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**DEPARTMENT OF DEFENSE****48 CFR Part 219 and Appendix I to Chapter 2**

[DFARS Case 96-D317]

**Defense Federal Acquisition Regulation Supplement; Pilot Mentor-Protégé Program**

AGENCY: Department of Defense (DoD).

ACTION: Final rule.

**SUMMARY:** The Director of Defense Procurement is amending the Defense Federal Acquisition Regulation Supplement (DFARS) to extend the dates for application into, and reimbursement of costs under, the DoD Pilot Mentor-Protégé Program.

EFFECTIVE DATE: October 18, 1996.

**FOR FURTHER INFORMATION CONTACT:** Defense Acquisition Regulations Council, Attn: Ms. Susan Schneider, PDUSD (A&T) DP (DAR), 3062 Defense Pentagon, Washington, DC 20301-3062. Telephone (703) 602-0131; telefax (703) 602-0350. Please cite DFARS Case 96-D317 in all correspondence related to this issue.

**SUPPLEMENTARY INFORMATION:****A. Background**

This final rule implements Section 802 of the National Defense Authorization Act for Fiscal Year 1997 (Public Law 104-201). Section 802: (1) extends, to September 30, 1998, the date by which an interested company must apply for participation as a mentor firm under the DoD Pilot Mentor-Protégé Program; and (2) extends to September 30, 1999, the date by which mentor firms must incur costs in order to be eligible for reimbursement under the Program.

**B. Regulatory Flexibility Act**

This final rule does not constitute a significant revision within the meaning of FAR 1.501 and Public Law 98-577, and publication for public comment is not required. However, comments from small entities concerning the affected DFARS subparts will be considered in accordance with 5 U.S.C. 610.

**C. Paperwork Reduction Act**

The Paperwork Reduction Act does not apply because the final rule does not contain any information collection requirements that require Office of Management and Budget approval under 44 U.S.C. 3501 *et seq.*

**List of Subjects in 48 CFR Part 219**

Government procurement.

Michele P. Peterson,

Executive Editor, Defense Acquisition Regulations Council.

Therefore, 48 CFR Part 219 and Appendix I to Chapter 2 are amended as follows:

**PART 219—[AMENDED]**

1. The authority citation for 48 CFR Part 219 continues to read as follows:

Authority: 41 U.S.C. 421 and 48 CFR Chapter 1.

**219.7104 [Amended]**

2. Section 219.7104 is amended in the last sentence of paragraph (b) by revising the date "October 1, 1996" to read "October 1, 1999".

**Appendix I to Chapter 2 [Amended]**

3. Appendix I to Chapter 2 is amended in section I-102, paragraphs (a) and (b), and in section I-103, paragraph (a), by revising the date "September 30, 1996" to read "September 30, 1998".

4. Appendix I to Chapter 2 is amended in section I-103, paragraph (b) introductory text, by revising the date "September 30, 1996" to read "September 30, 1999".

[FR Doc. 96-26533 Filed 10-17-96; 8:45 am]

BILLING CODE 5000-04-M

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

RIN 1018-AC47

**Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for Four Plants and Threatened Status for One Plant from the Central Sierran Foothills of California**

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

**SUMMARY:** The U.S. Fish and Wildlife Service (Service) determines endangered status pursuant to the Endangered Species Act of 1973, as amended (Act) for four plants—*Calystegia stebbinsii* (Stebbins' morning-glory), *Ceanothus roderickii* (Pine Hill ceanothus), *Fremontodendron californicum* ssp. *decumbens* (Pine Hill flannelbush), and *Galium californicum* ssp. *sierrae* (El Dorado bedstraw). The Service also determines threatened

status for *Senecio layneae* (Layne's butterweed). These species all occur on gabbroic or serpentine-derived soils in the central Sierran foothills of California within chaparral or oak woodland communities. Urbanization and the ensuing habitat fragmentation, road construction and maintenance, herbicide spraying, change in fire frequency, off-road vehicle use, unauthorized dumping, horse overgrazing, competition from invasive alien vegetation, and mining imperil these five species. This rule implements Federal protection and recovery provisions afforded by the Act for these five plants.

EFFECTIVE DATE: November 18, 1996.

**ADDRESSES:** The complete file for this rule is available for public inspection, by appointment, during normal business hours at the Sacramento Field Office, U.S. Fish and Wildlife Service, 3310 El Camino Avenue, Sacramento, California 95825.

**FOR FURTHER INFORMATION CONTACT:** Kirsten Tarp, Sacramento Field Office (see ADDRESSES section) (telephone 916/979-2122; facsimile 916/979-2128).

**SUPPLEMENTARY INFORMATION:****Background**

*Calystegia stebbinsii* (Stebbins' morning-glory), *Ceanothus roderickii* (Pine Hill ceanothus), *Fremontodendron californicum* ssp. *decumbens* (Pine Hill flannelbush), *Galium californicum* ssp. *sierrae* (El Dorado bedstraw), and *Senecio layneae* (Layne's butterweed) occur primarily on the Pine Hill intrusion, an area of approximately 10,400 hectares (ha) (25,700 acres (ac)), in western El Dorado County, California, ranging in elevation from 138 to 628 meters (m) (453 to 2,060 feet (ft)). In addition, *C. stebbinsii* and *S. layneae* have a few known isolated occurrences in El Dorado, Nevada, and/or Tuolumne counties, California. All of the species included in this final rule exhibit substrate preferences. *Ceanothus roderickii*, *F. californicum* ssp. *decumbens*, and *G. californicum* ssp. *sierrae* are endemic to gabbro-derived soils on the Pine Hill intrusion, and *C. stebbinsii* and *S. layneae* occur on gabbro and serpentine-derived soils. One known occurrence of *S. layneae* was found on metamorphic-derived soils.

Gabbro-derived soils originate from mafic rocks (gabbrodiorite) that are mildly acidic, are rich in iron and magnesium, and often contain other heavy metals such as chromium (Wilson 1986). Gabbro, a dark large-crystalled rock, is formed when liquid magma cools slowly underground. A red soil is

formed when the rock is exposed and weathers at the earth's surface (EIP Associates 1991). These soils are well-drained and are underlain by gabbrodiorite rocks at a depth of more than 1 meter (3.28 feet) (U.S. Department of Agriculture, Soil Conservation Service 1974).

Serpentine-derived soils are formed through a process similar to formation of gabbro-derived soils. Serpentine soils are derived from ultramafic rocks (e.g., serpentinite, dunite, and peridotite). They tend to have high concentrations of magnesium, chromium, and nickel, and low concentrations of calcium, nitrogen, potassium, and phosphorus (Kruckeberg 1984). "Gabbro soils are considered to be edaphically similar to serpentine because of their mineral composition and because they appear to influence plant distributions in much the same way" (Wilson 1986).

The three plant communities occurring on the Pine Hill intrusion are chaparral, oak woodland, and savanna. The vegetation type of this area is distinctive enough that Robert Holland (1986), based upon Wilson (1986), designated a community known as gabbro-derived northern mixed chaparral. This community is characterized by being "edaphically restricted to ultramafic gabbro in a mixed chaparral which is dominated by *Adenostoma fasciculatum* (chamise), and usually occurring on rather xeric exposures" (Holland 1986). *Calystegia stebbinsii*, *Ceanothus roderickii*, *Fremontodendron californicum* ssp. *decumbens*, and *Senecio layneae* occur in fire-dependent chaparral habitat; *F. californicum* ssp. *decumbens* and *S. layneae* also occur in the ecotone between chaparral and oak woodland; *Galium californicum* ssp. *sierrae* and *S. layneae* occur in oak woodland (Wilson 1986). None of the plants in this rule occur within savanna, which makes up approximately 27 percent of the vegetation on the Pine Hill intrusion.

Loss of habitat, fragmentation, and alteration of natural ecosystem processes have resulted from residential and commercial development. Housing and commercial development, road maintenance, grading, change in fire frequency, unauthorized dumping, off-road vehicle use, overgrazing practices, herbicide spraying, mining, competition from invasive alien vegetation, and other human-caused conditions threaten the remaining occurrences of these plants.

These plants occur within a fire-adapted plant community, either within chaparral or on the ecotone between chaparral and woodland. Change in fire frequency alters the natural processes

within several plant communities in California. Historically, fire occurred in chaparral on the average of 3 to 5 times every 100 years (Boyd 1985). Fire is important for seed germination and seedling reestablishment by eliminating competition and shading, as well as replenishing nutrients to the soil. Without periodic fires, the previously mentioned plants either do not reproduce by seed or may become shaded by other plants.

#### Discussion of the Five Species

G. Ledyard Stebbins collected the type specimen of *Calystegia stebbinsii* in 1970, 17 kilometers (km) (10 miles (mi)) west of Placerville in El Dorado County, California. Richard K. Brummitt (1974) described the species using specimens collected by Stebbins as the type.

