp. *arenaria* (sand gilia) and *Erysimum menziesii* ssp. *menziesii* (Menzies' wallflower), which are both endangered plants, as well as an endangered butterfly, *Euphilotes enoptes smithi* (Smith's blue butterfly), and a threatened bird, *Charadrius alexandrinus nivosus* (western snowy plover).

Chorizanthe pungens var. *pungens* formerly was more widespread in the Monterey Bay area, as well as farther south. The plant can no longer be found at some locations where historical collections were made. For instance, at a historical site on the coast near San Simeon in San Luis Obispo County, *C. p.* var. *pungens* has not been seen since it was first collected in 1842 (California Natural Diversity Data Base (CNDDB) 2000; D. Keil, California Polytechnic University, San Luis Obispo, pers. comm., 2000). It also is no longer found at Point Pinos on the Monterey Peninsula or Castroville (between Prunedale and Salinas River State Beach), both in Monterey County.

We can infer from the current distribution of the spineflower that development has fragmented habitat that formerly provided for a more continuous occurrence of the plant. For instance, portions of the coastal dune and coastal scrub communities that support *Chorizanthe pungens* var. *pungens* have been eliminated or altered

by recreational use, industrial and urban development, and military activities. The composition of dune communities also has been altered by the introduction of non-native species, especially *Carpobrotus* species (sea-fig or iceplant) and *Ammophila arenaria* (European beachgrass), in an attempt to stabilize shifting sands. In the last decade, significant efforts have been made to restore native dune communities and one aspect of such restoration is the elimination of these non-native species (CDPR 1995, Pratt *in litt.* 2000).

At more inland sites, *Chorizanthe pungens* var. *pungens* occurs on sandy, well-drained soils in a variety of habitat types, most frequently maritime chaparral, valley oak woodlands, and grasslands. The plant probably has been extirpated from a number of historical locations in the Salinas Valley, primarily due to conversion of the original grasslands and valley oak woodlands to agricultural crops (Reveal & Hardham 1989).

Within grassland communities, *Chorizanthe pungens* var. *pungens* occurs along roadsides, in firebreaks, and in other disturbed sites, while in oak woodland, chaparral, and scrub communities, it occurs in sandy openings between shrubs. In older stands with a high cover of shrubs, the plants are restricted to roadsides, firebreaks, and trails that bisect these communities.

Significant populations of *Chorizanthe pungens* var. *pungens* occur on lands that are referred to as former Fort Ord (U.S. Army Corps of Engineers (ACOE) 1992, 1997). At former Fort Ord, the highest densities of *C. p.* var. *pungens* are located in the central portion of the firing range, where disturbance is the most frequent. This pattern of distribution and densities of *C. p.* var. *pungens* on former Fort Ord indicates that some activities which have disturbed *C. p.* var. *pungens* habitat also have created open conditions that contribute to high densities of the plant. Prior to the onset of human use of this area, *C. p.* var. *pungens* may have been restricted to openings created by wildfires within these communities (Service 1998).

The southwestern edge of *Chorizanthe pungens* var. *pungens* habitat on former Fort Ord was once continuous with habitat found in the community of Del Rey Oaks and at the Monterey Airport (Deb Hillyard, ecologist, California Department of Fish and Game (CDFG), pers. comm., 2000). Other inland sites that support *C. p.* var. *pungens* are located in the area between Aptos and La Selva Beach in Santa Cruz

County, and near Prunedale in northern Monterey County. At some of these locations, *C. p. var. pungens* occurs in close proximity with the endangered *Piperia yadonii* (Yadon's piperia) and *C. robusta* var. *robusta*.

Chorizanthe pungens var. *pungens* was recently found on a dune within the Salinas River floodplain near Soledad, Monterey County (CNDDB 2000). Two historic sites for *C. p. var. pungens* occur nearby. One, near Mission Soledad, was collected once in 1881; the other, near San Lucas along the Salinas River, was collected once in 1935. Due to conversion to agriculture and channelization activities along the Salinas River over the last century, *C. p. var. pungens* most likely has been extirpated from these locations. The dune near Soledad is the only one of its size and extent between there and the river mouth (Brad Olsen, East Bay Regional Parks District, pers. comm., 2000).

During the public comment periods we became aware of additional locations that support *Chorizanthe pungens* var. *pungens*. Not surprisingly, the areas occur adjacent to habitat known to support *C. p. var. pungens*. These additional areas include the following: (1) Between the northern portion of the Fort Ord unit and the northern portion of the Marina unit, on private lands that are being used for cattle grazing but which may be proposed for development; (2) just south of the Freedom unit, on lands owned by the Pajaro Unified School District at Aptos High School; (3) northwest of the Prunedale unit on lands owned by The Nature Conservancy (TNC) and managed by the Elkhorn Slough Foundation for conservation of natural resources; and (4) several locations to the north and to the west of the Asilomar unit on the Monterey Peninsula, including Federal lands owned and managed by the Coast Guard at Point Pinos Light Station, and on private lands owned by the Pebble Beach Company along 17 Mile Drive.

Because we did not know of the four areas described above at the time we published the proposal rule, they were not included in the background information provided in the proposed rule and were not included in the proposed critical habitat. Under the Act and the Administrative Procedure Act (APA) (5 U.S.C. 702 and 706), we are required to allow the public an opportunity to comment on the proposed rulemaking. We have not yet evaluated these areas and, if appropriate, re-propose critical habitat for public review and comment. Because these areas were not included

in the proposed rule, we are not including them in this final rule. Depending on the results of an evaluation of these areas, we may revise this critical habitat designation in the future. Although these areas were not included in the critical habitat proposal, they may be important to the recovery of the species and could be included in recovery activities in the future, if appropriate. Also, Federal agencies will continue to be required to consult with us, as appropriate, on activities in these areas pursuant to section 7(a)(2) of the Act, to ensure that any action they authorize, fund, or carry out does not jeopardize the continued existence of *Chorizanthe pungens* var. *pungens*.

Previous Federal Action

Federal government actions for *Chorizanthe pungens* var. *pungens* began when we published an updated Notice of Review (NOR) of plants on December 15, 1980 (45 FR 82480). This notice included *C. p. var. pungens* as a category 2 candidate (defined at that time as species for which data in our possession indicate listing may be appropriate, but for which additional biological information is needed to support a proposed rule). In the September 27, 1985, revised NOR of plants (50 FR 39526) and in the February 21, 1990 (55 FR 6184) revised NOR of plants, *C. p. var. pungens* was again included as a category 2 candidate.

On October 24, 1991 (56 FR 55107), we published a proposal to list *Chorizanthe pungens* var. *pungens* as threatened, along with three other varieties of *Chorizanthe* (*C. p. var. hartwegiana*, *C. robusta* var. *hartwegii*, *C. r. var. robusta*) and *Erysimum teretifolium* as endangered species. The final rule listing *C. p. var. pungens* as a threatened species was published on February 4, 1994 (59 FR 5499). The final rule indicated that the designation of critical habitat for *C. p. var. pungens* was prudent but not determinable, and that designation of critical habitat would occur once we had gathered the necessary data.

On June 30, 1999, our failure to designate critical habitat for *Chorizanthe pungens* var. *pungens* and three other species within the time period mandated by 16 U.S.C. 1533(b)(6)(C)(ii) was challenged in *Center for Biological Diversity v. Babbitt* (Case No. C99-3202 SC). On August 30, 2000, the U.S. District Court for the Northern District of California (Court) directed us to publish a proposed critical habitat designation within 60 days of the Court's order and a final critical habitat designation no later than

120 days after the proposed designation was published. On October 16, 2000, the Court granted the government's request for a stay of this order. Subsequently, by a stipulated settlement agreement signed by the parties on November 20, 2000, we agreed to propose critical habitat for the *C. p. var. pungens* by January 15, 2001. Plaintiffs subsequently agreed to an extension, approved by the court, until May 17, 2002, to complete the final rule.

The proposed rule to designate critical habitat for the species was signed on January 16, 2001, and sent to the **Federal Register**. It was published on February 15, 2000 (66 FR 10440). In the proposal, we determined it was prudent to designate approximately 10,400 ha (25,800 ac) of land in Santa Cruz and Monterey Counties as critical habitat for *Chorizanthe pungens* var. *pungens*. Publication of the proposed rule opened a 60-day public comment period, which closed on April 16, 2001.

On September 19, 2001, we published a notice announcing the reopening of the comment period on the proposal to designate critical habitat for *Chorizanthe pungens* var. *pungens*, and a notice of availability of the draft economic analysis on the proposed determination (66 FR 48228). This second public comment period closed on October 19, 2001. By notice published February 1, 2002 (67 FR 4940), the Department provided interested parties an opportunity to resubmit written comments by February 15, 2002, the receipt of which may have been delayed due to the shutdown of postal facilities in Washington, DC, and of the Department's internet access.

Summary of Comments and Recommendations

We contacted appropriate Federal, State, and local agencies, scientific organizations, and other interested parties and invited them to comment. In addition, we invited public comment through the publication of a notice in the Santa Cruz Sentinel on February 24, 2001. We received individually written letters from 14 parties, which included 4 designated peer reviewers, 2 Federal agencies, 1 State agency, and 4 local jurisdictions. Approximately 800 additional letters were submitted as part of a mailing campaign. Of the 14 parties responding individually, 5 supported the proposed designation, 2 were neutral, and 7 were opposed. The 7 commenters opposing the proposal specifically opposed designation of critical habitat on lands they own or manage, and requested that these areas be excluded from critical habitat designation. Of the 800 additional

letters, 19 were opposed, 1 was neutral, and the remaining were in support of the critical habitat designation.

In accordance with our peer review policy published on July 1, 1994 (59 FR 34270), we solicited independent opinions from four knowledgeable individuals who have expertise with the species, with the geographic region where the species occurs, and/or familiarity with the principles of conservation biology. All four of the peer reviewers supported the proposal and provided us with comments, which are included in the summary below and incorporated into the final rule.

We reviewed all comments received from the public and the peer reviewers for substantive issues and new information regarding critical habitat and *Chorizanthe pungens* var. *pungens*. Similar comments were grouped into four general issues relating specifically to the proposed critical habitat determination and draft economic analysis on the proposed determination. These are addressed in the following summary:

Issue 1: Biological Justification and Methodology

1. Comment: The proposed rule was not based on the best scientific data available.

Our Response: As stated in the proposed rule, we are required under the Act and regulations (section 4(B)(2) and 50 CFR 424.12, respectively) to make decisions based on the best information available at the time of designation. Our policy on information standards, described in the section entitled Critical Habitat in the rule, states that we should use the listing package for the species as well as additional information obtained from recovery plans, articles in peer-reviewed journals, conservation plans developed by States and counties, scientific status surveys and studies, and biological assessments or other unpublished materials (*i.e.*, gray literature). In addition to using these sources, we have consulted with botanists and other experts who are familiar either with the species or the geographic area where it occurs. The final rule also incorporates relevant new information submitted during the two comment periods.

2. Comment: *Chorizanthe pungens* var. *pungens* would not even occur on Pebble Beach Company lands at Spanish Bay if it were not for their extensive restoration efforts that reclaimed a former sand mine site; therefore, this area should be excluded from the Asilomar unit.

Our Response: We recognize that the Company has undertaken the restoration

and creation of several habitats, including coastal dunes, in the Spanish Bay area; much of this work was done to fulfill permit requirements by the Coastal Commission as part of the approval for construction of resort facilities at Spanish Bay. We know from historical records that *Chorizanthe pungens* var. *pungens* occurred at several locations along the coast of Monterey Peninsula, both upcoast and downcoast from the Spanish Bay area prior to sand mining activity. In addition, extant populations are known to occur both immediately upcoast and downcoast within a mile of Spanish Bay. Although surveys done in conjunction with the Company's restoration plan did not detect *C. p.* var. *pungens*, it is possible that *C. p.* var. *pungens* was missed during the surveys, or existed as a seedbank on the remnant dunes. Moreover, seeds for the reintroduction of *C. p.* var. *pungens* into the newly created dunes were collected from the remnant dunes at Spanish Bay (Joey Dorrell-Canepa, biologist, pers. comm., 2001). We therefore believe that there is sufficient information to consider dune habitat at Spanish Bay within the range of the species and essential to the conservation of the species.

3. Comment: One peer reviewer suggested expanding the list of primary constituent elements to include such factors as seed germination requirements, substrate salinity, microreliefs and macroclimates within local habitats, seasonal and yearly groundwater levels, and bird populations that migrate within the range of *Chorizanthe pungens* var. *pungens*.

Our Response: While we recognize that these factors may be important components of the habitats within which *Chorizanthe pungens* var. *pungens* is found, we do not have sufficient information at this time that leads us to believe that they are the primary factors responsible for the distribution of *C. p.* var. *pungens* throughout its range and necessary for its conservation.

Issue 2: Economic Comments

4. Comment: Comments received by the Service from the Fort Ord Reuse Authority and City of Marina suggested that section 2.4.9 of the draft Economic Analysis (which estimated that 2 to 4 consultations, at a total cost of \$10,000 to \$60,000, will occur related to activities by private parties after the transfer of Fort Ord land) mischaracterized the likely impacts of critical habitat designation on lands within the boundaries of Fort Ord that

will be transferred to private landowners. The comments indicated that development on this land could lead to a greater number of consultations, and that the consultations would be more costly than estimated in the draft Economic Analysis.

Our Response: We have revised the final critical habitat designation to remove all lands within the boundaries of former Fort Ord that the Multispecies Habitat Management Plan for the area explicitly designates for development (see our response to comment 8 for further information regarding former Fort Ord and the Habitat Management Plan). The section 7 consultation requirements pertain only to actions of Federal agencies. Consequently, in relation to *Chorizanthe pungens* var. *pungens*, consultation involving these excluded lands would be necessary only when there is a Federal nexus and there is a determination that the Federal action may affect the species or its designated critical habitat.

Lands within former Fort Ord that have been designated for development with reserves, but for which development boundaries are not determined, are included in the final designation. These lands may be subject to additional consultations in the future. The original estimates of the draft Environmental Analysis, based on the consultation history and cost of the consultations in this area, apply to these lands, as two to four consultations may be necessary in the future to address any development as it occurs.

5. Comment: One party was concerned that the designation would eliminate their opportunity for Federal development grants, since Federal agencies must ensure that their activities do not result in destruction or adverse modification of critical habitat. The party was concerned that if a federally funded project "in any way destroyed or adversely modified any portion of the area proposed", the Federal agency would be unable to provide the grant.

Our Response: Under section 7(a)(2) of the Act all Federal agencies must ensure that any action they authorize, fund, or carry out does not jeopardize the continued existence of a listed species; this requirement applies regardless of whether the project area is designated as critical habitat. In the vast majority of situations in which a project funded by Federal development grant monies may affect a listed species or its critical habitat, we have been able to work with the landowner and the appropriate Federal agency to ensure that the landowner's project can be completed without jeopardizing the

continued existence of a species or adversely modifying critical habitat. Federal agencies already must consult pursuant to the jeopardy aspect of section 7(a)(2) of the Act on all activities that may affect *Chorizanthe pungens* var. *pungens*, regardless of whether critical habitat is present. All of the critical habitat units are occupied by *C. p. var. pungens*. Thus, the designation of critical habitat for *C. p. var. pungens* is expected to result in few or no additional restrictions through the consultation process beyond those that have existed since the species was listed.

Issue 3: Site-Specific Areas and Other Comments

6. Comment: The U.S. Department of the Navy (DON) requested that the lands of the Naval Postgraduate School be excluded from the Marina unit of the critical habitat designation because protections and management actions provided for *Chorizanthe pungens* var. *pungens* under their Integrated Natural Resource Management Plan (INRMP) are sufficient. Therefore, their lands do not require special management considerations or protection and do not meet the definition of critical habitat.

Our Response: We address the issue of INRMPs in the section entitled "Relationship of Critical Habitat to Military Lands." The DON completed a final INRMP for the Naval Postgraduate School in July of 2001. The INRMP provides for conservation, management and protection for *Chorizanthe pungens* var. *pungens* (DON 2001). The DON has been responsive to our comments regarding actions for the conservation and protection of *C. p. var. pungens* and other listed species that occur at the Naval Postgraduate School. We have reviewed the final INRMP and have determined that it addresses the conservation needs of *C. p. var. pungens*. The dune area of the Naval Postgraduate School has been restored, is maintained as habitat for sensitive species, and is designated solely for research and interpretive uses. In addition, we have undergone formal consultation with the DON for actions under their ongoing and proposed vegetation management and restoration program for the Naval Postgraduate School, which is designed to benefit listed and sensitive species. Therefore, the 22 ha (55 ac) of land of the Naval Postgraduate School have not been included in this final designation of critical habitat for *C. p. var. pungens*, as we have determined that they do not require additional special management considerations or protection, and so do

not meet the definition of critical habitat.

7. Comment: Sand City requested that any property within the city be excluded from the Marina critical habitat unit because their Local Coastal Plan already requires them to work with the Service and they believe that designation of critical habitat will add another layer of coordination which is unnecessary.

Our Response: Upon further evaluation of the Marina unit, we revised the final designation to avoid areas that have been developed or otherwise significantly altered to such an extent that they do not provide one or more of the primary constituent elements essential for the conservation of *Chorizanthe pungens* var. *pungens*. We included lands in the Marina unit that we determined to be essential to the conservation of *C. p. var. pungens* and that may require special management considerations or protection. This includes lands within Sand City. Although the remaining natural lands of Sand City within the larger Marina critical habitat unit may not be currently occupied by *C. p. var. pungens*, they may play an important role in the conservation of *C. p. var. pungens* with additional protection and management. Management of *C. p. var. pungens* in Sand City and other areas of the Marina unit has been successful in the past, and we believe that *C. p. var. pungens* will respond well to additional protection and management in areas of the Marina unit not yet developed or significantly altered.

8. Comment: The Army, City of Marina, and Fort Ord Reuse Authority requested that areas designated for development in the 1997 Installation-wide Multispecies Habitat Management Plan for Former Fort Ord, California (HMP), be excluded from the Fort Ord critical habitat unit. They commented that those areas do not require special management consideration; that the Service, through the consultation process, already indicated in a biological opinion that the designated development parcels are not essential to the long-term preservation of sensitive species at the former Fort Ord; and that the benefits of excluding these areas outweigh the benefits of including them. The Army indicated that it intends to fully implement the HMP, consistent with other laws and regulations.

Our Response: We have reevaluated the configuration of lands included in the Fort Ord Unit, particularly with regard to the various land designations in the HMP, and have revised this critical habitat designation to avoid those lands designated in the HMP as

solely for development. Based on information obtained through several section 7 consultations, we have determined that these areas are not essential to the conservation of *Chorizanthe pungens* var. *pungens*.

Although we not including as critical habitat those lands that are designated for development, with no resource conservation requirements, the public should recognize that the lands included in this designation are not the only lands that may be important to the conservation of *Chorizanthe pungens* var. *pungens*. If habitat for this species on the lands designated as habitat reserve, habitat corridor, and development with reserve or development with restrictions, does not receive the special management it requires because the HMP is not fully implemented, then additional lands may be needed for the conservation of *C. p. var. pungens* on former Fort Ord.

9. Comment: The Moss Landing Harbor District (District) has requested that their 3-ha (8-ac) parcel be excluded from the Moss Landing critical habitat unit because they believe the site is not essential to the continuation of the species due to its small size, marginal habitat, and isolation from the rest of the unit. Moreover, they believe the designation would place an unfair burden on the District because they already informally consulted with the Service on their habitat restoration plan for the site; this plan, if successful, would provide enhanced habitat conditions and more protection for *Chorizanthe pungens* var. *pungens* than were on the site previously.

Our Response: We acknowledge the work that the District is undertaking to restore, enhance, and protect habitat for *Chorizanthe pungens* var. *pungens* on this site. We also acknowledge that even though the District was not required to consult with us previously, they sought our technical assistance. We support the District's habitat restoration efforts for this site. Even if the restoration plan is fully implemented, however, the sites supporting *C. p. var. pungens* will not be under permanent protection, and could possibly be impacted by future projects, such as the widening of Highway 1. We are including this parcel in the Moss Landing critical habitat unit because we believe that, even though it is geographically separated, it is still biologically connected to the rest of the Moss Landing critical habitat unit. In particular, because other parts of the Moss Landing critical habitat unit are close to the coast, the inland position of this parcel is important for avoiding random extinction of *C. p. var. pungens* in this unit due, for instance, to severe

winter storms. We have made minor modifications to the boundaries of this final critical habitat designation in this area, based on our improved mapping ability.

