

U.S. FISH AND WILDLIFE SERVICE SPECIES ASSESSMENT AND LISTING PRIORITY ASSIGNMENT FORM

Scientific Name:

Chorizanthe parryi var. *fernandina*

Common Name:

San Fernando Valley Spineflower

Lead region:

Region 8 (California/Nevada Region)

Information current as of:

05/13/2013

Status/Action

Funding provided for a proposed rule. Assessment not updated.

Species Assessment - determined species did not meet the definition of the endangered or threatened under the Act and, therefore, was not elevated to the Candidate status.

New Candidate

Continuing Candidate

Candidate Removal

Taxon is more abundant or widespread than previously believed or not subject to the degree of threats sufficient to warrant issuance of a proposed listing or continuance of candidate status

Taxon not subject to the degree of threats sufficient to warrant issuance of a proposed listing or continuance of candidate status due, in part or totally, to conservation efforts that remove or reduce the threats to the species

Range is no longer a U.S. territory

Insufficient information exists on biological vulnerability and threats to support listing

Taxon mistakenly included in past notice of review

Taxon does not meet the definition of "species"

Taxon believed to be extinct

Conservation efforts have removed or reduced threats

___ More abundant than believed, diminished threats, or threats eliminated.

Petition Information

___ Non-Petitioned

X Petitioned - Date petition received: 12/14/1999

90-Day Positive:05/04/2004

12 Month Positive:05/04/2004

Did the Petition request a reclassification? **No**

For Petitioned Candidate species:

Is the listing warranted(if yes, see summary threats below) **Yes**

To Date, has publication of the proposal to list been precluded by other higher priority listing?
Yes

Explanation of why precluded:

Higher priority listing actions, including court-approved settlements, court-ordered and statutory deadlines for petition findings and listing determinations, emergency listing determinations, and responses to litigation, continue to preclude the proposed and final listing rules for the species. We continue to monitor populations and will change its status or implement an emergency listing if necessary. The Progress on Revising the Lists section of the current CNOR (<http://endangered.fws.gov/>) provides information on listing actions taken during the last 12 months.

Historical States/Territories/Countries of Occurrence:

- **States/US Territories:** California
- **US Counties:** Los Angeles, CA, Ventura, CA
- **Countries:**Country information not available

Current States/Counties/Territories/Countries of Occurrence:

- **States/US Territories:** California
- **US Counties:** Los Angeles, CA, Ventura, CA
- **Countries:**Country information not available

Land Ownership:

State of California, Private

Lead Region Contact:

ASST REGL DIR-ECO SVCS, Mary Grim, 916-414-6574, mary_grim@fws.gov

Lead Field Office Contact:

Biological Information

Species Description:

Chorizanthe parryi var. *fernandina* is a low growing herbaceous annual plant. Germination occurs following the onset of late-fall and winter rains and typically represents different cohorts from the seed bank. Flowering occurs in the spring, generally between April and June. *Chorizanthe parryi* var. *fernandina* grows up to 12 inches (in) (30 centimeters (cm)) in height and 2 to 6 in (5 to 40 cm) across. Leaves are oblong to oblanceolate, 0.2 to 1.6 in (5 to 40 millimeters (mm)) in length, and forming a basal rosette. The involucre is urn shaped, with six bracts and straight awns enclosing its small white flowers, which measure 0.1 to 0.12 in (2.5 to 3 mm) in diameter (Hickman 1993, pp. 856-860). *Chorizanthe parryi* var. *fernandina* can generally be differentiated from co-occurring spineflowers, including *Chorizanthe staticoides* and *Lastarriaea coriacea* by its decumbent habit, white flowers, entire leaves and straight-tipped involucral awns. Plants become desiccated and die by late summer, leaving branches brittle and dry but intact with involucre still attached and containing seed. *Chorizanthe parryi* var. *fernandina* disarticulates (breaks apart) with clumps of four to eight involucre that are rigidly held together. In contrast, the involucre of *Chorizanthe staticoides* and *Lastarriaea coriacea* disarticulate readily and one-by-one.



Taxonomy:

Chorizanthe parryi var. *fernandina* was first described as *Chorizanthe fernandina* by Watson in 1880. The type specimen was collected in 1879 from San Fernando Canyon near the San Fernando railroad station (California Department of Fish and Game (CDFG) 2004). In 1923, Jepson revised the taxonomy and renamed the taxon *C. parryi* var. *fernandina*; this remains the accepted nomenclature. *Chorizanthe parryi* var. *fernandina* is a member of the Polygonaceae family and is among 50 taxa in the genus *Chorizanthe* that occur in western North America and southwestern South America (Hickman 1993, pp. 856-860; Costea and Reveal 2012, pp. 1077-1082).