*Calystegia stebbinsii* is a leafy perennial herb in the morning-glory family (Convolvulaceae). Its stems range up to 1 m (3.28 ft) in length and generally lie flat on the ground. The leaves are palmately lobed with the two outermost lobes being divided again. The leaf lobes are narrow and lance-shaped. White flowers, which appear in May through June, are on stalks 3 to 13 cm (1 to 5 in) long and bear two leaf-like bracts. The fruit is a slender capsule. Its distinctively shaped leaves, each having 7 to 9 narrow lance-shaped lobes, distinguish *C. stebbinsii* from other California morning-glories.

*Calystegia stebbinsii* occurs in two localized areas. Most occurrences of *C. stebbinsii* are discontinuously scattered within two population centers in the northern and southern portions of the Pine Hill intrusion. *Calystegia stebbinsii* does not occur at the center of the intrusion on Pine Hill. It recently was discovered in Nevada County near the County landfill, where it was sparsely scattered over a distance of 6.5 km (3.5 mi) (California Diversity Database (CNDDDB) 1994). In El Dorado County, the species is associated with chaparral on gabbro-derived soils. In Nevada County it occurs on serpentine. The species may have been transplanted from El Dorado County by the transport of soil to the Nevada County Sanitary Landfill (Carla DeCrona, California Department of Fish and Game (CDFG), pers. comm. 1992; *The Union* 1991). *Calystegia stebbinsii* occurs primarily on privately owned land, although, the Bureau of Land Management (BLM) manages land harboring some occurrences. Development has extirpated at least one-third of the known occurrences (CDFG 1990a). Other threats to these populations include off-road vehicle use, grading,

dumping, road maintenance, change in fire frequency, and competition with invasive alien vegetation (CNDDDB 1994).

Beecher Crampton first collected *Ceanothus roderickii* in 1956 from Pine Hill in El Dorado County, California. Walter Knight described *C. roderickii* in 1968, naming it after Wayne Roderick, who first suspected the horticultural value of this endemic shrub (Knight 1968). Knight (1968) considered *C. roderickii* to be most closely related to *C. cuneatus*, which also grows throughout the area. *Ceanothus roderickii* can be differentiated from its congeners by its blue-tinged flowers, prostrate habit, and inconspicuously horned fruit.

*Ceanothus roderickii* is a prostrate evergreen shrub of the buckthorn family (Rhamnaceae) that generally grows to 3 m (9.84 ft) in diameter. The smooth gray-brown branches radiate from a central axis and root when they come into contact with the ground. The leaves of the species are semi-erect with entire margins. Small whitish flowers tinged with blue appear from May through June. Its fruit is an inconspicuously horned globe-shaped capsule.

*Ceanothus roderickii* is restricted to gabbro-derived soil in openings in chaparral or more infrequently on previously disturbed sites within chaparral (Wilson 1986). The species is restricted to one localized area of approximately 10 known extant occurrences discontinuously scattered in the Pine Hill intrusion (CNDDDB 1994). Residential and commercial development, inadequate regulatory mechanisms, off-road vehicle use, road-widening, change in fire frequency, and other human-caused conditions are responsible for the decline of *C. roderickii*. Commercial development has extirpated two known occurrences (CNDDDB 1994). *Ceanothus roderickii* occurs primarily on private land. BLM owns part of one site and the California Department of Forestry (CDF) owns another site.

Beecher Crampton made the first collection of *Fremontodendron californicum* ssp. *decumbens* in 1956. Robert Lloyd (1965) described *F. californicum* ssp. *decumbens* as *F. decumbens* based on the type specimen Lloyd collected in May 1964 from "California, El Dorado Co., Pine Hill, ca. 3 km north of Rescue." Philip Munz (1968) reduced *F. decumbens* to a subspecies of *F. californicum*. Walter Kelman (1991), in his revision of *Fremontodendron*, recognized *F. californicum* ssp. *decumbens* as a full species based upon morphological variation. Nonetheless, the plant is treated as *F. californicum* ssp.

*decumbens* in the Jepson Manual (Whetstone and Atkinson 1993).

*Fremontodendron californicum* ssp. *decumbens* is a branched spreading shrub of the cacao family (Sterculiaceae) growing to 1.3 m (4 ft) tall. Dense star-shaped hairs cover the leaves and the younger twigs and branchlets. The leaves of the subspecies are elliptic-ovate to ovate, shallowly or deeply palmately lobed with 5 to 7 lobes. Showy light-orange to reddish-brown flowers appear from late April to early July. Its fruit is a capsule.

*Fremontodendron californicum* ssp. *decumbens* can be distinguished from *F. californicum* ssp. *californicum* and *F. mexicanum* by its decumbent growth habit, its relatively long peduncles, and its copper-orange flowers.

*Fremontodendron californicum* ssp. *decumbens* occurs on scattered rocky outcrops either in chaparral or in the ecotone between woodland and chaparral. The subspecies depends on fire to promote seed germination, and Boyd (1996) documented that seeds are dispersed by ants. It is only known from one localized area near Pine Hill in western El Dorado County scattered within an area of approximately 2,000 ha (5,000 ac). Although there are some reports of *F. californicum* ssp. *decumbens* occurring in some small scattered populations in Yuba or Nevada County, other reports describe these individuals as aberrant *F. californicum* ssp. *californicum*. *Fremontodendron californicum* ssp. *decumbens* occurs primarily on private land, but one site is on BLM land. CDF and CDFG also own another site.

The largest population of *Fremontodendron californicum* ssp. *decumbens* is on the Pine Hill Ecological Reserve managed by CDFG. The proximity of this plant to human population centers and intensive development activities renders *F. californicum* ssp. *decumbens* vulnerable to the long-term effects of fire suppression. The restricted distribution of the subspecies increases its susceptibility to catastrophic events such as disease or pest outbreak, severe drought, or other natural or human-caused disasters. In addition, residential and commercial development (including unregulated grading for homes or barns on existing large parcels), and trash dumping threaten *F. californicum* ssp. *decumbens*.

The type specimen for *Galium californicum* ssp. *sierrae* was collected 1.7 km (1 mi) north of Pine Hill Lookout in western El Dorado County, California. Lauramay Dempster and G. Ledyard Stebbins (1968) described *G. californicum* ssp. *sierrae*.

*Galium californicum* ssp. *sierrae* is a softly hairy perennial herb in the coffee family (Rubiaceae). Four narrow leaves are arranged at each node. The pale yellow flowers, which are clustered at the tips of stems, appear in May and June. Minute hairs cover the fleshy fruit. *Galium californicum* ssp. *sierrae* can be distinguished from other subspecies of *G. californicum* by its very narrow leaves.

*Galium californicum* ssp. *sierrae* is restricted to one localized area—Pine Hill and surrounding ridges to the west within a distance of approximately 4 km (2.5 mi) (Baad and Hanna 1987). The subspecies grows in oak woodland areas, including sites with ponderosa pine and gray pine (Wilson 1986). *Galium californicum* ssp. *sierrae* occurs primarily on private land. BLM manages the land where at least one population occurs. CDF and CDFG manage one site as well. Residential development, road construction, grazing by horses, and irrigation threaten *G. californicum* ssp. *sierrae*. Restricted distribution and limited numbers of individuals make it susceptible to catastrophic events such as disease or pest outbreak, severe drought, or other natural disasters.

Kate Brandegee Layne-Curran collected the type specimen for *Senecio layneae* in May 1883 from El Dorado County, California, on Sweetwater Creek, not far from Folsom. E. L. Greene first described *S. layneae* in 1883 (Greene 1883). Although Asa Gray reduced *S. layneae* to a variety of *S. fastigiatus* (1884), the species currently is known as *S. layneae* (Barkley 1993). The type population is now thought to be extirpated due to inundation by Folsom Lake.

*Senecio layneae* is a perennial herb of the aster family (Asteraceae) that sprouts from a rootstock. Its mostly basal lance-shaped leaves are 8 to 24 cm (3 to 10 in) long. The several flower heads are 4 to 6 cm (2 to 3 in) wide each having 5 to 8 orange-yellow ray flowers and numerous yellow disk flowers. *Senecio layneae* flowers between April and June.

*Senecio layneae* grows in open rocky areas within chaparral plant communities, primarily on gabbro-derived soil formations and occasionally on serpentine soils. Most known sites are scattered within a 16,200 ha (40,000 ac) area in western El Dorado County that includes the Pine Hill intrusion and adjacent serpentine. A few other colonies occur in the Eldorado National Forest in El Dorado County and in the BLM Red Hills Management Area in Tuolumne County (BioSystems Analysis, Inc. 1984). *Senecio layneae* primarily occurs on privately owned

land. Some populations of *S. layneae* also occur on Federal land managed either by the Forest Service or BLM. One site is on land managed by CDF and CDFG. Residential and commercial development, road maintenance, change in fire frequency, off-road vehicle use, competition with invasive alien vegetation, excessive horse grazing practices, mining, and other human-caused conditions threaten and are responsible for the declining trend for *S. layneae* (CDFG 1990b, CNDDDB 1994).