10. Comment: The Pebble Beach Company requested that their property in the Spanish Bay area be excluded from the Asilomar unit and cited a number of legal and procedural issues as well as biological arguments for doing so.

Our Response: Our response to the legal and procedural issues is included under Issue 4 below, and our responses to the biological arguments are included under Issue 1 above. We did not exclude all of Pebble Beach Company's property from the final designation. However, based on additional reports, photos and a map supplied by the Company, as well as recent aerial photos acquired by the Service and a site visit made by Service staff, we have reduced the amount of acreage of their lands included in the Asilomar unit by avoiding areas that do not contain one or more of the primary constituent elements essential for the conservation of *Chorizanthe pungens* var. *pungens*.

Issue 4: Legal and Procedural Comments

11. Comment: The Pebble Beach Company believes that they would unfairly be subject to additional regulatory burden by the inclusion of their lands in the designation of the Asilomar unit, where *Chorizanthe pungens* var. *pungens* occurs only by virtue of their restoration efforts.

Our Response: Private land owners are not required to consult with us under section 7 of the Act except when their actions involve a Federal nexus. See our response under Issue 1, above, that addresses the relationship of the restoration efforts to the presence of *Chorizanthe pungens* var. *pungens* on Company lands.

12. Comment: The Service did not follow the narrow criteria set forth in the ESA in proposing critical habitat, specifically: (a) Critical habitat is to be limited to those areas essential to species conservation; (b) legislative history shows that congressional intent was to have critical habitat narrowly defined; and (c) the proposal goes beyond the limited grounds for designating critical habitat.

Our Response: We developed the proposed and this final critical habitat designation consistent with the Act and our implementing regulations. The definition of critical habitat in section 3(5)(A) of the Act includes "(i) the specific areas within the geographic area occupied by a species, at the time it is listed in accordance with the provisions

of section 4 of this Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and (ii) specific areas outside the geographical area occupied by the species at the time it is listed * * * upon a determination by the Secretary that such areas are essential for the conservation of the species." The term "conservation", as defined in section 3(3) of the Act, means "to use and the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to the Act are no longer necessary."

In accordance with section 3(5)(A) of the Act, and regulations at 50 CFR 424.12, in determining which areas to propose as critical habitat we consider those physical and biological features (primary constituent elements) that are essential to the conservation of the species and that may require special management considerations or protection. As specified in the regulations, 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 germination, or seed dispersal; and habitats that are protected from disturbance or are representative of the historic geographical and ecological distributions of a species. This designation of critical habitat is consistent with these requirements of the Act and the regulations.

13. Comment: The proposed rule states that the Service is required to make decisions due to court-ordered deadlines even though the Service admits that little is known about the physical and biological requirement of the species. Therefore, the Service has violated the Administrative Procedure Act and is acting in an arbitrary and capricious manner by not going beyond the existing body of science where available methodologies may yield "as yet untapped sources of best scientific and commercial data" (*Roosevelt Campobello Intern. Park v. U.S.E.P.A.*, 684 F.2d 1041, 1055 (1st Cir. 1982) in Nossaman 2001).

Our Response: Under section 4(b)(2) of the Act, we are required to use the best scientific and commercial information available when designating critical habitat. During development of the proposed designation and following its publication during two open comment periods, we solicited biological data and public participation

in the rule making process. The comments received have been taken into consideration in the development of this final designation. In this final designation, we used information from: the CNDDDB (CNDDDB 2000); soil survey maps (Soil Conservation Service (SCS) 1978, 1980); recent biological surveys and reports; additional information provided by interested parties; and discussions with botanical experts. We also conducted site visits at a number of locations (see the Methods section of this rule for more information). We believe we have used the best available information and therefore, are not in violation of the APA. We will continue to monitor the species and collect new information. We may revise the critical habitat designation in the future if new information supports a change.

14. Comment: The proposed rule did not provide adequate notice to impacted landowners because it fails to identify the specific locations that contain the primary constituent elements, which illegally shifts the burden of determining critical habitat to the landowner.

Our Response: We published the proposed rule to designate critical habitat for *Chorizanthe pungens* var. *pungens* on February 15, 2001 (66 FR 10440), and accepted comments from the public for 60 days, until April 16, 2001. We contacted appropriate Federal, State, and local agencies, scientific organizations, elected officials, and other interested parties and invited them to comment. In addition, we invited public comment through the publication of a notice in the Santa Cruz Sentinel on February 24, 2001.

The proposed rule provided maps of the critical habitat units. The maps delineated the area covered with reference to street and natural landmark boundaries. More detailed mapping information was available to any interested individuals, organizations, local jurisdiction or State and Federal agencies upon their request during the 60-day comment period upon their request. No such requests for additional information were received.

We believe the information made available to the public was sufficiently detailed to allow for determination of critical habitat boundaries. In addition to the maps, specific information was provided in the proposed rule regarding the primary constituent elements are for *Chorizanthe pungens* var. *pungens*. The maps and the description of primary constituent elements together provide landowners with information necessary to determine whether any Federal action involving their property would trigger a section 7 consultation with the Service

with regard to critical habitat, or if the Federal action may affect the species and/or critical habitat adjacent to their property.

This final rule contains the legal descriptions of areas designated as critical habitat required under 50 CFR 424.12(c). If additional clarification is necessary, it can be provided by the Ventura Fish and Wildlife Office (see ADDRESSES section).

15. *Comment:* The proposed rule does not include an Economic Impact Analysis as required under the Endangered Species Act and the Regulatory Flexibility Act.

Our Response: We published a notice in the **Federal Register** on September 19, 2001 (66 FR 48228), announcing the reopening of the public comment period for the critical habitat designation, and a notice of availability of the draft Economic Analysis. This announcement was to allow for comments on the draft Economic Analysis and additional comments on the proposed determination itself. This second comment period closed October 19, 2001. We also published the draft Economic Analysis and associated material on our Fish and Wildlife Office internet site following the draft's release on September 19, 2001.

16. *Comment:* The proposed rule does not comply with NEPA as required by the Tenth Circuit Court of Appeals in *Catron County Bd. Of Comm'r N.M. v. United States Fish and Wildlife Service*, 75 F.3d 1429 (10th cir. 1996).

Our Response: We have determined that an Environmental Assessment and/or an Environmental Impact Statement as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act, as amended. A notice outlining our reason for this determination was published in the **Federal Register** on October 25, 1983 (48 FR 49244). Also, the public involvement and notification requirements under both the ESA and the APA provide ample opportunity for public involvement in the process, similar to the opportunities for public involvement and economic analysis of effects that would be provided in the NEPA process.

17. *Comment:* One commenter opposed the exemption from critical habitat of those lands that are included in HCPs, because they are never developed specifically for plants, and vary in the amount of conservation benefit provided to them through this process.

Our Response: We recognize that critical habitat is only one of many conservation tools for federally listed species. HCPs are one of the most important tools for reconciling land use with the conservation of listed species on non-Federal lands. Section 4(b)(2) of the Act allows us to exclude from critical habitat areas where the benefits of exclusion outweigh the benefits of designation, provided the exclusion will not result in the extinction of the species. We believe that in most instances the benefits of excluding lands covered by HCPs from critical habitat designations will outweigh the benefits of including them. Although "take" of listed plants is not prohibited by the Act, listed plant species may be, and often are, covered in HCPs for wildlife species.

We expect that HCPs undertaken by local jurisdictions (e.g., counties and cities) and other parties will identify, protect, and provide appropriate management for those specific lands within the boundaries of the plans that are essential for the long-term conservation of the species. Section 10(a)(2) of the Act states that HCPs must meet issuance criteria, including minimizing and mitigating any take of the listed wildlife species, to the maximum extent practicable. In addition, the action covered in the HCP must not appreciably reduce the likelihood of the survival and recovery of the species in the wild. We fully expect that our future Section 7 analyses of HCPs and section 10(a)(1)(B) permits will show that covered activities carried out in accordance with the provisions of the HCPs and section 10(a)(1)(B) permits will not result in the destruction or adverse modification of critical habitat.

In the one HCP issued that includes *Chorizanthe pungens* var. *pungens*, the habitat area is already managed for the benefit of this and other covered species under the terms of the associated section 10(a)(1)(B) permit. We believe the assurances provided through the HCP and permit are sufficient to provide for the conservation of *C. p. var. pungens*, and any additional benefit provided by designating these lands as critical habitat would be minimal, at best. In contrast, the benefits of excluding lands covered by this HCP will be significant in preserving positive relationships with our conservation partners, particularly by reinforcing the regulatory assurances provided for in the implementation agreement for the HCP. We believe these benefits outweigh the benefits of designating this area as critical habitat.

Summary of Changes From the Proposed Rule

In preparation for development of our final designation of critical habitat for *C. p. var. pungens* we reviewed comments received on the proposed designation of critical habitat and the draft Economic Analysis. We made several changes to our proposed designation, as follows:

(1) The description of the primary constituent elements was modified and clarified. One peer reviewer suggested expanding the list of primary constituent elements (see comment 3 in Summary of Comments section). However, we believed it was more appropriate to shorten the list of primary constituent elements from six to four elements. The two primary constituent elements that were included in the proposed rule but deleted in the final rule are: pollinator activity between existing colonies of *Chorizanthe pungens* var. *pungens*, and seed dispersal mechanisms between existing colonies and other potentially suitable sites. We deleted the two elements because we believe that the critical habitat units are of sufficient size and number that the ecosystem processes of pollinator activity and seed dispersal mechanisms are functioning normally and are not a factor in limiting the distribution of *C. p. var. pungens* to the extent that the other primary constituent elements are.

(2) We added a section describing Special Management Needs or Protections that *Chorizanthe pungens* var. *pungens* may require. We believe this new section will be useful in identifying activities that address section 3(5)(A)(i)(II) of the Act, and also assist land managers in developing management strategies for *C. p. var. pungens* on their lands.

(3) We deleted one of the eleven units described in the proposed rule and made changes in the boundaries of the remaining ten units, resulting in an overall total reduction of approximately 2,823 ha (6,989 ac), approximately 27 percent of the area that had been proposed for critical habitat. These changes are described below.

The Manresa unit was removed entirely from the critical habitat designation. Based upon recently gathered information, we determined that *Chorizanthe pungens* var. *pungens* does not occur within the unit. Previous records of *C. p. var. pungens* from Manresa State Beach are likely to have been made in error. The exclusion of this unit resulted in a reduction of approximately 40 ha (100 ac) compared to the proposed rule.

We made changes to the boundary lines on the remaining ten units. The new boundary lines were drawn within the boundary lines shown in the proposed designation; in no case were the new boundary lines drawn outside of those described in the legal description for the units in the proposed designation. The purpose of these changes was to avoid areas that obviously did not contain the primary constituent elements, and for which we were unable to draw more precise boundaries at the time of the proposed designation. The use of recently acquired high resolution aerial photographs dating from April 2000 enabled us to undertake this more precise mapping. These changes resulted in a total reduction of 377 ha (928 ac) in this final critical habitat designation.

These minor changes reduced the total amount of critical habitat by 15 percent or less in the final designation for 5 of the units. These units, and the approximate percent reduction for each, are as follows: Asilomar (13 percent), Del Rey Oaks (9 percent), Freedom (7 percent), Bel Mar (14 percent), and Prunedale (15 percent).

Changes in the boundary lines of the other five units resulted in excluding more than 15 percent of the critical habitat that was included in the proposed designation in each of those units. Changes in these units were made based on information supplied by commenters, as well as the use of the high resolution aerial photos, which indicated either that the primary constituent elements were not present in certain portions of the proposed unit, or that certain changes in land use had occurred on lands within the proposed designation that would preclude those areas supporting the primary constituent elements. The units with reductions of more than 15 percent in the final designation are: Sunset (35 percent), Moss Landing (36 percent), Marina (19 percent), Fort Ord (29 percent), and Soledad (79 percent).

A brief summary of the modifications made on each of the 10 units is provided below, beginning with the four coastal units and followed by the six inland units:

Coastal units

Unit A: Sunset Unit

The beaches within the surf zone were eliminated along the western boundary of this unit because they do not contain the primary constituent elements for *Chorizanthe pungens* var. *pungens*. The unit was reduced from 50 ha (130 ac) in the proposed rule to 35

ha (85 ac) in the final designation. Habitat supporting *C. p. var. pungens* populations within the State Beach to the east of Shell Road was inadvertently omitted from the proposed critical habitat designation, and so is not included in this final critical habitat designation.

Unit B: Moss Landing Unit

Major modifications were made to this unit to avoid areas that do not contain the primary constituent elements, including intertidal areas, wetlands, and areas that have been developed or significantly disturbed. These modifications resulted in a reduction from 283 ha (703 ac) in the proposed rule to 182 ha (452 ac) in the final designation.

Unit C: Marina Unit

Major modifications were made to this unit to avoid areas that do not contain the primary constituent elements, including areas that have been developed or significantly disturbed. Federal lands at the Naval Postgraduate School were not included in the final designation because DON has recently completed a final INRMP that addresses the conservation of *Chorizanthe pungens* var. *pungens* (U.S. Department of the Navy 2001). A 5-acre (2-ha) parcel on former Fort Ord lands that has been designated solely for development in the HMP was also removed. These changes also are discussed in the *Summary of Comments and Recommendations* section above (see our responses to comments 4 and 6). These modifications resulted in a reduction from 885 ha (2,190 ac) in the proposed rule to 720 ha (1,780 ac) in the final designation.

Unit D: Asilomar Unit

During the comment period, the Pebble Beach Company, which owns Spanish Bay, provided us with maps, reports, and aerial photos that allowed us to more accurately map habitat supporting the primary constituent elements on their property. The modifications to this unit resulted in a reduction from 145 ha (355 ac) in the proposed rule to 125 ha (310 ac) in the final designation. Also, during 2001 several populations of *Chorizanthe pungens* var. *pungens* were located that are adjacent to, but not in, this unit. One population is on Federal lands managed by the Coast Guard at Point Pinos Light Station, and one population is on private lands owned by Pebble Beach Company along 17 Mile Drive on the Monterey Peninsula. Habitat supporting these populations has not been included in this critical habitat unit because we

did not have information about them at the time the proposal was prepared and there was no opportunity to conduct an evaluation of whether they met the criteria for critical habitat, or to prepare and issue a revised proposal, including a revised draft Economic Analysis, for public comment within the schedule established by the court for completing the critical habitat designation.

Inland units

Unit E: Freedom Boulevard Unit

Minor modifications were made on this unit to remove areas that do not contain the primary constituent elements, including areas that have been developed or are heavily wooded. These modifications resulted in a reduction from 90 ha (220 ac) in the proposed rule to 85 ha (205 ac) in the final designation.

Unit F: Bel Mar Unit

Minor modifications were made on this unit to remove areas that do not contain the primary constituent elements, including areas that have been developed or paved. These modifications resulted in a reduction from 40 ha (95 ac) in the proposed rule to 33 ha (82 ac).

Unit G: Prunedale Unit

Modifications were made to this unit to remove areas that do not contain the primary constituent elements, including areas that have been developed, paved, or have been significantly disturbed by agriculture. These modifications resulted in a reduction from 2,135 ha (5,280 ac) in the proposed rule to 1,815 ha (4,485 ac). We also corrected the description of land ownership in this unit to reflect ownership of parcels by Caltrans. During the public comment period, we received information from the Elkhorn Slough Foundation that two populations of *Chorizanthe pungens* var. *pungens* occur on lands they manage for The Nature Conservancy (TNC) to the northwest of this unit. Habitat supporting these populations has not been included in this critical habitat unit because we did not have information about them at the time the proposal was prepared and there was no opportunity to conduct an evaluation of whether they met the criteria for critical habitat, or to prepare and issue a revised proposal, including a revised draft Economic Analysis, for public comment within the schedule established by the court for completing the critical habitat designation.

Unit H: Fort Ord Unit

Substantial modifications were made to this unit to remove areas designated

in the HMP for this area as "Development" that have no HMP resource conservation requirements. Areas designated in the HMP as "Habitat Reserve," "Habitat Corridor," and "Development with Reserve or Development with Restrictions" were retained in this unit, as were easements that cross lands with these designations. The reasons for removing areas designated for development in this unit are discussed under the paragraphs about former Fort Ord in the section titled "Criteria Used to Identify Critical Habitat," and in Comment 8 in the Summary of Comments and Recommendations section. In the north area of former Fort Ord, the Service has followed existing habitat reserve lines in designating final critical habitat. We recognize that the habitat corridor that connects the North and South Reserves of the University of California's Natural Reserve System on former Fort Ord is narrow and tenuously connects the adjacent reserves. We encourage those entities who own surrounding natural lands that are designated for development to consider and accommodate functioning of this area as a corridor for the movement of seeds, seed dispersers, and pollinators whenever possible. The modifications to this unit and some corrections in habitat acreages resulted in a reduction from 5,995 ha (14,810 ac) in the proposed rule to 4,265 ha (10,530 ac).

Unit I: Del Rey Oaks Unit

Minor modifications were made to this unit to remove areas that do not contain the primary constituent elements, including the runways at the Monterey Airport, and other areas that have been developed, paved, or have been significantly disturbed. These modifications resulted in a reduction from 280 ha (700 ac) in the proposed rule to 255 ha (640 ac).

Unit J: Soledad Unit

Major modifications were made to this unit to remove areas that do not contain the primary constituent elements. Most of the area surrounding the eastern subunit are in agricultural production. In addition, we have eliminated the western subunit because, based on a site visit we conducted following the proposed rule, we now believe the primary constituent elements that would support the species are not present there. These modifications resulted in a reduction from 500 ha (1,235 ac) in the proposed rule to 105 ha (260 ac).

Critical Habitat

Critical habitat is defined in section 3 of the Act as—(i) the specific areas within the geographic 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) which may require special management considerations or protection; and (ii) specific areas outside the geographical area occupied by the species at the time it is listed upon a determination that such areas are essential for the conservation of the species. "Conservation" is defined in section 3 of the Act as meaning the use of all methods and procedures that are necessary to bring an endangered or a threatened species to the point at which listing under the Act is no longer necessary.

Critical habitat receives protection under section 7(a)(2) of the Act through the prohibition against destruction or adverse modification of critical habitat with regard to actions authorized, funded, or carried out by a Federal agency. Also, section 7(a)(4) of the Act requires conferences on Federal actions that are likely to result in the destruction or adverse modification of proposed critical habitat. In regulations at 50 CFR 402.02, we define destruction or adverse modification as "a direct or indirect alteration that appreciably diminishes the value of critical habitat for both the survival and recovery of a listed species. Such alterations include, but are not limited to, alterations adversely modifying any of those physical or biological features that were the basis for determining the habitat to be critical." Because consultation under section 7 of the Act does not apply to activities on private or other non-Federal lands that do not involve a Federal nexus, critical habitat designation would not result in any regulatory requirements for these actions.

The designation of critical habitat does not, in itself, lead to recovery of a listed species. The designation of critical habitat does not create a management plan, establish a preserve, reserve, or wilderness area where no actions are allowed, it does not establish numerical population goals, prescribe specific management actions (inside or outside of critical habitat), or directly affect areas not designated as critical habitat.

In order to be included in a critical habitat designation, the habitat must first be "essential to the conservation of the species." Critical habitat

designations identify, to the extent known, and using the best scientific and commercial data available, habitat areas that provide essential life cycle needs of the species (*i.e.*, areas on which are found the primary constituent elements, as defined at 50 CFR 424.12(b)).

Section 4 of the Act requires that we designate critical habitat for a species, to the extent such habitat is determinable, at the time of listing. We are required to designate those areas we know to be critical habitat, using the best information available to us.

Within the geographic area occupied by the species, we are designating only areas currently known to be essential. Essential areas contain the features and habitat characteristics that are necessary to sustain the species, as defined at 50 CFR 424.12(b). We will not speculate about what areas might be found to be essential if better information becomes available, or what areas may become essential over time.

Our regulations state that, "The Secretary shall designate as critical habitat areas outside the geographic area presently occupied by the species only when a designation limited to its present range would be inadequate to ensure the conservation of the species." (50 CFR 424.12(e)). Accordingly, when the best available scientific and commercial data do not demonstrate that the conservation needs of the species can not be met within currently occupied areas, we will not designate critical habitat in areas outside the geographic area occupied by the species.

Our Policy on Information Standards

Under the Endangered Species Act, published in the **Federal Register** on July 1, 1994 (59 FR 34271), provides criteria, establishes procedures, and provides guidance to ensure that our decisions represent the best scientific and commercial data available. This policy requires our biologists, to the extent consistent with the Act and with the use of the best scientific and commercial 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 should be the listing package for the species. Additional information may be obtained from a recovery plan, articles in peer-reviewed journals, conservation plans developed by States and counties, scientific status surveys and studies, biological assessments, unpublished materials, and expert opinions.

