

Second, this Memorandum Opinion and Order adopts minor revisions to other rule provisions to make it clear that: (1) the frequencies and polarity of transmission to GSO satellites in the 29.25–29.5 GHz band from fixed earth stations in the vicinity of NGSO feeder-link stations must be chosen to minimize interference with reception of uplink transmission to NGSO, as well as GSO, satellites and (2) applicants for authority to use the 29.25–29.5 GHz band for feeder uplinks must show that sharing is possible with other systems that have been previously-authorized to use that band, not just systems that are currently operational. These changes merely clarify the Commission's pertinent intentions, rather than altering its policies and therefore impose no additional burden on any small entities. We therefore certify that the adoption of this Memorandum Opinion and Order will not have a significant economic impact on a substantial number of small entities. The Commission will send a copy of the Memorandum Opinion and Order, including a copy of this final certification, in a report to Congress pursuant to the Small Business Regulatory Enforcement Fairness Act of 1996. In addition, the Memorandum Opinion and Order and this final certification will be sent to the Chief Counsel for Advocacy of the SBA and will be published in the **Federal Register**.

Ordering Clauses

Accordingly, that the "Petition for Partial Reconsideration" filed by Motorola Satellite Communications, Inc. on September 27, 1996 *is granted*.

The "Petition of TRW Inc. for Clarification and/or Partial Reconsideration of the First Report and Order" filed on September 24, 1996 *is granted* to the extent indicated herein and *is otherwise denied* and that the "Petition for Reconsideration of Texas Instruments, Inc." filed on August 28, 1996 *is denied* to the extent indicated herein.

Section 25.258 of the Commission's rules *is amended* as indicated in the rule changes, effective May 29, 2002. This action is taken pursuant to 47 U.S.C. 154(i) and 303(r).

The Commission's Consumer Information Bureau, Reference Information Center, *shall send* a copy of this Memorandum Opinion and Order, including the Regulatory Flexibility Certification, to the Chief Counsel for Advocacy of the Small Business Administration.

List of Subjects in 47 CFR Part 25

Satellites.

Federal Communications Commission.

Marlene H. Dortch,
Secretary.

Rules Changes

For the reasons discussed in the preamble, the Federal Communications Commission amends 47 CFR part 25 as follows:

PART 25—SATELLITE COMMUNICATIONS

1. The authority citation for part 25 continues to read as follows:

Authority: 47 U.S.C. 701–744. Interprets or applies Sections 4, 301, 302, 303; 307, 309 and 332 of the Communications Act, as amended, 47 U.S.C. Sections 154, 301, 302, 303, 307, 309 and 332, unless otherwise noted.

2. Section 25.258 is revised to read as follows:

§ 25.258 Sharing between NGSO MSS Feeder links Stations and GSO FSS services in the 29.25–29.5 GHz Bands.

(a) Operators of NGSO MSS feeder link earth stations and GSO FSS earth stations in the band 29.25 to 29.5 GHz where both services have a co-primary allocation shall cooperate fully in order to coordinate their systems. During the coordination process both service operators shall exchange the necessary technical parameters required for coordination.

(b) Licensed GSO FSS systems shall, to the maximum extent possible, operate with frequency/polarization selections, in the vicinity of operational or planned NGSO MSS feeder link earth station complexes, that will minimize instances of unacceptable interference with GSO FSS or NGSO MSS uplink reception.

(c) Applicants for authority to use the 29.25–29.5 GHz band for NGSO MSS feeder uplinks will have to demonstrate that their systems can share with GSO FSS and NGSO MSS systems that have been authorized for operation in that band.

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DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018–AH82

Endangered and Threatened Wildlife and Plants; Critical Habitat Designation for *Chorizanthe robusta* var. *hartwegii* (Scotts Valley Spineflower)

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), designate critical habitat pursuant to the Endangered Species Act of 1973, as amended (Act), for *Chorizanthe robusta* var. *hartwegii* (Scotts Valley spineflower). Approximately 116 hectares (287 acres) of land fall within the boundaries of the critical habitat designation located in Santa Cruz County, California. 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 becomes effective on June 28, 2002.

ADDRESSES: Comments and materials received, as well as supporting documentation used in the preparation of this final rule will be 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: Connie Rutherford, Ventura Fish and Wildlife Office, at the above address (telephone 805/644–1766; facsimile 805/644–3958).

SUPPLEMENTARY INFORMATION:

Background

Chorizanthe robusta var. *hartwegii* is endemic to Purisima sandstone and Santa Cruz mudstone in Scotts Valley in the Santa Cruz Mountains, Santa Cruz County, California. *C. r.* var. *hartwegii*, a short-lived annual species in the buckwheat family (Polygonaceae), is a low-growing herb with rose-pink involucrel (pertaining to a circle or collection of modified leaves surrounding a flower cluster) margins confined to the basal portion of the teeth and an erect form of growth. The aggregate flowers (heads) are medium in size (1 to 1.5 centimeters (cm) (0.4 to 0.6 inches (in) in diameter) and distinctly aggregate. Each flower produces one

seed; the seeds are 3.5 to 4.0 millimeters (mm) long. Hooks on the spines of the involucre (circle or collection of modified leaves surrounding a flower cluster), which surround the seed, facilitate seed dispersal.

Chorizanthe robusta var. *hartwegii* is one of two varieties of the species *Chorizanthe robusta*. The other variety (*Chorizanthe robusta* var. *robusta*), known as robust spineflower, is restricted to sandy soils in coastal and near-coastal areas in Santa Cruz County. We are designating critical habitat for *C. r.* var. *robusta* in a separate **Federal Register** notice.

The range of *Chorizanthe robusta* var. *hartwegii* comes close to, but does not overlap with that of *Chorizanthe pungens* var. *hartwegiana* (Ben Lomond spineflower), another closely related taxon in the *Pungentes* section of the genus, in Santa Cruz County.

Chorizanthe pungens var. *hartwegiana* is also a federally endangered species; for a detailed description of these related taxa, see the Draft Recovery Plan for the Robust Spineflower (Service 2000) and references within this plan.

Chorizanthe robusta var. *hartwegii* is known from two sites about 1.6 kilometers (km) (1 mile (mi)) apart at the northern end of Scotts Valley in Santa Cruz County, California. For the most part, it co-occurs with *Polygonum hickmanii*, a species that is proposed for Federal listing as endangered (65 FR 67335). We proposed critical habitat for *C. r.* var. *hartwegii* and *Polygonum hickmanii* at the same time; however, since the final rule for *Polygonum hickmanii* has not been published, we are only designating critical habitat for *C. r.* var. *hartwegii* at this time.

Chorizanthe robusta var. *hartwegii* is found on gently sloping to nearly level fine-textured, shallow soils of the Bonnydoon series over outcrops of Santa Cruz mudstone and Purisima sandstone (Hinds and Morgan 1995, Soil Conservation Service 1980, U.S. Geologic Survey 1989). *C. r.* var. *hartwegii* occurs with other small annual herbs in patches within a more extensive annual grassland habitat. These small patches have been referred to as "wildflower fields" because they support a large number of native herbs, in contrast to the adjacent annual grasslands that support a greater number of non-native grasses and herbs. While the wildflower fields are underlain by shallow, well-draining soils, the surrounding annual grasslands are underlain by deeper soils with a greater water-holding capacity, and therefore more easily support the growth of non-native grasses and herbs. The surface soil texture in the wildflower fields

tends to be consolidated and crusty rather than loose and sandy (Biotic Resources Group (BRG) 1998). Elevation of the sites is from 215 to 245 meters (m) (700 to 800 feet (ft)) (Hinds and Morgan 1995).

Chorizanthe robusta var. *hartwegii* is associated with a number of native herbs including *Lasthenia californica* (goldfields), *Minuartia douglasii* (sandwort), *Minuartia californica* (California sandwort), *Gilia clivorum* (gilia), *Castilleja densiflora* (owl's clover), *Lupinus nanus* (sky lupine), *Brodiaea terrestris* (brodiaea), *Stylocline amphibola* (Mount Diablo cottonweed), *Trifolium grayii* (Gray's clover), and *Hemizonia corymbosa* (coast tarplant). Non-native species present include *Filago gallica* (filago) and *Vulpia myuros* (rattail) (California Natural Diversity Data Base (CNDDB) 1998; Randy Morgan, biological consultant, pers. comm., 1998). In many cases, the habitat also supports a crust of mosses and lichens (BRG 1998).