#### Previous Federal Action

Federal government actions on the five plants began as a result of section 12 of the Act of 1973, as amended (16 U.S.C. 1531 *et seq.*), which directed the Secretary of the Smithsonian Institution to prepare a report on those plants considered to be endangered, threatened, or extinct in the United States. This report, designated as House Document No. 94-51, was presented to Congress on January 9, 1975, and included *Fremontodendron decumbens* (now known as *Fremontodendron californicum* ssp. *decumbens*), *Galium californicum* ssp. *sierrae*, and *Senecio layneae* as endangered and *Ceanothus roderickii* as threatened. The Service published a notice on July 1, 1975, (40 FR 27823) of its acceptance of the report of the Smithsonian Institution as a petition within the context of section 4(c)(2) (petition provisions are now found in section 4(b)(3) of the Act) and its intention thereby to review the status of the plant taxa named therein. The above four taxa were included in the July 1, 1975, notice. On June 16, 1976, the Service published a proposal (41 FR 24523) to determine approximately 1,700 vascular plant species, including *Calystegia stebbinsii*, *F. decumbens*, *G. californicum* ssp. *sierrae*, and *S. layneae*, to be endangered species pursuant to section 4 of the Act. The list of 1,700 plant taxa was assembled on the basis of comments and data received by the Smithsonian Institution and the Service in response to House Document No. 94-51 and the July 1, 1975, Federal Register publication.

General comments received in relation to the 1976 proposal were summarized in an April 26, 1978, publication (43 FR 17909). The Act Amendments of 1978 (Amendments) required the Secretary to withdraw all proposals not adopted as final regulations within two years from their publication in the Federal Register. Proposals published before the date of enactment of the Amendments could be withdrawn before the end of a 1-year grace period. On December 10, 1979, the Service published a notice of

withdrawal (44 FR 70796) of the June 16, 1976, proposal, along with four other proposals that had expired.

The Service published an updated Notice of Review for plants on December 15, 1980 (45 FR 82480). This notice included *Calystegia stebbinsii*, *Fremontodendron decumbens*, *Galium californicum* ssp. *sierrae*, and *Senecio layneae* as category 1 candidates for Federal listing, and *Ceanothus roderickii* as a category 2 candidate. Category 1 taxa were those for which the Service had on file substantial information on biological vulnerability and threats to support preparation of listing proposals. Category 2 taxa were those for which data in the Service's possession indicated listing was possibly appropriate, but for which substantial data on biological vulnerability and threats were not known or on file to support proposed rules. On November 28, 1983, the Service published a supplement to the Notice of Review (48 FR 53640). This supplement changed *C. stebbinsii*, *F. decumbens*, *G. californicum* ssp. *sierrae*, and *S. layneae* from category 1 to category 2 candidates.

The September 27, 1985 (50 FR 39526), plant Notice of Review included *Calystegia stebbinsii*, *Ceanothus roderickii*, *Fremontodendron californicum* ssp. *decumbens* (as *Fremontodendron decumbens*), *Galium californicum* ssp. *sierrae*, and *Senecio layneae* as category 2 candidates. The February 21, 1990 (55 FR 6184), and September 30, 1993 (58 FR 51144), plant notices of review included *C. roderickii* and *F. californicum* ssp. *decumbens* (as *F. decumbens*) as category 1 candidates and *C. stebbinsii*, *G. californicum* ssp. *sierrae*, and *S. layneae* as category 2 candidates. On February 28, 1996, the Service published a Notice of Review in the Federal Register (61 FR 7596) that discontinued the use of categories and removed former category 2 species from candidate status.

Section 4(b)(3)(B) of the Act requires the Secretary to make certain findings on pending petitions within 12 months of their receipt. Section 2(b)(1) of the 1982 amendments further required that all petitions pending on October 13, 1982, be treated as having been newly submitted on that date. This was the case for *Ceanothus roderickii*, *Fremontodendron californicum* ssp. *decumbens*, *Galium californicum* ssp. *sierrae*, and *Senecio layneae* because the 1975 Smithsonian report was accepted as a petition. On October 13, 1982, the Service found that the petitioned listing of these species was warranted but precluded by other pending listing actions in accordance with section

4(b)(3)(B)(iii) of the Act. Notification of this finding was published on January 20, 1984 (49 FR 2485). Such a finding requires the petition to be recycled, pursuant to section 4(b)(3)(C)(I) of the Act. The finding was reaffirmed annually in October of 1983 through 1993. Publication of the proposed rule constituted the final finding for the petitioned action.

A proposal to list *Calystegia stebbinsii*, *Ceanothus roderickii*, *Fremontodendron californicum* ssp. *decumbens*, and *Galium californicum* ssp. *sierrae* as endangered and *Senecio layneae* as threatened was published on April 20, 1994 (59 FR 18774). The proposal was based on information supplied by reports to the California Diversity Database; observations and studies by numerous botanists; and reports by EIP associates, Jones & Stokes Associates, and Biosystems Analysis, Inc.

The processing of this final listing rule conforms with the Service's final listing priority guidance published on May 16, 1996 (61 FR 24722). The guidance clarifies the order in which the Service will process rulemakings following two related events, the lifting, on April 26, 1996, of the moratorium on final listings imposed on April 10, 1995 (Public Law 104-6) and the restoration of significant funding for listing through passage of the omnibus budget reconciliation law on April 26, 1996, following severe funding constraints imposed by a number of continuing resolutions between November 1995 and April 1996. The guidance calls for giving highest priority to handling emergency situations (Tier 1) and second highest priority (Tier 2) to resolving the listing status of the outstanding proposed listings. This final rule falls under Tier 2.

#### Summary of Comments and Recommendations

In the April 20, 1994, proposed rule and associated notifications, all interested parties were requested to submit factual reports or information that would contribute to the development of a final rule. A 90-day comment period closed on July 19, 1994. Appropriate Federal and State agencies, county and city governments, scientists, and interested parties were contacted and requested to comment. The Service published notices in the *Sacramento Bee* on May 6 and 12, 1994, *Placerville Mountain Democrat* on May 9, 1994, and *Grass Valley Union* on May 6, 1994, inviting general public comment. Thirty-eight individuals or agencies, including State and Federal congressmen, El Dorado County Board

of Supervisors, BLM, California Cattlemen's Association, California Department of Forestry and Protection, and California Native Plant Society (CNPS), submitted comments. Several individuals commented more than once. Ten commenters supported, 25 opposed, and three were neutral on the proposed action.

In response to the publication of the proposed rule, Daniel Macon, Director of Industry Affairs, California Cattlemen's Association; William Hazeltine, Environmental Consultant, Oroville, California; and Robert Feusi, Gardner-Feusi Company, Sacramento, California requested a public hearing in letters dated May 2, 1994, April 4, 1994, and June 3, 1994 respectively. Notice of the public hearing was published in the *Sacramento Bee* (June 14, 1994), a newspaper with a large circulation, as well as in the *Placerville Mountain Democrat* (June 15, 1994), and the *Grass Valley Union* (June 14, 1994). A public hearing was held at the Radisson Hotel in Sacramento on June 30, 1994, from 6 pm. to 8 pm. Twenty people presented oral and written testimony.

Written comments and oral statements presented at the public hearing and received during the comment period are addressed in the following summary. Comments of a similar nature are grouped together into general issues. These issues and the Service's responses are presented below.

*Issue 1:* Many commenters expressed concern that the listing would negatively impact property owners' ability to clear vegetation from around their homes for fire protection. One commenter stated the listing may be in opposition to the State fire codes requiring "defensible space" for fire protection. Others thought that "homeowners who removed vegetation around their homes for fire protection could be deemed criminals."

*Service Response:* Removing listed plants from one's own land is not prohibited by the Act. Listing the five plants as endangered or threatened would not prohibit the cutting of a defensible space around an individual's residence. Other activities that do not violate section 9(a)(2) of the Act, as well as prohibited acts, are discussed further under "Conservation Measures."

*Issue 2:* Several people expressed concerns regarding the adverse economic impact listing would have on the economy of El Dorado County.

*Service Response:* Under section 4(b)(1)(A), a listing determination must be based solely on the best scientific and commercial data available. The legislative history of this provision clearly states the intent of Congress to

"ensure" that listing decisions are "based solely on biological criteria and to prevent non-biological considerations from affecting such decisions," H. R. Rep. No. 97-835, 97th Cong. 2d Sess. 19 (1982). As further stated in the legislative history, "Applying economic criteria \* \* \* to any phase of the species listing process is applying economics to the determinations made under section 4 of the Act and is specifically rejected by the inclusion of the word "solely" in this legislation," H. R. Rep. No. 97-835, 97th Cong. 2d Sess. 19 (1982). Because the Service is precluded from considering economic impacts in a final decision on a proposed listing, the Service has not examined such impacts.