Habitat is often dynamic, and populations 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, it is important to understand that critical habitat designations do not signal that habitat outside the designation is unimportant or may not be required for recovery. Areas outside the critical habitat designation will continue to be subject to conservation actions that may be implemented under section 7(a)(1) of the Act and to the regulatory protections afforded by the section 7(a)(2) jeopardy standard and the prohibitions of section 9 of the Act, as determined on the basis of the best available information at the time of the action. We specifically anticipate that federally funded or assisted 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 the Act and regulations (section 4(b)(2) and 50 CFR 424.12) we used the best scientific information available to determine areas that contain the physical and biological features that are essential for the conservation of *Chorizanthe pungens* var. *pungens*. This included information from the CNDDB (CNDDB 2000), soil survey maps (SCS1978,1980), recent biological surveys and reports, additional information provided by interested parties, and discussions with botanical experts.

We also reviewed the goals for the delisting of *Chorizanthe pungens* var. *pungens* included in our recovery plan that addresses seven coastal plant taxa and the Myrtle's silverspot butterfly (Service 1998). The criteria for delisting *C. p. var. pungens* include: (1) The funding and implementation of permanent protection of *C. p. var. pungens* through the Fort Ord disposal and reuse process, and (2) the permanent protection of private and public lands on the beaches and dunes along the coast that are occupied by *C. p. var. pungens* or contain its habitat. At the time the recovery plan was prepared, Fort Ord was considered the most important inland occurrence of *C. p. var. pungens* because of the extent of

habitat it occupied there. The discovery of additional inland populations over the last few years has led us to conclude that these other sites are equally as important in contributing to the long-term conservation of the species.

The plan calls for the following recovery actions: (1) Protect habitat for *Chorizanthe pungens* var. *pungens* by working with landowners and local lead agencies; (2) obtain life history and response-to-management information, particularly concerning the role of substrate disturbance in the establishment and persistence of *C. p. var. pungens*; (3) develop and implement management practices for occurrences of *C. p. var. pungens*, particularly with respect to controlling invasive, non-native species; (4) monitor occurrences for population trends and for effectiveness of reducing and eliminating threats; and (5) increase public awareness of the species and its associated habitats through various outreach efforts. Although the recovery plan does not provide more detailed conservation recommendations for specific areas, we believe that the designation of critical habitat for *C. p. var. pungens* is consistent with these recommended recovery actions.

We also conducted site visits. Frequently we were accompanied by agency representatives at locations managed by local, State or Federal agencies, including Manresa, Sunset, Marina, Monterey, and Asilomar State Beaches; Service lands at Salinas River National Wildlife Refuge; Bureau of Land Management (BLM) lands at former Fort Ord; Moss Landing Marine Laboratory; Moss Landing North Harbor District; Monterey Airport; Caltrans lands in the vicinity of Prunedale; and Manzanita County Park. We have also made site visits to certain privately owned lands, such as those owned by Pebble Beach Company along 17-Mile Drive and at Spanish Bay, and those owned by TNC at Blohm Ranch.

Much of the coastline along Monterey Bay and the Monterey Peninsula includes resources of concern to the California Coastal Commission (Commission). The Coastal Act requires that projects within the coastal zone be reviewed and permitted by the Commission, or by local planning agencies that have a Local Coastal Plan (LCP) certified by the Commission. Section 30240 of the Coastal Act requires that areas recognized as environmentally sensitive habitat areas (ESHAs) be protected against any significant disruption of habitat values. Only uses dependent on those resources shall be allowed within those areas. In general, dunes are considered ESHAs

because they include plant or animal life or their habitats which are either rare or especially valuable because of their special nature or role in the ecosystem and which could be easily disturbed or degraded by human activities and developments (Coastal Commission 2001). The counties of Santa Cruz and Monterey both have LCPs that allow only resource-dependent uses in habitats known to support rare and endangered species. The County of Monterey also recognizes dune habitat, with or without rare and endangered species, as ESHAs, and requires the protection of environmentally sensitive habitats in new land divisions or developments through deed restrictions or dedications of permanent conservation easements. The County of Santa Cruz requires protection of environmentally sensitive habitats through dedication of an open space or conservation easement to protect the portion of a sensitive habitat that is undisturbed by the proposed development (Service 1998). Local jurisdictions may request amendments to their LCPs from the Commission to allow for changes in land use not consistent with the current plan.

These initiatives and planning efforts all recognize the sensitivity of the coastal habitats and resources along this portion of the central California coast. Due to the historic loss of the habitats that supported *Chorizanthe pungens* var. *pungens*, and in consideration of the primary constituent elements essential to the conservation of the species, we believe that future conservation and recovery of this species depends not only on protecting it in the areas that it currently occupies, but also on providing the opportunity for it to shift in distribution over time, and to increase its current distribution by designating currently unoccupied habitat within its range.

All of the critical habitat units are occupied by either above-ground plants or a seed bank. "Occupied" is defined here as an any area with above-ground *Chorizanthe pungens* var. *pungens* plants or a *C. p. var. pungens* seed bank of indefinite boundary. Current surveys need not have identified above-ground individuals for the area to be considered occupied because plants may still exist at the site as part of the seed bank (Given 1994). All occupied sites contain some or all of the primary constituent elements that are essential to the conservation of the species, as described below. In addition, each of the units probably contain areas currently unoccupied by the species. "Unoccupied" is defined here as an area that contains no above-ground *C. p. var.*

pungens plants and that is unlikely to contain a viable seed bank. For the reasons discussed above, both occupied and unoccupied areas that are designated as critical habitat are essential to the conservation of the species.

Determining the specific areas that this taxon occupies is difficult for several reasons: (1) The distribution of *Chorizanthe pungens* var. *pungens* appears to be more closely tied to the presence of sandy soils than to specific plant communities; the plant communities may undergo changes over time, which, due to the degree of cover that is provided by that vegetation type, may or may not favor the growth of *C. p. var. pungens* above ground; (2) the way the current distribution of *C. p. var. pungens* is mapped can vary, depending on the scale at which patches of individuals are recorded (e.g., many small patches versus one large patch); and (3) depending on the climate and other annual variations in habitat conditions, the extent of the distributions may either shrink and temporarily disappear, or, if there is a residual seedbank present, enlarge and cover a more extensive area. Because it is difficult to determine how extensive the seed bank is at any particular site and because above-ground plants may or may not be present in all patches within a site every year, we cannot quantify in any meaningful way what proportion of each critical habitat unit may actually be occupied by *C. p. var. pungens*. Therefore, patches of unoccupied habitat are interspersed with patches of occupied habitat; the inclusion of unoccupied habitat in our critical habitat units reflects the dynamic nature of the habitat and the life history characteristics of this taxon. Unoccupied areas provide habitat into which populations might expand, provide connectivity or linkage between colonies within a unit, and support populations of pollinators and seed dispersal organisms.

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 and biological features (primary constituent elements) that are essential to the conservation of the species and 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 germination, or seed dispersal; and habitats that are protected from disturbance or are representative of the historic geographical and ecological distributions of a species.

Much of what is known about the specific physical and biological requirements of *Chorizanthe pungens* var. *pungens* is described in the Background section of this final rule.

Several coastal dune restoration efforts have included measures to propagate and reintroduce *Chorizanthe pungens* var. *pungens*, notably at Moss Landing North Harbor, Pajaro Dunes, and the University of California's Moss Landing Marine Laboratory (MLML). Such efforts have contributed to our understanding that *C. p. var. pungens* readily grows where suitable sandy substrates occur and competition with other plant species is minimal (Harding Lawson Associates 2000; J. Dorrell-Canepa, pers. comm., 2000; P. Slattery, dune ecologist, MLML, pers. comm., 2000). Where *C. p. var. pungens* occurs within native plant communities, along the coast as well as at more interior sites, it occupies microhabitat sites found between scrub and shrub stands where there is little cover from other herbaceous species. Where *C. p. var. pungens* occurs within grassland communities, the density of *C. p. var. pungens* may decrease with an increase in the density of other herbaceous species.

As has been observed at former Fort Ord, human caused disturbance, such as scraping along roadsides and firebreaks, can favor the abundance of *Chorizanthe pungens* var. *pungens* by reducing competition from other herbaceous species. However, because such disturbance also can promote the spread and establishment of non-native species, can bury the seedbank of *C. p. var. pungens*, and does not result in the cycling of nutrients and soil microbial changes that occur from fire, this type of management may not sustain populations over the long term and would likely result in a general degradation of habitat for *C. p. var. pungens* if conducted over large areas. At other locations where *C. p. var. pungens* occurs, its habitat may include a large complement of non-native species. Management activities such as mowing, scraping, or in some situations, tilling, would need to be repeated frequently and may not be practical in all areas where *C. p. var. pungens* habitat includes a complement of non-native species. Moreover, while the presence of *C. p. var. pungens* could be maintained in areas with a high abundance of non-native species, the habitat quality of these areas may be less

than areas where the presence of non-native species is minimal.

Based on our knowledge to date, the primary constituent elements of critical habitat for *Chorizanthe pungens* var. *pungens* are:

(1) Sandy soils associated with active coastal dunes, coastal bluffs with a deposition of windblown sand, inland sites with sandy soils, and interior floodplain dunes;

(2) Plant communities that support associated species, including coastal dune, coastal scrub, grassland, maritime chaparral, oak woodland, and interior floodplain dune communities, and have a structure with openings between the dominant elements (e.g., scrub, shrub, oak trees, clumps of herbaceous vegetation);

(3) No or little cover by non-native species which compete for resources available for growth and reproduction of *Chorizanthe pungens* var. *pungens*; and

(4) Physical processes, such as occasional soil disturbance, that support natural dune dynamics along coastal areas.

Site selection

We selected critical habitat areas to provide for the conservation of *Chorizanthe pungens* var. *pungens* at four coastal sites and six inland sites where it is known to occur. Historic locations for which there are no recent records of occupancy (within the last 20 years) were not proposed for designation, including large areas of the Salinas Valley floodplain that have been converted to agriculture over the last 100 years and potentially suitable areas around San Simeon in San Luis Obispo County and along the Salinas River near San Lucas in Monterey County.

The long term probability of the conservation of *Chorizanthe pungens* var. *pungens* is dependent upon the protection of existing population sites, and the maintenance of ecological functions within these sites, including connectivity between sites within close geographic proximity to facilitate pollinator activity and seed dispersal mechanisms, and the ability to maintain disturbance factors (for example, dune dynamics in the coastal sites, and fire disturbance at inland sites) that maintain the openness of vegetative cover on which the species depends. Threats to the habitat of *C. p. var. pungens* include: industrial and recreational development; road development; human and equestrian recreational use; and dune stabilization as a result of the introduction of non-native species (59 FR 5499; February 4, 1994). The areas we are designating as critical habitat provide some or all of

the habitat components essential for the conservation of *C. p. var. pungens*. Given the species' need for an open plant community structure and the risk from non-native species invasions, we believe that these areas may require special management considerations or protection.

Special Management Considerations or Protections

Special management considerations or protections may be needed to maintain the primary constituent elements for *Chorizanthe pungens* var. *pungens* within the units designated as critical habitat. In some cases, protection of existing habitat and current ecological processes may be sufficient to ensure that populations of *C. p. var. pungens* are maintained at those sites, and have the ability to reproduce and disperse into surrounding habitat. In other cases, however, active management may be needed to maintain the primary constituent elements for *C. p. var. pungens*. We have outlined below the most likely kinds of special management and protection that *C. p. var. pungens* may require.

(1) In near-coastal areas, the supply and movement of sand along the coast must be maintained to create the dynamic dune habitats that are needed for *Chorizanthe pungens* var. *pungens*.

(2) In more interior locations, the sandy soils on which *Chorizanthe pungens* var. *pungens* is found should be maintained to optimize conditions for it. Physical properties of the soil, such as its chemical composition, salinity, and drainage capabilities would best be maintained by limiting or restricting the use of herbicides, fertilizers, or other soil amendments that are applied.

(3) The associated plant communities must be maintained to ensure that the habitat needs of pollinators and dispersal agents are maintained. The use of pesticides should be limited or restricted so that viable populations of pollinators are present to facilitate reproduction of *Chorizanthe pungens* var. *pungens*. Fragmentation of habitat (e.g. through construction of roads or certain types of fencing) should be limited so that seed dispersal agents may move seed of *C. p. var. pungens* throughout the unit.

(4) In some plant communities, it may be important to maintain a mosaic of different-aged stands of coastal scrub or maritime chaparral patches so that openings that support *Chorizanthe pungens* var. *pungens* will be maintained. Depending on location, the use of prescribed fire, thinning, or other

forms of vegetation management may be useful in creating and maintaining this type of mosaic, particularly if natural processes that generally result in maintaining such a mosaic are altered due to human activities.

(5) In all plant communities where *Chorizanthe pungens* var. *pungens* occurs, invasive, non-native species such as harding grass (*Phalaris aquatica*), veldt grass (*Ehrharta* sp.), European beachgrass, iceplant, and other species need to be actively managed to maintain the open habitat that *C. p. var. pungens* needs.

(6) Certain areas where *Chorizanthe pungens* var. *pungens* occurs may need to be fenced to protect them from accidental or intentional trampling by humans or livestock. While *C. p. var. pungens* appears to withstand light to moderate disturbance, heavy disturbance may be detrimental to its persistence. Seasonal exclusions may work in certain areas to protect *C. p. var. pungens* during its critical season of growth and reproduction.

Criteria Used to Identify Critical Habitat

We believe it is important to preserve all areas that currently support native populations of *Chorizanthe pungens* var. *pungens* because the species has undergone a reduction in range which places a great importance on the conservation of all the known remaining sites. When possible, areas that were in close geographic proximity were included in the same unit to emphasize the need to maintain connectivity between different populations. We also included habitat for *C. p. var. pungens* adjacent to and contiguous to areas of known occurrences to maintain landscape scale processes. Some units were mapped with a greater precision than others, based on the available information and the size of the unit. Each unit contains habitat that is occupied by *C. p. var. pungens*.

The proposed critical habitat units were delineated by creating data layers in a geographic information system (GIS) format of the areas of known occurrences of *Chorizanthe pungens* var. *pungens*, using information from the CNDDDB (CNDDDB 2000), recent biological surveys and reports, our recovery plan for this species, and discussions with botanical experts. These data layers were created on a base of USGS 7.5' quadrangles obtained from the State of California's Stephen P. Teale Data Center. We defined the boundaries for the proposed critical habitat units using roads and known landmarks and, if necessary, township, range, and section numbers from the

public land survey. During preparation of the final rule, we found several discrepancies between the legal description of the boundaries of the critical habitat units and the boundaries of the units as depicted in the maps accompanying the proposed rule. The discrepancies resulted primarily through our use of data layers created at a small scale (e.g., 1:100,000 scale USGS mapping) during preparation of the maps of proposed critical habitat. For the final rule, the mapped boundaries of critical habitat first were corrected to be consistent with the boundaries as described in the proposed rule. We then modified the boundaries of proposed critical habitat using information on the location of existing developed areas from recent aerial imagery (April, 2000), additional information from botanical experts, and comments on the proposed rule. The boundaries of the final critical habitat units are defined by Universal Transverse Mercator (UTM).

We also considered the status of habitat conservation plan (HCP) efforts in proposing areas as critical habitat. Section 10(a)(1)(B) of the Act authorizes us to issue permits for the take of listed wildlife species incidental to otherwise lawful activities. An incidental take permit application must be supported by an HCP that identifies conservation measures that the permittee agrees to implement for the species to minimize and mitigate the impacts of the permitted incidental take. Although "take" of listed plants is not prohibited by the Act, listed plant species may also be covered in an HCP developed primarily for wildlife species.

The only HCP that is operative and has an executed Implementation Agreement within the critical habitat that was proposed for *Chorizanthe pungens* var. *pungens* is the HCP for the North of Playa project site (Zander Associates 1995), within Sand City (Marina Unit). Subsection 4(b)(2) of the Act allows us to exclude from critical habitat designation areas where the benefits of exclusion outweigh the benefits of designation, provided the exclusion will not result in the extinction of the species.

Habitat for *Chorizanthe pungens* var. *pungens* in the North of Playa HCP plan area is already managed for the benefit of this and other covered species under the terms of the associated section 10(a)(1)(B) permit. We believe the assurances provided through the HCP and permit are sufficient to provide for the conservation of *C. p. var. pungens* in that area. Any additional benefit provided by designating these lands as critical habitat would be minimal at best. In contrast, the benefits of

excluding lands covered by this HCP would be significant in preserving positive relationships with our conservation partners, particularly by reinforcing the regulatory assurances provided for in the implementation agreement for the HCP. We believe they outweigh the benefits of designating this area as critical habitat. Furthermore, we have determined that excluding this area from critical habitat designation will not result in the extinction of the species. The main regulatory benefit of critical habitat designation is the requirement that Federal agencies consult with us and ensure that their actions do not destroy or adversely modify designated critical habitat. As these areas are occupied by the species, Federal agencies are already required to consult with us and ensure their actions here do not jeopardize the continued existence of the species. This requirement will ensure that excluding this area does not result in the extinction of the species. Consequently, these lands have not been included in this critical habitat designation for the Marina Unit.

A large planning effort is currently underway to address the conservation needs for a number of threatened and endangered species, in addition to sensitive unlisted species, for the lands formerly known as Fort Ord. The Defense Base Realignment and Closure Commission selected the 11,340-ha (28,000-ac) Fort Ord for closure in 1991. As a requirement of a biological opinion issued by the Service in 1993, the *Installation-wide Multispecies Habitat Management Plan for Former Fort Ord, California* (HMP), was prepared in 1994 and revised in 1997 by the Army to address listed, proposed, candidate, and sensitive species and their habitat. The HMP provides a comprehensive plan for minimizing and mitigating impacts to sensitive species and their habitats while allowing disposal and redevelopment of the base. Under the HMP, over 6,880 ha (17,000 ac) is designated for eventual habitat conservation. The Bureau of Land Management (BLM) will receive approximately 6,070 ha (15,000 ac) of undeveloped land to be managed for habitat and sensitive species. California Department of Parks and Recreation (CDPR) will receive the coastal properties, a large portion of which will be restored and managed for sensitive species. Several other entities will also receive property which they will manage for conservation of habitat and sensitive species. The remaining areas of the base, including many areas that have already been developed as part of

the base operations, will be available for land development. As of October 2001, a total of approximately 4,290 ha (10,600 ac) of former Fort Ord had been transferred. Approximately 3,160 ha (7,800 ac) identified as habitat reserve were transferred, of which about 2,910 ha (7,200 ac) were transferred to BLM, 215 ha (530 ac) were transferred to the University of California, Santa Cruz, and 16 ha (40 ac) were transferred to the City of Marina.

The Service has designated critical habitat on lands of the former Fort Ord specified as "Habitat Reserve," "Habitat Corridor," and "Development with Reserve Areas or Development with Restrictions" as shown on the map and post-transfer modifications of the HMP. In finalizing this critical habitat rule we have not included lands that the HMP designated solely for development, with no accompanying resource conservation requirements, that were included as critical habitat in the proposed rule. Lands within easements remain in this critical habitat designation where they cross the Reserve, Corridor, or Development with Reserve designations listed above.

The Service has consulted with the Army on the closure and reuse of Fort Ord. The Fort Ord critical habitat unit is entirely encompassed within the area covered by that consultation. The biological opinions resulting from consultation with the Army on the closure and reuse of former Fort Ord determined that development according to the HMP would not jeopardize the continued existence of *Chorizanthe pungens* var. *pungens*. This determination was based on full implementation of the HMP, including the appropriate management of habitat reserve areas. Recently, the Army's ability to fully implement the HMP has come into question. Specifically, the Army's ability to conduct prescribed burns to clear vegetation in habitat reserve areas was impeded by two lawsuits brought by the Monterey Bay Unified Air Pollution Control District against the Army during the past several years. The Army uses prescribed burns to clear vegetation prior to the cleanup of ammunition and explosives that remain on former ranges. Following a ruling on the most recent of these lawsuits, the Army is embarking on an evaluation of alternative methods of vegetation clearance, including prescribed burning, under CERCLA. If the Army is not able to fully implement those measures in the HMP that protect and conserve listed and sensitive species, then the design of reserve and development lands may need to be

reevaluated along with this critical habitat designation.