Habitat/Life History:

Based upon historical collections, *Chorizanthe parryi* var. *fernandina* occurred in sandy to gravelly soils, often in washes, and mostly in coastal sage scrub (Reveal 1979, pp. 1-2). Apparently, *C. parryi* var. *fernandina* was also collected in some areas with relatively deep soils in coastal sage scrub (Glenn Lukos & Associates 1999, p. 17). Contrary to some historical data, recent information from investigations conducted on the site of the plants rediscovery (after being considered extinct for 70 years) indicates that it occurs in sparsely vegetated areas with thin or highly mineralized soils (i.e., low organic content) (Sapphos Environmental 2001a, p. 60). The conditions under which *C. parryi* var. *fernandina* is able to persist are most likely due to the decreased competition from native and nonnative plants on thin soils, where other plants cannot become established. *Chorizanthe pungens* var. *hartwegiana*, a related species to *C. parryi* var. *fernandina*, did not fare well if shaded by taller plants or forced to compete for water and nutrients (McGraw and Levin 1998, pp. 119-127). The invasion of nonnative grasses and weeds in southern California in the last few decades, which grow profusely in deeper or disturbed soils, may explain the disappearance of *C. parryi* var. *fernandina* from some historical locations, and the current observation of the species primarily on thinner, mineralized soils (Sapphos Environmental 2001a, p. 60). Also, of the 12 historical occurrences, the sites in San Bernardino, Orange, and Los Angeles Counties no longer support suitable habitat for *C. parryi* var. *fernandina*, as those areas have been extirpated by urbanization (Reveal and Hardham 1989, pp. 98-198; Schierenbeck 1995, pp. 168-174; California Native Plant Society (CNPS) 2001, p. 123). Currently, *C. parryi* var. *fernandina* is predominately found within openings of sparsely vegetated California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), and grassland communities. *C. parryi* var. *fernandina* is also found to a lesser extent within the following vegetation communities: coast live oak, mixed chaparral, chaparral, disturbed land, Great Basin scrub, valley oak grassland and alluvial scrub (Dudek 2007a, p. 36).

The pollination ecology of *C. parryi* var. *fernandina* has been studied (Sapphos Environmental 2002, pp. 1-18). These studies indicate that the flowers are most often visited by ants (*Dorymyrmex pyramicus*), and this is consistent with the flower type (i.e., other ant-pollinated flowers are small with low nectar yield). However, ants are not efficient pollinators, and the rate of fruit set measured by the researchers was high, which would indicate another, more effective pollinator was visiting the plants. The study revealed that honeybees (*Apis mellifera*) showed a strong constancy (carrying pollen of one plant species) for *C. parryi* var. *fernandina* and visited the flowers fairly often (Sapphos Environmental 2002, pp. 1-18). Honeybees were the second-most common visitors to the flowers of *C. parryi* var. *fernandina*, followed by another ant (*Solenopsis xylonii*), and two beetles (*Dasytinae* spp. and *Zabrotes* spp.). The results of these pollination studies have implications for the conservation of *C. parryi* var. *fernandina* as the continued pollination, seed production, and germination of the plant will rely upon a healthy, mostly native, insect community that cannot exist in the face of urbanization and competition from nonnative ants, such as the Argentine ant (*Linepithema humilis*), that often accompany human development (Conservation Biology Institute (CBI) 2000).