*Issue 3:* Several commenters stated that specific data used in preparation of the proposed rule were unavailable for review and comment.

*Service Response:* The proposed rule summarized and cited available scientific and commercial information. The supporting documentation was available during the public comment period for review as stated in the proposed rule. Two individuals requested to review this documentation.

*Issue 4:* Several commenters requested either no further action be undertaken with the listing process of these five plants because of the existence of the El Dorado County preserve system plan, or that efforts be postponed until local attempts to conserve the species are completed. Several commenters also contended that adequate regulatory mechanisms currently are in place to protect the plants, through the California Environmental Quality Act (CEQA) and the California Endangered Species Act (CESA).

*Service Response:* As discussed in Factor D, in the "Summary of Factors Affecting the Species" section, the preserve system approved in concept by the El Dorado County Board of Supervisors generates no habitat acquisition funding, provides no clear mechanism to protect habitat, and fails to include a preserve in the southern part of the gabbro-derived soil formation. The Service agrees that local ecosystem planning can be an effective way to coordinate conservation and development objectives, and we encourage El Dorado County in its planning effort. However, the present status of the County plan does not provide sufficient assurances for habitat protection.

The only protection given to State-listed species is the requirement that landowners give CDFG 10 days notice of any land use change. The CEQA

requires mitigation for projects that adversely affect listed species as well as those that qualify for State listing; however, many mitigation attempts do not secure long-term protection for such plants (Howald 1993). The failure of existing regulatory mechanisms to adequately protect the plants are further discussed under Factor D.

*Issue 5:* Several commenters questioned the necessity for listing the species now, since the species have been under consideration for Federal listing for 19 years, and contended that the reason the taxa were being proposed was because of a lawsuit settlement agreement between the Service and CNPS rather than on purely scientific grounds.

*Service Response:* While the CNPS lawsuit settlement may have brought more public attention to declining California plant species, the suit does not change the standards by which species are evaluated for potential listing. As stated under Issue 2 above, the Endangered Species Act directs the Service to list species on the basis of biological vulnerability.

*Issue 6:* A few commenters stated that the Service must prepare an Environmental Impact Statement (EIS), pursuant to the National Environmental Policy Act (NEPA), on this rule.

*Service Response:* For the reasons set out in the NEPA section of this document, the Service has determined that the rules issued pursuant to section 4(a) of the Act do not require the preparation of an EIS. The Federal courts have held in *Pacific Legal Foundation v. Andrus*, 657 F.2d 829 (6th Circuit 1981), that an EIS is not required for listing under the Act. The Sixth Circuit decision noted that preparing an EIS on listing actions does not further the goals of NEPA or the Act.

*Issue 7:* Many commenters indicated that the Service should designate critical habitat. One commenter stated "without the process of assessing and designating critical habitat, the public will be denied its statutory right to participate in the development of a rational and effective recovery plan."

*Service Response:* The Service has concluded that, at this time, the danger posed to the five plant species by designating critical habitat outweighs any potential benefit. As discussed in the "Summary of Factors Affecting the Species" section, all five plants could be adversely affected by acts of vandalism if the sites become known through the critical habitat designation process. In addition, as discussed further under the "Critical Habitat" section, the potential benefit gained by designating critical habitat is limited. Regarding

development and implementation of recovery plans, Service policy (59 FR 34270) solicits active participation by the scientific community, local, State, and Federal agencies, Tribal governments, and other interested parties.

*Issue 8:* A few commenters stated that the Service had not adequately notified the public regarding the proposed rule. Another commenter requested to have the hearings held locally.

*Service Response:* The Service published a notice of the proposed rule regarding these five plants in the Federal Register on April 20, 1994 (59 FR 18774). The Service mailed 50 notifications of the proposed rule to Federal, State, county entities, species experts, and other individuals to solicit their input. Additionally, the Service paid for the publication of public notices regarding the proposed rule in the following newspapers—*Sacramento Bee*, *Placerville Mountain Democrat* and the *Grass Valley Union*. In response to the requests for a public hearing, the Service announced the scheduling of a public hearing in the Federal Register on June 9, 1994 (59 FR 29778), and shortly thereafter published additional notices in the *Sacramento Bee*, a local newspaper with a large circulation, the *Placerville Mountain Democrat*, and the *Grass Valley Union*. The Service also mailed notification of the public hearing to a variety of interested parties.

*Issue 9:* One commenter stated that the Service needs to complete a Regulatory Impact Analysis, as directed by Presidential Executive Order 12630, for the proposed rule to list the five plants. Three commenters were concerned about the listing violating private property rights within the Fifth and Fourteenth Amendments to the U.S. Constitution.

*Service Response:* Regarding Executive Order 12630, Governmental Actions and Interference with Constitutionally Protected Property Rights, the Attorney General has issued implementation guidelines to the Department of the Interior (Department). Under these guidelines, a special rule applies when an agency within the Department is required by law to act without exercising its usual discretion—that is, to act solely upon specified criteria that leave the agency no discretion.

In this context, an agency's action might be subject to legal challenge if it did not consider or act upon economic information. In these cases, the Attorney General's guidelines state that Taking Implications Assessments (TIAs) shall be prepared after, rather than before, the agency makes the decision upon which

its discretion is restricted. The purpose of the TIAs in these special circumstances is to inform policy makers of areas where unavoidable taking exposures exist. Such TIAs shall not be considered in the making of administrative decisions that must, by law, be made without regard to their economic impact. In enacting the Endangered Species Act, Congress required that listings be based solely upon scientific and commercial data indicating whether or not the species are in danger of extinction. Thus, by law and U.S. Attorney General guidelines, the Service is forbidden to conduct such TIAs prior to listing.

Regarding personal property rights within the Fifth and Fourteenth amendments, the mere promulgation of a regulation is rarely sufficient to establish that private property has been taken unless the regulation denies the property owner all economically viable use of personal property. Listing pursuant to the Act does not restrict all uses of one's land. Property owners cannot establish that their properties have been taken as a result of a regulatory action such as the listing of a species until development proposals are denied. Property owners must apply for all available permits and waivers before takings potentially could be established.

*Issue 10:* One commenter believes the only threat to the plants is the natural progression of chaparral and change in fire frequency.

*Service Response:* As discussed further in the "Summary of Factors Affecting the Species" section, numerous threats imperil these five species including urbanization and its ensuing habitat fragmentation, road construction and maintenance, grading, herbicide spraying, off-road vehicle use, change in fire frequency, unauthorized dumping, overgrazing by horses, competition from invasive alien vegetation, and mining.

*Issue 11:* One commenter stated *Calystegia stebbinsii* should not be listed because it needs disturbance. This commenter also noted that this plant would not be around after 5 to 10 years without disturbance.

*Service Response:* Limited surface disturbance benefits *Calystegia stebbinsii* in certain circumstances by promoting initial establishment, though, the type and amount of disturbance the plant can tolerate is important. Whereas occasional disturbance for scarification of seed may be beneficial, other types of disturbance, such as mowing once the plant is growing, or construction, would be detrimental to the species' survival.

*Issue 12:* One commenter stated that listing the species would cause needless duplication with the State process.

*Service Response:* Federal and State regulations often complement each other. For example, as discussed in Factor D in the "Summary of Factors Affecting the Species" section, the CEQA and CESA apply only to actions on private and State lands. Whereas, the Act primarily covers Federal land and Federal actions that may affect proposed and listed species.

*Issue 13:* Some commenters believed no specific justification for listing exists, or questioned the adequacy of the data. One commenter believed that many of the items listed in the proposed rule were wholly inaccurate and did not support the listing. One commenter stated the listing should be based on good science and local peer review.

*Service Response:* Specific justification for listing the five plant species is summarized in Factors A through E. The Service used information received from the CNDDDB, botanical collections, knowledgeable botanists, and from studies specifically directed at gathering the information on the distribution and threats to the five plants. Additionally, information was received from Federal, State, and local agencies, and professional botanists during the preparation of the proposed rule. Destruction, loss of habitat, and extirpation of populations of these plants from a variety of causes have been documented. As discussed in Issue 8, the Service sought comments on the proposed rule from Federal, State, county entities, species experts, and other individuals. All substantive new data received during the public comment period have been incorporated into the final rule.

*Issue 14:* One commenter stated that grazing by cattle and other ungulates has been a historical and integral component of the central Sierran ecosystem, and that properly managed grazing by cattle and other domestic livestock can create the habitat conditions and vegetative diversity required by many species of plants and wildlife.

*Service Response:* The commenter did not provide specific information on the role of domestic livestock in the gabbro-derived/serpentine habitat of the five plants. However, assuming the area referred to includes chaparral, wild ungulates and other herbivores, such as deer and rabbit species, have been an integral component of the ecosystem. Chaparral characteristically does not produce high amounts of grass and, typically, is not an important source of forage for domestic livestock (Stoddart

*et al.* 1975). The Service agrees that cattle and other domestic livestock can be managed to achieve natural resource objectives, including a diversity of habitats for many species of plants and wildlife.