On former Fort Ord lands, the HMP would be the basis of each subsequent HCP submitted by a non-Federal land recipient applying for a section 10(a)(1)(B) incidental take permit. A draft programmatic HCP submitted by the Fort Ord Reuse Authority is under review by the Service.

Throughout this designation, in selecting areas of critical habitat we made an effort to avoid developed areas, such as housing developments, that are unlikely to contribute to the conservation of *Chorizanthe pungens* var. *pungens*. However, we did not map critical habitat in sufficient detail to exclude all developed areas, or other lands unlikely to contain the primary constituent elements essential for the conservation of *C. p.* var. *pungens*. Areas within the boundaries of the mapped units, such as buildings, roads, parking lots, railroads, airport runways and other paved areas, lawns, and other urban landscaped areas will not contain any of the primary constituent elements. Therefore, Federal actions limited to these areas would not trigger a section 7 consultation unless it is determined that such actions may affect the species and/or its designated critical habitat (e.g. certain actions may affect the species or its critical habitat an adjacent area).

Critical Habitat Designation

The critical habitat areas described below constitute our best assessment at this time of the areas needed for the conservation of *Chorizanthe pungens* var. *pungens*. Critical habitat for *C. p.* var. *pungens* includes 10 units that currently support the species. The areas being designated as critical habitat are either along the coast between Sunset State Beach in Santa Cruz County, south to Asilomar State Beach in Monterey County, or are at inland sites ranging from the Aptos area in Santa Cruz County, south to a stretch of the Salinas River near Soledad in Monterey County, California, and include the appropriate dune, maritime chaparral, or oak woodland habitats that support *C. p.* var. *pungens*. We have designated approximately 7,620 ha (18,830 acres) of land as critical habitat for *C. p.* var. *pungens*. Approximately 57 percent of this area consists of Federal lands, while State lands comprise approximately 9 percent, County and other local jurisdiction lands comprise approximately 4 percent, and private lands comprise approximately 31 percent of the critical habitat.

A brief description of each critical habitat unit is given below:

Coastal units

Unit A: Sunset Unit

Unit A includes approximately 35 ha (85 ac) of critical habitat, consisting of coastal beaches, dunes, and bluffs west of Watsonville in southern Santa Cruz County. This entire unit is within Sunset State Beach. The unit includes land from Sunset Beach Road south to the gate on Shell Road, just north of the mouth of the Pajaro River, and west of the main road that extends the length of the park. This unit supports a population of *Chorizanthe pungens* var. *pungens* that numbers in the tens of thousands. This unit is important because it supports the northernmost population found along the coast, as well as being one of only four populations along the coast. Preserving the genetic characteristics that have allowed individuals at this site to survive under these slightly different environmental conditions (*i.e.*, more northerly coastal conditions) may be important for the long-term survival and conservation of *C. p.* var. *pungens*.

Unit B: Moss Landing Unit

Unit B includes approximately 182 ha (452 ac) of critical habitat. It consists of coastal beaches, dunes, and bluffs to the north and south of the community of Moss Landing in northern Monterey County. The northern portion of this unit includes lands owned and managed by the State, including portions of Zmudowski State Beach and Moss Landing State Beach as well as the private land between these two parks, between the mouths of the Pajaro River and Elkhorn Slough. The southern portion of this unit includes two portions of Salinas River State Beach and the private lands between these two portions. Two other small pieces of the unit include portions of the Moss Landing North Harbor District (MLNHD), and the MLML. Local agency lands (MLNHD) comprise 2 percent of the unit, while State lands comprise 86 percent, and private lands comprise 12 percent of the unit. This unit currently supports a population of *Chorizanthe pungens* var. *pungens* that numbers in the tens of thousands (P. Slattery, MLML, pers. comm., 2001). This unit is important because it supports one of only four populations found along the coast and because it provides connectivity between the Sunset unit to the north, and the Marina unit to the south.

Unit C: Marina Unit

Unit C contains approximately 720 ha (1,780 ac) of critical habitat. The unit consists of coastal beaches, dunes, and

bluffs ranging from just south of the mouth of the Salinas River, south to the city of Monterey in northern Monterey County. These lands are almost entirely west of Highway 1, with the exception of a small portion of land between Del Monte Boulevard and Highway 1 in Sand City. Federal lands, which comprise 44 percent of the unit, include a portion of the Salinas River National Wildlife Refuge, and lands known as former Fort Ord. State lands, which comprise 3 percent of the unit, include Marina State Beach and Monterey State Beach. Private lands account for 53 percent of the unit. An area of 1.9 ha (4.6 ac) within Sand City known as North of Playa, has been excluded from the unit because a HCP for this restoration site included *Chorizanthe pungens* var. *pungens* as a covered species. In addition, Federal lands at the Naval Postgraduate School were not included, because DON has recently completed a final INRMP that addresses the conservation of *C. p.* var. *pungens*. This unit currently supports a population of *C. p.* var. *pungens* that numbers in the tens of thousands. This unit is important because it supports one of only four populations found along the coast and because it provides connectivity between the coastal populations and the more interior populations found at former Fort Ord.

Unit D: Asilomar Unit

Unit D includes approximately 125 ha (310 ac) of critical habitat. It consists of coastal dunes and bluffs near the communities of Pacific Grove and Pebble Beach on the Monterey Peninsula in northern Monterey County. The unit is generally bounded by the extrapolated western extension of Lighthouse Avenue to the north and the portion of 17 Mile Drive between Point Joe and Sloat Road to the south. It is bounded on the east by Sunset Drive south to Arena Avenue, Arena Avenue to Asilomar Boulevard, Asilomar Boulevard to Highway 68, from this corner generally south to the junction of 17 Mile Drive and Spanish Bay Road. The unit is comprised of State lands at Asilomar State Beach (about 80 percent) and private lands, including those near Spanish Bay (about 20 percent). This unit currently supports a population of *Chorizanthe pungens* var. *pungens* that numbers in the thousands. This unit is important because it supports one of only four populations found along the immediate coast, and is also the southernmost occurrence of *C. p.* var. *pungens* along the coast. Preserving the genetic characteristics that have allowed individuals at this site to survive under these slightly different environmental

conditions (*i.e.*, more southerly coastal conditions) may be important for the long-term survival and conservation of *C. p.* var. *pungens*.

Inland Units

Unit E: Freedom Boulevard Unit

Unit E includes approximately 85 ha (205 ac) of critical habitat. The unit consists of grassland, maritime chaparral, and oak woodland habitat near the western terminus of Freedom Boulevard and northeast of Highway 1 in Santa Cruz County. The unit is bounded on the western boundary by Freedom Boulevard from Valencia Road to McDonald Road, then north on McDonald Road to Apple Road. The northern boundary runs approximately 0.4 km (0.25 mi) east from McDonald Road, then jogs south to Freedom Boulevard, and follows Freedom Boulevard for approximately 0.8 km (0.5 mi). The eastern boundary heads directly south from Freedom Boulevard at this point for approximately 0.6 km (0.4 mi). The southern boundary heads directly west from this point to Freedom Boulevard near the intersection with Valencia Road. This entire unit consists of privately owned lands. This unit currently supports a population of *Chorizanthe pungens* var. *pungens* that numbers in the thousands in favorable years, but many fewer in unfavorable years. This unit is important because it, along with the Bel Mar unit, is the northernmost occurrence away from the immediate coast. Preserving the genetic characteristics that have allowed individuals at this site to survive under these slightly different environmental conditions (*i.e.*, at the northern end of its range) may be important for the long-term survival and conservation of *C. p.* var. *pungens*.

Unit F: Bel Mar Unit

Unit F includes approximately 33 ha (82 acres) of critical habitat. The unit consists of maritime chaparral habitat near the terminus of East Bel Mar Drive, between Larkin Valley Road and Highway 1 near the community of La Selva Beach in southern Santa Cruz County. This unit consists of privately owned lands, with 3 acres of State lands, and currently supports a population of *Chorizanthe pungens* var. *pungens* that numbers in the thousands in favorable years, but many fewer in unfavorable years. This unit is important because it, along with the Freedom unit, is the northernmost occurrence away from the immediate coast. Preserving the genetic characteristics that have allowed individuals at this site to survive under

these slightly different environmental conditions (*i.e.*, at the northern end of its range) may be important for the long-term survival and conservation of *C. p. var. pungens*.

Unit G: Prunedale Unit

Unit G includes approximately 1,815 ha (4,485 ac) of critical habitat. It consists of grassland, maritime chaparral, and oak woodland in the area around Prunedale in northern Monterey County. On the west side of Highway 101, the unit includes Manzanita County Park located between Castroville Boulevard and San Miguel Canyon Road. On the east side of Highway 101, the unit is generally bounded by Highway 101 to the west and north, Crazy Horse Canyon Road, and then Wild Horse Road and Herbert Road to the east, and Meadow Ridge Circle to the south. Approximately 9 percent of the unit consists of county park land, 8 percent is owned by Caltrans, and 83 percent is privately owned.

This unit currently supports multiple populations of *Chorizanthe pungens* var. *pungens*; in addition to the populations that have been known from Manzanita County Park for over a decade, it includes numerous populations that have been discovered in the past few years during surveys conducted for the Highway 101 Prunedale bypass project (R. Robison, *in litt.* 2001). This is one of only three units that are known to support populations away from the immediate coast and that support maritime chaparral and oak woodland habitats more representative of hotter, interior sites. Preserving the genetic characteristics that have allowed individuals at this site to survive under these slightly different environmental conditions may be important for the long-term survival and conservation of *C. p. var. pungens*. The Prunedale Unit also supports multiple populations in relatively close proximity to one another and supports suitable habitat that is important for the expansion of existing populations.

Unit H: Fort Ord Unit

Unit H includes approximately 4,265 ha (10,530 ac) of critical habitat. It consists of grassland, maritime chaparral, coastal scrub, and oak woodland on the former DOD base at Fort Ord, east of the city of Seaside in northern Monterey County. Portions of Fort Ord have been transferred to the BLM; University of California, Santa Cruz; California State University at Monterey Bay; and local city and county jurisdictions. As of October 2001, approximately 4,290 ha (10,600 ac) of former Fort Ord had been transferred, of which about 3,160 ha (7,800 ac) have been designated as habitat reserve in the HMP. As a result of these recent transfers, approximately 5 percent of this critical habitat unit is State land and 1 percent is under local jurisdiction. We considered all other land within this unit to be under Federal jurisdiction (about 94 percent). This unit is entirely within the area formerly known as Fort Ord, bounded by Highway 1 on the northwest, the Salinas River to the east and the Monterey-Salinas Road (Highway 68) to the south. This unit currently supports multiple populations of *Chorizanthe pungens* var. *pungens* that number in the tens of thousands. This is one of only three units that are known to support populations away from the immediate coast and that support maritime chaparral and oak woodland habitats more representative of hotter, interior sites. Preserving the genetic characteristics that have allowed individuals at this site to survive under these slightly different environmental conditions may be important for the long-term survival and conservation of *C. p. var. pungens*. It also supports multiple populations in relatively close proximity to one another and supports suitable habitat that is important for the expansion of existing populations.

Unit I: Del Rey Oaks Unit

Unit I contains approximately 255 ha (640 ac) of critical habitat. It consists of grassland, maritime chaparral, and oak woodland near the community of Del

Rey Oaks, southeast of the city of Seaside in northern Monterey County. This unit is generally bounded to the north and northeast by Rosita Road and South Boundary Road, to the east by York Road, to the south by the Monterey-Salinas Road (Highway 68), and by Olmstead Road and its extrapolated extension northward to Rosita Road on the west. Approximately 30 percent of the unit is owned by Monterey County Airport and other local jurisdictions, and 70 percent is privately owned. This unit currently supports multiple populations of *Chorizanthe pungens* var. *pungens*; at one time, habitat supporting these populations was likely continuous with habitat on former Fort Ord. Although fragmentation has occurred, it is possible that connectivity still exists between these areas. This unit is important because it supports multiple populations in relatively close proximity to one another and because it represents the southernmost extension of the population complex that occurs on former Fort Ord.

Unit J: Soledad Unit

Unit J includes approximately 105 ha (260 ac) of critical habitat. It consists of an interior dune in the floodplain of the Salinas River channel just south of the town of Soledad in central Monterey County, on privately owned lands. This unit currently supports a population of *Chorizanthe pungens* var. *pungens*. This unit is the southernmost interior location that supports a population, and the only unit where *C. p. var. pungens* grows in interior floodplain dune habitat. Preserving the genetic characteristics that have allowed individuals at this site to survive in interior floodplain dune habitat may be important for the long-term survival and conservation of *C. p. var. pungens*.

The approximate areas of proposed critical habitat by land ownership are shown in Table 1. Lands proposed are under private, county, State, and Federal jurisdiction, with Federal lands including lands managed by us, the DOD, and BLM.

TABLE 1.—APPROXIMATE AREAS, GIVEN IN HECTARES (HA) AND ACRES (AC)¹ OF DESIGNATED CRITICAL HABITAT FOR *Chorizanthe pungens* VAR. *pungens* BY LAND OWNERSHIP.

Unit name	State lands	Private lands	County and other local jurisdictions	Federal lands	Total
A. Sunset	35 ha (85 ac)	0 ha (0 ac)	0 ha (0 ac)	0 ha (0 ac)	35 ha (85 ac).
B. Moss Landing	160 ha (390 ac)	20 ha (55 ac)	2 ha (7 ac)	0 ha (0 ac)	182 ha (452 ac).
C. Marina ²	25 ha (60 ac)	380 ha (945 ac)	0 ha (0 ac)	315 ha (775 ac)	720 ha (1,780 ac).
D. Asilomar	100 ha (250 ac)	25 ha (60 ac)	0 ha (0 ac)	0 ha (0 ac)	125 ha (310 ac).
E. Freedom Blvd.	0 ha (0 ac)	85 ha (205 ac)	0 ha (0 ac)	0 ha (0 ac)	85 ha (205 ac).
F. Bel Mar	3 ha (7 ac)	30 ha (75 ac)	0 ha (0 ac)	0 ha (0 ac)	33 ha (82 ac).
G. Prunedale	145 ha (360 ac)	1,515 ha (3,740 ac)	155 ha (385 ac)	0 ha (0 ac)	1,815 ha (4,485 ac).

TABLE 1.—APPROXIMATE AREAS, GIVEN IN HECTARES (HA) AND ACRES (AC)¹ OF DESIGNATED CRITICAL HABITAT FOR *Chorizanthe pungens* VAR. *pungens* BY LAND OWNERSHIP.—Continued

Unit name	State lands	Private lands	County and other local jurisdictions	Federal lands	Total
H. Fort Ord (Current) ³	215 ha (530 ac)	0 ha (0 ac)	55 ha (130 ac)	3,995 ha (9,870 ac)	4,265 ha (10,530 ac).
I. Del Rey Oaks	0 ha (0 ac)	180 ha (450 ac)	75 ha (190 ac)	0 ha (0 ac)	255 ha (640 ac).
J. Soledad	0 ha (0 ac)	105 ha (260 ac)	0 ha (0 ac)	0 ha (0 ac)	105 ha (260 ac).
Total	683 ha (1,682 ac) ...	2,340 ha (5,790 ac)	287 ha (712 ac)	4,310 ha (10,645 ac).	7,620 ha (18,829 ac).

¹ Approximate acres have been converted to hectares (1 ha = 2.47 ac). Based on the level of imprecision of mapping of each unit, hectares and acres greater than 10 have been rounded to the nearest 5; hectares and acres less than or equal to 10 have been rounded to the nearest whole number. Totals are sums of units.

² Acreages assigned to various landowner categories for the Fort Ord portion of the Marina unit will change in the future once land transfers have been completed. We estimate the following after transfer: state, 835 ac; local, 945 ac; federal, 0 ac.

³ Acreages assigned to various landowner categories for the Fort Ord unit will change in the future once land transfers have been completed. We estimate the following after transfer: state, 610 ac; local jurisdictions, 970 ac; federal, 8,950 ac.

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 jeopardize the continued existence of any threatened or endangered species or result in the destruction or adverse modification of critical habitat designated for such species. Destruction or adverse modification of critical habitat occurs when a Federal action directly or indirectly alters critical habitat to the extent it appreciably diminishes the value of critical habitat for the conservation of the species. Individuals, organizations, States, local governments, and other non-Federal entities are affected by the designation of critical habitat only if their actions occur on Federal lands, require a Federal permit, license, or other authorization, or involve Federal funding.

Section 7(a) of the Act requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is designated or proposed. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402. Section 7(a)(4) of the Act requires Federal agencies to confer with us on any action that is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed critical habitat. Conference reports provide conservation recommendations to assist the action agency in eliminating conflicts that may be caused by the proposed action. The conservation recommendations in a conference report are advisory. We may

issue a formal conference report, if requested by the Federal action agency. Formal conference reports include an opinion that is prepared according to 50 CFR 402.14, as if the species was listed or critical habitat designated. We may adopt the formal conference report as the biological opinion when the species is listed or critical habitat designated, if no substantial new information or changes in the action alter the content of the opinion (see 50 CFR 402.10(d)).

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.

When we issue a biological opinion concluding that a project is likely to result in 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 the 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 critical habitat is subsequently designated 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 or conference with us on actions for which formal consultation previously has been completed if those actions may affect designated critical habitat or adversely modify or destroy proposed critical habitat.

Activities on Federal lands that may affect *Chorizanthe pungens* var. *pungens* or its critical habitat will require section 7 consultation. Activities on private or State lands requiring a permit from a Federal agency, such as a permit from the U.S. Army Corps of Engineers (Corps) under section 404 of the Clean Water Act or any other activity requiring Federal action (i.e., funding, authorization) will also continue to be subject to the section 7 consultation process. Federal actions not affecting *C. p. var pungens* or its critical habitat, as well as actions on non-Federal lands that are not federally funded or permitted, will not require section 7 consultation with respect to this species.

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

constituent elements to the extent that the value of critical habitat for the conservation of *Chorizanthe pungens* var. *pungens* is appreciably reduced. We note that such activities may also jeopardize the continued existence of the species. Activities that, when carried out, funded, or authorized by a Federal agency, may directly or indirectly destroy or adversely modify critical habitat include, but are not limited to:

(1) Activities that alter watershed characteristics in ways that would appreciably alter or reduce the quality or quantity of surface and subsurface flow of water needed to maintain the maritime chaparral and oak woodland communities. Such activities adverse to *Chorizanthe pungens* var. *pungens* could include, but are not limited to, maintaining an unnatural fire regime either through fire suppression or prescribed fires that are too frequent or poorly-timed; residential and commercial development, including road building and golf course installations; agricultural activities, including orchardry, viticulture, row crops, and livestock grazing; and vegetation manipulation such as chaining or harvesting firewood in the watershed upslope from *C. p. var. pungens*; and

(2) Activities that appreciably degrade or destroy native maritime chaparral and oak woodland communities, including but not limited to livestock grazing, clearing, discing, introducing or encouraging the spread of nonnative species, and heavy recreational use.

To properly portray the effects of critical habitat designation, we must first compare the section 7 requirements for actions that may affect critical habitat with the requirements for actions that may affect a listed species. Section 7 ensures that actions funded, authorized, or carried out by Federal agencies are not likely to jeopardize the continued existence of a listed species or destroy or adversely modify the critical habitat designated for such species. Actions likely to jeopardize the continued existence of a species are those that would appreciably reduce the likelihood of its survival and recovery, and actions likely to destroy or adversely modify critical habitat are those that would appreciably reduce the value of critical habitat for the survival and recovery of the listed species. (50 CFR 402.02)

Common to both definitions is an appreciable detrimental effect on both survival and recovery of a listed species. Given the similarity of these definitions, actions likely to destroy or adversely modify critical habitat would almost

always result in jeopardy to the species concerned, particularly when the area of the proposed action is occupied by the species concerned. All of the units we are designating are occupied by either above-ground plants or a *Chorizanthe pungens* var. *pungens* seed bank, and Federal agencies already consult with us on activities in areas where the species may be present to ensure that their actions do not jeopardize the continued existence of the species. Each unit also contains some areas which are considered unoccupied. However, we believe, and the economic analysis discussed below illustrates, that the designation of critical habitat is not likely to result in a significant regulatory burden above that already in place due to the presence of the listed species. Few additional consultations are likely to be conducted due to the designation of critical habitat. Actions on which Federal agencies consult with us include, but are not limited to:

(1) Development on private lands requiring permits from Federal agencies, such as 404 permits from the U.S. Army Corps of Engineers or permits from other Federal agencies such as Housing and Urban Development, military activities of the U.S. Department of Defense (Navy and Army) on their lands or lands under their jurisdiction;

(2) Activities of the BLM on their lands or lands under their jurisdiction;

(3) Activities of the Federal Aviation Authority on their lands or lands under their jurisdiction;

(4) The release or authorization of release of biological control agents by the U.S. Department of Agriculture;

(5) Regulation of activities affecting point source pollution discharges into waters of the United States by the Environmental Protection Agency under section 402 of the Clean Water Act; and

(6) Construction of communication sites licensed by the Federal Communications Commission, and authorization of Federal grants or loans.