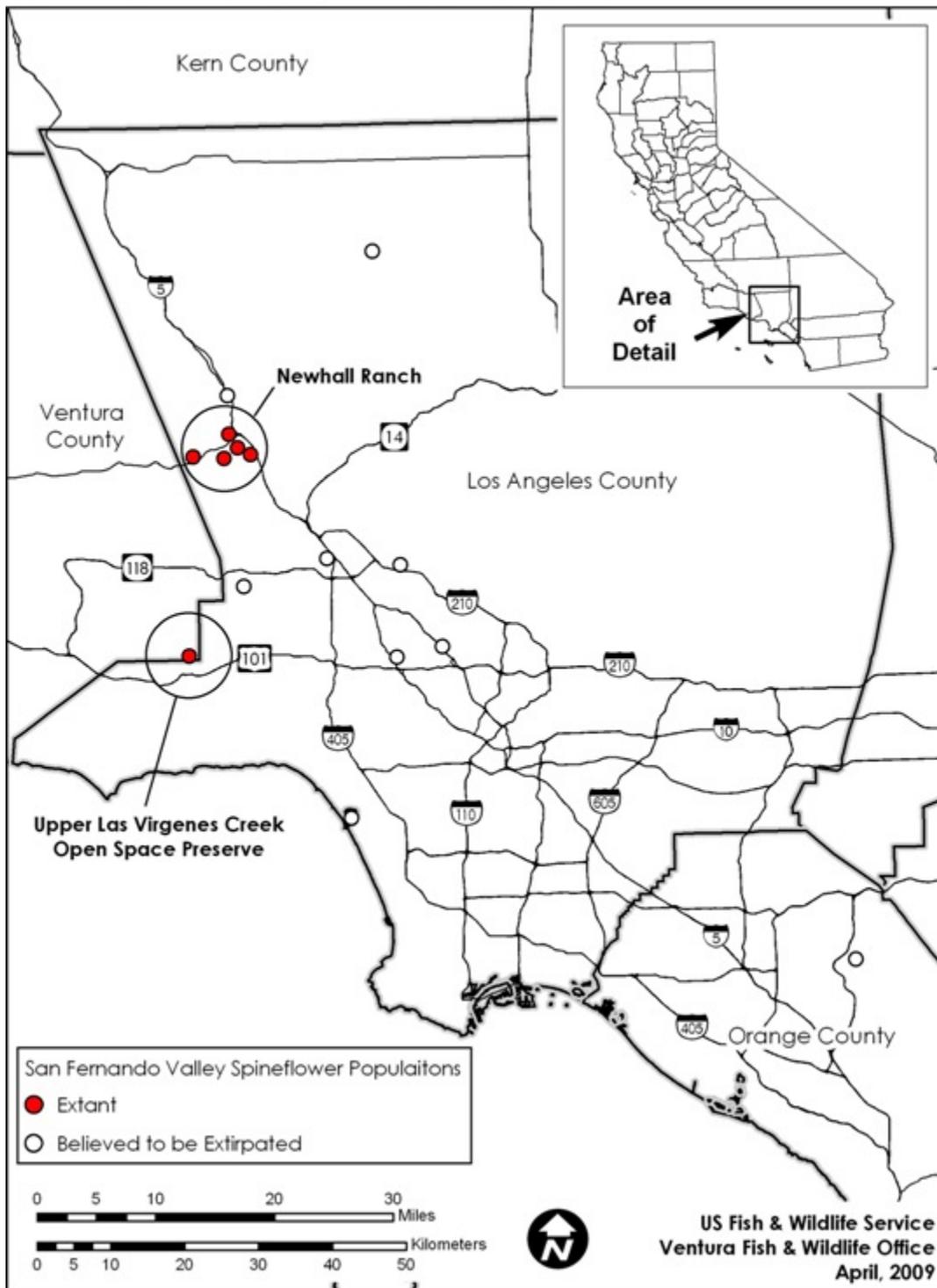
Historical Range/Distribution:

Chorizanthe parryi var. *fernandina* was thought to be extinct since the last collection was made in 1929 (Reveal and Hardham 1989, pp. 98-198). This taxon had been collected in the late 1800s and early 1900s from Los Angeles County, near the city of Santa Ana in Orange County, and an unspecified area in San Bernardino County. The majority of the historical collections of *C. parryi* var. *fernandina* from the greater Los Angeles metropolitan area were made in areas where urban, agricultural, and industrial development have replaced native habitats (Reveal and Hardham 1989, pp. 98-198). Prior to its rediscovery at Ahmanson Ranch in Ventura County (see below) in the late spring of 1999, the most recent collection was made in 1929 from Castaic in Los Angeles County.

Chorizanthe parryi var. *fernandina* is known historically from California in the area of Elizabeth Lake and Castaic, south through the San Fernando Valley in Los Angeles County, to near Santa Ana in Orange County,

and from a single location on the coastal side of the mountains in San Bernardino County. The 20 known historical collections (before 1999) may be divided into 12 general localities; 10 in Los Angeles County, one in Orange County based on specimens collected in 1902, and a generalized locality in San Bernardino County based on a specimen collected in 1876 (Goodman 1934, pp. 50-80; Reveal and Hardham 1989, pp. 98-198).