To determine the effects of grazing, site specifics of the management regime need to be considered and evaluated. Grazing by cattle in rangeland situations currently does not appear to be affecting these plants on the Pine Hill intrusion. As discussed in Factor C, the principal impact on the plants under consideration is consumption that results when horses are paddocked on small rural residential lots of insufficient size to provide adequate forage or pasture.

*Issue 15:* One commenter stated that there has been no further degradation or destruction of habitat of any kind since 1989.

*Service Response:* While public awareness of the importance of protecting plant habitat has increased, as discussed in Factors A and E, the primary threat facing these plants remains habitat destruction and fragmentation from urbanization, road construction, and increased human activity.

*Issue 16:* One commenter was concerned about what happens when a species that is thought to be rare is listed and new populations are subsequently found.

*Service Response:* If scientific or commercial information indicates a species is much more abundant or widely spread than is currently thought and/or a species is no longer endangered or threatened by any of the five factors, a species may be delisted. The process for delisting a species is similar to the process for listing a species. Although additional populations of the five proposed plants could be found, it is unlikely that many populations would contain large numbers. As discussed in the "Introduction" and "Summary of the Factors Affecting the Species" sections, these plants are habitat specific endemics that are exposed to range-wide human related threats.

*Issue 17:* One commenter stated that managing fire on smaller rather than larger units is both practical and often more ecologically beneficial due to the greater control that can be achieved.

*Service Response:* The Service agrees that fire can be applied in a more precise way on smaller units than larger units. The Service desires to work cooperatively with local fire management agencies in designing prescriptions that accommodate public safety and plant conservation objectives.

**Issue 18:** One commenter claimed that the Service has no jurisdiction over the five proposed species because at least 80 percent of the existing populations occur on private land.

**Service Response:** Section 4 of the Act directs the Service to evaluate species for listing based on biological information only. The five factors on which the biological vulnerability of species are evaluated are discussed in the "Summary of Factors Affecting the Species" section. Land ownership is not a factor used to determine whether listing is appropriate.

**Issue 19:** Two commenters were concerned about the additional time that might be added to implementing a controlled burn program due to the section 7 consultation process. One commenter wanted the Public Agencies Prescribed Burn Plan and Environmental Review to be accepted in lieu of the section 7 process. The other commenter wanted special rules to advocate professionally planned and implemented prescribed burning.

**Service Response:** The Service recognizes the importance of properly timed prescribed burns as a conservation measure, not only for maintaining habitat, but also for protecting human life and personal property. At least 80 percent of the occurrences of these plants are on private land. No special rules are needed to facilitate private land burning. Prescribed burning on private land would not be subject to section 7 consultation. Section 7 of the Act requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened. A programmatic section 7 consultation could be performed for prescribed burns on Federal lands to eliminate the need to consult on each prescribed burn activity.

**Issue 20:** A few commenters expressed concern regarding the impact of listing the plants to private property owners when Federal funding permitting is required. A couple of commenters stated the listing would infringe on local water rights issues, including Federal involvement in any Auburn Dam work.

**Service Response:** Section 4 of the Act directs the Service to evaluate species for listing based on biological information only. The five factors on which the biological vulnerability of species are evaluated are discussed in the "Summary of Factors Affecting the Species" section. Impact to private landowners when Federal funding is involved, or infringement on local water rights issues are not factors used to

determine whether or not listing is appropriate.

Section 7(a)(2) requires Federal agencies to insure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of listed 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 must enter into formal consultation with the Service.

**Issue 21:** Two commenters noted confusion regarding the amount of habitat that is federally owned.

**Service Response:** The Service wishes to clarify the figures within the proposed rule. The Service arrived at the reported 80 percent of occurrences being on private land at by dividing the number of occurrences on private land by the total number of occurrences. It is not a percentage of the habitat that is federally owned. The 10,400 ha (25,700 ac) referred to in the rule is the area of the gabbro-derived soils. The 16,200 ha (40,000 ac) within the rule refers to an area that includes the gabbro-derived soils plus adjacent serpentine soils in western El Dorado County. Within this 16,200 ha area, 95 percent of the land is outside Federal ownership (John Upton, County of El Dorado, *in litt.* 1994).

#### Summary of Factors Affecting the Species

After a thorough review and consideration of all information available, the Service has determined that *Calystegia stebbinsii*, *Ceanothus roderickii*, *Fremontodendron californicum* ssp. *decumbens*, *Galium californicum* ssp. *sierrae* should be classified as endangered species and *Senecio layneae* should be classified a threatened species. Procedures found at section 4(a)(1) of the Act and regulations implementing the listing provisions of the Act (50 CFR part 424) were followed. A species may be determined to be endangered or threatened species due to one or more of the five factors described in section 4(a)(1). These factors and their application to *Calystegia stebbinsii* Brummitt (Stebbins' morning-glory), *Ceanothus roderickii* Knight (Pine Hill ceanothus), *Fremontodendron californicum* ssp. *decumbens* (Lloyd) Munz (Pine Hill flannelbush), *Galium californicum* H. & A. ssp. *sierrae* Dempster & Stebbins (El Dorado bedstraw), and *Senecio layneae* Greene (Layne's butterweed) are as follows:

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

least 80 percent of the occurrences for these five plant species are on private land. They primarily occur on the Pine Hill intrusion, an area of approximately 10,400 ha (25,700 ac) in western El Dorado County. A few isolated occurrences of *Calystegia stebbinsii* or *Senecio layneae* are known from El Dorado, Nevada, and/or Tuolumne counties (EIP Associates 1991, CNDDDB 1994). The primary threat facing these five species and their associated habitat is the ongoing and threatened destruction and modification of habitat by one or more of the following—urbanization and the ensuing habitat fragmentation, road construction and maintenance, off-road vehicle use, and mining.

Nearly all the remaining occurrences of the five species are threatened by destruction of habitat through residential or commercial development. The human population of the four counties just east of the Sacramento metropolitan area (Nevada, Placer, El Dorado, and Amador) increased 375 percent between 1960 and 1992 (Engellenner 1993). El Dorado County, which has a projected population growth of 54 percent between 1990 and 2005, is one of the most rapidly growing counties in California (California Department of Finance 1991, Jones and Stokes Associates 1992). In 1991, the population grew by 4.2 percent; faster than the projected growth rate of 3.6 percent (California Department of Finance 1992). Western El Dorado County is becoming a bedroom community, as it is easily accessible by freeway from several nearby cities including Sacramento. Most of the new residential growth in El Dorado County is expected to occur within western El Dorado County near Highway 50 (Jones and Stokes Associates 1992), which crosses the southern portion of the Pine Hill intrusion.

Within the gabbro-derived soil and adjacent serpentine formations in western El Dorado County, 39 proposed development projects, which variously threaten to fragment the habitat of all five species, are currently on file with El Dorado County. Development currently is planned for approximately 8.5 percent of this 16,200 ha (40,000 ac) area. In addition, the El Dorado County General Plan update proposes the conversion of vacant and agricultural land to various residential uses within the 38,400 ha (95,000 ac) western service area of the El Dorado County Irrigation District (EID) (Jones and Stokes Associates 1992), which encompasses nearly the entire Pine Hill intrusion. It is estimated that at least 50 percent of the Pine Hill intrusion is

within the EID boundary (Kirsten Tarp, Fish and Wildlife Service, pers. comm. 1996).

The proposed land uses within the western service area of the EID include a 1,000 percent increase in single family residences (from a current level of 1,857 ha (4,589 ac) to 20,254 ha (50,047 ac)) and a doubling of the rural residential uses (from 7,630 ha (18,860 ac) to 15,780 ha (39,000 ac)) (Jones and Stokes Associates 1992). The El Dorado County Water Agency proposed the construction of either additional dams, water storage facilities, or water conveyance lines on the South Fork of the American River (Jones and Stokes Associates 1992, El Dorado County Water Agency 1993). The subsequent induced growth would affect all five species in both the northern and southern portions of the Pine Hill intrusion and adjacent serpentine, either by further fragmenting the habitat (as discussed below) or by directly destroying habitat. The expanding number of people and changes in land uses will continue to place an increasing strain on undeveloped areas through activities such as off-road vehicle traffic, unauthorized garbage dumping, and changes in the pattern of wildfires.

Historical gold rush activities and clearing for agriculture reduced and fragmented habitat of the five plants. Currently, these plants face threats from habitat fragmentation associated with commercial and residential development and road construction. Fragmentation splits habitat into smaller, more isolated units and has two primary effects. First, habitat fragmentation may alter the physical environment, changing the amount of incoming solar radiation, water, wind, or nutrients for the remnant vegetation (Saunders *et al.* 1991). Second, a higher proportion of these fragmented natural areas is subject to influences from external factors (e.g., additional development, lawn and garden watering, herbicide drift, and off-road vehicular use) that disrupt natural ecosystem processes.