Chorizanthe robusta var. *hartwegii* germinates during the winter months and flowers from April through June. Although pollination ecology has not been studied for this taxon, it is likely visited by a wide array of pollinators. Pollinators that have been observed on other species of *Chorizanthe* that occur in Santa Cruz County have included: leaf cutter bees (megachilids); at least 6 species of butterflies; flies; sphecid wasps; ants; and small beetles (Randy Morgan, biologist, Soquel, California, pers. comm., 2000; S. Baron, *in litt.* 2000; A. Murphy, *in litt.*, 2002). In other annual species of *Chorizanthe*, the flowers are protandrous, a reproductive strategy in which the anthers (male reproductive structures) mature and shed pollen prior to the maturation of the style (female reproductive structures) to receive pollen, with a delay of style receptivity being one or two 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 (James Reveal 2001). The relative importance of insect pollination and self-pollination to seed set is unknown; however, in the closely related Monterey spineflower (*Chorizanthe pungens* var. *pungens*), the importance of pollinator activity to production of viable seed was demonstrated by the production of seed with low viability where pollinator access was limited (Harding Lawson Associates 2000).

The plants turn a rusty hue as they dry through the summer months, eventually shattering during the fall. Seed is mature by August and dispersal

is facilitated by the hooked involucre spines, which surround the seed and attach it to passing animals. Black-tailed hares (*Lepus californicus*) have been observed to browse on the related *Chorizanthe robusta* var. *robusta* (S. Baron, *in litt.* 2000), and most likely act to disperse seeds as well. Other animals likely to assist in seed dispersal include, but are not limited to: mule deer (*Odocoileus hemionus*); gray foxes (*Urocyon cinereoargenteus*); coyotes (*Canis latrans*); bobcats (*Felis rufus*); ground squirrels (*Otospermophilus beecheyi*); striped skunks (*Mephitis mephitis*); opossums (*Didelphis virginiana*); raccoons (*Procyon lotor*); and other small mammals and small birds.

For annual plants, maintaining a seed bank (a reserve of dormant seeds, generally found in the soil) is important to its year-to-year and long-term survival (Baskin and Baskin 1978). A seed bank includes all of the seeds in a population and generally covers a larger area than the extent of observable plants seen in a give year (Given 1994). The number and location of standing plants (the observable plants) in a population varies annually due to a number of factors, including the amount and timing of rainfall, temperature, soil conditions, and the extent and nature of the seed bank. The extent of seed bank reserves is variable from population to population and large fluctuations in the number of standing plants at a given site may occur from one year to the next.

Depending on the vigor of the individual plant and the effectiveness of pollination, dozens, if not hundred of seeds could be produced. In one study on 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). The production of seed itself does not guarantee 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). Seedling mortalities of up to 42 percent in the related *C. r.* var. *robusta* have been caused primarily by the larval (caterpillar) life stage of moths belonging to the family Gelichiidae (Baron 2000).

For purposes of this rule, a cluster of individuals of *Chorizanthe robusta* var. *hartwegii* will be referred to as a "colony." Because of the close proximity of many of the clusters to

each other, it is uncertain whether clusters biologically represent patches within a metapopulation, true colonies, or separate populations. The general location of the colonies will be referred to as a "site."

While the sites that support large colonies or populations of *Chorizanthe robusta* var. *hartwegii* most likely also support large seed banks and can sustain the species through several years of poor weather or bouts of predation, sites that support smaller populations and smaller seed banks may be more vulnerable to extirpation. The complex of colonies of *C. r.* var. *hartwegii* in the Glenwood area are in close enough proximity to each other that their seed banks most likely are dispersed between colonies; the total number of standing individuals and the attendant seed bank most likely are of sufficient magnitude to perpetuate the species in the near term, absent significant threats to the remaining habitat. In the Polo Ranch area, the colonies of *C. r.* var. *hartwegii* are also in close enough proximity to each other that their seed banks most likely are dispersed between colonies; however, the total number of individuals and the attendant seed bank are relatively smaller in magnitude here than at the Glenwood site and, therefore, this unit may be more vulnerable to extirpation if exposed to events such as several years of poor weather or bouts of predation.

The total number of colonies of *Chorizanthe robusta* var. *hartwegii* is difficult to count for several reasons: (1) Depending on the scale at which colonies are mapped, a larger or smaller number of colonies may result, and (2) depending on the climate and other annual variations in habitat conditions, the extent of colonies may either shrink and temporarily disappear, or enlarge and merge into each other, thus appearing as larger but fewer colonies.

The distribution of colonies is generally concentrated at two sites. The Glenwood site is located north of Casa Way and west of Glenwood Drive in northern Scotts Valley (see map at end of rule) and contains a large number of colonies of *Chorizanthe robusta* var. *hartwegii* that occur on three privately owned parcels of land. Colonies of *C. r.* var. *hartwegii* are situated within a 4 hectare (ha) (9 ac) preserve on a parcel owned by the Scotts Valley Unified School District and referred to as the "School District" colony (Denise Duffy and Associates 1998). Other colonies at the Glenwood site are located approximately 0.20 km (0.13 mi) to the west of the School District colony on a parcel of land owned by the Salvation Army (CNDDDB 1998) and are referred to

as the "Salvation Army" colonies. Additional colonies of *C. r.* var. *hartwegii* are located on a parcel owned by American Dream/Glenwood L.P. and are referred to as the "Glenwood" colonies; the parcel has been approved for development by the City of Scotts Valley (Keenan Land Company (KLC) 2001). As currently approved, the project would retain colonies on the west side of Glenwood Drive and on the east side of Glenwood Drive in portions of the parcel that are being designated as open space (Impact Sciences 2001, KLC 2001).

The first extensive effort to map the distribution and abundance of *Chorizanthe robusta* var. *hartwegii* within the area included in the Glenwood unit was carried out in 1992; surveyors mapped 30 "populations/ occurrences" of *C. r.* var. *hartwegii*, with occurrences comprising from a low of one individual to over 25,000, and including a total of approximately 100,000 individuals. Additionally 82 patches of "suitable habitat" were mapped (Habitat Restoration Group 1992). Construction of the Scotts Valley High School in 1999 resulted in the loss of approximately 6 populations and occurrences, 890 individuals, and 34 patches of "suitable habitat" (Denise Duffy and Associates 1997, 1998).

In addition to direct removal of habitat, habitat fragmentation affects the long-term conservation of the species by reducing connectivity among colonies and populations, by altering microsite drainage patterns, and by providing access to vectors that cause secondary impacts, such as the spread of non-native species. Because the high school is located within the central portion of the Glenwood unit, its construction significantly fragmented the grasslands that were once contiguous and that provided connectivity between the Salvation Army, School District, and Glenwood colonies. Two access roads, one on each side of Glenwood Drive, have been constructed in the last three years; one was placed between colonies of *Chorizanthe robusta* var. *hartwegii*, and the other was placed between colonies and other patches of wildflower fields. In the fall of 2001, an arson wildfire burned approximately 12 ha (5 ac) of grassland between Teacup and Cupcake Hill, coming close to, but not directly damaging individuals of *C. r.* var. *hartwegii*. This event highlighted the potential for damage to the species' habitat, not only from a fire event that is not part of a habitat management plan, but also from the vehicles dispatched to extinguish the fire (K. Lyons, consultant, Santa Cruz, CA, pers. comm., 2002).

The second site is referred to as the "Polo Ranch" site. Located just east of Highway 17 and north of Navarra Drive in northern Scotts Valley, this site is approximately 1.6 km (1 mi) east of the Salvation Army and School District colonies. Colonies within the Polo Ranch site occur on a parcel of land owned by Greystone Homes (Lyons *in litt.* 1997); a number of these colonies of *Chorizanthe robusta* var. *hartwegii* occur within 0.2 km (0.1 mi) of each other (Lyons *in litt.* 1997, Impact Sciences 2000). In 1997 surveys, *C. r.* var. *hartwegii* was found at 25 locations and comprised approximately 8,000 individuals; the abundance and distribution was similar to that recorded in 1990 (Lyons *in litt.* 1997). We believe that the abundance and distribution of *C. r.* var. *hartwegii* has been reduced by disturbance to the site by illegal off-highway vehicle use since that time (Service *in litt.* 2000).