San Fernando Valley Spineflower Populations



Current Range Distribution:

The plant currently is known from two disjunct localities: the first is in the southeastern portion of Ventura County on a site now known as Upper Las Virgenes Canyon Open Space Preserve (formerly known as

Ahmanson Ranch), and the second locality is in an area of northwestern Los Angeles County known as Newhall Ranch. These two sites are separated by approximately 17 miles (27 kilometers). Investigations of historical locations and seemingly suitable habitat within the range of the species have not revealed any other occurrences (Sapphos Environmental 2001a, pp. 57-60).

The locations for *Chorizanthe parryi* var. *fernandina* on Newhall Ranch have been reported as occurring in six survey areas: Mission Village, Homestead South, Entrada South, San Martinez Grande, Valencia Commerce Center, and Potrero Village. Furthermore, each survey area comprises numerous small colonies of the species that are surveyed separately. The mapping of survey results over a series of years indicate a shrinking and swelling of the footprint of colonies, likely with the influence of climatic conditions.

Population Estimates/Status:

Although reported here, counts of individuals of an annual plant species are not necessarily the best indicator of long-term population trends because the number of individuals can fluctuate widely from year-to-year, sometimes not germinating at all if conditions are too dry. Therefore, the number of individuals reported may be as much a reflection of rainfall as it is population size. The areal extent or distribution of the populations is a more appropriate measure of the species population size, and where available, the areal extent of the populations is presented.

At the Upper Las Virgenes Canyon Open Space Preserve (Ahmanson Ranch) site in 1999, when *C. parryi* var. *fernandina* was first rediscovered, biologists estimated the number of individual plants at between 5,000 and 10,000 (LSA Associates 1999, p. 4). Further investigation that same year revised the number of individual plants to 23,000 over almost 6 acres (ac) (2.4 hectares (ha)) (Sapphos Environmental 2001a, pp. 53-54). In 2000, new populations were discovered and the number of individual plants, estimated at approximately 1.5 million over more than 10 ac (4 ha), was greater than in 1999 as a result of favorable weather during the winter and spring of 1999-2000 (Sapphos Environmental 2001a, pp. 53-54). Our current information indicates that the Upper Las Virgenes Canyon Open Space Preserve population is composed of 18 sub-populations of various sizes, all located within 0.3 mile (mi) (0.5 km) of each other, and occupying approximately 12.9 ac (5.2 ha) (Sapphos Environmental 2001b, pp. 2-4; 2003). No surveys were conducted for this species at Upper Las Virgenes Canyon Open Space Preserve in 2010 or 2011. In 2012, we made site visits to several sub-populations, and observed on the order of tens of thousands of individuals; a full survey was not conducted (Rutherford pers. obs 2012).

The Newhall Ranch population of *C. parryi* var. *fernandina* was discovered in 2000; however, 2000 survey data did not include population estimates (Newhall Land and Farming 2004). In 2001, surveys revealed 14,750 *C. parryi* var. *fernandina* plants at two sites on Newhall Ranch. Results from 2002 surveys included population estimates for the senescent remains of *C. parryi* var. *fernandina* plants that were observed during the 2001 surveys. Because it was not possible to determine what year these plants germinated, these plants were labeled pre-2002. Pre-2002 plants were estimated to include 3,153,194 individuals, while plants in 2002 were estimated to include 7,814 individuals. In 2003, surveys estimated that populations of *C. parryi* var. *fernandina* totalled 5.9 million individuals (Newhall Land and Farming 2004). In 2004, the total population of *C. parryi* var. *fernandina* at Newhall Ranch was estimated to be 560,000 individuals. In 2005, the total population of *C. parryi* var. *fernandina* on Newhall Ranch was estimated to be 7.4 million individuals. In 2006, the total population of *C. parryi* var. *fernandina* on Newhall Ranch was estimated to be 1.8 million individuals. In 2007, the total population of *C. parryi* var. *fernandina* on Newhall Ranch was estimated to be 760 individuals (Dudek 2007a, p. 14). The low number of individuals for 2007 can be attributed to the worst drought in recorded history up to that time for the region at approximately 3.5 in (8.9 cm) of rainfall. Typically, this region of southern California receives an average rainfall of approximately 15 in (38 cm). No other activities that could have been factors for the low population number at Newhall Ranch are evident at this time. Surveys were not conducted between 2008 and 2010.

Surveys conducted in 2011, 2012, and 2013 reported the total occupied area (minimum convex polygons

around each colony separated by a minimum of 4 meters from adjacent colonies). Although individuals were apparently counted within polygons, totals were not presented in an annual monitoring report. Nevertheless, a quick tally indicates approximately 32,000 individuals were observed in 2012 (Dudek 2012, Service 2014). In 2013, a similar tally indicates that approximately 42,200 individuals were observed (Dudek 2013, Service 2014).