The vegetation structure on the Pine Hill intrusion has changed significantly due to commercial and residential development, road construction, and historical fragmentation. Hunter and Horenstein (1991) characterized vegetation structure on the Pine Hill intrusion and estimated the median patch size to be only 11 ha (27 ac). This degree of fragmentation is significant within chaparral because plant species will disappear from fragments between 10 and 100 ha (25 to 250 ac) in size due to persistent disturbance and potentially

due to change in fire frequency (Soulé *et al.* 1992). These and other effects of fragmentation are discussed further.

Twelve potential preserve sites were identified as the best remaining habitat for the five plants on the Pine Hill intrusion and adjacent serpentine (EIP Associates 1991). Within these 12 sites, at least 11 residential or commercial projects (Bass Lake Estates, Cameron Ridge, Fremont's Peak, Kanaka Valley, Pinnacles, Ponderosa 50, Sunset Heights, Woodleigh Ridge, and three approved parcel splits) are proposed (El Dorado County Planning Staff 1992). These projects threaten all five plants to varying degrees by directly destroying individual plants or further fragmenting and destroying their habitat.

Activities often associated with rural residential areas, such as clearing chaparral for fire protection around houses, bulldozing land (to build houses or other structures), planting fruit trees, and irrigation, also have modified the habitat within western El Dorado County (James Jokerst, Jones and Stokes Associates, pers. comm. 1993; Jo Van Ess, California State University, Sacramento, pers. comm. 1993). The ongoing repetitive clearing of chaparral destroys the habitat. Irrigation involved with lawn maintenance also adversely affects these species (Jo Van Ess, pers. comm. 1993; James Jokerst, pers. comm. 1993).

Commercial and residential development has extirpated at least one-third of the known occurrences of *Calystegia stebbinsii* (CDFG 1990a, CNDDDB 1994). Most of the remaining occurrences for *C. stebbinsii* are on the Pine Hill intrusion. All of these sites, except for those in the northern part, are in areas threatened by rapid residential and commercial development as discussed above. Habitat for *C. stebbinsii* in Nevada County is threatened by a proposed County works project (CDFG 1990a).

Other human activities also destroy or damage habitat of *Calystegia stebbinsii*. One occurrence was adversely impacted by grading for construction (CNDDDB 1994). Off-road vehicle use has adversely impacted the habitat of *C. stebbinsii* at one site (CNDDDB 1994). In the northern part of the Pine Hill intrusion, several hills are scarred with off-road vehicle tracks. Erosion promoted by scarring adversely modifies the habitat. Road maintenance and herbicide spraying potentially threaten another site of *C. stebbinsii* that occurs along a road cut (CNDDDB 1994).

Shopping center construction and other commercial development extirpated two occurrences of *Ceanothus roderickii* (CNDDDB 1994).

Road-widening also threatens the habitat of *C. roderickii* at one site (CNDDDB 1994). Off-road vehicle use degrades the habitat at three sites in the northern part of the area (CNDDDB 1994).

Construction of houses on and near Pine Hill resulted in the loss of many individuals of *Fremontodendron californicum* ssp. *decumbens* (George Clark, *in litt.* 1993). Land clearing activities that occur with road construction also threaten *F. californicum* ssp. *decumbens*. In 1968, all the vegetation along the Pine Hill approach road was cut. In 1969, the west slope of Pine Hill was cleared by the CDF, demolishing 80 percent of the *F. californicum* ssp. *decumbens* within the boundaries of the current Pine Hill Ecological Reserve (Baad and Hanna 1987). Most of these shrubs have resprouted. Presently, the Pine Hill Ecological Reserve, managed by CDFG, has the largest occurrence of *F. californicum* ssp. *decumbens*.

No known extirpations of *Galium californicum* ssp. *sierrae* due to residential or commercial development have occurred. However, as discussed above, residential or commercial development and activities associated with rural residential areas threaten *G. californicum* ssp. *sierrae* within the potential reserve area identified as the best remaining habitat. *Galium californicum* ssp. *sierrae* has a small population size and a restricted distribution almost entirely on private land.

Commercial and residential development extirpated two occurrences of *Senecio layneae* (CNDDDB 1994). Many of the remaining occurrences of *S. layneae* are in areas undergoing rapid commercial and residential development. *Senecio layneae* is also potentially threatened by a variety of disturbances including road maintenance, vegetation removal, and off-road vehicle use (CNDDDB 1994). Road widening occurs in the vicinity of development within El Dorado County, and this activity has already extirpated one occurrence and threatens an additional five sites (CNDDDB 1994). Intensive off-road vehicle use threatens two additional occurrences of this species (CNDDDB 1994). Off-road vehicle use occurred historically in Tuolumne County on BLM land, but this activity no longer occurs there. Currently, off-road vehicle use occurs on two sites within the Pine Hill intrusion on privately owned land. One site of *S. layneae* in the northern part of the intrusion is impacted by heavy off-road vehicle use and has been fragmented by the numerous roads that traverse the entire area. A southern site of *S. layneae*



that occurs across 89 ha (221 ac) was cleared in preparation for development and is subject to off-road vehicle use over part of the site (CNDDDB 1994).

Habitat for *Senecio layneae* within the Traverse Creek Botanical Area in Eldorado National Forest historically was fragmented by serpentine quarrying. In addition, mining claims for semi-precious stones and gold exist on *S. layneae* habitat in the Eldorado National Forest. Although the Eldorado National Forest is trying to withdraw these claims, the withdrawal action may not be achieved (Mike Foster, Eldorado National Forest, pers. comm. 1993).

Destruction and fragmentation of habitat by commercial and residential development is the most significant and imminent threat facing *Calystegia stebbinsii*, *Ceanothus roderickii*, *Fremontodendron californicum* ssp. *decumbens*, *Galium californicum* ssp. *sierrae*, and *Senecio layneae*. Proposed residential or commercial development within the Pine Hill intrusion, combined with growth likely induced by proposed dams on the South Fork of the American River, threaten the majority of sites within the Pine Hill intrusion and adjacent serpentine in western El Dorado County and will adversely impact most of the range of all five taxa. Road widening, off-road vehicle use, garbage dumping, and other human-caused conditions associated with increased development threaten individual occurrences of these five species throughout their respective ranges.

**B. Overutilization for commercial, recreational, scientific, or educational purposes.** Overutilization is not currently known to be a factor for the five plants, but unrestricted collecting for scientific or horticultural purposes, vandalism, or excessive visits by individuals interested in seeing rare plants could result from increased publicity. Two of the species included in this proposal, *Ceanothus roderickii* and *Fremontodendron californicum* ssp. *decumbens*, have been used horticulturally (Schmidt 1993, Whetstone 1993), but they do not appear to be threatened by collection in the wild.

**C. Disease or predation.** Disease is a potential factor for *Fremontodendron californicum* ssp. *decumbens*. In cultivation *F. californicum* ssp. *decumbens* is highly susceptible to a wilt disease that can kill the plant almost overnight (Knight 1972). This mortality has not been observed in the field. Plants proximate to residences may be vulnerable to supplemental moisture from irrigation of lawns or

gardens. Disease is not known to be a factor for any of the other taxa.

Intense insect and rodent predation occurs on *Fremontodendron californicum* ssp. *decumbens*. Boyd and Serafini (1992) studied reproductive attrition in *F. californicum* ssp. *decumbens*. They found that less than 2 percent of flower buds produced fruit because of predation by insects. In addition, rodents destroyed 90 percent of seeds under shrubs within 8 to 10 months (Boyd and Serafini 1992). Because *F. californicum* ssp. *decumbens* is very restricted in range and few individuals exist, this predation increases the chance for extinction as discussed under Factor E.

Overgrazing by horses in rural residential areas within the Pine Hill intrusion threatens *Calystegia stebbinsii*, *Galium californicum* ssp. *sierrae*, and *Senecio layneae*. The horses, when confined, severely graze virtually all available vegetation.

Documentation of population extirpations as a result of disease and predation does not exist. However, as discussed under Factors A and E, small population size and fragmentation increases the plants' vulnerability to predation.

**D. The inadequacy of existing regulatory mechanisms.** *Calystegia stebbinsii* is listed as an endangered species under the CESA (chapter 1.5 sec. 2050 *et seq.* of the California Fish and Game Code and Title 14 California Code of Regulations 670.2). *Ceanothus roderickii*, *Fremontodendron californicum* ssp. *decumbens*, *Galium californicum* ssp. *sierrae*, and *Senecio layneae* are listed by the State as rare. Individuals are required to obtain a memorandum of understanding with the CDFG to possess or "take" a species listed under the CESA. Although the "take" of State-listed plants is prohibited (California Native Plant Protection Act, chapter 10 sec. 1908 and CESA, chapter 1.5 sec. 2080), State law exempts the taking of such plants via habitat modification or land use changes by the owner. State law does not necessarily prohibit activities that could extirpate these species. After CDFG notifies a landowner that a State-listed plant grows on his or her property, State law requires that the landowner notify the agency "at least 10 days in advance of changing the land use to allow salvage of such a plant" (Native Plant Protection Act, chapter 10 sec. 1913). Ten days may not allow adequate time for agencies to coordinate the salvage of the plants.

The CEQA requires a full disclosure of the potential environmental impacts of proposed projects. The public agency

with primary authority or jurisdiction over the project is designated as the lead agency and is responsible for conducting a review of the project and consulting with the other agencies concerned with the resources affected by the project. Section 15065 of the CEQA Guidelines requires a finding of significance if a project has the potential to "reduce the number or restrict the range of a rare or endangered plant or animal." Species that are eligible for listing as rare, threatened, or endangered are given the same protection as species officially listed under State or Federal endangered species acts. Once significant effects are identified, the lead agency has the option to require mitigation for effects through changes in the project or to decide that overriding considerations make mitigation infeasible. In the latter case, projects may be approved that cause significant environmental damage, such as destruction of endangered species and their habitats. Protection of listed species through CEQA is, therefore, dependent upon the discretion of the lead agency.

Section 21080(b) of CEQA allows certain projects to be exempted from the CEQA process. Ministerial projects, those projects that the public agency must approve after the applicant shows compliance with certain legal requirements, may be approved or carried out without undertaking CEQA review.

When development occurs and individual project effects are mitigated in accordance with the provisions in CEQA, the developer often will set aside small natural areas within the development. These small "set asides" are vulnerable to the problems of habitat fragmentation as discussed further under Factors A and E. These small set asides are impractical to manage for fire (discussed further under Factor E). Land development and multiple ownership makes difficult the planning and implementation of controlled burns at the appropriate fire frequency necessary for the maintenance of chaparral.

Within El Dorado County over the past several years, attempts have been made to establish a preserve system to protect chaparral habitat. An initial report on preserve sites and rare plant strategies, completed in November 1991, identified 12 potential preserve sites. In 1992, El Dorado County held public workshops concerning this report. A rare plant advisory committee, consisting of members from the development community, various agencies (CDFG, BLM, Service), El Dorado County planning staff, CNPS, and others, was established to identify

feasible preserve sites, funding mechanisms, and management strategies for these preserves.

The County Board of Supervisors evaluated the preserve sites identified by the rare plant advisory committee and eliminated the large southern preserve site. It approved in principle two other large preserve sites and the two small satellite sites; however, the majority of the Board would not consider any local funding to establish or maintain the preserves (George Clark, *in litt.* 1993; Kirsten Tarp, U.S. Fish and Wildlife Service, pers. obs. 1993). The establishment and maintenance of a sufficient reserve system likely will not occur without adequate funding.

E. *Other natural or manmade factors affecting its continued existence.* Altered periodicity of fire (change in fire frequency) threatens *Calystegia stebbinsii*, *Ceanothus roderickii*, *Fremontodendron californicum* ssp. *decumbens*, and *Senecio layneae*. These plants occur within a fire-adapted plant community, either within chaparral or on the ecotone between chaparral and woodland. Fire suppression policies have altered natural processes within several plant communities in California. Historically, fire occurred in chaparral on the average of 3 to 5 times every 100 years (Boyd 1985). As described below, fire is important for seed germination and seedling reestablishment by eliminating competition and shading, as well as replenishing nutrients to the soil. Without periodic fires, the previously mentioned four plants either do not reproduce by seed or may become shaded by other plants. In a study of the effects of controlled burning on three rare plants occurring on Pine Hill within western El Dorado County, Boyd (1985, 1987) found that fire killed *C. roderickii* shrubs, but caused a 22-fold increase in seed germination. He also found that the growth rate of seedlings was greater in the burned area than in the unburned area.

*Fremontodendron californicum* ssp. *decumbens* seeds require heat from fire to germinate. *Fremontodendron californicum* ssp. *decumbens* also resprouts vegetatively after a burn. In studying reproductive attrition in *F. californicum* ssp. *decumbens*, Boyd and Serafini (1992) found that seeds of *F. californicum* ssp. *decumbens* cannot successfully develop and germinate without the benefit of fire. They concluded that to maintain genetic diversity and establish plants at new localities within the boundaries of the current populations, sexual reproduction versus plant root sprouting may be necessary over long time

periods. The authors further concluded that these goals could be accomplished by controlled burns.

Initial studies also show seeds of *Calystegia stebbinsii* need disturbance by either heat or scarification for germination (Tim Nosal, CDFG, pers. comm. 1993; Paul Boch, Nevada County Agricultural Commissioner, *in litt.*, 1993). *Calystegia stebbinsii* also is associated with fire. At the Nevada County landfill site, this species is more prevalent in the burned areas than in the unburned areas (Paul Boch, *in litt.* 1993). *Calystegia stebbinsii* is eliminated as soon as the surrounding chaparral grows tall enough to shade it.

Excessive fire frequency also potentially threatens *Ceanothus roderickii* and *Fremontodendron californicum* ssp. *decumbens*. These plants need sufficient time between burns to set enough seed to replenish the soil seedbank. Mature plants of *F. californicum* ssp. *decumbens* also need to build up carbohydrate reserves to be able to resprout after a fire (Boyd 1985).

The suppression of fire and other forms of disturbance threatens *Senecio layneae* and *Calystegia stebbinsii*. Limited surface disturbance is beneficial to these species in certain circumstances by promoting initial establishment (James Jokerst, pers. comm. 1993). *Senecio layneae* appears to be an early successional species that occupies temporary openings on gabbro-derived or serpentine and is eliminated as vegetation regrows in the openings (Baad and Hanna 1987).

Competition with invasive alien vegetation, herbicide spraying, and unauthorized dumping threaten individual occurrences of *Calystegia stebbinsii*. An introduced species of field bindweed, *Convolvulus* sp., competes with one colony of *C. stebbinsii* within Nevada County (CNDDDB 1994). Trash dumping also threatens three occurrences of *C. stebbinsii* (CNDDDB 1994). Herbicide spraying potentially threatens a significant portion of one occurrence of *C. stebbinsii* near Shingle Springs and several local occurrences adjacent to roads (Tim Nosal, pers. comm. 1993).

Herbicide spraying and trash dumping threaten one occurrence of *Ceanothus roderickii* (CNDDDB 1994). Habitat degradation from garbage dumping on ridge-tops around Pine Hill degrades the habitat and is a minor threat to *Fremontodendron californicum* ssp. *decumbens* (James Wilson, Sierra College, pers. comm. 1993).

As discussed under Factor A, habitat fragmentation may alter the physical environment. Chaparral plants reportedly disappeared from fragments

10 to 100 ha (25 to 250 ac) in size due to persistent disturbance and potentially to change in fire frequency (Soulé *et al.* 1992). In addition, habitat fragmentation increases the risks of extinction due to environmental, demographic, or genetic random events.

Competition with invasive alien vegetation and shading from native tree and shrub species potentially threaten *Senecio layneae*. Several alien plant species, including *Cytisus scoparius* (Scotch broom), have become established within the Traverse Creek Botanical Area in Eldorado National Forest and potentially threaten this occurrence of *S. layneae* (Duron 1990, Pollak 1990).

One occurrence of *Senecio layneae* is thought to have been extirpated by roadside herbicide application (Oren Pollak, The Nature Conservancy, pers. comm. 1993). This activity may threaten several other occurrences of this species.

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by these species in determining to finalize this rule. Proposed residential and commercial development, and habitat fragmentation threaten all occurrences of *Calystegia stebbinsii*, *Ceanothus roderickii*, *Galium californicum* ssp. *sierrae*, and *Fremontodendron californicum* ssp. *decumbens* on the Pine Hill intrusion and adjacent serpentine formations in western El Dorado County. Changes in fire frequency threaten *C. stebbinsii*, *C. roderickii*, and *F. californicum* ssp. *decumbens*, throughout their respective ranges. *Senecio layneae* is threatened by development or habitat fragmentation throughout a portion of its range and by changes in fire frequency throughout its entire range. Road construction and maintenance, grading, unauthorized dumping, excessive grazing practices, herbicide spraying, off-road vehicle use, competition from invasive alien vegetation, shading by native vegetation, irrigation, and mining affect individual occurrences of the five taxa.

*Calystegia stebbinsii*, *Ceanothus roderickii*, *Fremontodendron californicum* ssp. *decumbens*, and *Galium californicum* ssp. *sierrae* are in danger of extinction throughout all or a significant portion of their ranges, and the final action, therefore, is to list them as endangered. Because of its wider distribution, *Senecio layneae* is not now in immediate danger of extinction throughout all or a significant portion of its range; however, unless current human population trends and development are reversed it is likely to become an endangered species in the

foreseeable future throughout all or a significant portion of its range. Therefore, the final action is to list *Senecio layneae* as threatened.

#### Critical Habitat

Critical habitat is defined in section 3 of the Act as: (i) The specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) that may require special management consideration or protection and; (ii) specific areas outside the geographical area occupied by a species at the time it is listed, upon determination that such areas are essential for the conservation of the species. "Conservation" means the use of all methods and procedures needed to bring the species to the point at which listing under the Act is no longer necessary.

Section 4(a)(3) of the Act and implementing regulations (50 CFR 424.12) require that, to the maximum extent prudent and determinable, the Secretary determine critical habitat concurrently with determining a species to be endangered or threatened. The Service finds that designation of critical habitat is not prudent for *Calystegia stebbinsii*, *Ceanothus roderickii*, *Fremontodendron californicum* ssp. *decumbens*, *Galium californicum* ssp. *sierrae*, and *Senecio layneae* at this time. Service regulations (50 CFR 424.12(a)(1)) state that designation of critical habitat is not prudent when one or both of the following situations exist—(1) the species is threatened by taking or other human activity, and identification of critical habitat can be expected to increase the degree of threat to the species, or (2) such designation of critical habitat would not be beneficial to the species.

Because the five plants face numerous human-caused threats (see Factors A and E in "Summary of Factors Affecting the Species") and the five occur predominantly on private land, the publication of precise maps and descriptions of critical habitat in the Federal Register would make these plants more vulnerable to incidents of vandalism and, therefore, could contribute to the decline of these species and increase enforcement problems. The listing of these species as endangered and/or threatened also publicizes the rarity of these plants and, thus, can make these plants attractive to researchers, horticulturalists, or collectors of rare plants, as discussed under Factor B.

Protection of the habitat of these species will be addressed through the recovery process and the section 7 consultation process. The Service believes that Federal involvement in the areas where these plants occur can be identified without the designation of critical habitat. Therefore, the Service finds that designation of critical habitat for these plants is not prudent at this time because such designation likely would increase the degree of threat from vandalism, collecting, or other human activities.

#### Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain activities. Recognition through listing encourages and results in public awareness and conservation actions by Federal, State, and local agencies, private organizations, and individuals. The Act provides for possible land acquisition and cooperation with the State and requires that recovery plans be developed for all listed species. The protection required of Federal agencies and the prohibitions against certain activities involving listed plants are discussed, in part, below.

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 being designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402. Section 7(a)(4) of the Act requires Federal agencies to confer with the Service 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. If a species is listed subsequently, section 7(a)(2) requires Federal agencies to insure 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 must enter into formal consultation with the Service.

At least 80 percent of the occurrences for these five species are on privately owned lands. However, BLM manages land supporting populations of all five plants, and *Senecio layneae* occurs on Federal land managed by the Forest Service. Both agencies would become

involved with any or all of these species as they are responsible for managing land use of areas supporting these species.

The Veterans Administration and the U.S. Department of Housing and Urban Development (Federal Home Administration loans) may become involved with these species through their administration of Federal mortgage programs. The construction and maintenance of roads and highways by the Federal Highway Administration, the relicensing of hydroelectric projects by the Federal Energy Regulatory Commission, and the contracting of surface waters for irrigation, industrial, or municipal uses by the Bureau of Reclamation would necessitate involvement with these species under the Act. Also, the Army Corps of Engineers could potentially become involved with these species through its permitting authority under section 404 of the Clean Water Act. By regulation, nationwide permits may not be issued where a federally listed threatened or endangered species would be affected by a proposed project without first completing formal consultation pursuant to section 7 of the Act. The presence of a listed species would highlight the importance of these resources. Therefore, the Army Corps of Engineers would be required to consult with the Service on any proposed dam construction or any proposed permits for fill operations that would adversely affect any of these plants.

Listing *Calystegia stebbinsii*, *Ceanothus roderickii*, *Fremontodendron californicum* ssp. *decumbens*, and *Galium californicum* ssp. *sierrae* as endangered and *Senecio layneae* as threatened provides for the development of a recovery plan(s), which will bring together State and Federal efforts for conservation of these plants. The recovery plan(s) would establish a framework for agencies to coordinate activities and cooperate with each other in conservation efforts. The plan(s) would set recovery priorities and estimate costs of various tasks necessary to accomplish them. It also would describe site-specific management actions necessary to achieve conservation and survival of these species. Additionally, pursuant to section 6 of the Act, the Service would be more likely to grant funds to affected states for management actions aiding in the protection and recovery of these plants.

The Act and its implementing regulations set forth a series of general prohibitions and exceptions that apply to all endangered or threatened plants. All prohibitions of section 9(a)(2) of the

Act implemented by 50 CFR 17.61 for endangered plants, and 17.71, for threatened plants, apply. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to import or export, transport in interstate or foreign commerce in the course of a commercial activity, sell or offer for sale in interstate or foreign commerce, or remove and reduce the species to possession from areas under Federal jurisdiction. In addition, for plants listed as endangered, the Act prohibits the malicious damage or destruction of any such species on areas under Federal jurisdiction and the removal, cutting, digging, or destroying of such plant species on any other area in knowing violation of any State law or regulation, including a State criminal trespass law. Certain exceptions to the prohibitions apply to agents of the Service and State conservation agencies.

It is the policy of the Service, published in the Federal Register on July 1, 1994 (59 FR 34272), to identify to the maximum extent practicable at the time a species is listed those activities that would or would not constitute a violation of section 9 of the Act. The intent of this policy is to increase public awareness of the effect of the listing on proposed and ongoing activities within a species' range. Less than 20 percent of the occurrences of the five species are on public (Federal) lands. Collection, damage, or destruction of these species on Federal lands is prohibited, although in appropriate cases a Federal endangered species permit may be issued to allow collection for scientific or recovery purposes. Such activities on non-Federal lands would constitute a violation of section 9 if conducted in knowing violation of California State law or regulations or in violation of a State criminal trespass law. California requires a ten day notice be given before taking of plants on private land.

Activities that are unlikely to violate section 9 include horse paddocking and other grazing, clearing a defensible space for fire protection around personal residences, and landscaping, including irrigation around personal residences. Seeds from cultivated specimens of threatened plant taxa also are exempt from these prohibitions provided that a statement "of cultivated origin" appears on the shipping containers. Certain exceptions apply to agents of the Service and State conservation agencies. Questions regarding whether specific activities will constitute a violation of section 9 should be directed to the Field Supervisor of the Sacramento Field Office (see ADDRESSES section).

The Act and 50 CFR 17.62, 17.63, and 17.72 also provide for the issuance of permits to carry out otherwise prohibited activities involving endangered or threatened plant species under certain circumstances. The Service anticipates few trade permits would ever be sought or issued for the five species because the plants are not common in cultivation or in the wild. Requests for copies of the regulations regarding listed plants and inquiries about prohibitions and permits may be addressed to the U.S. Fish and Wildlife Service, Endangered Species Permits, 911 N.E. 11th Avenue, Portland, Oregon 97232-4181 (phone 503/231-2063, facsimile 503/231-6243).

#### National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, 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 Act. A notice outlining the Service's reasons for this determination was published in the Federal Register on October 25, 1983 (48 FR 49244).

#### Required Determinations

The Service has examined this regulation under the Paperwork Reduction Act of 1995 and found it to contain no information collection requirements. This rulemaking was not subject to review by the Office of Management and Budget under Executive Order 12866.

#### References Cited

A complete list of all references cited herein is available upon request from the Field Supervisor, Sacramento Field Office (see ADDRESSES section).

#### Author

The primary author of this final rule is Kirsten Tarp, Sacramento Field Office (see ADDRESSES section).

#### List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and record keeping requirements, and Transportation.

#### Regulation Promulgation

Accordingly, part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, is amended 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. Section 17.12(h) is amended by adding the following, in alphabetical order under [FLOWERING PLANTS], to 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>Calystegia stebbinsii</i> .....	* Stebbins' morning-glory	* U.S.A. (CA) .....	* Convolvulaceae .....	E	596	NA	NA
* <i>Ceanothus roderickii</i> .....	* Pine Hill ceanothus .....	* U.S.A. (CA) .....	* Rhamnaceae .....	E	596	NA	NA
* <i>Fremontodendron californicum</i> ssp. <i>decumbens</i> .	* Pine Hill flannelbush .....	* U.S.A. (CA) .....	* Sterculiaceae .....	E	596	NA	NA
* <i>Galium californicum</i> ssp. <i>sierrae</i> .	* El Dorado bedstraw .....	* U.S.A. (CA) .....	* Rubiaceae .....	E	596	NA	NA
* <i>Senecio layneae</i> .....	* Layne's butterweed .....	* U.S.A. (CA) .....	* Asteraceae .....	T	596	NA	NA

Dated: September 23, 1996.  
 John G. Rogers,  
 Acting Director, Fish and Wildlife Service.  
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