Chorizanthe robusta var. *hartwegii* is threatened with extinction by habitat alteration due to secondary impacts of urban development. Urban development includes the recent construction and operation of a high school; installation and maintenance of water delivery pipelines, access roads, and water tanks; and currently existing and proposed housing. Over the last decade a variety of housing proposals have been considered for two of the parcels; the Glenwood development was approved by the City of Scotts Valley in late 2001 (Keenan Land Company 2001), and the proposed Polo Ranch development is currently on hold due to other legal issues.

The small range of this taxon makes it vulnerable to edge effects from adjacent human activities. The kinds of habitat alterations expected to impact *Chorizanthe robusta* var. *hartwegii* as a result of development include changes in soil characteristics such as surface and subsurface water flow and soil compaction; increased disturbance due to trampling from humans, pets, and bicycle traffic; the inadvertent application of herbicides and pesticides; over-spray from landscape irrigation, dumping of yard wastes; and the introduction and spread of non-native species (Conservation Biology Institute 2000). Due to their small size, the proposed preserves and open space areas intended to protect *C. r.* var. *hartwegii* are inadequate for maintaining viable populations of this species (Service *in litt.* 1998). Studies on habitat fragmentation and preserves established in urbanized settings have shown that these preserves gradually become destabilized from external forces (*i.e.*, changes in the hydrologic conditions,

soil compaction, etc.), resulting in preserves that are no longer able to support the species that they were established to protect (Kelly and Rotenberry 1993).

The chance of random extinction for *Chorizanthe robusta* var. *hartwegii* is also increased due to the limited area of habitat available for this species (Shaffer 1981). Because the colonies are concentrated at only a few sites, a random environmental event (e.g., fire) or human disturbance potentially could destroy all colonies occurring on a parcel, thus diminishing the likelihood of long-term persistence.

Previous Federal Action

On May 16, 1990, we received a petition from the Santa Cruz Chapter of the California Native Plant Society to list *Chorizanthe robusta* var. *hartwegii* as endangered. Based on a 90-day finding that the petition presented substantial information indicating that the requested action may be warranted (55 FR 46080), we initiated a status review of this taxon. During this time, we also reviewed the status of *Chorizanthe robusta* var. *robusta*. On October 24, 1991 (56 FR 55107), we published a proposal to list both varieties of *Chorizanthe robusta* as endangered species. On February 4, 1994, we published a final rule that listed *C. robusta* as endangered, inclusive of *C. r.* var. *hartwegii* and *C. r.* var. *robusta* (59 FR 5499). Proposed designation of critical habitat for these taxa was believed prudent but not determinable at the time of listing. A Recovery Plan covering two insect species and four plant species from the Santa Cruz Mountains, including *C. r.* var. *hartwegii*, was published in 1998 (Service 1998).

On June 30, 1999, our failure to designate critical habitat for *Chorizanthe robusta*, inclusive of var. *hartwegii* and var. *robusta*, 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, the Service agreed to propose critical habitat for *C. r.* var. *hartwegii* by January 15, 2001, and to sign a final rule

by October 19, 2001. The plaintiffs subsequently agreed to an extension, approved by the court, until May 17, 2002 to complete the final rule.

Because the two varieties of *Chorizanthe robusta* are geographically and ecologically separated, critical habitat designations were developed separately. The proposed rule to designate critical habitat for *Chorizanthe robusta* var. *hartwegii* was sent to the **Federal Register** on January 16, 2001, and was published in the **Federal Register** February 15, 2001 (66 FR 10469). In the proposal, we determined that it was prudent to designate approximately 125 ha (310 ac) of lands in Santa Cruz County as critical habitat. The 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 *C. r.* var. *hartwegii*, and a notice of availability of the draft economic analysis on the proposed determination (66 FR 48227). This second public comment period closed on October 19, 2001. On February 1, 2002, the Office of the Secretary of the Interior published a notice reopening the comment period until February 15, 2002 (67 FR 4940). The comment period was reopened to allow individuals to resubmit comments that we may not have received due to the Department's Internet access, including the receipt of outside e-mail, being shut down.

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 seven parties, including three designated peer reviewers, and two environmental groups. Approximately 800 additional letters were submitted as part of a mailing campaign. Of the seven parties responding individually, five supported the proposed designation, one was neutral, and one was opposed. Of the 800 additional letters, 23 were opposed, 1 was neutral, and the remaining were in support of the critical habitat designation.

We reviewed all comments received for substantive issues and new information regarding critical habitat and *Chorizanthe robusta* var. *hartwegii*. Similar comments were grouped into

three general issues relating specifically to biological issues, procedural and legal issues, and economic issues. These are addressed in the following summary.

Issue 1: Biological Justification and Methodology

Comment 1: The proposed designation is not properly supported by the best scientific information available. In particular, the Service makes "numerous and unsupported assertions regarding the biology and habitat requirements" of the species, and did not use the data available to them.

Service Response: 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 robusta* var. *hartwegii*. This information included data from the California Natural Diversity Data Base (CNDDB 2000), geologic and soil survey maps (USGS 1989, SCS 1980), recent biological surveys and reports, our recovery plan for this species, additional information provided by interested parties, and discussions with botanical experts. We also conducted multiple site visits to the two locations that were proposed for designation.

Comment 2: One peer reviewer suggested expanding the list of primary constituent elements to include such factors as seed germination requirements, substrate salinity, microreliefs and microclimates within local habitats, seasonal and yearly groundwater levels, and bird populations that migrate within the range of *Chorizanthe robusta* var. *hartwegii*.

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

Comment 3: One commenter submitted a map portraying a recommended revision to the proposed critical habitat covering the parcel owned by American Dream/Glenwood L.P. which would reduce the extent of critical habitat on that parcel. The commenter suggested that the swath of low-elevation grasslands that occur along Carbonera Creek in the middle of the Glenwood Unit could be eliminated from critical habitat, as well as a portion of the Carbonera Creek watershed above

them, because the low-level grasslands do not support the primary constituent elements, and the presence of existing residential development and the Scotts Valley High School along Glenwood Drive makes this area a less desirable movement corridor for wildlife functioning as dispersal agents.

Our Response: The low-elevation grasslands along Carbonera Creek do support some of the primary constituent elements, including; a grassland community, area to allow for adequate seed dispersal between existing colonies and other suitable sites, and areas that allow pollinator activity between existing colonies. In particular, the low-level grasslands along Carbonero Creek provide an important corridor for dispersers and pollinators between the colonies on the west and east sides of Glenwood Drive. The recent development of the Scotts Valley High School has reduced the extent of the corridor between the east and west sides of Carbonero Creek, and has therefore increased the conservation value and importance of the remaining corridor for pollinators and seed dispersers. In the background section of this final rule, we have expanded the discussion of potential seed dispersers and pollinators, which are part of the primary constituent elements, to clarify the role that these elements play in the long-term conservation of the species.

The recovery plan for the species states that to downlist the species from endangered to threatened, all known sites would have to be in protected status, a habitat conservation plan would have to be in place with the City of Scotts Valley, and population numbers would have to be stable or increasing (Service 1998). The limited range of the species, the limited opportunities for conservation, and the existence of threats on all locations where it occurs, makes conservation of the species very difficult. Further loss of habitat or compromising the ecological processes on which the species depends may eliminate the ability of the species to persist.

Issue 2: Legal and Procedural Issues

Comment 4: The proposed designation fails to designate specific areas as critical habitat; rather, it uses a landscape approach.

Service Response: The critical habitat designation delineates areas which contain locations of known individuals of *Chorizanthe robusta* var. *hartwegii* and areas with the constituent elements that we believe are necessary for the long-term conservation of *C. r.* var. *hartwegii*. The distribution of *C. r.* var. *hartwegii* is so restricted that direct and

indirect threats to its habitat may preclude our ability to recover the species. Given the limited distribution of the species, we were able to map critical habitat for it with a high level of precision.

Comment 5: The proposed designation improperly includes areas not essential to the conservation of *Chorizanthe robusta* var. *hartwegii*.

Service Response: We recognize that not all parcels of land proposed and designated as critical habitat contain the habitat components essential to the conservation of *Chorizanthe robusta* var. *hartwegii*. Some lands included in the proposed designation have not been included in this final designation. In developing the final designation, we modified boundary lines to exclude 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. However, due to our mapping scale, some areas not essential to the conservation of *C. r.* var. *hartwegii* were included within the boundaries of final critical habitat. Certain features, such as, buildings, roads, other paved areas and urban landscaped areas do not contain the primary constituent elements for the species. Service staff at the contact numbers provided are available to assist landowners in discerning whether or not lands within the critical habitat boundaries actually possess the primary constituent elements for the species.