Distinct Population Segment(DPS):

N/A

Threats

A. The present or threatened destruction, modification, or curtailment of its habitat or range:

Prior to its rediscovery at Ahmanson Ranch (now referred to as Upper Las Virgenes Canyon Open Space Preserve) in 1999, 20 collections of *C. parryi* var. *fernandina* were made by 16 individuals at 12 locations, with the most recent from the vicinity of Castaic in 1929 (Reveal and Hardham 1989, pp. 98-198). During the last few decades, numerous field botanists had been unable to locate the species, even where historically recorded, largely due to the alteration and loss of suitable habitat (Reveal and Hardham 1989, pp. 98-198). The best evidence we have suggests that *C. parryi* var. *fernandina* is extirpated from all of the 12 general areas where it was originally collected. Chatsworth Park, site of the 1901 collection, is approximately 6 mi (10 km) from the Ahmanson Ranch site where urbanized Los Angeles County borders the more rural lands of southeastern Ventura County.

The previous owner of Ahmanson Ranch, Washington Mutual, had attained approval for a development project in 1992, which was re-certified by the County of Ventura on November 24, that same year (County of Ventura 2002). The approved development would have destroyed approximately 75 percent of the total number of individuals of *C. parryi* var. *fernandina* on the site. We and the CDFG were working with the developer to redesign its project to protect more of the plants until August 2003, when the State of California announced it had offered to purchase the Ahmanson Ranch property. Washington Mutual accepted the States offer, and the land was transferred into public ownership in November 2003. It is now under the auspices of the Santa Monica Mountains Conservancy, a joint powers authority operated by the State to conserve lands within the Conservancys sphere of influence. We believe most of the direct threats to the species from the former Ahmanson Ranch development plan have been eliminated. The use of adjacent habitat for movie filming was brought to our attention in 2007; the potential impacts to *C. parryi* var. *fernandina* have not yet been evaluated. We will be working with the new landowners to ensure that they manage the site for the benefit of *C. parryi* var. *fernandina*.

The Newhall Ranch population of *C. parryi* var. *fernandina* is within the footprint of a proposed development of approximately 21,300 homes, 629 acres (255 ha) of mixed-use development, 67 acres (27 ha) of commercial uses, 249 acres (101 ha) of business parks, 181 acres (73 ha) of community parks, 55 acres (22 ha) in 10 neighborhood parks, a 15-acre (6-ha) lake, and an 18-hole golf course. The proposed project has been approved by the County of Los Angeles (Dudek 2007b, p. 1), but some legal issues from opponents remain before the project can proceed. The CDFG was notified by an anonymous source in 2002 that Newhall Land and Farming had destroyed undisclosed occurrences of the plant on its property (the species is State-listed as endangered under the California Endangered Species Act (CESA) and is afforded certain protections under CESA). An investigation by CDFG discovered numerous remains of *C. parryi* var. *fernandina* on the property in areas that had been graded to prepare for installation of an agave farm (Liotta 2002). The District Attorney chose not to pursue prosecution under CESA.

Representatives of Newhall Ranch informed us that they intended to pursue a Candidate Conservation

Agreement (CCA) for the plant. We received a draft CCA from Newhall Land and Farming on July 25, 2006. We also received a draft conservation plan, upon which the CCA is based, on February 29, 2008, which shows that the developer would avoid removing approximately 69 percent of the area the plant is believed to occupy (Dudek 2007a, p. 48); however, the level of detail available was not sufficient for us to conclude that the preserved populations would be appropriately buffered from adjacent land uses, or that sufficient native vegetation would remain in proximity to the preserved areas to support a pollinator community. The CCA is still in review and negotiation with the applicant. Much of the conservation strategy has been developed in cooperation with the CDFW. As of 2014, work on the CCA is suspended.