Where federally listed wildlife species occur on private lands proposed for development and an HCP is submitted by an applicant to secure a permit to take according to section 10(a)(1)(B) of the Act, our issuance of such a permit would be subject to the section 7 consultation process. In those situations where *Chorizanthe pungens* var. *pungens* may occur or its critical habitat is present within the area covered by the HCP, the consultation process would include consideration of the potential effects of granting the permit authorizing take of threatened or endangered wildlife species addressed by the HCP. Wildlife species that are listed under the Act and occur in the

same general areas as *C. p. var. pungens* include the Smith's blue butterfly (*Euphilotes enoptes smithi*), which occurs at dunes from Salinas River National Wildlife Refuge south to the Naval Postgraduate School, and western snowy plover (*Charadrius alexandrinus nivosus*), which ranges from Zmudowski State Beach south along the coast to Monterey State Beach. Consultations conducted under Section 7 in relation to HCPs prepared for these wildlife species would address any effects that granting a permit for take of the wildlife species would have on *C. p. var. pungens*, including its critical habitat.

If you have questions regarding whether specific activities will likely constitute adverse modification of critical habitat, contact the Field Supervisor, Ventura Fish and Wildlife Office (see **ADDRESSES** section). Requests for copies of the regulations on listed wildlife and inquiries about prohibitions and permits may be addressed to the U.S. Fish and Wildlife Service, Portland Regional Office, 911 NE 11th Avenue, Portland, OR 97232-4181 (503/231-6131, FAX 503/231-6243).

Relationship of Critical Habitat to Military Lands

Critical habitat is defined in section 3 of the Act as—(i) the specific areas within the geographic 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 geographic 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. Special management and protection are not required if adequate management and protection are already in place. Adequate special management or protection is provided by a legally operative plan/agreement that addresses the maintenance and improvement of the primary constituent elements important to the species and that manages for the long-term conservation of the species. If any areas containing the primary constituent elements are currently being managed to address the conservation needs of *C. p. var. pungens* management or protection, these areas would not meet the definition of critical habitat in section 3(5)(A)(i) of the Act and would not be included in this final rule.

We consider several factors to determine if a plan provides adequate

management or protection. These factors are: (1) Whether there is a current plan specifying the management actions and whether such actions provide sufficient conservation benefit to the species; (2) whether the plan provides assurances that the conservation management strategies will be implemented; and (3) whether the plan provides assurances that the conservation management strategies will be effective.

In determining if management strategies are likely to be implemented, we consider whether: (a) A management plan or agreement exists that specified the management actions being implemented or to be implemented; (b) there is a timely schedule for implementation; (c) there is a high probability that the funding source(s) or other resources necessary to implement the actions will be available; and (d) the party(ies) have the authority and long-term commitment to implement the management actions, as demonstrated, for example, by a legal instrument providing enduring protection and management of the lands.

In determining whether an action is likely to be effective, we consider whether: (a) The plan specifically addresses the management needs, including reduction of threats to the species; (b) such actions have been successful in the past; (c) there are provisions for monitoring and assessment of the effectiveness of the management actions; and (d) adaptive management principles have been incorporated into the plan.

The Sikes Act Improvement Act of 1997 (Sikes Act) requires each military installation that encompasses land and water suitable for the conservation and management of natural resources to have completed, by November 17, 2001, an Integrated Natural Resources Management Plan (INRMP). An INRMP integrates implementation of the military mission of the installation with stewardship of the natural resources found there. Each INRMP includes an assessment of the ecological needs of the installation, including needs to provide for the conservation of species listed as threatened or endangered pursuant to the Endangered Species Act; 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.

As required by Section 7 of the Act, consultation is conducted on the development and implementation of INRMPs for installations with listed species. We believe that military installations that have completed and

approved INRMPs which address the needs of species generally do not meet the definition of critical habitat discussed above, as they require no additional special management or protection. Therefore, we do not include these areas in critical habitat designations if they meet the following three criteria: (1) A current INRMP must be complete and provide a benefit to the species; (2) the plan must provide assurances that the conservation management strategies will be implemented; and (3) the plan must provide assurances that the conservation management strategies will be effective, by providing for periodic monitoring and revisions as necessary. If all of these criteria are met, then the lands covered under the plan would not meet the definition of critical habitat.

The mission of the Naval Postgraduate School is to foster and encourage a program of education and research in order to sustain academic excellence. The majority of the coastal dune portion of the Naval Postgraduate School is designated as open beach and protected habitat zone with controlled public access, as compatible with mission requirements for academic research and training and resource protection.

The DON has committed to continue implementing vegetation management and restoration activities that benefit *Chorizanthe pungens* var. *pungens*, including removal of invasive plant species that threaten the native vegetation community of the coastal dune portion of the Naval Postgraduate School. In the INRMP for the Naval Postgraduate School, the DON places a high priority on funding and implementing these efforts. In addition, the Naval Postgraduate School will continue its annual surveys to track the effectiveness of management actions taken to enhance and protect the local population of *C. p. var. pungens*. Since 1992, the DON and the Naval Postgraduate School have successfully implemented actions that benefit *C. p. var. pungens*.

The DON funded a revegetation and rehabilitation project of the dunes of the Naval Postgraduate School, which was implemented in 1992. Prior to 1992, grading, compaction, introduction of fill material, and previous landscaping activities resulted in the loss of 80 percent of the native back dunes at the Naval Postgraduate School. Due to the efforts of the DON and the Naval Postgraduate School, the 18-hectare (45-acre) area has since undergone extensive native revegetation and efforts to control invasive non-native plant species, primarily iceplant, *Bromus diandrus* (ripgut brome grass), and *Ammophila*

arenaria (European dune grass). Following initial eradication of these invasive species, more than 90,000 plants of 50 native dune and coastal bluff species, including *Chorizanthe pungens* var. *pungens*, were planted over 5 years (Cowan 1998, Navy 2001). Elimination of iceplant and ripgut brome grass (along with increased rainfall) was noted as a factor in the substantial increase of *C. p. var. pungens* plants from 1,600 plants in 1992 to more than 100,000 plants in 1998 (Cowan 1998). In 1999, colonies of sensitive plant species in the dunes appeared to be thriving, and most of the invasive plant species had been eradicated or were noted to be controlled by ongoing weeding (Greening Associates 1999). In 2001, the DON formally consulted with the Service on potential adverse effects to *C. p. var. pungens* plants that may occur during ongoing and proposed invasive plant species control and vegetation management activities at the Naval Postgraduate School.

In 2001, the DON completed a final INRMP for the Naval Postgraduate School. In their comments on the proposed rule, the DON requested that the lands of the School be excluded from the Marina unit of critical habitat because of the protections and management actions provided for *Chorizanthe pungens* var. *pungens* as part of the INRMP. We evaluated the INRMP and found that it meets the three criteria described above. We excluded these lands from critical habitat under the section 3(5)(A) definition.

Lands at former Fort Ord are not discussed in this section because Fort Ord is no longer an active military installation. All but a few hundred acres at former Fort Ord are to be eventually transferred to non-military entities. The few hundred acres that the Army may retain are not within this critical habitat designation.

Economic Analysis

Section 4(b)(2) of the Act requires us to designate critical habitat on the basis of the best scientific and commercial 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 a draft Economic Analysis to estimate the potential economic effect of the designation. The draft analysis was made available for public review on September 19, 2001 (66 FR 48228). We accepted comments on the draft analysis until October 19, 2001.

Our draft Economic Analysis evaluated the potential future effects associated with the listing of *Chorizanthe pungens* var. *pungens* as a threatened species under the Act, as well as any potential effect of the critical habitat designation above and beyond those regulatory and economic impacts associated with listing. To quantify the proportion of total potential economic impacts attributable to the critical habitat designation, the analysis evaluated a "without critical habitat" baseline and compared it to a "with critical habitat" scenario. The "without critical habitat" baseline represented the current and expected economic activity under all modifications prior to the critical habitat designation, including protections afforded the species under Federal and State laws. The difference between the two scenarios measured the net change in economic activity attributable to the designation of critical habitat. The categories of potential costs considered in the analysis included the costs associated with: (1) Conducting section 7 consultations associated with the listing or with the critical habitat, including reinitiated consultations and technical assistance; (2) modifications to projects, activities, or land uses resulting from the section 7 consultations; (3) uncertainty and public perceptions resulting from the designation of critical habitat; and (4) potential offsetting beneficial costs associated with critical habitat including educational benefits.

Our economic analysis recognizes that there may be costs from delays associated with reinitiating completed consultations after the critical habitat designation is made final. There may also be economic effects due to the reaction of the real estate market to critical habitat designation, as real estate values may be lowered due to a perceived increase in the regulatory burden. We believe these impacts will be short-term, however.

Based on our draft analysis, we concluded that the designation of critical habitat would not result in a significant economic impact, and estimated the potential economic effects over a 10-year period would be \$400,000. Costs to Federal agencies are expected to be approximately \$150,000. Costs to State agencies are expected to be approximately \$56,000, primarily resulting from consultations and project modifications in the Sunset, Marina, and Prunedale units. Local agencies are not expected to be impacted by the designation of critical habitat, principally because activities on local agency lands do not typically have Federal involvement. Costs to private landowners are expected to range from \$170,000 to \$200,000, primarily resulting from consultations and modifications within the Moss Landing, Marina, Fort Ord, and De Rey Oaks units. These estimates are based on the existing consultation history with agencies in this area and increased public awareness regarding the actual impacts of critical habitat designation on land values.

Following the close of the comment period on the draft Economic Analysis, a final addendum was completed which incorporated public comments on the draft analysis. The values presented above may be an overestimate of the potential economic effects of the designation because the final designation has been reduced to encompass 7,620 ha (18,829 ac) versus the 10,443 ha (25,818 ac) proposed as critical habitat, a difference of 2,823 ha (6,989 ac).

A copy of the final economic analysis and a description of the exclusion process with supporting documents are included in our administrative record and may be obtained by contacting our Ventura Fish and Wildlife Office (see ADDRESSES section).

Required Determinations

Regulatory Planning and Review

In accordance with Executive Order (EO) 12866, this is a significant rule and was reviewed by the Office of Management and Budget (OMB) in accordance with the four criteria discussed below.

(a) In the economic analysis, we determined that this rule will not have

an annual economic effect of \$100 million or more or adversely affect an economic sector, productivity, jobs, the environment, or other units of government. *Chorizanthe pungens* var. *pungens* was listed as threatened in February of 1994. Since that time we have conducted, and will continue to conduct, formal and informal section 7 consultations with other Federal agencies to ensure that their actions will not jeopardize the continued existence of *C. p. var. pungens*.

Under the Act, Federal agencies shall consult with the Service to ensure that any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of an endangered or threatened species or result in the destruction or adverse modification of critical habitat. The Act does not impose any restrictions on non-Federal persons unless they are conducting activities funded or otherwise sponsored, authorized, or permitted by a Federal agency (see Table 2 below). Based upon our understanding of this species and its ecological needs, we conclude that any Federal action or authorized action that could potentially result in the destruction or adverse modification of critical habitat would also be considered as "jeopardy" under the Act in areas occupied by the species.

Accordingly, the designation of currently occupied areas as critical habitat is not anticipated to have any incremental impacts on what actions may or may not be conducted by Federal agencies or non-Federal persons that receive Federal authorization or funding beyond the effects resulting from the listing of this species. Non-Federal persons that do not have a Federal "sponsorship" in their actions are not restricted by the designation of critical habitat. The designation of areas as critical habitat where section 7 consultations would not have occurred but for the critical habitat designation may have impacts on what actions may or may not be conducted by Federal agencies or non-Federal persons who receive Federal authorization or funding that are not attributable to the species listing. These impacts were evaluated in our Economic Analysis (under section 4 of the Act; see Economic Analysis section of this rule).

TABLE 2.—IMPACTS OF *Chorizanthe pungens* VAR. *pungens* LISTING AND CRITICAL HABITAT DESIGNATION.

Categories of activities	Activities potentially affected by species listing only	Additional activities potentially affected by critical habitat designation ¹
Federal Activities Potentially Affected ² .	Activities conducted by the Army Corps of Engineers, the Department of Housing and Urban Development, Department of Defense, Bureau of Land Management, Federal Aviation Authority, U.S. Department of Agriculture, Environmental Protection Agency, Federal Communications Commission, and any other Federal Agencies.	Activities by these Federal Agencies in designated areas where section 7 consultations would not have occurred but for the critical habitat designation.
Private or other non-Federal Activities Potentially Affected ³ .	Activities that require a Federal action (permit, authorization, or funding) and may remove or destroy habitat for <i>Chorizanthe pungens</i> var. <i>pungens</i> by mechanical, chemical, or other means or appreciably decrease habitat value or quality through indirect effects (e.g., edge effects, invasion of exotic plants or animals, fragmentation of habitat).	Funding, authorization, or permitting actions by Federal Agencies in designated areas where section 7 consultations would not have occurred but for the critical habitat designation.

¹ This column represents activities potentially affected by the critical habitat designation in addition to those activities potentially affected by listing the species.

² Activities initiated by a Federal agency.

³ Activities initiated by a private or other non-Federal entity that may need Federal authorization or funding.

(b) This rule will not create inconsistencies with other agencies' actions. As discussed above, Federal agencies have been required to ensure that their actions not jeopardize the continued existence of *Chorizanthe pungens* var. *pungens* since its listing in 1994. We evaluated the impact of designating areas where section 7 consultations would not have occurred but for the critical habitat designation in our economic analysis (see *Economic Analysis* section of this rule). The prohibition against adverse modification of critical habitat is not expected to impose any restrictions in addition to those that currently exist on currently occupied land and will not create inconsistencies with other agencies' actions on unoccupied lands.

(c) This final rule is not expected to materially affect entitlements, grants, user fees, loan programs, or the rights and obligations of their recipients. Federal agencies are currently required to ensure that their activities do not jeopardize the continued existence of the species, and as discussed above, we do not anticipate that the adverse modification analysis (resulting from critical habitat designation) will have any incremental effects.

(d) OMB has determined that this rule raises novel and legal or policy issues. Therefore, this rule is significant under E.O. 12866, and, as a result, has undergone OMB review.

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 effect 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 an 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* to require Federal agencies to require a certification statement. In this rule, we are certifying that the critical habitat designation for *Chorizanthe pungens* var. *pungens* will not have a significant effect on a substantial number of small entities. The following discussion explains our rationale.

Small entities include small organizations, such as independent non-profit 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. While the SBREFA does not explicitly define "substantial number," the Small Business Administration, as well as other federal agencies, has interpreted this to represent an impact on 20 percent or greater of the number of small entities in any industry. 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 numbers of small entities potentially affected, we also consider whether their activities have any Federal involvement.

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

Federal activities. Since *C. p. var. pungens* was proposed for listing we have conducted approximately four formal consultations.

In the Economic Analysis, we found that the proposed designation could potentially impose total economic costs for consultations and modifications to projects within proposed critical habitat for *Chorizanthe pungens* var. *pungens* on privately owned land to be in a range from \$170,000 to \$200,000 over a 10 year period. The analysis estimated that private landowners will likely incur costs of \$70,000 in Unit C (Moss Landing), \$56,000 in Unit D (Marina), \$30,000 to \$60,000 in Unit I (Fort Ord), and \$14,000 in Unit J (Del Ray Oaks).

For the final designation, the Service has elected to exclude from critical habitat all lands within the boundaries of former Fort Ord that have been explicitly designated for development without additional resource conservation measures. Therefore, any projects on these lands will not be subject to any consultations as a result of critical habitat designation for the *Chorizanthe pungens* var. *pungens*, unless a Federal action is involved that requires consultation because it may affect critical habitat (for example, if the action may affect critical habitat is nearby). Lands within former Fort Ord that have been designated for development with reserves, but are not explicitly slated for development in the immediate future, are included in the final designation. These lands may be subject to additional consultations in the future. The original estimates of the draft EA apply to these lands, as two to four consultations may be necessary in the future to address any development as it occurs (please see the draft EA for further discussion).

Our draft Economic Analysis found that residential and commercial development on private land constitutes the primary activity that is likely to take place within the area designated as critical habitat for the Monterey spineflower. To be conservative (i.e., more likely overstate impacts than underestimate them), the Economic Analysis assumed that all potentially affected parties that may be engaged in development activities within critical habitat are small entities. There are approximately 65 small residential development and construction companies in Santa Cruz and Monterey counties. Because the draft EA estimates that at most 22 formal consultations could arise involving private entities, the analysis for impacts on small businesses assumes that at most 22 residential/small business entities may be affected the designation of critical

habitat for *Chorizanthe pungens* var. *pungens* in Monterey and Santa Cruz counties over a ten year period.

On average, over the ten year period of analysis, in each year there could be 2 to 3 consultations for real estate development projects. Assuming each consultation involves a different small business, approximately 2 to 4 percent of the total number of small residential development and construction companies could be affected annually by the designation of critical habitat for *Chorizanthe pungens* var. *pungens*. Because the percentage of small businesses that could be affected by this designation is far less than the 20 percent threshold that would be considered "substantial," the economic analysis concludes that this designation will not affect a substantial number of small entities as a result of the designation of critical habitat for *C. p. var. pungens*.

In general, two different mechanisms in section 7 consultations could lead to additional regulatory requirements for the two to three small businesses, on average, that may be required to consult with us each year regarding their project's impact on *Chorizanthe pungens* var. *pungens* and its habitat. First, if we conclude, in a biological opinion, that a proposed action is likely to jeopardize the continued existence of a species or adversely modify its critical habitat, we can offer "reasonable and prudent alternatives." Reasonable and prudent alternatives are alternative actions that can be implemented in a manner consistent with the scope of the Federal agency's legal authority and jurisdiction, that are economically and technologically feasible, and that would avoid jeopardizing the continued existence of listed species or resulting in adverse modification of critical habitat. A Federal agency and an applicant may elect to implement a reasonable and prudent alternative associated with a biological opinion that has found jeopardy or adverse modification of critical habitat. An agency or applicant could alternatively choose to seek an exemption from the requirements of the Act or proceed without implementing the reasonable and prudent alternative. However, unless an exemption were obtained, the Federal agency or applicant would be at risk of violating section 7(a)(2) of the Act if it chose to proceed without implementing the reasonable and prudent alternatives. Secondly, if we find that a proposed action is not likely to jeopardize the continued existence of a listed animal species, we may identify reasonable and prudent measures designed to minimize the amount or extent of take and require

the Federal agency or applicant to implement such measures through non-discretionary terms and conditions. We may also identify discretionary conservation recommendations designed to minimize or avoid the adverse effects of a proposed action on listed species or critical habitat, help implement recovery plans, or to develop information that could contribute to the recovery of the species.

Based on our experience with consultations pursuant to section 7 of the Act for all listed species, virtually all projects—including those that, in their initial proposed form, would result in jeopardy or adverse modification determinations in section 7 consultations—can be implemented successfully with, at most, the adoption of reasonable and prudent alternatives. These measures, by definition, must be economically feasible and within the scope of authority of the Federal agency involved in the consultation. As we have a very limited consultation history for *Chorizanthe pungens* var. *pungens*, with no consultations that resulted in a jeopardy determination and so no identified reasonable and prudent alternatives, we can only describe the general kinds of actions that may be identified in future reasonable and prudent alternatives. These are based on our understanding of the needs of the species and the threats it faces, as described in the final listing rule and this critical habitat designation.

It is likely that a developer could modify a project or take measures to protect *Chorizanthe pungens* var. *pungens*. Based on the types of modifications and measures that have been implemented in the past for plant species, a developer may take such steps as installing fencing or re-aligning the project to avoid sensitive areas. The cost for implementing these measures for one project is expected to be of the same order of magnitude as the total cost of the consultation process, *i.e.*, approximately \$10,000. It should be noted that developers likely would already be required to undertake such measures due to regulations in the California Environmental Quality Act (CEQA). These measures are not likely to result in a significant economic impact to project proponents.