Comment 6: The proposed designation fails to delineate between occupied and unoccupied habitat areas.

Service Response: In this final designation all of the critical habitat units are occupied by either standing plants or support a *Chorizanthe robusta* var. *hartwegii* seed bank, but each of the units probably contains areas that are considered currently unoccupied by the species. "Occupied" is defined here as an area that may or may not have an above-ground standing mass of *C. r.* var. *hartwegii* during current surveys, but if no standing mass is apparent, the site likely contains a below-ground seed bank of indefinite boundary. All occupied sites contain some or all of the primary constituent elements and are essential to the conservation of the species, as described below. "Unoccupied" is defined here as an area that contains no above-ground standing mass of *C. r.* var. *hartwegii* and the unlikely existence of a viable seed bank. 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 areas into which populations might expand, provide connectivity or linkage between colonies within a unit, and support populations of pollinators and seed dispersal organisms.

The commenter also cited that there is a lack of data to show that colonies may temporarily disappear or expand into areas surrounding the immediate vicinity of the current year's colony. Determining the specific areas that this taxon occupies is difficult for several reasons: (1) The way the current distribution of *Chorizanthe robusta* var. *hartwegii* is mapped can be variable, depending on the scale at which patches of individuals are recorded (e.g., many small patches versus one large patch) and (2) 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 logistically 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. r.* var. *hartwegii*.

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)). Because of the very limited range of *Chorizanthe robusta* var. *hartwegii*, designating only occupied areas would not meet the conservation requirements of the species. Occupied areas, as well as the grassland areas around them within the designated units of critical habitat which may be occupied in the future, provide the essential life-cycle needs of the species and provide some or all of the habitat components essential for the conservation (primary constituent elements) of *C. r.* var. *hartwegii*. We are designating critical habitat for *C. r.* var. *hartwegii* in all areas that are known to currently be occupied by the species. Even so, we believe that the small amount of critical habitat that we are designating for *C. r.* var. *hartwegii* will be insufficient to provide for its recovery because of the development projects that are proposed and the secondary impacts that will result from

the development. At this time, we are not aware of additional populations of *C. r.* var. *hartwegii* nor additional areas that can be occupied by the species in the future.

Comment 7: The Service should review the endangered status of *Chorizanthe robusta* var. *hartwegii*. Since the listing of the species, no new information about the habitats essential to the species had been obtained.

Service Response: Since the time of listing in 1994, we have reviewed new information from the CNDDDB, biological surveys, botanists in the field familiar with the species, and made numerous visits to field sites. From this information, we believe that the range of the species is limited to the Scotts Valley area. Since the species was listed as endangered in 1994, habitat for the species has been destroyed due to several development projects, and additional habitat has been altered due to secondary impacts resulting from development. According to a review of the socioeconomic information available about the geographic area presented in the draft economic analysis, pressure on the remaining suitable habitat for the species from residential and commercial development and recreation, has increased steadily since the species was listed in 1994. The increased pressure on the limited area currently available for this species reinforces its endangered status and the need to designate critical habitat.

Comment 8: The Service has failed to properly consider the economic and other impacts of designating particular areas as critical habitat.

Service Response: The Service published the economic analysis for designating the critical habitat for *Chorizanthe robusta* var. *hartwegii* on September 19, 2001 (66 FR 48227). There was a 30-day public comment period associated with this publication. Comments received on the economic analysis are incorporated with the comments received on the other portions of the proposed designation in this final rule. In addition, an addendum to the economic analysis, incorporating the comments received on the economic analysis, has been completed and is available upon request (see ADDRESSES section).

Comment 9: The Service has improperly bifurcated its consideration of economic impacts and other factors.

Service Response: Pursuant to section 4(b)(2) of the Act, we are to evaluate, among other relevant factors, the potential economic effects of the designation of critical habitat for *Chorizanthe robusta* var. *hartwegii*. We published our proposed designation in

the **Federal Register** on February 15, 2001 (66 FR 10469). At that time, our Division of Economics and their consultants, Industrial Economics, Inc., initiated the draft economic analysis. The draft economic analysis was made available for public comment and review beginning on September 19, 2001 (66 FR 48227). Following a 30-day public comment period on the proposal and draft economic analysis, a final addendum to the economic analysis was developed. Both the draft economic analysis and final addendum were used in the development of this final designation of critical habitat for *C. r.* var. *hartwegii*. Please refer to the Economic Analysis section of this final rule for a more detailed discussion of these documents.

Comment 10: The Service has not provided a fair and meaningful opportunity for comment on its proposed designation.

Service Response: We published a proposed rule to designate critical habitat for *Chorizanthe robusta* var. *hartwegii* on February 15, 2001 (66 FR 10469), and accepted comments from the public for 60 days, until April 16, 2001. The comment period was reopened from September 19, 2001, to October 19, 2001 (66 FR 48227) and February 1, 2002, to February 15, 2002 (67 FR 4940), to allow for additional comments on the proposed designation, and comments on the draft economic analysis of the proposed critical habitat.

We contacted all appropriate State and Federal agencies, county governments, 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. We provided notification of the draft economic analysis through telephone calls, letters, and news releases faxed and/or mailed to affected elected officials, local jurisdictions, and interest groups. Additionally, the public had the opportunity to request a public hearing, but none was requested.

Comment 11: The Service should prepare and consider an environmental impact statement in keeping with NEPA.

Service 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 Endangered Species Act and the Administrative Procedure Act 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.

Issue 3: Economic Comments

Comment 12: Some commenters expressed concern that the economic analysis fails to adequately describe the potential social welfare benefits of the rule such as the averted cost to society if, absent the rule, the areas identified in this rule are developed or somehow used in a manner that leads to the extinction of the species.

Our Response: We recognize that social welfare generally benefits from the conservation and recovery of endangered and threatened species and their habitat as numerous studies have shown that society values open space and biodiversity. Benefits to social welfare are composed of direct and passive use benefits. Examples of direct use benefits, as it may relate to species protection, include such activities as commercial cultivation of a species for medicinal purposes (e.g., the Pacific yew tree) and tourism associated with a species' presence (e.g., traveling to a certain part of the country just to see protected species and their habitat). Passive use benefits may include such values as option, bequest, and existence values that include, respectively, the value to society of future direct use benefits, the value of conserving species and their habitat for future generations, and the value gained by society from simple acknowledgment that a species continues to exist in its natural habitat.

While we have acknowledged the potential for society to experience such benefits in our economic analyses for critical habitat rulemakings, our ability to actually measure these benefits in any meaningful way is difficult and imprecise at best. While we are aware of many studies that attempt to identify the social benefits of open space, the use of public lands for recreational purposes, the cost of sprawl, etc., few of these studies provide any meaningful information that can be used to develop estimates associated with critical habitat designation. The designation of critical habitat does not necessarily inhibit development of private property, which makes it difficult to draw upon the literature of the economic values of open space to identify potential benefits

of critical habitat designation. Also, while some economic studies attempt to measure the social value of protecting endangered species, the species that are often valued are well known and easy to identify (e.g., bighorn sheep) in contrast to less high profile species. Furthermore, the values identified in these studies would be most closely associated with the listing of a species as endangered or threatened because the listing serves to provide the majority of protection and conservation benefits under the Act.

While we will continue to explore ways that will allow us to provide more meaningful descriptions of the potential social benefits associated with critical habitat designation, we believe that due to the current lack of available data specific to these rulemakings, along with the time and resource constraints imposed upon the Service, the benefits of critical habitat designation can best be expressed in biological terms that can then be weighed against the expected social costs of the rulemaking.

Peer Review

In accordance with our policy published on July 1, 1994 (59 FR 34270), we solicited independent opinions from three knowledgeable individuals with expertise in one or several fields, including familiarity with the species, familiarity with the geographic region that the species occurs in, and familiarity with the principles of conservation biology. All three of the peer reviewers supported the proposal, and provided us with comments which were summarized in the previous section and incorporated into the final rule.

Summary of Changes From the Proposed Rule

Based on a review of public comments received on the proposed determination of critical habitat, we reevaluated our proposed designation and made several changes to the final designation of critical habitat. These include the following:

(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 2* in *Summary of Comments* above). However, we took some of these additional elements suggested by the peer reviewer, and included discussion of them as features of the landscape that needed special management or protections.