In summary, the threats to *C. parryi* var. *fernandina* from habitat destruction or modification are slightly less than they were 9 years ago. One of the two populations is in permanent, public ownership and is being managed by an agency that is working to conserve the plant, although potential impacts from movie filming activities still needs to be evaluated. The other population is under threat of development; however, if the CCA can be developed with the landowner, it is possible that the remaining plants can also be conserved. Furthermore, cattle grazing on Newhall Ranch may be a current threat (CBI 2000). Cattle grazing may harm *C. parryi* var. *fernandina* by trampling and soil compaction. Grazing activity could also alter the nutrient content of the soils where *C. parryi* var. *fernandina* grows through fecal inputs, which in turn may favor the growth of other plant species that would otherwise not grow so readily on the mineral-based soils. Over time, changes in species composition may render the sites less favorable for the persistence of *C. parryi* var. *fernandina*. Soil compaction by cattle could render the soil impenetrable, thus disrupting seed germination. Lastly, hoof-prints may break apart the soil crust, which is characteristic of *C. parryi* var. *fernandina* habitat, leaving it vulnerable to erosion processes (Fleischner 1994, p. 634). Until the CCA is finalized, the threat of development, cattle grazing, and the potential damage to the Newhall Ranch population remain, as shown by the destruction of some plants during installation of an agave farm.

B. Overutilization for commercial, recreational, scientific, or educational purposes:

We found no evidence of threats to *Chorizanthe parryi* var. *fernandina* from commercial, recreational, scientific, or educational purposes.

C. Disease or predation:

We found no evidence that disease is a factor affecting this species, nor did we find evidence that predation by livestock or wildlife is a current threat to this species. The Upper Las Virgenes Creek Open Space Preserve site had been heavily grazed by sheep in the past, and the Newhall Ranch sites are currently grazed by cattle (see discussion in Factor A above concerning impacts to habitat due to cattle grazing).

D. The inadequacy of existing regulatory mechanisms:

Currently, *C. parryi* var. *fernandina* is not protected under Federal law. In June 2000, the species became a candidate for listing as endangered by the State of California, and was listed as endangered in August 2001. The CESA (California Fish and Game Code, section 2080 et seq.) prohibits the unauthorized take of state-listed threatened or endangered species. Under the CESA, the California Native Plant Protection Act (CNPPA) (Division 2, Chapter 10, section 1908) also prohibits the unauthorized take of state-listed threatened or endangered plant species. The CESA requires consultation with the CDFG for those activities that may affect a State-listed species and to mitigate for any adverse impacts to the species or its habitat. Pursuant to CESA, it is unlawful to import or export, take, possess, purchase, or sell any species or part or product of any species listed as endangered or threatened. The State may authorize permits for scientific, educational, or management purposes, and to allow take that is incidental to otherwise lawful activities. On December 3, 2010, the CDFG certified the Final Environmental Impact Statement/Environmental Impact Report (FEIS/EIR) for the Newhall Ranch Resource Management and Development Plan (RMDP) and Spineflower Conservation Plan (SCP). CDFG also issued a Master Streambed Alteration Agreement and Incidental Take Permits related to the project. The SCP establishes seven preserves at Newhall Ranch

totaling approximately 227 acres, which represents 76 percent of the occupied *C. parryi* var. *fernandina* habitat at Newhall Ranch. Therefore, approximately 24 percent of the occupied *C. parryi* var. *fernandina* habitat at Newhall Ranch will be lost to development (U.S. Army Corps of Engineers (Corps) and CDFG 2010). Although the take of State listed plants is prohibited under the CNPPA, these statutes do not provide adequate protection for such plants from the impacts of habitat modification and land use change. Under CNPPA, certain activities, such as agricultural or timber operations, mining assessment work, or removal of plants from a right-of-way are exempt from the general take prohibitions. Also under CNPPA, after the CDFG notifies a landowner that a State-listed plant grows on his or her property, the statute requires only that the landowner notify the agency at least 10 days in advance of changing the land use to allow salvage of such plant. The Federal Act does not afford similar protections for listed plants on private lands.

The California Environmental Quality Act (CEQA) requires a full disclosure of the potential environmental impacts of proposed projects. The lead agency is the public agency with primary authority or jurisdiction over the project, and is responsible for conducting a review of the project and consulting with other agencies concerned with the resources affected by the project. Protection of listed species through CEQA depends on the discretion of the lead agency involved. For example, Los Angeles County approved the Newhall Ranch CEQA documents with the knowledge that several other federally- and State-listed species were present on Newhall's property, including *Gymnogyps californianus* (California condor), *Vireo bellii pusillus* (least Bells vireo), *Empidonax traillii extimus* (southwestern willow flycatcher), *Gasterosteus aculeatus williamsoni* (unarmored threespine stickleback), and *Anaxyrus californicus* (arroyo toad). Despite findings of significance of the impacts to these resources, the County had the discretion under CEQA to determine that the impacts could be mitigated, or that other overriding considerations would allow the proposed development to proceed. Therefore, the adequacy of CEQA in protecting sensitive resources is limited to the discretion of the local jurisdiction and may not be effective for species such as *C. parryi* var. *fernandina*.