As required under section 4(b)(2) of the Act, we conducted an analysis of the potential economic impacts of this critical habitat designation, and that analysis was made available for public review and comment before finalization of this designation. Based on estimates provided in the economic analysis, the potential economic impact of critical habitat designation for *Chorizanthe*

pungens var. *pungens* over the next 10 years is about \$400,000. Out of this about one-half, \$200,000, could potentially be borne by the private sector. On an annual basis, this amounts to about \$20,000, which would not normally be considered a significant cost in the context of multi-acre real estate development projects that would most likely be affected by this designation as indicated in the economic analysis. Furthermore, due to the changes being made in the final rule regarding the designation of private lands, the actual impact of critical habitat designation on private landowners will be less than that estimated in the economic analysis.

In summary, we have considered whether this rule would result in a significant economic effect on a substantial number of small entities. We have determined, for the above reasons, that it will not affect a substantial number of small entities. Furthermore, we believe that the potential compliance costs for the number of small entities that may be affected by this rule will not be significant. Therefore, we are certifying that the designation of critical habitat for *Chorizanthe pungens* var. *pungens* will not have a significant economic impact on a substantial number of small entities. A regulatory flexibility analysis is not required.

Small Business Regulatory Enforcement Fairness Act (5 U.S.C. 804(2))

In the economic analysis, we determined whether designation of critical habitat would cause (a) any effect on the economy of \$100 million or more, (b) any increases in costs or prices for consumers, individual industries, Federal, State, or local government agencies, or geographic regions, or (c) any significant adverse effects on competition, employment, investment, productivity, innovation, or the ability of U.S.-based enterprises to compete with foreign-based enterprises. Refer to the final economic analysis for a discussion of the effects of this determination.

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

In accordance with the Unfunded Mandates Reform Act (2 U.S.C. 1501 et seq.):

(a) This rule will not "significantly or uniquely" affect small governments. A Small Government Agency Plan is not required. Small governments will be affected only to the extent that they must ensure that any programs involving Federal funds, permits, or other authorized activities must ensure

that their actions will not adversely affect the critical habitat.

(b) This rule will not produce a Federal mandate of \$100 million or greater in any year, that is, it is not a "significant regulatory action" under the Unfunded Mandates Reform Act. The designation of critical habitat imposes no obligations on State or local governments.

Executive Order 13211

On May 18, 2001, the President issued a Executive Order 13211 on regulations that significantly affect energy supply, distribution, and use. Executive Order 13211 requires agencies to prepare Statements of Energy Effects when undertaking certain actions. Although this rule is a significant regulatory action under Executive Order 12866, it is not expected to significantly affect energy supplies, distribution, or use. In our Economic Analysis, we did not identify energy production or distribution as being affected by this designation, and we received no comments indicating that the proposed designation could significantly affect energy supplies, distribution, or use. Therefore, this action is not a significant energy action and no Statement of Energy Effects is 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 *Chorizanthe pungens* var. *pungens* in a takings implication assessment. The takings implications assessment concludes that this final rule 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. As discussed above, the designation of critical habitat in areas currently occupied by *Chorizanthe pungens* var. *pungens* would have little incremental impact on State and local governments and their activities. The designations may have some benefit to these governments in that the areas essential to the conservation of these species are more clearly defined, and the primary constituent elements of the habitat necessary to the survival of the species are 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 consultation to occur.

Civil Justice Reform

In accordance with Executive Order 12988, the Department of the Interior's Office of the Solicitor has determined that this rule does not unduly burden the judicial system and meets the requirements of sections 3(a) and 3(b)(2) of the Order. We have designated critical habitat in accordance with the provisions of the Endangered Species Act, as amended. The 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 *Chorizanthe pungens* var. *pungens*.

Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.)

This rule does not contain any information collection requirements for which Office of Management and Budget approval under the Paperwork Reduction Act is required. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB Control Number.

National Environmental Policy Act

We have determined that an Environmental Assessment and/or an Environmental Impact Statement as defined by the National Environmental Policy Act of 1969 need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act, as amended. A notice outlining our reason for this determination was published in the **Federal Register** on October 25, 1983 (48 FR 49244). This determination does not constitute a major federal action significantly affecting the quality of the human environment.

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. The designated critical habitat for *Chorizanthe pungens* var. *pungens* does not contain any Tribal lands or lands that we have identified as impacting Tribal trust resources.

References Cited

A complete list of all references cited herein, as well as others, is available upon request from the Ventura Fish and Wildlife Office (see **ADDRESSES** section).

Author

The authors of this final rule are Constance Rutherford and Diane Pratt, 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:

PART 17—[AMENDED]

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

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

2. In § 17.12(h) revise the entry for *Chorizanthe pungens* var. *pungens* under “FLOWERING PLANTS” in the List of Endangered and Threatened Plants to read as follows:

§ 17.12 Endangered and threatened plants.

* * * * *

(h) * * *

Species	Scientific name	Common name	Historic range	Family	Status	When listed	Critical habitat	Special rules
FLOWERING PLANTS								
*	*	*	*	*	*	*	*	*
<i>Chorizanthe pungens</i> var. <i>pungens</i> .	Monterey Spineflower.		U.S.A. (CA)	Polygonaceae—Buckwheat	T	528	17.96(a)	NA
*	*	*	*	*	*	*	*	*

3. Amend In § 17.96(a) by adding critical habitat for the Monterey spineflower (*Chorizanthe pungens* var. *pungens*) in alphabetical order under Family Polygonaceae to read as follows:

§ 17.96 Critical habitat—plants.

(a) * * *

Family Polygonaceae: *Chorizanthe pungens* var. *pungens* (Monterey spineflower)

(1) Critical habitat units are depicted for Santa Cruz and Monterey Counties, California, on the maps below.

(2) The primary constituent elements of critical habitat for *Chorizanthe pungens* var. *pungens* are the habitat components that provide:

(i) Sandy soils associated with active coastal dunes, coastal bluffs with a deposition of windblown sand, inland sites with sandy soils, and interior floodplain dunes;

(ii) Plant communities that support associated species, including coastal dune, coastal scrub, grassland, maritime chaparral, oak woodland, and interior floodplain dune communities, and have a structure such that there are openings between the dominant elements (e.g., scrub, shrub, oak trees, clumps of herbaceous vegetation);

(iii) No or little cover by nonnative species which would compete for resources available for growth and reproduction of *Chorizanthe pungens* var. *pungens*; and

(iv) Physical processes, such as occasional soil disturbance, that support natural dune dynamics along coastal areas.

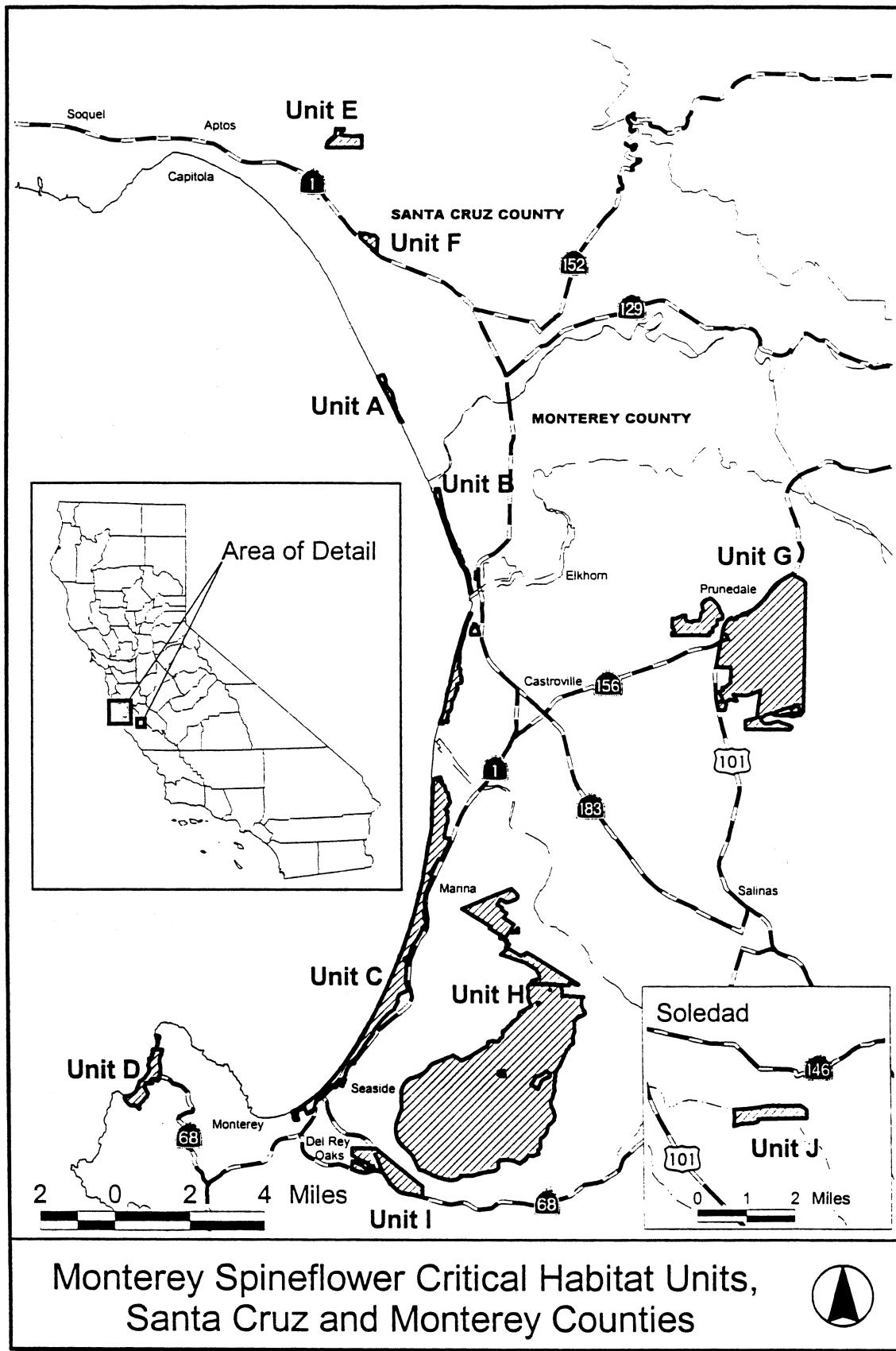
(3) Critical habitat does not include existing features and structures, such as buildings, roads, aqueducts, railroads, airports, other paved areas, lawns, and other urban landscaped areas not containing one or more of the primary constituent elements.

Critical Habitat Map Units

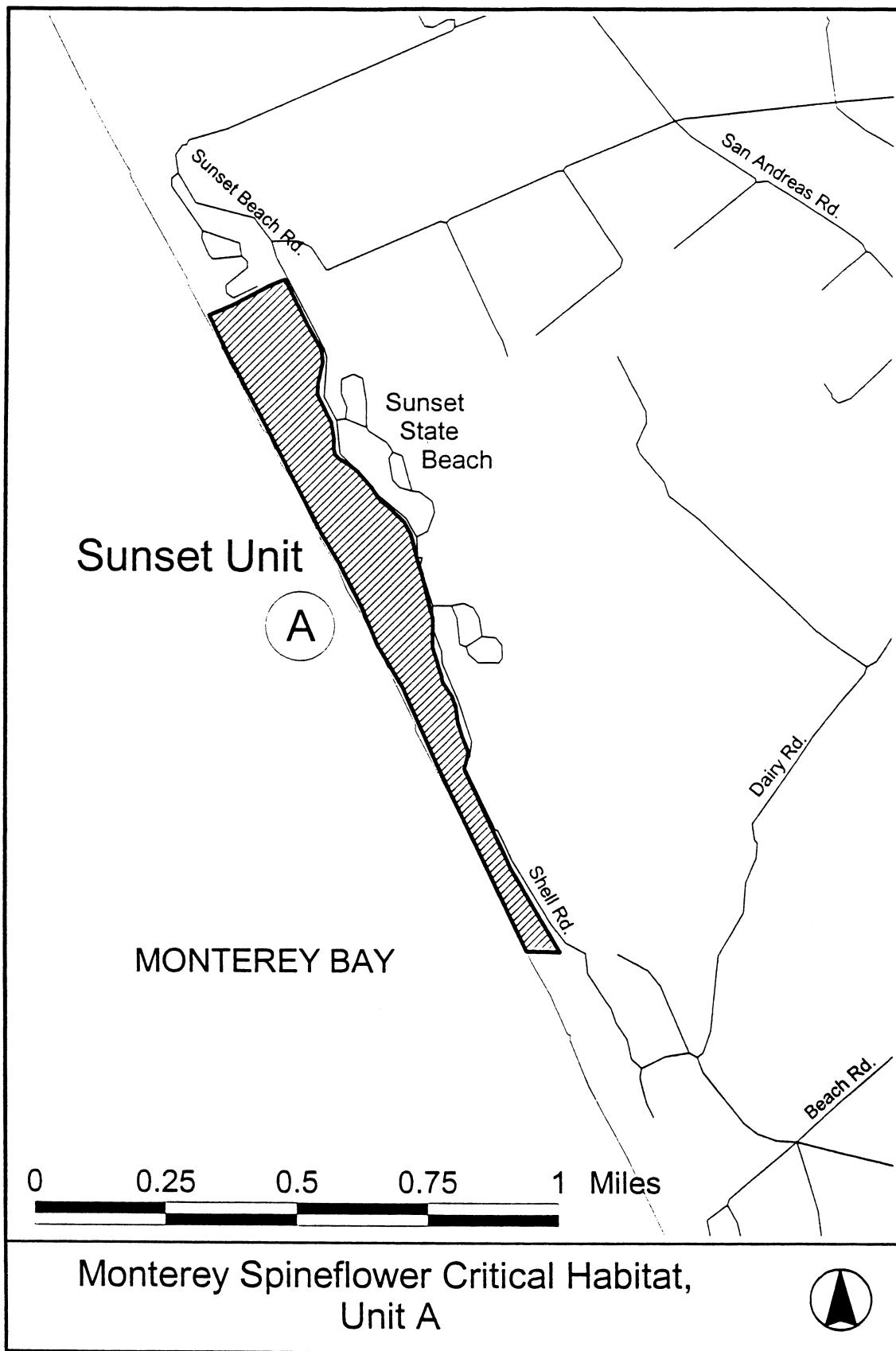
Data layers defining map units were mapped using Universal Transverse Mercator (UTM) coordinates.

(4) Index Map Follows

BILLING CODE 4310-55-P



(5) Unit A: *Sunset Unit*.
(i) Santa Cruz County, California.
From USGS 1:24,000 quadrangle map
Watsonville West, lands bounded by the
following UTM zone 10 NAD83
coordinates (E,N): 603772, 4083610;
603885, 4083680; 603931, 4083700;
604008, 4083560; 604053, 4083490;
604059, 4083450; 604054, 4083420;
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604080, 4083290; 604092, 4083270;
604102, 4083220; 604103, 4083180;
604109, 4083160; 604122, 4083150;
604149, 4083140; 604176, 4083120;
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(ii) Map Unit A follows:

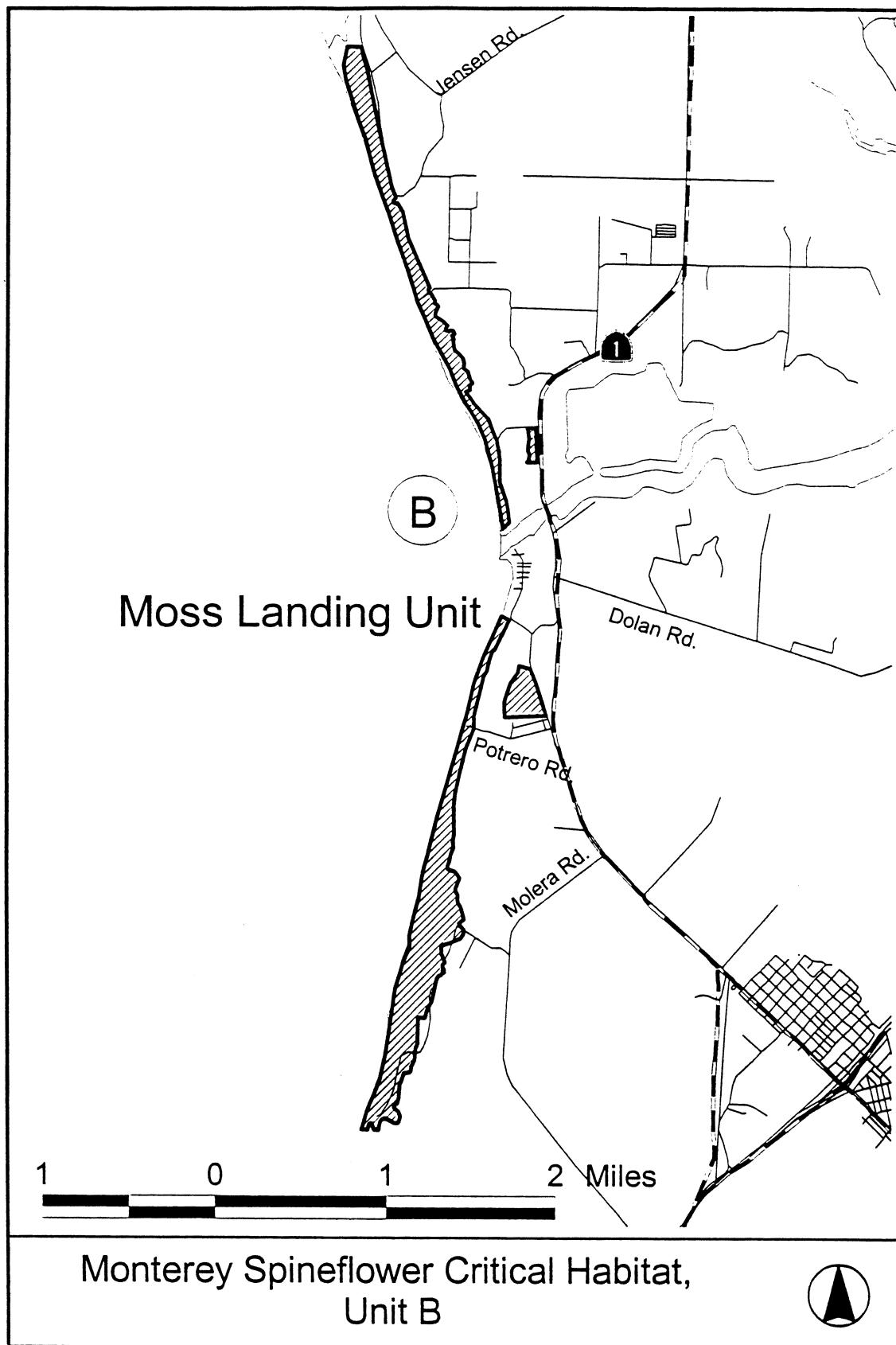


(6) Unit B: *Moss Landing Unit*.
Monterey County, California.