(2) One element ("physical processes. * * * that support natural dune dynamics") was erroneously included

in the proposed rule; it has been removed from this final rule.

(3) We added a section describing the Special Management Needs or Protections that *Chorizanthe robusta* var. *hartwegii* may require. We believe that this new section will assist land managers in developing management strategies for *C. r.* var. *hartwegii* on their lands.

(4) We made minor revisions to the boundary lines on both units. The purpose for these minor changes was to remove areas that do not contain the primary constituent elements. The use of recently acquired high-resolution aerial photographs dating from April, 2000 enabled us to undertake this more precise mapping. These changes reduced the Glenwood Unit by 4 percent and Polo Ranch Unit was reduced 15 percent by eliminating some of the riparian gallery forest at the western edge of the unit that borders Carbonero Creek because the area does not support any of the primary constituent elements.

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) 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. "Conservation" means 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.

Section 7(a)(2) of the Act requires Federal agencies to consult with the Service to ensure that any action they authorize, fund, or carry out is not likely to result in the destruction or adverse modification critical habitat. Section 7 of the Act also requires conferences on Federal actions that are likely to result in the destruction or adverse modification of proposed critical habitat. In our regulations at 50 CFR 402.02, we define destruction or adverse modification as "a direct or indirect alteration that appreciably diminishes the value of critical habitat for both the survival and recovery of a listed species. Such alterations include, but are not limited to, alterations adversely modifying any of those physical or biological features that were the basis

for determining the habitat to be critical." Aside from the added protection that may be provided under section 7, the Act does not provide other forms of protection to lands designated as critical habitat. 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 afford any additional protections under the Act against such activities.

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 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. When we designate critical habitat at the time of listing or under short court-ordered deadlines, we will often not have sufficient information to identify all areas essential for the conservation of the species. Nevertheless, 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 will designate only areas currently known to be essential. Essential areas should already have the features and habitat characteristics that are necessary to sustain the species. We will not speculate about what areas might be found to be essential if better information became available, or what areas may become essential over time. If the information available at the time of designation does not show that an area provides essential life cycle needs of the species, then the area should not be included in the critical habitat designation. Within the geographic area occupied by the species, we will attempt to not designate areas that do not now have the primary constituent elements, as defined at 50 CFR 424.12(b), which provide essential life cycle needs of the species. However, we may be restricted by our minimum mapping unit or mapping scale.

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 require designation of critical habitat outside of 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. It 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, at a minimum, 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 opinion.

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, all should 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 Act's section 7(a)(2) jeopardy standard and the section 9 of the Act prohibitions, 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 section 4(b)(2) of the Act and regulations at 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 robusta* var. *hartwegii*. This information included information from the CNDDDB 2000, geologic and soil survey maps (USGS 1989, SCS 1979), recent biological surveys and reports, our recovery plan for this species, additional information provided by interested parties, and discussions with botanical experts. We also conducted multiple site visits to the two locations that are being designated as critical habitat.

We also reviewed the goals for downlisting *Chorizanthe robusta* var. *hartwegii* included in our recovery plan that addresses this species and other taxa from the Santa Cruz Mountains (Service 1998).

The plan calls for the following recovery actions: (1) Secure and protect habitat for *Chorizanthe robusta* var. *hartwegii* through HCPs, conservation easements, or acquisition; (2) manage habitat for the species through such actions as control of non-native species, reducing impacts from recreation, restoring degraded sites, and regular monitoring; (3) learn more about the life history, ecology, and population dynamics of the species that will contribute to developing appropriate management strategies; (4) increase public awareness of the species and its associated habitats through various outreach efforts; and (5) use an adaptive management approach to revise management strategies over time. Critical habitat alone is not expected to recover the species, and it is only one of many strategies that can assist in such recovery.

Determining the specific areas that this taxon occupies is difficult for several reasons: (1) The distribution of *Chorizanthe robusta* var. *hartwegii* 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. r.* var. *hartwegii* above ground; (2) the way the current distribution of *C. r.* var. *hartwegii* is mapped can be variable, 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 logistically 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. r.* var. *hartwegii*. 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 areas 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 robusta* var. *hartwegii* is described in the Background section of this final rule. Based on the best available information at this time, we believe the long-term probability of the conservation of *C. r.* var. *hartwegii* is dependent upon the protection of existing population sites, and the maintenance of ecologic functions within these sites, including connectivity between colonies within close geographic proximity to facilitate pollinator activity and seed dispersal mechanisms, and the ability to maintain disturbance factors (for example, fire disturbance) that maintain the openness of plant cover on which the species

depends. In addition, the small range of this species makes it vulnerable to edge effects from adjacent human activities, including disturbance from trampling and recreational use, the introduction and spread of non-native species, and the application of herbicides, pesticides, and other contaminants (Conservation Biology Institute 2000).

The primary constituent elements of critical habitat for *Chorizanthe robusta* var. *hartwegii* are:

(1) Thin soils in the Bonnydoon series that have developed over outcrops of Santa Cruz mudstone and Purisima sandstone;

(2) "Wildflower field" habitat that has developed on these thin-soiled sites;

(3) A grassland plant community that supports the "wildflower field" habitat, that is stable over time and in which nonnative species are absent or are at a density that has little or no adverse effect on resources available for growth and reproduction of *Chorizanthe robusta* var. *hartwegii*;

(4) Sufficient areas around each population to allow for recolonization to adjacent suitable microhabitat sites in the event of catastrophic events;

(5) Pollinator activity between existing colonies of *Chorizanthe robusta* var. *hartwegii*;

(6) Seed dispersal mechanisms between existing colonies and other potentially suitable sites; and

(7) Sufficient integrity of the watershed above habitat for *Chorizanthe robusta* var. *hartwegii* to maintain soil and hydrologic conditions that provide the seasonally wet substrate for growth and reproduction of *C. r.* var. *hartwegii*.

Special Management Considerations or Protections

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

(1) The soils on which *Chorizanthe robusta* var. *hartwegii* is found should be maintained to optimize conditions for its persistence. Physical properties of the soil, such as its chemical

composition, surface crust, and drainage capabilities would best be maintained by limiting or restricting the use or application of herbicides, fertilizers, or other soil amendments.

(2) Overspray from irrigation or saturation of soils beyond the normal season should also be avoided, as this may alter the structure and composition of the grassland community, or render the native species more vulnerable to pathogens found in wetter soil regimes.

(3) The associated plant communities must be maintained to ensure that the habitat needs of pollinators and seed dispersal agents are maintained. For pollinators, the use of pesticides should be limited or restricted so that healthy populations of pollinators are present to effect seed set in *Chorizanthe robusta* var. *hartwegii*. For dispersal agents, the fragmentation of habitat through construction of roads and certain types of fencing should be limited so that these agents may disperse seed of *C. r.* var. *hartwegii* throughout the unit.

(4) Within the grassland community where *Chorizanthe robusta* var. *hartwegii* occurs, invasive, non-native species such as bromes and other species may need to be actively managed to maintain the patches of open habitat that *C. r.* var. *hartwegii* needs.

(5) Certain areas where *Chorizanthe robusta* var. *hartwegii* occurs may need to be fenced to protect it from accidental or intentional trampling by humans and livestock. While *C. r.* var. *hartwegii* 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. r.* var. *hartwegii* during its critical season of growth and reproduction.

Criteria Used To Identify Critical Habitat

In delineating the critical habitat units, we selected areas that provide for the conservation of *Chorizanthe robusta* var. *hartwegii* at the only two sites where it is known to occur. We believe it is important to preserve all areas that currently support native populations of *C. r.* var. *hartwegii* because the current range of the species is so restricted that it places great importance on the conservation of all the known remaining sites. The species is currently growing on less than 0.4 ha (1 ac) of land. However, habitat is not restricted solely to the area where standing individuals can be observed. Habitat for the species must include an area that is large enough to maintain the ecological functions upon which the species depends (e.g., the hydrologic and soil

conditions for seed germination and establishment, pollinators and seed dispersers). We believe it is important to designate an area of sufficient size to maintain landscape scale processes that maintain the patches of wildflower field habitat, and to minimize the alteration of habitat, such as invasions of non-native species and recreation-caused erosion, that result from human occupancy and human activities occurring in adjacent areas.

We delineated the critical habitat units by creating data layers in a geographic information system (GIS) format of the areas of known occurrences of *Chorizanthe robusta* var. *hartwegii* using information from the California Natural Diversity Data Base (CNDDB 2000) and the other information sources listed above. These data layers were created on a base of USGS 7.5' quadrangle maps obtained from the State of California's Stephen P. Teale Data Center. Because the areas within proposed critical habitat boundaries were portions of the San Augustin Spanish Land Grant, they have not been surveyed according to the State Plan Coordinate System. Therefore, instead of defining proposed critical habitat boundaries using a grid of township, range, and section, we defined the boundaries for the proposed critical habitat units using known landmarks and roads.

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 (for example 1:100,000 scale USGS mapping) during preparation of the maps of proposed critical habitat. For the final rule, we corrected the mapped boundaries of critical habitat first 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 (April 2000) aerial imagery, 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).

In selecting areas of critical habitat, we made an effort to avoid developed areas, such as housing developments, which are unlikely to contribute to the conservation of *Chorizanthe robusta* var. *hartwegii*. For the final rule, we attempted to map critical habitat in sufficient detail to exclude all

developed areas (buildings), or other lands unlikely to contain the primary constituent elements essential for the conservation of *C. r. var. hartwegii*. Note that other areas within the boundaries of the mapped units, such as roads, parking lots, and other paved areas, lawns, and other urban landscaped areas will not contain any of the primary constituent elements. Federal actions limited to these areas, therefore would not trigger a section 7 of the Act consultation, unless they affect the species and/or primary constituent elements in adjacent critical habitat.

Critical Habitat Designation

The critical habitat areas described below constitute our best assessment at this time of the areas essential for the species' conservation. Critical habitat for *Chorizanthe robusta* var. *hartwegii* is being designated at the only two sites where it is known to occur and both units are currently occupied with known occurrences of *C. r. var. hartwegii*. These areas provide the essential life cycle needs of the species and the habitat components essential for the survival of *C. r. var. hartwegii*. The two units are primarily within the city limits of Scotts Valley in Santa Cruz County, with a small portion within an unincorporated area of Santa Cruz County, California, and include the grassland habitat that contains the "wildflower field" patches on which the species depends. Given the threats to the habitat of *C. r. var. hartwegii* discussed above, we believe that these

areas are likely to require special management considerations and protection. Because we consider maintaining hydrologic and soil conditions so important in these grasslands, the critical habitat area extends outward to the following limits—(1) Upslope from the occurrences of *Chorizanthe robusta* var. *hartwegii* to include the upper limit of the immediate watershed; (2) downslope from the occurrences of *C. r. var. hartwegii* to the point at which grassland habitat is replaced by forest habitats (oak forest, redwood forest, or mixed conifer-hardwood forest); and (3) to the boundary of existing development.

Unit Descriptions

We are designating the following general areas as critical habitat (see legal descriptions for exact critical habitat boundaries).

Unit 1: Glenwood Site

Unit 1 consists of approximately 87 ha (214 acres) to the west of Glenwood Drive and north and northwest of Casa Way, in the City of Scotts Valley, including land owned and managed by the Salvation Army, land owned and managed by the Scotts Valley High School District as a preserve, but excluding the rest of the High School, and to the east of Glenwood Drive, encompassing the parcel known as the Glenwood Development. Most of the land being designated within this unit is privately owned, with a small portion (4

ha (9 ac)) owned by a local agency. This unit is essential because it supports approximately 90 percent of the known numbers of individuals of *Chorizanthe robusta* var. *hartwegii*, as well as other suitable patches of wildflower field habitat that could be colonized by the species; intervening habitat which supports the grassland community necessary for pollinators and seed dispersers; and a contiguous extent of the watershed that is necessary to maintain the hydrologic and soil conditions suitable for *C. r. var. hartwegii*.

Unit 2: Polo Ranch Site

The Polo Ranch site consists of approximately 30 ha (73 ac) to the east of Carbonera Creek on the east side of Highway 17 and north and northeast of Navarra Drive, in the City of Scotts Valley, known as the Polo Ranch, in the County of Santa Cruz, California. All of the land being designated as critical habitat is privately owned. This unit is essential because it supports approximately 10 percent of the known numbers of individuals of *Chorizanthe robusta* var. *hartwegii*, as well as other suitable patches of wildflower field habitat that could be colonized by the species; intervening habitat which supports the grassland community necessary for pollinators and seed dispersers; and a contiguous extent of the watershed that is necessary to maintain the hydrologic and soil conditions suitable for *C. r. var. hartwegii*.

TABLE 1.—APPROXIMATE CRITICAL HABITAT AREA (HA (AC)) BY AND LAND OWNERSHIP
[Estimates reflect the total area within critical habitat unit boundaries]

Unit name	Local agency	Private	Total
1. Glenwood Unit	4ha (9 ac)	83 ha (205 ac)	87 ha (214 ac)
2. Polo Ranch Unit	0 ha (0 ac)	30 ha (73 ac)	30 ha (73 ac)
Total	4 ha (9 ac)	113 ha (278 ac)	117 ha (287 ac)

Effects of Critical Habitat Designation
Section 7 Consultation

Section 7(a) of the Act requires Federal agencies, including the Service, to ensure that actions they fund, authorize, or carry out do not destroy or adversely modify its critical habitat to the extent that the action appreciably diminishes the value of the 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) 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 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 a Federal 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 were designated. We may adopt the formal conference report as the biological opinion when the species is listed or critical habitat is designated, if no substantial new information or changes in the action alter the content of the opinion (*see* 50 CFR 402.10 (d)).

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. Through this consultation, the Federal action agency would ensure that the permitted actions do not destroy or adversely modify critical habitat.

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 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.

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 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 robusta* var. *hartwegii* or its critical habitat will be subject to the section 7 of the Act

consultation process. 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 of the Act consultation process. Federal actions not affecting critical habitat, as well as actions on non-Federal lands that are not federally funded or permitted, will not require section 7 of the Act consultation.

To properly portray the effects of critical habitat designation, we must first compare the requirements pursuant to section 7 of the Act for actions that may affect critical habitat with the requirements for actions that may affect a listed species. Section 7 of the Act prohibits actions funded, authorized, or carried out by Federal agencies from jeopardizing the continued existence of a listed species or destroying or adversely modifying the listed species' critical habitat. Actions likely to "jeopardize the continued existence" of a species are those that would appreciably reduce the likelihood of the species' survival and recovery. Actions likely to "destroy or adversely modify" critical habitat are those that would appreciably reduce the value of critical habitat for the recovery of the listed species.

Common to both definitions is an appreciable detrimental effect on the 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. Because both of the units we are designating are occupied by either standing plants or a *Chorizanthe robusta* var. *hartwegii* 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, 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. 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 section 404 of the Clean Water Act permits from the U.S. Army Corps of Engineers;

(2) Restoration projects sponsored by the Natural Resources Conservation Service;

(3) Pest control projects undertaken by the Animal and Plant Health Inspection Service, permits from Housing and Urban Development, or authorization of Federal grants or loans.

Such activities would be subject to the section 7 of the Act consultation process. Where federally listed wildlife species occur on private lands proposed for development, any habitat conservation plans submitted by the applicant to secure an incidental take permit according to section 10(a)(1)(B) of the Act would be subject to the section 7 of the Act consultation process. The Ohlone tiger beetle (*Cicindela ohlone*), a federally endangered species, occurs in close proximity to *Chorizanthe robusta* var. *hartwegii* within grasslands on the east side of Carbonero Creek on land owned by American Dream/Glenwood L.P.

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 robusta* var. *hartwegii* 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 natural grassland communities and the wildflower field habitat. Such activities adverse to *Chorizanthe robusta* var. *hartwegii* could include, but are not limited to: vegetation manipulation such as chaining or harvesting timber in the watershed upslope from *C. r.* var. *hartwegii*; 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 orchards, viticulture (the cultivation of grapes), row crops, and livestock grazing; and

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

If you have questions about whether specific activities may 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 to Habitat Conservation Plans

Currently, there are no HCPs that include *Chorizanthe robusta* var. *hartwegii* as a covered species. Section 10(a)(1)(B) of the Act authorizes us to issue permits for the take of listed 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 for wildlife species.