E. Other natural or manmade factors affecting its continued existence:

Chorizanthe parryi var. *fernandina* may be threatened by invasive nonnative plants, including grasses, which could potentially displace it from available habitat; compete for light, water, and nutrients; and reduce survival and establishment. A study of the endangered *Chorizanthe pungens* var. *hartwegiana* (McGraw and Levin 1999, pp. 119-127) implicated shade as the primary factor affecting the survival, reproduction, and biomass of *Chorizanthe*. Current research and management approaches are inadequate to control the problem of nonnative plant invasions (Hobbs and Humphries 1995, pp. 761-770; Schierenbeck 1995, pp. 168-174). During a site visit to the Ahmanson Ranch property in April, 2012, we noted the following nonnative species within *Chorizanthe parryi* var. *fernandina* habitat: hoarhound (*Marrubium vulgare*), fennel (*Foeniculum vulgare*), storksbill (*Erodium cicutarium*), nonnative grasses (bromes (*Bromus* spp.), oatgrass (*Avena fatua*)). If not managed, such species could degrade the quality of the habitat for *C. parryi* var. *fernandina* over time.

Chorizanthe parryi var. *fernandina* is particularly vulnerable to extinction due to its concentration in two isolated areas (Barrett and Kohn 1991, pp. 3-30). The existence of only two areas of occurrence, and a relatively small range, makes the variety highly susceptible to extinction or extirpation from a significant portion of its range due to random events such as fire, drought, erosion, or other occurrences (Shaffer 1981, pp. 132-134; Shaffer 1987, pp. 69-86; Meffe and Carroll 1997, pp. 217-218). Such events are not usually a concern unless the number of populations or geographic distribution is severely limited, as is the case with *C. parryi* var. *fernandina*. Once the number of populations or the plant population size is reduced, the remnant populations, or portions of populations, have a higher probability of extinction from random, chance events (Primack 1998, pp. 280-304).

Conservation Measures Planned or Implemented :

In November 2003, the State of California purchased the Ahmanson Ranch property. The property and management of the population of *C. parryi* var. *fernandina* on Ahmanson Ranch is now under the auspices of the Santa Monica Mountains Conservancy, a joint powers authority operated by the State to conserve lands

within the Conservancys sphere of influence. We believe the direct threats to the species from the former Ahmanson Ranch development plan have been eliminated, and we are working with the State to manage the site for the benefit of *C. parryi* var. *fernandina*.

Representatives of Newhall Ranch informed us that they intended to pursue a CCA for *Chorizanthe parryi* var. *fernandina*, and presented us with a revised conservation plan on February 27, 2008, that would avoid removing approximately 69 percent of the area the plant is believed to occupy (Dudek 2007a, p. 48). At this time, the level of detail available is not sufficient for us to conclude that the preserved populations would be appropriately buffered from adjacent land uses, would remain connected through habitat corridors, or that sufficient native vegetation would remain in proximity to the preserved areas to support a pollinator community. The document is currently in review and negotiation with the applicant. Much of the conservation strategy has been developed in cooperation with the CDFW. As of 2014, work on the CCA is suspended.

The threats to *C. parryi* var. *fernandina* from direct habitat destruction or modification are slightly less than they were 7 years ago. One of the two populations is in permanent, public ownership and is being managed by an agency that is working to conserve the plant. The other population is under threat of development; however, if the CCA can be developed with the landowner, it is possible that the remaining plants can also be conserved. Until such an agreement is finalized, the threat of development and the potential damage to the Newhall Ranch population remains. Other threats to *C. parryi* var. *fernandina* remain a concern; these include alteration of habitat due to grazing, fragmentation of habitat due to development, competition with non-native species, and stochastic extinction due to small areal extent of populations.

Summary of Threats :

The greatest threats to *C. parryi* var. *fernandina* continue to be habitat destruction or modification due to development and cattle grazing (Factor A); inadequacy of existing regulatory mechanisms (Factor D); competition with nonnative species (Factor E), and small number and isolation of populations (Factor E). The threats to *C. parryi* var. *fernandina* from habitat destruction or modification are slightly less than they were 7 years ago. One of the two populations is in permanent, public ownership and is being managed by an agency that is working to conserve the plant, although potential impacts from movie filming activities still need to be evaluated (Factor A). The other population continues to be under threat of development; however, if the CCA can be developed with the landowner, it is possible that the remaining plants can also be conserved. We find that *C. parryi* var. *fernandina* is warranted for listing throughout all its range and, therefore, find that it is unnecessary to analyze whether it is threatened or endangered in a significant portion of its range.