(i) From USGS 1:24,000 quadrangle
map Moss Landing, lands bounded by

the following UTM zone 10 NAD83
coordinates (E,N): 608197, 4072970;

608305, 4072940; 608361, 4072820; 607283, 4069120; 607278, 4069110; 606827, 4077460; 606860, 4077390;
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607314, 4069210; 607298, 4069170; 606487, 4078780; 606514, 4078680;
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(7) Unit C: *Marina Unit*. Monterey County, California

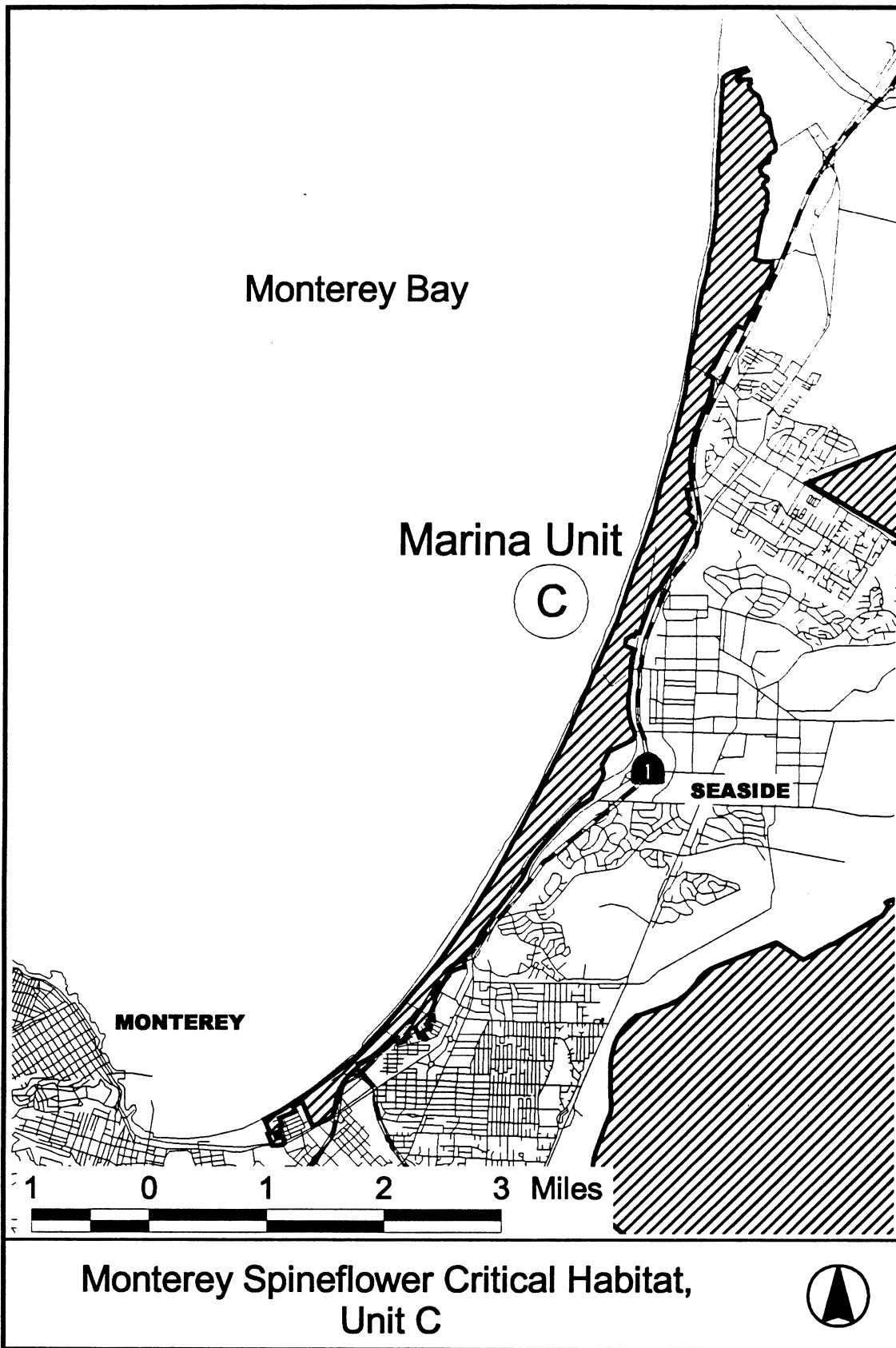
(i) From USGS 1:24,000 quadrangle maps Marina and Seaside, lands

bounded by the following UTM zone 10 NAD83 coordinates (E,N): 606623,

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(ii) Excluding lands bounded by: 604634, 4056280; 604620, 4056260; 604616, 4056260; 604611, 4056230; 604611, 4056230; 604612, 4056220; 604618, 4056210; 604626, 4056200; 604632, 4056190; 604633, 4056180; 604631, 4056170; 604626, 4056160; 604616, 4056150; 604608, 4056140; 604603, 4056130; 604601, 4056120; 604602, 4056100; 604603, 4056090; 604599, 4056080; 604593, 4056080; 604579, 4056080; 604571, 4056080; 604559, 4056080; 604539, 4056090; 604530, 4056090; 604523, 4056090; 604516, 4056080; 604514, 4056070; 604514, 4056070; 604519, 4056050; 604526, 4056030; 604528, 4056010; 604526, 4056010; 604522, 4056000; 604517, 4055990; 604501, 4055980; 604491, 4055980; 604479, 4055970; 604467, 4055960; 604459, 4055940; 604456, 4055930; 604450, 4055920; 604443, 4055910; 604423, 4055890; 604420, 4055880; 604422, 4055870; 604427, 4055850; 604438, 4055850; 604451, 4055850; 604473, 4055860; 604484, 4055860; 604498, 4055870; 604510, 4055890; 604524, 4055910; 604537, 4055920; 604560, 4055940; 604578, 4055950; 604613, 4055970; 604651, 4056000; 604697, 4056070; 604723, 4056120; 604729, 4056140; 604733, 4056160; 604736, 4056180; 604730, 4056240; 604724, 4056270; 604710, 4056290; 604702, 4056300; 604676, 4056300; 604653, 4056300; 604634, 4056280.

(iii) Map Unit C follows.



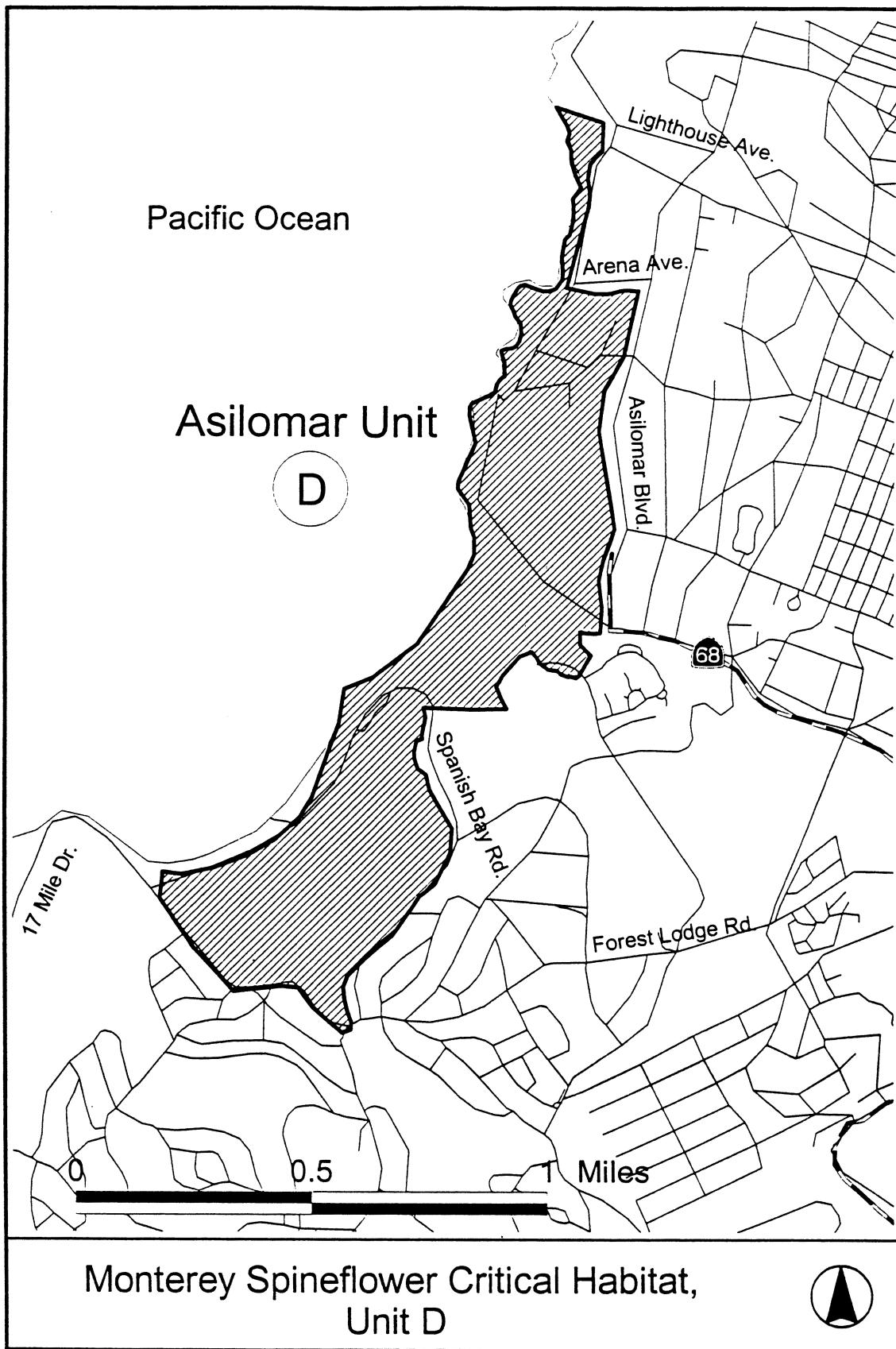
(8) Unit D: Asilomar Unit. Monterey County, California.

(i) From USGS 1:24,000 quadrangle map Monterey, lands bounded by the

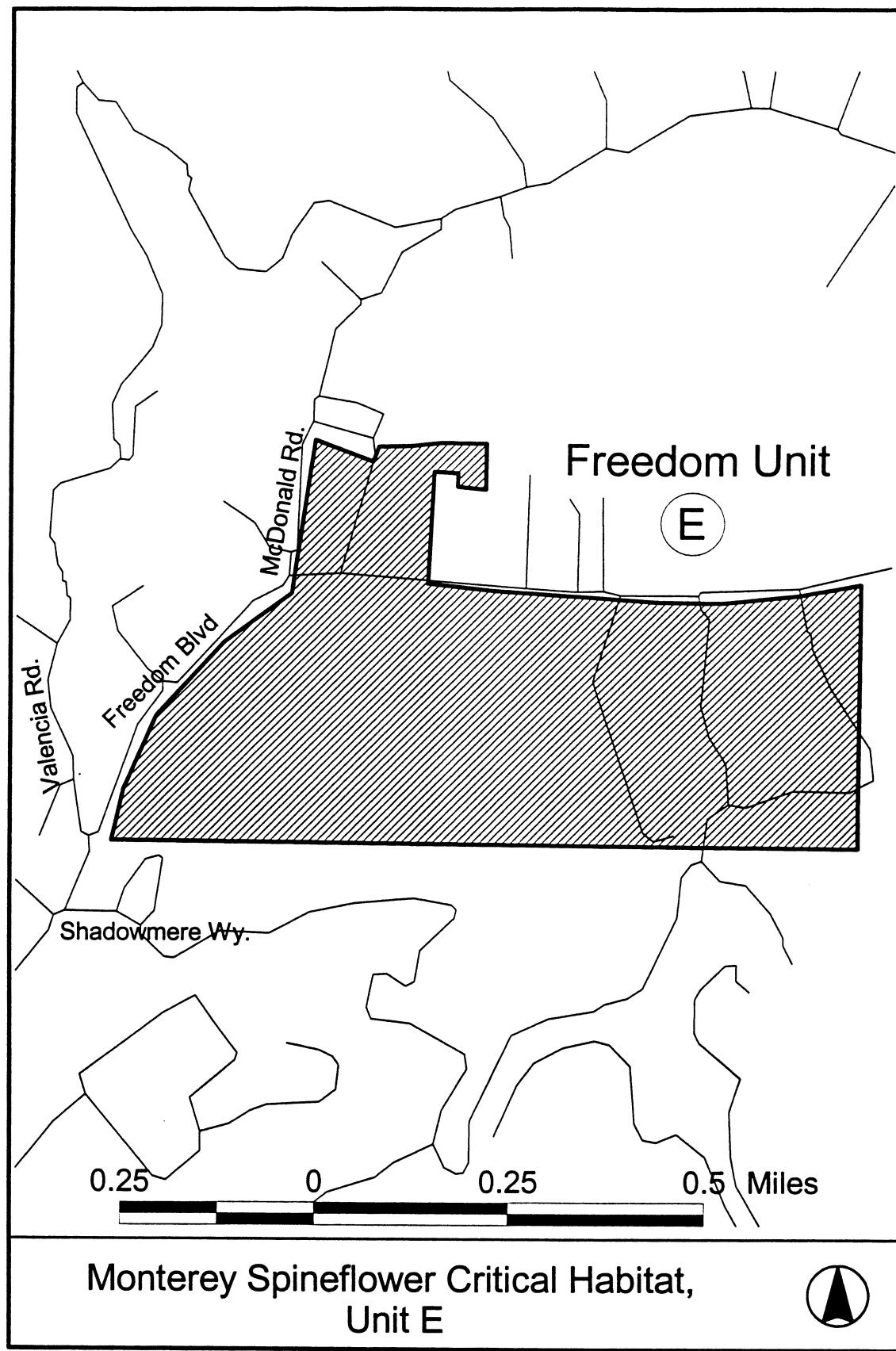
following UTM zone 10 NAD83 coordinates (E,N): 594965, 4054010;

595058, 4053990; 595108, 4054000; 595134, 4054000; 595161, 4054010; 595209, 4054010; 595169, 4053780; 595109, 4053660; 595094, 4053520; 595130, 4053330; 595156, 4053180; 595123, 4053070; 595110, 4053000; 595124, 4052910; 595121, 4052820; 595106, 4052820; 595073, 4052820; 595052, 4052830; 595053, 4052780; 595092, 4052740; 595058, 4052680; 595056, 4052670; 595044, 4052670; 595037, 4052670; 595025, 4052670; 595018, 4052670; 595009, 4052670; 594992, 4052680; 594980, 4052690; 594972, 4052690; 594959, 4052690; 594945, 4052690; 594937, 4052700; 594919, 4052710; 594910, 4052730; 594890, 4052750; 594850, 4052730; 594804, 4052680; 594791, 4052660; 594784, 4052650; 594773, 4052630; 594792, 4052590; 594811, 4052550; 594694, 4052540; 594526, 4052550; 594534, 4052510; 594523, 4052450; 594524, 4052440; 594509, 4052430; 594504, 4052420; 594498, 4052390; 594501, 4052370; 594514, 4052340; 594541, 4052320; 594555, 4052270; 594635, 4052140; 594632, 4052050; 594582, 4051940; 594530, 4051900; 594505, 4051850; 594455, 4051780; 594397, 4051730; 594293, 4051610; 594279, 4051580; 594283, 4051540; 594293, 4051500; 594310, 4051460; 594308, 4051430; 594279, 4051420; 594177, 4051500; 594123, 4051570; 594062, 4051570; 593904, 4051550; 593762, 4051690; 593643, 4051860; 593651, 4051950; 593714, 4051950; 593821, 4051970; 593939, 4052020; 594032, 4052080; 594113, 4052160; 594152, 4052220; 594236, 4052480; 594251, 4052600; 594348, 4052640; 594497, 4052770; 594662, 4053030; 594680, 4053080; 594680, 4053140; 594667, 4053170; 594658, 4053250; 594618, 4053310; 594619, 4053330; 594673, 4053460; 594648, 4053560; 594648, 4053580; 594655, 4053600; 594727, 4053640; 594734, 4053640; 594740, 4053670; 594751, 4053690; 594765, 4053700; 594763, 4053750; 594755, 4053770; 594750, 4053790; 594766, 4053800; 594788, 4053800; 594800, 4053810; 594811, 4053820; 594817, 4053850; 594813, 4053880; 594795, 4053910; 594788, 4053930; 594776, 4053950; 594778, 4053960; 594784, 4053980; 594798, 4054000; 594807, 4054010; 594822, 4054020; 594862, 4054000; 594883, 4054000; 594906, 4054000; 594928, 4054010; 594949, 4054040; 594950, 4054060; 594944, 4054110; 594952, 4054170; 594968, 4054190; 594979, 4054240; 594977, 4054290; 594972, 4054310; 595001, 4054350; 594980, 4054390; 594962, 4054440; 594960, 4054480; 594946, 4054510; 594953, 4054540; 594944, 4054560; 594905, 4054620; 595068, 4054580; 595069, 4054560; 595069, 4054480; 595048, 4054460; 595028, 4054430; 595022, 4054380; 595028, 4054350; 595032, 4054330; 595029, 4054290; 594965, 4054010.

(ii) Map Unit D follows.



(9) Unit E: *Freedom Boulevard Unit*.
Santa Cruz County, California.
(i) From USGS 1:24,000 quadrangle map Watsonville West, lands bounded by the following UTM zone 10 NAD83 coordinates (E,N): 601095, 4093430; 601117, 4093530; 601180, 4093690; 601315, 4093840; 601452, 4093950; 601490, 4094270; 601612, 4094230; 601623, 4094260; 601689, 4094260; 601755, 4094270; 601845, 4094270; 601848, 4094180; 601789, 4094180; 601789, 4094210; 601740, 4094210; 601735, 4093980; 601871, 4093970; 602214, 4093960; 602341, 4093960; 602500, 4093980; 602626, 4094000; 602637, 4093460; 601095, 4093430.
(ii) Map Unit E follows.

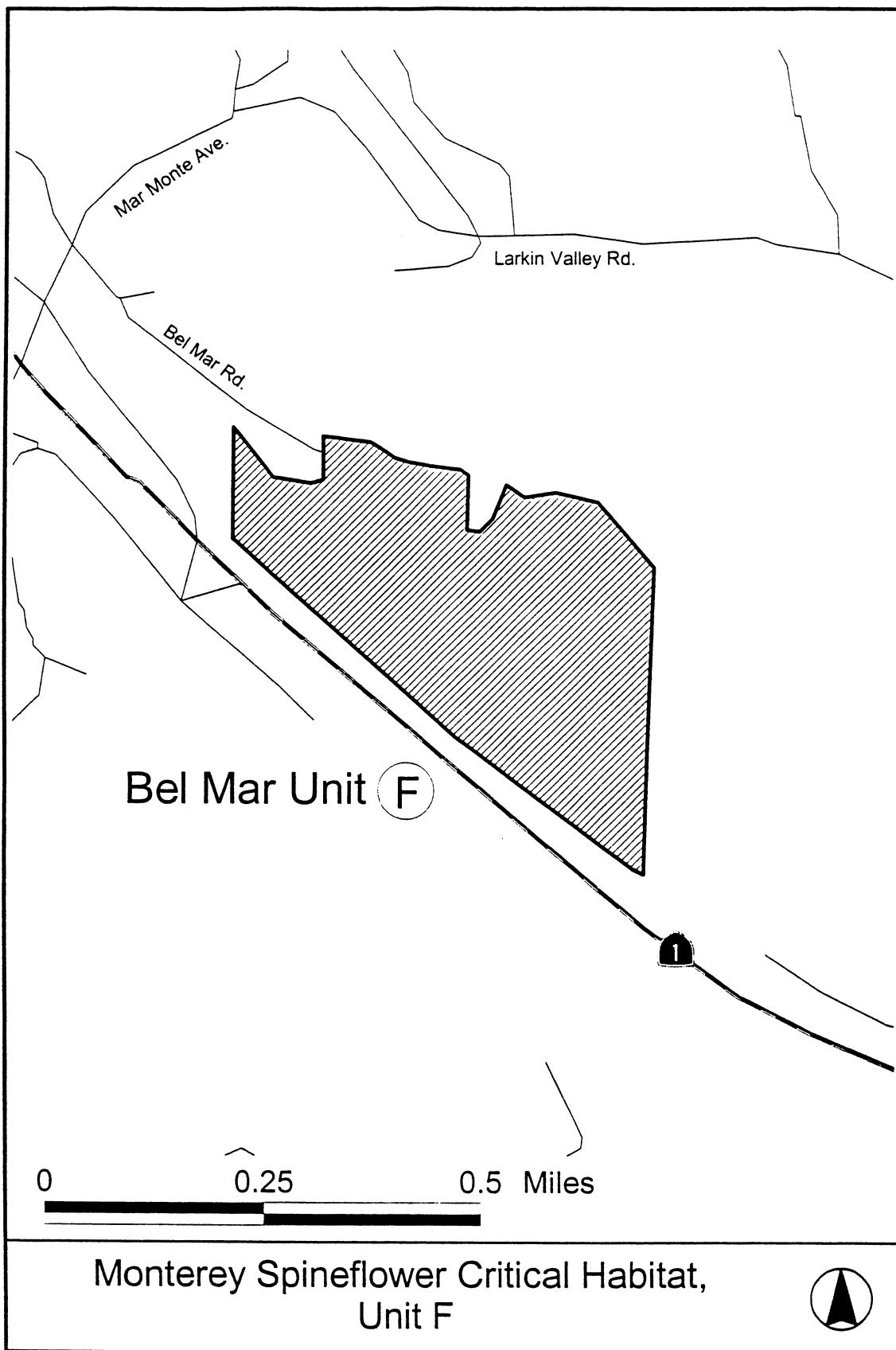


(10) Unit F: *Bel Mar unit*. Santa Cruz County, California.

(i) From USGS 1:24,000 quadrangle map Watsonville West, lands bounded

by the following UTM zone 10 NAD83 coordinates (E,N): 602688, 4089780;

602766, 4089690; 602836, 4089680; 603129, 4089700; 603130, 4089600; 603457, 4088980; 603120, 4089220;
602858, 4089690; 602855, 4089770; 603154, 4089600; 603177, 4089630; 602693, 4089570; 602688, 4089780.
602944, 4089760; 602971, 4089740; 603201, 4089690; 603236, 4089670; (ii) Map Unit F follows.
602991, 4089730; 603014, 4089730; 603292, 4089680; 603373, 4089660;
603059, 4089720; 603114, 4089710; 603481, 4089550; 603476, 4088970;



(11) Unit G: *Prunedale Unit*. Monterey County, California. From USGS 7.5' quadrangle map Prunedale, California.

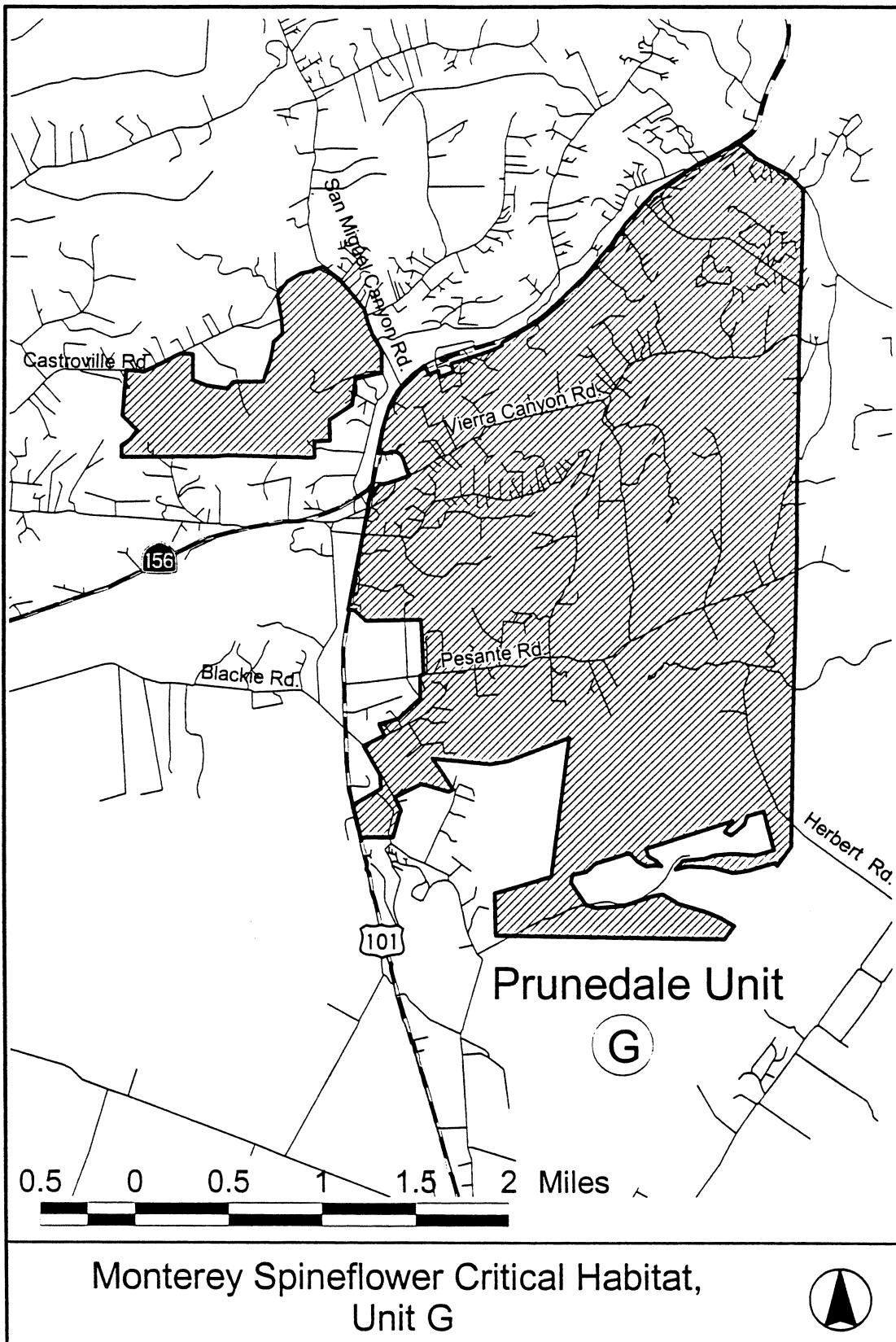
(i) From USGS 1:24,000 quadrangle map Prunedale, lands bounded by the following UTM zone 10 NAD83 coordinates (E,N). Western portion: 618343, 4074370; 618464, 4074420; 618606, 4074310; 618731, 4074180; 618828, 4074060; 618863, 4073950; 618915, 4073840; 618988, 4073730; 618993, 4073540; 618770, 4073470; 618751, 4073250; 618562, 4073110; 618572, 4072940; 618441, 4072930; 618443, 4072790; 618391, 4072780; 618346, 4072790; 618096, 4072780; 617914, 4072790; 617680, 4072780; 617591, 4072770; 616784, 4072740; 616781, 4072840; 616855, 4072890; 616906, 4072970; 616780, 4073090; 616783, 4073170; 616796, 4073480; 616951, 4073470; 617265, 4073640; 617366, 4073630; 617373, 4073410; 617490, 4073370; 617670, 4073350; 617722, 4073410; 617785, 4073420; 617979, 4073420; 618035, 4073600; 618057, 4073760; 618132, 4073840; 618119, 4073960; 618076, 4074170; 618162, 4074290; 618279, 4074360; 618343, 4074370.

(ii) Eastern Portion: 619646, 4070100; 619725, 4069980; 619688, 4069950;

619448, 4070010; 619226, 4069890; 619285, 4069780; 619266, 4069740; 619221, 4069550; 618942, 4069540; 618864, 4069810; 619102, 4069960; 619089, 4070090; 618943, 4070330; 619120, 4070420; 619071, 4070520; 619240, 4070570; 619422, 4070750; 619410, 4070950; 619442, 4070960; 619414, 4071320; 619402, 4071420; 618929, 4071400; 618825, 4071490; 618773, 4071490; 618871, 4072100; 618932, 4072480; 618960, 4072480; 618970, 4072520; 618989, 4072550; 619018, 4072580; 619091, 4072600; 619147, 4072610; 619263, 4072660; 619257, 4072680; 619212, 4072790; 619196, 4072830; 619158, 4072860; 619117, 4072860; 619072, 4072850; 618989, 4072850; 619011, 4073000; 619072, 4073250; 619138, 4073380; 619266, 4073530; 619365, 4073610; 619404, 4073530; 619483, 4073570; 619496, 4073510; 619614, 4073560; 619593, 4073630; 619905, 4073740; 619988, 4073780; 620028, 4073800; 620030, 4073820; 620125, 4073880; 620280, 4073980; 620392, 4074080; 620700, 4074380; 620956, 4074720; 621042, 4074860; 621284, 4075150; 621644, 4075400; 621980, 4075590; 622139, 4075460; 622413, 4075320; 622539, 4075210; 622554, 4074580; 622539,

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(iii) Map Unit G follows.



(12) Unit H: *Fort Ord Unit*: Monterey County, California.

(i) From USGS 1:24,000 quadrangle maps Marina, Salinas, Seaside, and Spreckels, lands bounded by the

following UTM zone 10 NAD83 coordinates (E,N): 609722, 4059410; 610035, 4059230; 610010, 4059190;

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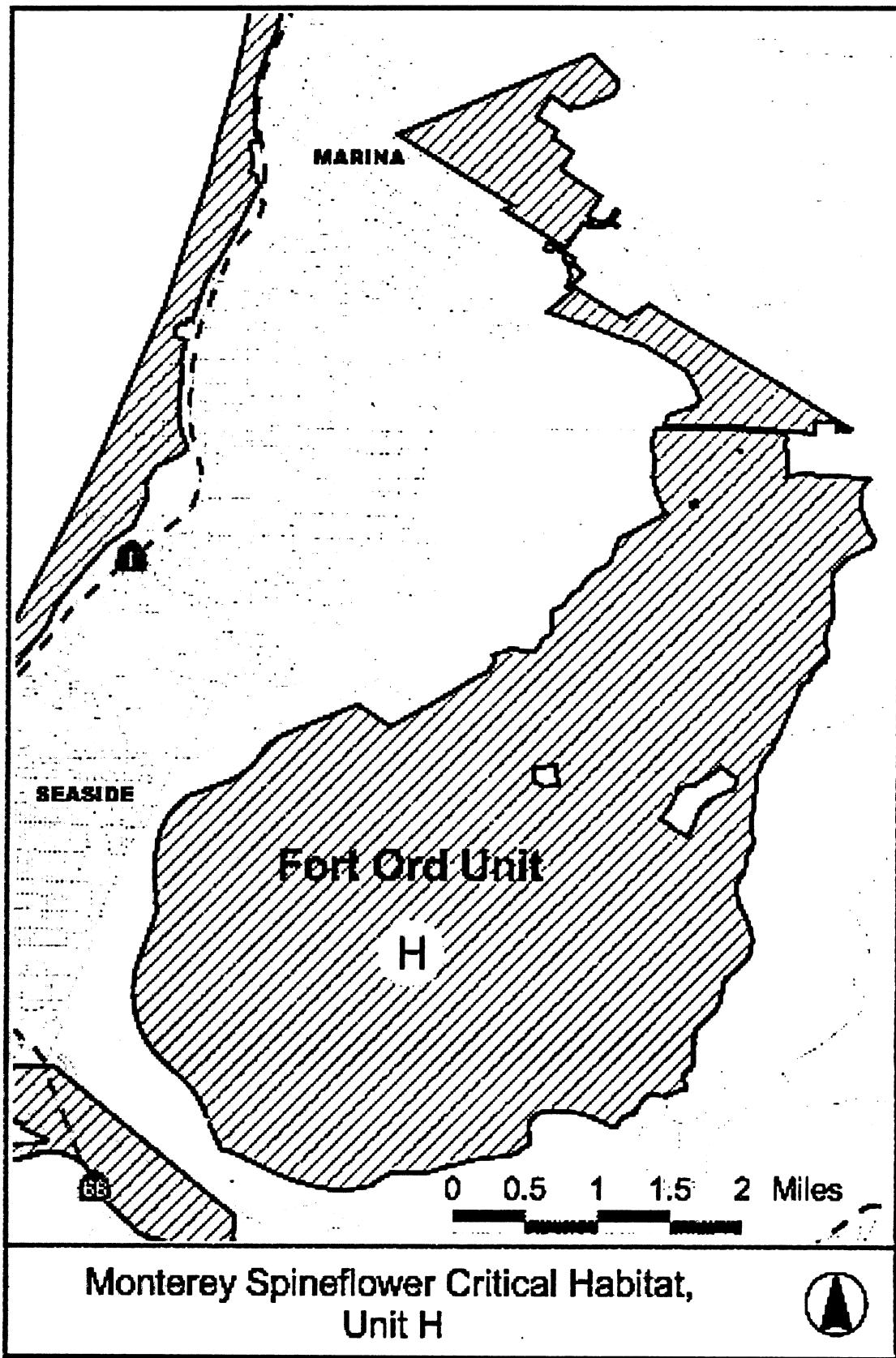
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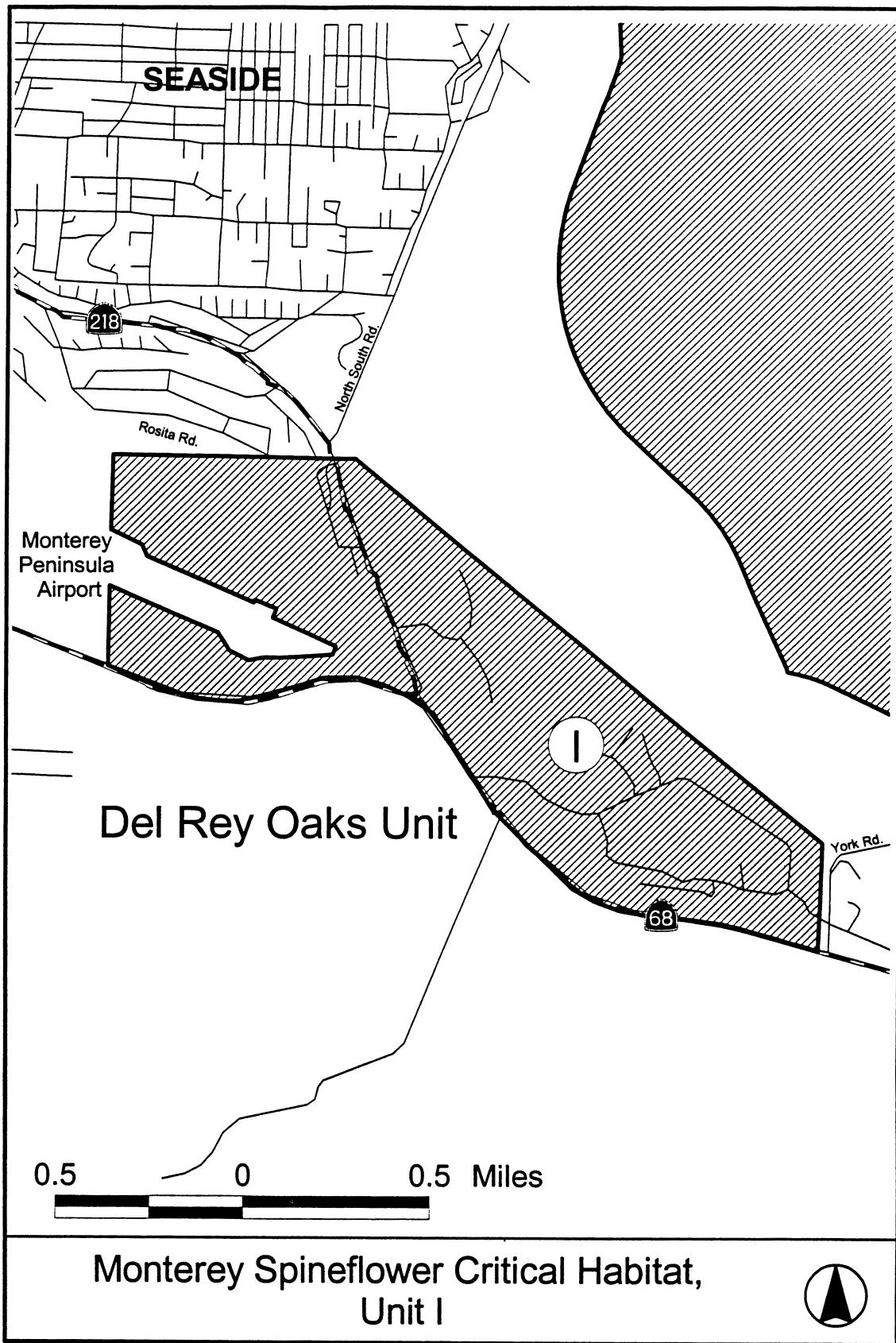
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(iii) Map Unit H follows.



(13) Unit I: *Del Rey Oaks Unit*.
Monterey County, California.
(i) From USGS 1:24,000 quadrangle map Seaside lands bounded by the following UTM zone 10 NAD83 coordinates (E,N): 603516, 4050050; 604562, 4050070; 606616, 4048490; 606612, 4048020; 606317, 4048090; 606197, 4048120; 606101, 4048130; 605982, 4048140; 605862, 4048150; 605758, 4048170; 605649, 4048200; 605557, 4048250; 605206, 4048580; 604937, 4048980; 604820, 4049060; 604710, 4049100; 604599, 4049130; 604457, 4049120; 604340, 4049080; 604209, 4049040; 604094, 4049010; 604000, 4049010; 603918, 4049020; 603802, 4049040; 603692, 4049080; 603525, 4049140; 603521, 4049490; 603993, 4049300; 604045, 4049220; 604128, 4049190; 604195, 4049200; 604280, 4049200; 604377, 4049210; 604452, 4049220; 604491, 4049220; 604502, 4049260; 604228, 4049370; 604242, 4049410; 604148, 4049450; 604143, 4049440; 603678, 4049620; 603655, 4049670; 603519, 4049730; 603516, 4050050.
(ii) Map Unit I follows.

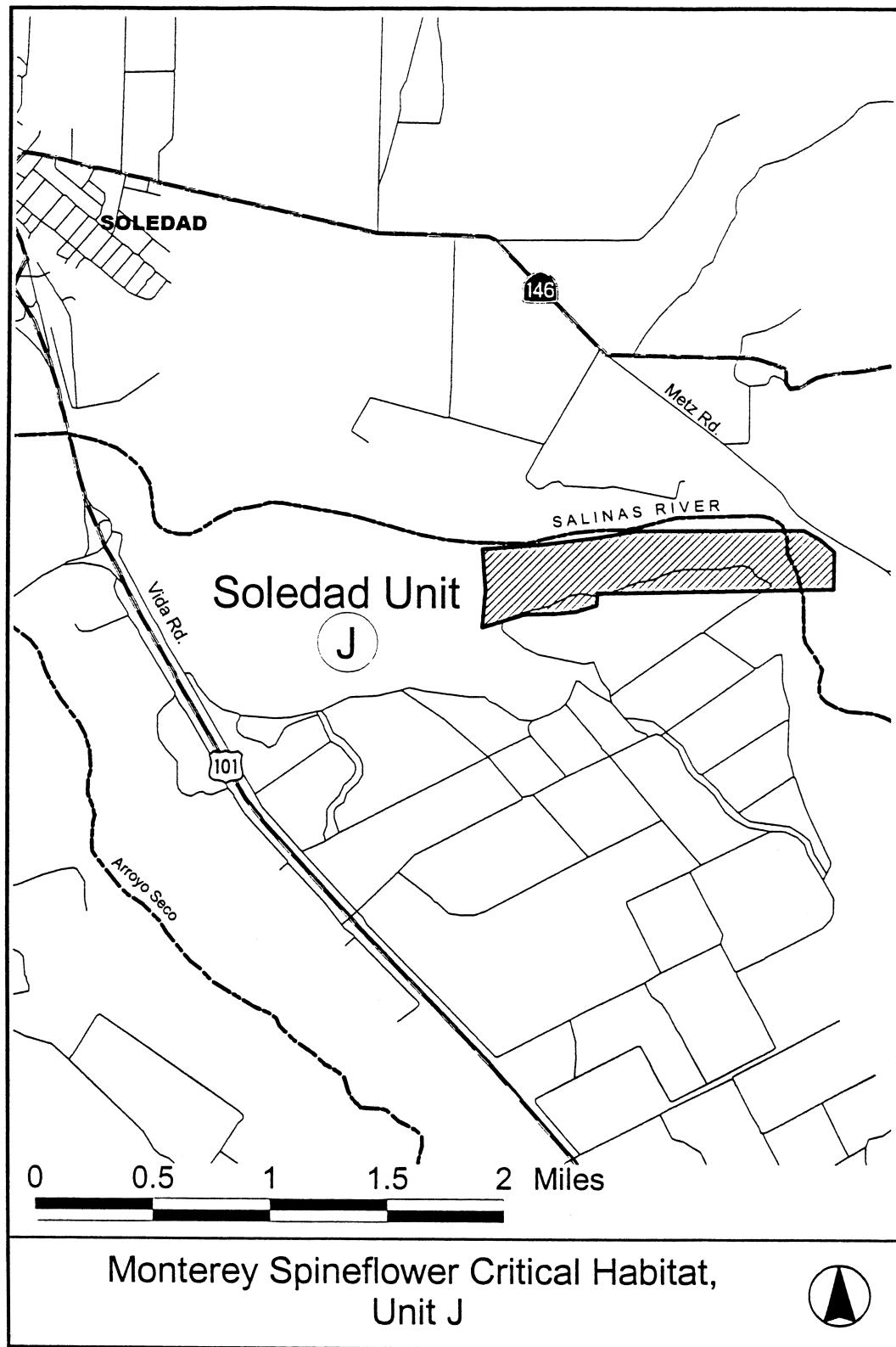


(14) Unit J: *Soledad Unit*. Monterey County, California.

(i) From USGS 1:24,000 quadrangle map Soledad, lands bounded by the following UTM zone 10 NAD83

coordinates (E,N): 653580, 4030090; 653997, 4030130; 654337, 4030190; 654644, 4030250; 655780, 4030290; 655904, 4030220; 655999, 4030140; 655999, 4029880; 654381, 4029810;

654381, 4029730; 654236, 4029680; 654093, 4029660; 653886, 4029650; 653594, 4029550; 653609, 4029810; 653580, 4030090.
(ii) Map Unit J follows.



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Dated: May 17, 2002.

Craig Manson,

*Assistant Secretary for Fish and Wildlife and
Parks.*

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