In the event that future HCPs covering *Chorizanthe robusta* var. *hartwegii* are developed within the boundaries of designated critical habitat, we will work with applicants to ensure that the HCPs provide for protection and management of habitat areas essential for the conservation of this species. This will be accomplished by either directing development and habitat modification to nonessential areas, or appropriately modifying activities within essential habitat areas so that such activities will not adversely modify the primary constituent elements. The HCP development process would provide an opportunity for more intensive data collection and analysis regarding the use of particular habitat areas by *C. r.* var. *hartwegii*. The process would also enable us to conduct detailed evaluations of the importance of such lands to the long-term survival of the species in the context of constructing a biologically configured system of interlinked habitat blocks. We will also provide technical assistance and work closely with applicants throughout the development of any future HCPs to

identify appropriate management for lands essential for the long-term conservation of *C. r.* var. *hartwegii*. Furthermore, we will complete Intra-Service consultation on our issuance of section 10(a)(1)(B) permits for these HCPs to ensure permit issuance will not destroy or adversely modify critical habitat.

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.

Following the publication of the proposed critical habitat designation, a draft economic analysis was conducted to estimate the potential economic effect of the designation. The draft analysis was made available for review on September 19, 2001. 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 robusta* var. *hartwegii* 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 of the Act consultations associated with the listing or with the critical habitat, including incremental consultations and technical assistance; (2) modifications to projects, activities, or land uses resulting from the section 7 of the Act 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. The most likely economic effects of critical habitat designation are on private landowners carrying out development activities funded or authorized by a Federal agency.

Based on our draft analysis, we concluded that the designation of critical habitat would have little significant additional regulatory burden or associated significant additional costs because of critical habitat above and beyond those attributable to the listing of *Chorizanthe robusta* var. *hartwegii*. Our economic analysis does take into account that unoccupied habitat is being designated and that there may be some cost associated with new section 7 consultations that would not have occurred but for critical habitat being designated. Our economic analysis also recognizes that there may be economic effects due to the reaction of the real estate market to critical habitat designation, as real estate values may be temporarily lowered due to perceived increase in the regulatory burden. However, we believe these impacts will be short-term or minimal in cost.

The draft economic analysis concludes that, over the next 10 years the total costs to all landowners attributable to the designation are expected to be approximately \$16,000 to \$56,000 annually, however, we anticipate the costs will be even less because the costs of preparing Environmental Impact Reports for proposed developments, which were figured into the estimates, would have already been prepared to satisfy California Environmental Quality Act requirements for the lead State agency. Costs to Federal agencies are expected to total approximately \$10,000 total over the next 10 years. Costs to local agencies are expected to total \$5,000 to \$8,000 total over the next 10 years. However, this does not include the potential cost of developing a multispecies HCP. Costs to private landowners are expected to range from \$159,000 to \$558,000 total over the next 10 years.

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 117 ha (287 acres) versus the 125 ha (308 ac) proposed as critical

habitat, a difference of approximately 8 ha (21 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 robusta* var. *hartwegii* was listed as endangered in February, 1994. Since that time we have not conducted any formal or informal section 7 consultations with other

Federal agencies with respect to *C. r.* var. *hartwegii*. However, should any agencies be involved in any activities within the area being designated as critical habitat, we will consult with them to ensure that their actions will not jeopardize the continued existence of *C. r.* var. *hartwegii* or adversely modify its critical habitat.

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 knowledge of this species and its ecological needs, and the fact that it is so restricted in its range, we conclude that any Federal action or authorized action that could potentially result in the destruction or adverse modification

of critical habitat would currently 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 of the Act 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 robusta* var. *hartwegii* 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, the Environmental Protection Agency, the Natural Resources Conservation Service, the Animal and Plant Health Inspection Service, and any other Federal Agencies, including, but not limited to, the authorization of permits under section 404 of the Clean Water Act, the disbursement of grant monies for housing projects, the spraying of herbicides or pesticides, the permitting or funding of clean-up activities of contaminants, pest control projects, and land acquisition.	Activities by these Federal Agencies in designated areas where section 7 of the Act 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 robusta</i> var. <i>hartwegii</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 of the Act 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 robusta* var. *hartwegii* since its listing in 1994. We evaluated the impact of designating areas where section 7 of the Act 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 additional restrictions 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 prohibition, resulting from critical habitat designation will have any incremental effects.

(d) OMB has determined that this rule may raise novel and legal or policy issues. Therefore, this rule is significant under E.O. 12866 and, as a result, this rule 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 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 prepare a certification statement. In this rule, we are certifying that the critical habitat designation for the *Chorizanthe robusta* var. *hartwegii* 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 would 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, *etc.*). We apply the "substantial number" test individually to each industry to determine if certification is appropriate. While SBREFA does not explicitly define "substantial number," the Small Business Administration, as well as other Federal agencies, have 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. Residential development on private land constitutes the primary activity expected to be impacted by the designation of critical habitat for the *Chorizanthe robusta* var. *hartwegii*.

To be conservative (*i.e.*, more likely overstate impacts than understate 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 35 small residential development and construction companies in Santa Cruz County. Because the draft EA estimates that at most three formal consultations could arise involving private entities, the analysis for impacts on small businesses assumes that at most three residential/small business entities may be affected by the designation of critical habitat for the Scotts Valley spineflower in Santa Cruz County over a ten-year period. It's important to note that, to date, we have not conducted any formal consultations for *Chorizanthe robusta* var. *harwegii*.

In each year over the ten-year period of analysis, on average, there would likely be less than a single consultation for real estate development projects. As a result, less than one percent of the total number of small residential development and construction companies could be affected annually by the designation of critical habitat for the *Chorizanthe robusta* var. *hartwegii*. 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 *Chorizanthe robusta* var. *hartwegii*.

In general, two different mechanisms in section 7 of the Act consultations could lead to additional regulatory requirements for the one small business, on average, that may be required to consult with us each year regarding their project's impact on *Chorizanthe robusta* var. *hartwegii* 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 alternatives, by definition, must be economically feasible and within the scope of authority of the Federal agency involved in the consultation. As we have no consultation history for *Chorizanthe robusta* var. *hartwegii*, 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 to avoid removing standing plants. Based on the types of modifications 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 modifications for one project is expected to be of the same order of magnitude as the total cost of the consultation process, *i.e.*, approximately \$16,000. It should be noted that developers likely would already be required to undertake such modifications due to regulations in California Environmental Quality Act. These modifications are not likely to result in a significant economic impact to project proponents. However, there does remain some concern about secondary impacts to the species. These will need to be addressed before projects are approved.

In summary, we have considered whether this rule would result in a significant economic effect on a substantial number of small entities and 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 robusta* var. *hartwegii* will not have a significant economic impact on a substantial number of small entities and a regulatory flexibility analysis is not required.

Small Business Regulatory Enforcement Fairness Act (5 U.S.C. 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. There are no energy-related facilities located within designated critical habitat. Although this rule is a significant regulatory action under Executive Order 12866, it is not expected to significantly affect energy supplies, distribution, or use. Therefore, this action is not a significant energy action and no Statement of Energy Effects is required.

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 robusta* var. *hartwegii* 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 robusta* var. *hartwegii* 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 this species is 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 of the Act 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. 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 robusta* var. *hartwegii*.

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).

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 robusta* var. *hartwegii* 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 primary author of this final rule is Constance Rutherford, 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 robusta* var. *hartwegii* under “FLOWERING PLANTS” in the List of Endangered and Threatened Plants to read as follows:

§ 17.12 Endangered and threatened plants.

* * * * *
(h) * * *

Species		Historic range	Family	Status	When listed	Critical habitat	Special rules
Scientific name	Common name						
FLOWERING PLANTS							
* <i>Chorizanthe robusta</i> var. <i>hartwegii</i> .	* Scotts Valley spineflower.	* U.S.A. (CA)	* Polygonaceae— Buckwheat.	* E	* 528	* 17.96(a)	* NA
* *	* *	* *	* *	* *	* *	* *	* *

3. Amend § 17.96(a) by adding critical habitat for Scotts Valley spineflower (*Chorizanthe robusta* var. *hartwegii*) in alphabetical order under Family Polygonaceae to read as follows:

§ 17.96 Critical habitat—plants.

(a) * * *

Family Polygonaceae: *Chorizanthe robusta* var. *hartwegii* (Scotts Valley spineflower)

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

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

(i) Thin soils in the Bonnydoon series that have developed over outcrops of Santa Cruz mudstone and Purisima sandstone;

(ii) “Wildflower field” habitat that has developed on these thin-soiled sites;

(iii) A grassland plant community that supports the “wildflower field” habitat, that is stable over time and in which nonnative species are absent or are at a density that has little or no adverse effect on resources available for growth and reproduction of *Chorizanthe robusta* var. *hartwegii*;

(iv) Sufficient areas around each population to allow for recolonization to adjacent suitable microhabitat sites in the event of catastrophic events;

(v) Pollinator activity between existing colonies of *Chorizanthe robusta* var. *hartwegii*;

(vi) Seed dispersal mechanisms between existing colonies and other potentially suitable sites; and

(vii) Sufficient integrity of the watershed above habitat for *Chorizanthe robusta* var. *hartwegii* to maintain soil and hydrologic conditions that provide the seasonally wet substrate for growth and reproduction.

(3) Existing features and structures, such as buildings, roads, railroads, airports, other paved areas, lawns, and other urban landscaped areas, do not contain one or more of the primary constituent elements. Federal actions limited to those areas, therefore, would not trigger a consultation under section 7 of the Act unless they may affect the species and/or primary constituent elements in adjacent critical habitat.

(4) Unit 1: Santa Cruz County, California.
From USGS 7.5’ quadrangle map Felton, California, Mount. Diablo Meridian, California.

Lands bounded by the following UTM zone 10 NAD83 coordinates (E,N):
587990, 4103190; 587999, 4103220;
588021, 4103230; 588025, 4103250;
587997, 4103260; 588025, 4103280;
588035, 4103290; 588033, 4103310;
588025, 4103320; 588012, 4103330;
588014, 4103340; 588005, 4103350;
587984, 4103360; 587969, 4103370;
587962, 4103380; 587958, 4103390;

587962, 4103400; 587975, 4103410;
587992, 4103410; 588012, 4103420;
588029, 4103400; 588046, 4103410;
588058, 4103420; 588064, 4103430;
588072, 4103450; 588082, 4103480;
588088, 4103500; 588091, 4103530;
588091, 4103560; 588099, 4103570;
588115, 4103590; 588146, 4103580;
588169, 4103610; 588201, 4103630;
588272, 4103700; 588411, 4104050;
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588583, 4104010; 588574, 4104030;
588559, 4104050; 588549, 4104070;
588568, 4104110; 588833, 4104150;
588827, 4104020; 588883, 4104030;
588891, 4103950; 588906, 4103920;
588931, 4103890; 588979, 4103870;
589049, 4103870; 589069, 4103680;
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588504, 4103330; 588505, 4103420;
588402, 4103470; 588360, 4103480;
588292, 4103480; 588267, 4103440;
588121, 4103320; 588033, 4103080;
588352, 4103020; 588337, 4102930;
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587900, 4102940; 587900, 4102960;
587905, 4102980; 587919, 4102970;
587931, 4102970; 587932, 4102990;

587924, 4103010; 587916, 4103040;
587915, 4103060; 587893, 4103070;
587887, 4103090; 587883, 4103100;
587885, 4103100; 587891, 4103110;
587911, 4103100; 587939, 4103130;
587942, 4103150; 587951, 4103160;
587963, 4103150; 587977, 4103160;
587990, 4103190.

(5) Unit 2: Santa Cruz County,
California.

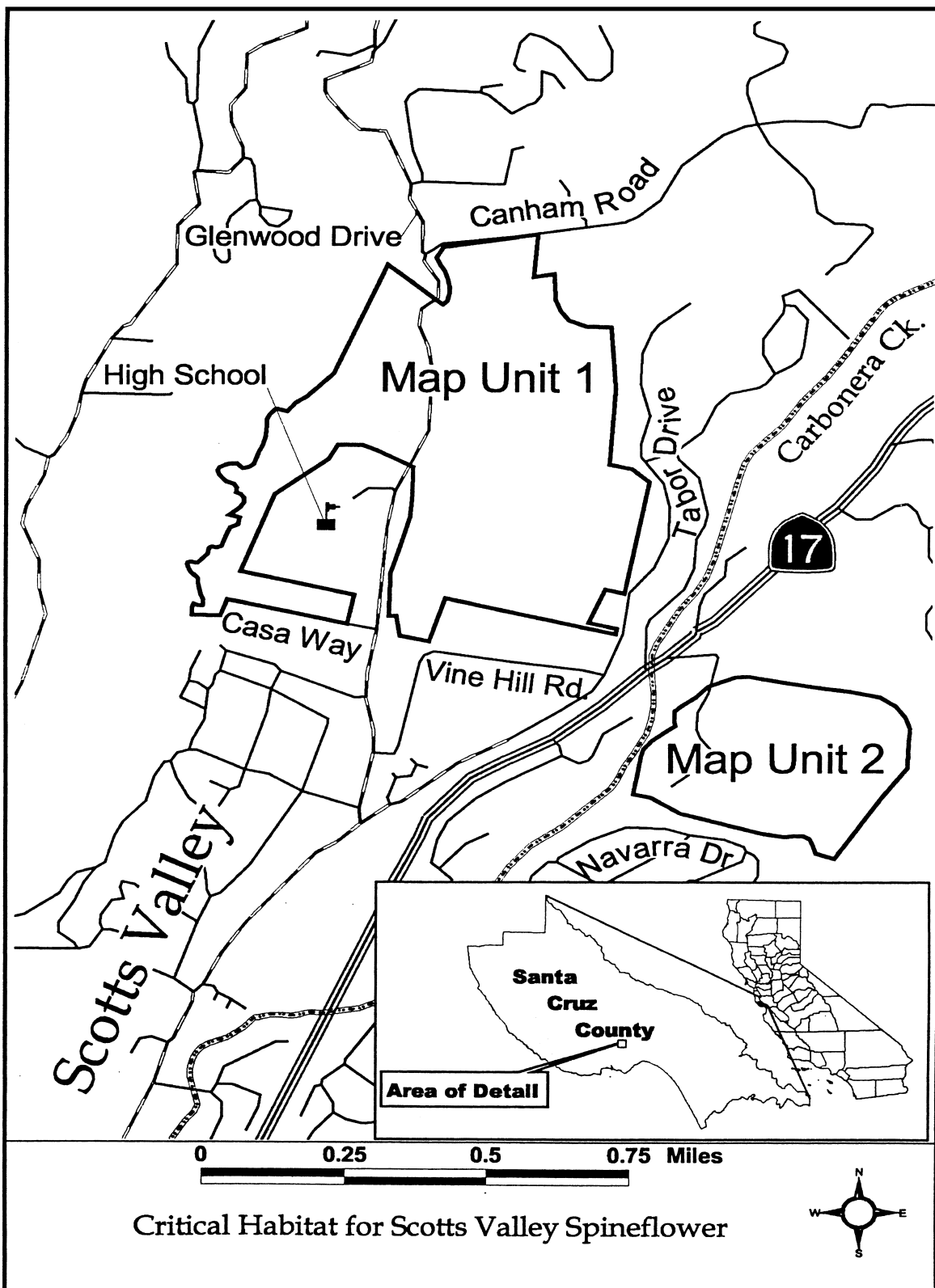
From USGS 7.5' quadrangle map
Laurel, California.

Lands bounded by the following UTM
zone 10 NAD83 coordinates (E,N):
589297, 4102370; 589213, 4102420;
589164, 4102430; 589168, 4102460;
589174, 4102500; 589181, 4102550;
589189, 4102570; 589210, 4102600;
589243, 4102620; 589261, 4102630;
589274, 4102640; 589271, 4102660;
589270, 4102680; 589270, 4102690;
589289, 4102710; 589327, 4102740;
589361, 4102770; 589402, 4102790;
589435, 4102800; 589472, 4102800;
589571, 4102790; 589657, 4102780;

589762, 4102770; 589845, 4102750;
589889, 4102730; 589917, 4102690;
589932, 4102660; 589932, 4102620;
589930, 4102530; 589865, 4102440;
589732, 4102250; 589681, 4102260;
589669, 4102290; 589661, 4102300;
589642, 4102310; 589623, 4102310;
589590, 4102310; 589531, 4102320;
589297, 4102370.

(6) *Critical Habitat Map for Units 1
and 2 follows:*

BILLING CODE 4310-55-P



Critical Habitat for Scotts Valley Spineflower

* * * * *

Dated: May 16, 2002.

Craig Manson,

Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 02-13063 Filed 5-28-02; 8:45 am]

BILLING CODE 4310-55-C