For species that are being removed from candidate status:

_____ Is the removal based in whole or in part on one or more individual conservation efforts that you determined met the standards in the Policy for Evaluation of Conservation Efforts When Making Listing Decisions(PECE)?

Recommended Conservation Measures :

1. We will be working with the landowner of the Los Angeles County site (Newhall Ranch) to develop a conservation strategy in conjunction with approved development plans. The landowner has proposed developing a CCA. As of 2014, work on the CCA is suspended.
2. The other site is in State ownership and is being managed for conservation by a local land conservancy. The land conservancy is proposing to implement the protections developed by the previous landowner with the Service, and has closed sections of the land to public access to protect *C. parryi* var. *fernandina*. Potential impacts from filming activities need to be evaluated.

Priority Table

Magnitude	Immediacy	Taxonomy	Priority
High	Imminent	Monotypic genus	1
		Species	2
		Subspecies/Population	3
	Non-imminent	Monotypic genus	4
		Species	5
		Subspecies/Population	6
Moderate to Low	Imminent	Monotype genus	7
		Species	8
		Subspecies/Population	9
	Non-Imminent	Monotype genus	10
		Species	11
		Subspecies/Population	12

Rationale for Change in Listing Priority Number:

N/A

Magnitude:

Chorizanthe parryi var. *fernandina* is known to currently exist as only two populations. Proposed development projects at one population site have the potential to cause the loss of most, if not all, of the remaining plants at that location. All of the plants, including those on preserved public lands, are also under potential threat by competition from nonnative plants (e.g., nonnative grasses); stochastic events, such as erosion; and the potential loss of the native pollinator community to competition with, and predation by, the nonnative *Linepithema humilis* (Argentine ants). Considering the number and types of threats to the survival of *C. parryi* var. *fernandina*, the magnitude of these threats is considered high.

Imminence :

Formerly, the threats to *C. parryi* var. *fernandina* were considered imminent because the two locations where the species occurs were proposed for residential developments, and both of the projects had been approved by the local government agencies with jurisdiction over development. The site in Ventura County is now in permanent ownership of the State of California and is being managed for conservation of its biological resources. At the site in Los Angeles County, development was expected to begin in 2004; however, the development is on hold for several reasons. At the same time, the landowner has approached the Service to develop a CCA. The potential exists for a stochastic event to cause the loss of one or both populations. The loss of either population would put the plant at immediate risk of extinction given the various threats to its survival.

Yes No Have you promptly reviewed all of the information received regarding the species for the purpose of determination whether emergency listing is needed?

Emergency Listing Review

No Is Emergency Listing Warranted?

Emergency listing is not warranted at this time because approximately one-half of the known occurrences of *C. parryi* var. *fernandina* are protected on State-owned land, and the other half of the species' occurrences are expected to be protected under a CCA.

Description of Monitoring:

Monitoring of *C. parryi* var. *fernandina* has been performed by the respective landowners of the two properties where the species occurs; however, monitoring for *C. parryi* var. *fernandina* at Upper Las Virgenes Canyon Open Space Preserve has not been conducted since 2006. Prior to the Upper Las Virgenes Canyon Open Space Preserve site coming into State ownership, the land was privately-owned and Service biologists were not invited to participate in monitoring. Similarly for the Newhall Ranch site, which remains in private ownership, the landowner did not invite nor allow the Service or other government agencies to conduct monitoring. We have received reports from the Newhall Ranch site in preparation for the CCA.

Indicate which State(s) (within the range of the species) provided information or comments on the species or latest species assessment:

California

Indicate which State(s) did not provide any information or comment:

none

State Coordination:

California did not provide official comments. However, we coordinated with our local CDFw representative, who has extensive knowledge of ongoing activities at the sites where the two populations occur.

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Approval/Concurrence:

Lead Regions must obtain written concurrence from all other Regions within the range of the species before recommending changes, including elevations or removals from candidate status and listing priority changes; the Regional Director must approve all such recommendations. The Director must concur on all resubmitted 12-month petition findings, additions or removal of species from candidate status, and listing priority changes.

Approve:



06/10/2014

Date

Concur:



11/18/2014

Date

Did not concur:

Date

Director's Remarks: