

the method of determining when the contract would receive pre-delivery telephone surveillance or pre-delivery on-site production surveillance.

B. Regulatory Flexibility Act

The proposed rule is not expected to have a significant economic impact on a substantial number of small entities within the meaning of the Regulatory Flexibility Act, 5 U.S.C. 601 *et seq.*, because the frequency of on-site surveillance is not expected to change. The proposed rule merely simplifies the method used by the Government to determine when on-site surveillance will be performed. An initial Regulatory Flexibility Analysis (IRFA) has therefore not been performed. Comments are invited from small businesses and other interested parties. Comments from small entities concerning the affected DFARS Subparts will be considered in accordance with Section 610 of the Act. Such comments must be submitted separately and should cite DAR Case 93-D003 in all correspondence.

C. Paperwork Reduction Act

The Paperwork Reduction Act (Pub. L. 96-511) does not apply because the proposed rule imposes no reporting and recordkeeping requirements which require the approval of OMB under 44 U.S.C. 3501, *et seq.*

List of Subjects in 48 CFR Part 242

Government procurement.

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Executive Editor, Defense Acquisition,
Regulations Directorate.

Therefore it is proposed that 48 CFR Part 242 be amended as follows:

1. The authority citation for 48 CFR Part 242 continues to read as follows:

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

PART 242—CONTRACT ADMINISTRATION

2. Section 242.1104 is revised to read as follows:

§ 242.1104 Surveillance requirements.

(a)(i) As a minimum, contracts will receive pre-delivery telephonic, surveillance.

(ii) Contracts in the following categories will receive pre-delivery on-site production surveillance.

(A) Contracts assigned criticality designator A (see FAR 42.1105).

(B) Contracts specifically identified for special surveillance by the contracting officer.

(C) Any contract where telephonic surveillance reveals actual or anticipated delinquency unless the

contract administration office, in coordination with the contracting officer, decides that on-site surveillance is not warranted.

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DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018-AC99

Endangered and Threatened Wildlife and Plants; Proposed Endangered or Threatened Status for 10 Plants From the Foothills of the Sierra Nevada Mountains in California

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: The U.S. Fish and Wildlife Service (Service) proposes endangered status pursuant to the Endangered Species Act of 1973, as amended (Act) for four plants: *Brodiaea pallida* (Chinese Camp brodiaea), *Calyptridium pulchellum* (Mariposa pussypaws), *Lupinus citrinus* var. *deflexus* (Mariposa lupine), and *Mimulus shevockii* (Kelso Creek monkeyflower). The Service also proposes threatened status for six plants: *Allium tuolumnense* (Rawhide Hill onion), *Clarkia springvillensis* (Springville clarkia), *Carpenteria californica* (carpenteria), *Fritillaria striata* (Greenhorn adobe lily), *Navarretia setiloba* (Piute Mountains navarretia), and *Verbena californica* (Red Hills vervain). These plants are known from the annual grassland, chaparral, Joshua tree, pinyon-juniper, blue oak, and digger pine woodland communities in the foothills of the Sierra Nevada Mountains in central California. The 10 plants are threatened by one or more of the following: agricultural land conversion, urbanization, logging, highway construction and road maintenance activities, overgrazing, off-highway vehicle use, mining, insect predation, inadequate regulatory mechanisms, stochastic extinction from random natural events, and incompatible fire management techniques. This proposal, if made final, would implement the Federal protection and recovery provisions afforded by the Act for these plants.

DATES: Comments from all interested parties must be received by December 5, 1994. Public hearing requests must be received by November 18, 1994.

ADDRESSES: Comments and materials concerning this proposal should be sent to the Field Supervisor, U.S. Fish and Wildlife Service, 2800 Cottage Way, Room E-1803, Sacramento, California 95825-1846. Comments and materials received will be available for inspection, by appointment, during normal business hours at the above address.

FOR FURTHER INFORMATION CONTACT: Kenneth Fuller (see ADDRESSES) at 916-978-4866.

SUPPLEMENTARY INFORMATION:

Background

Allium tuolumnense (Rawhide Hill onion), *Brodiaea pallida* (Chinese Camp brodiaea), *Calyptridium pulchellum* (Mariposa pussypaws), *Carpenteria californica* (carpenteria), *Clarkia springvillensis* (Springville clarkia), *Fritillaria striata* (Greenhorn adobe lily), *Lupinus citrinus* var. *deflexus* (Mariposa lupine), *Mimulus shevockii* (Kelso Creek monkeyflower), *Navarretia setiloba* (Piute Mountains navarretia), and *Verbena californica* (Red Hills vervain) are located in the western foothills of the Sierra Nevada Mountains in California, from Jamestown in Tuolumne County, to Bodfish in Kern County, to near Grapevine in the foothills of the Tehachapi Mountains in Kern County. The Sierra Nevada Mountains are California's largest mountain range, extending from the Mojave Desert in the south to the Modoc Plateau in the north. The Sierra Nevada Mountains are 645 kilometers (km) (400 miles) long, 95 to 130 km (60 to 80 miles) wide, and north-south oriented on the east side of California. Structurally, this mountain range is a westerly tilted Cenozoic fault block consisting of granitic and metamorphic rocks. These mountains have an elevational range of 1,000 to 4,000 meters (m) (3,000 to 12,000 feet (ft)) and a precipitation range of 750 to 2,030 millimeters (mm) (30 to 80 inches (in)). These mountains are a region of winter snow and some summer thunderstorms. Montane and subalpine coniferous forests dominate the area with minor components of deciduous forests. Lakes, swamps, rock outcrops, talus slopes, meadows, and montane chaparral occupy more than half of the ground surface.

Each of these 10 plant species exhibits strong substrate preferences. *Allium tuolumnense*, *Brodiaea pallida*, and *Verbena californica* are associated with serpentine soils in an elevational range from 260 to 600 m (850 to 2,000 ft) in the Red Hills and near Rawhide Hill in Tuolumne County. Serpentine soils are derived from ultramafic rocks such as

serpentinite, dunite, and peridotite, which are found in discontinuous outcrops in the foothills of the Sierra Nevada and in the Coast Ranges from Santa Barbara County to British Columbia, Canada. Although the ultramafic rocks may be of igneous origin (peridotite, dunite, or harzburgite) or metamorphics (serpentine), the major constituent of the parent rock is some variant of iron-magnesium silicate. Serpentine and other ultramafics weather into shallow, rocky, and highly erodible soils. Typically, these soils are rich in magnesium, iron, chromium, nickel, and silicates and are deficient in nitrogen, calcium, phosphorus, and molybdenum (Kruckeberg 1984). The unique mineral nutrition and cation status of serpentine soils are inhospitable for the growth of most plants. Nevertheless, serpentine soils support a diversity of plants, some of which are restricted entirely to these soils. *Allium tuolumnense* is associated with sunny, rocky, often south-facing slopes. *Brodiaea pallida* and *Verbena californica* are often found in the blue oak (*Quercus douglasii*) or digger pine (*Pinus sabiniana*) woodland communities.

Calyptridium pulchellum, *Lupinus citrinus* var. *deflexus*, and *Mimulus shevockii* are associated with sandy, decomposed granitic soils in foothill woodlands. *Fritillaria striata* and *Navarretia setiloba* are found in heavy clay soils in the openings of blue oak woodland. *Clarkia springvillensis* most often is found on roadbanks and openings in blue oak woodlands.

Marion Ownbey first recognized *Allium sanbornii* var. *tuolumnense* in "A California Flora" (Munz 1959). The first validly published description of the plant was Hamilton P. Traub's 1972 treatment. Stella Denison and Dale McNeal (1989) revised the *A. sanbornii* complex and elevated the variety to a species based upon the position of stamens and styles and the length and shape of perianth (sepals and petals) segments.

Allium tuolumnense is an erect, herbaceous perennial of the lily family (Liliaceae) that grows from underground bulbs. This species has fleshy, green entire leaves that reach a height of 25 to 50 centimeters (cm) (10 to 20 in), and has a loose, 20 to 60 flowered, white- or pink-flushed inflorescence appearing in late March to early May. *Allium tuolumnense* differs from *A. sanbornii* and *A. jepsonii* in its entire, spreading perianth segments, fringed ovarian bumps (processes), and early blooming period that does not overlap with any other *Allium* species. Although this

plant can reproduce from seed, *A. tuolumnense* tends to reproduce asexually from its underground bulb, forming small colonies of usually fewer than 100 plants per colony (BioSystems Analysis 1984). *A. tuolumnense* is a highly restricted endemic that only grows on serpentine soils in the foothills of the Sierra Nevada in southwestern Tuolumne County from 400 to 600 m (1,310 to 1,970 ft) in elevation. *A. tuolumnense* is known from two localities: Table Mountain and the Red Hills. The entire range of the species includes a 342 square kilometer (sq km) (132 square mile (sq mi)) area. Approximately 25 percent of *A. tuolumnense* is found on private lands and 75 percent on lands administered by the Bureau of Land Management (BLM). *A. tuolumnense* is threatened by placer mining, urbanization, and potentially by overgrazing.

Robert Hoover (1938) first described *Brodiaea pallida* from specimens collected near Chinese Camp in Tuolumne County. *B. pallida* is an erect, herbaceous perennial in the lily family (Liliaceae). The plant grows from an underground bulb and has long, narrow, thick, succulent leaves that reach a height of 1 to 3 decimeters (dm) (4 to 12 in). Several to many rose-pink flowers appear in an umbrella-like cluster at the top of a leafless stem in late May to early June. *B. pallida* grows in association with two sympatric congeners and can hybridize with one of them (Keator 1993). Despite these incidences of hybridization, the species is considered stable (Blaine Rogers, Columbia Coll., pers. comm., 1993). *B. pallida* can be separated from its congeners and hybrids by flower color and the length, width, shape, and position of nonpollen bearing stamens.

Brodiaea pallida grows in seeps and springs in serpentine and volcanic soils within a stream channel on private land in the Red Hills, Tuolumne County. This species is restricted to a 3 to 6 m (10 to 20 ft) wide and 0.8 km (0.5 mi) long stretch of private land in an old, intermittent stream channel at an elevation of 385 m (1,260 ft). The species has always had an extremely limited distribution; searches of potential habitat in other areas have failed to locate any additional plants. The single population is threatened by urbanization, inadequate State regulatory mechanisms, and stochastic events. Several of the parcels of privately-owned land where the plant is located are for sale. Although The Nature Conservancy (TNC) has secured a 1-year lease on one of the parcels, permanent protection for this plant is lacking.

Joseph Congdon collected the type specimen of *Calyptridium pulchellum* on "Pea Ridge" in Mariposa County in 1901. Alice Eastwood (1902) first described this plant as *Spraguea pulchella*. Robert Hoover (1940) revised the genera *Spraguea* and *Calyptridium* and renamed this plant *Calyptridium pulchellum* based on the combination of flower and vegetative characteristics and habitat. *C. pulchellum* is a small, compact, rosette-forming, annual herb in the purslane family (Portulacaceae). The smooth, slender, prostrate stems are 1 to 2 dm (4 to 8 in) long, with smooth, spatula-shaped leaves. Rose-colored, four-petaled flowers appear in loose panicles between May and August.

The fibrous-rooted plant grows on decomposed granitic sands between elevations of 460 to 1,090 m (1,500 to 3,600 ft) in foothill woodlands and converted chaparral grasslands in the Sierra Nevada foothills. No other species of *Calyptridium* co-occurs with *C. pulchellum*. The seven populations of *C. pulchellum* are found in Fresno, Madera, and Mariposa Counties over a range of 1,940 sq km (750 sq mi). Six populations of *C. pulchellum* occur on private land and one population occurs on Forest Service land (Sierra National Forest). *C. pulchellum* is threatened by urbanization and potentially by overgrazing.

John C. Fremont collected *Carpenteria californica* from an area in the Kings River watershed on his third expedition to California in 1846. John Torrey (1852) first described *C. californica* from specimens sent to him by John Fremont. The monotypic genus *Carpenteria* is one of California's many endemic genera that are relicts without any close relatives; this genus probably had a wider range earlier in Tertiary time (Barbour and Major 1988).

Carpenteria californica is an erect to spreading evergreen shrub in the mock orange family (Philadelphaceae) that grows to a height of 1 to 6.5 m (3 to 13 ft). The plant has glossy green, opposite leaves and pale bark that peels in large sheets in the fall. Terminal, white, showy flowers appear in May or June and last through July at the upper elevational limits. *C. californica* is found in drainages and mesic areas on mostly granitic soils from 460 to 1,220 m (1,500 to 4,000 ft) in elevation within the chaparral and cismontane woodland communities of the foothills of the Sierra Nevada in eastern Fresno County. *C. californica* is known from six populations distributed over a 583 sq km (225 sq mi) area. One population of *C. californica* is on private lands, four are on lands administered by the U.S. Forest Service (Sierra National Forest),

and one is on both private and Forest Service lands. Collectively, approximately 30 percent of *C. californica* individuals occur on private lands. A portion of one population of *C. californica* is protected on a preserve owned by TNC. *C. californica* is threatened by urbanization, fire management practices, overgrazing and trampling by cattle, and inadequate State regulatory mechanisms. Logging, illegal dumping, highway construction, maintenance of roads and rights-of-way activities, and competition from native brush species have the potential to adversely impact this species.

Frank Vasek (1964) first collected and described *Clarkia springvillensis* from its type locality along Balch Park Road near Springville, Tulare County. *C. springvillensis* is an erect annual herb in the evening-primrose family (Onagraceae). The 1 m (3 ft) tall plant has simple or usually branched stems. The bright green leaves are 2 to 9 cm (0.8 to 3.5 in) long and 5 to 20 mm (0.2 to 0.8 in) wide. The lavender-pink flowers appear in May to July and usually have a dark purplish basal spot. *C. springvillensis* can be separated from the sympatric congener *C. unguiculata* by the absence of long hairs on the calyx and ovary, the purple sepals, and the dark purplish spot at the base of the petals.

Clarkia springvillensis is found on granitic soils in open sunny sites in blue oak woodlands and on roadbanks from 360 to 910 m (1,220 to 3,000 ft) in elevation. Nine of the 10 historically reported populations of *C. springvillensis* are extant, all in Tulare County. Eight of the nine populations are found within a 111 sq km (43 sq mi) area in eastern Tulare County, with the remaining population occurring 26 km (16 mi) to the northwest. One population of *C. springvillensis* is partially protected where it occurs on California Department of Fish and Game land, one population is on lands owned by Tulare County, three are on privately owned land, and four populations are on lands administered by the Forest Service (Sequoia National Forest). Urbanization, overgrazing, timber operations, inadequate State regulatory mechanisms, sphinx moth predation, and roadway maintenance activities threaten this plant.

Alice Eastwood (1931) described *Fritillaria striata* from specimens collected by Roy Weston on the Rattlesnake Grade in the Greenhorn Mountains of Kern County. *F. striata* is a slender, herbaceous perennial in the lily family (Liliaceae). An unbranched stem grows 5 to 10 cm (2 to 4 in) above the surface of the ground from an

underground bulb. The predominantly basal, alternate to opposite leaves are oblong to lance-shaped, 1 to 2 cm (0.4 to 0.8 in) wide and 6 to 10 cm (2 to 4 in) long. The upper leaves are narrower and undulate. The one to four fragrant, bell-shaped flowers appear from February through April. *F. striata* differs from the related *F. pluriflora* (adobe lily), which occurs in the northern Sacramento Valley foothills, in the shape, size, and coloring of the flowers, the conspicuous nectaries, and the connivent (converging) stigmas (Stebbins 1989, Eastwood 1931).

Fritillaria striata is found on heavy, usually red clay soils on the grasslands and in the blue oak woodlands of the southeastern San Joaquin Valley and southern Sierra Nevada foothills. Fourteen populations of *F. striata* occur in Kern County and three populations are found in Tulare County (California Natural Diversity Data Base (CNDDB) 1993) discontinuously scattered over a 7,250 sq km (2,800 sq mi) area. The 17 populations range in elevation from 300 to 1,430 m (1,000 to 4,800 ft). All populations occur on private lands. *F. striata* is threatened by urbanization, livestock use, competition from nonnative grasses, agriculture land conversion, road widening, emergency road maintenance, inadequate State regulatory mechanisms, and off-highway vehicle use.

Joseph Congdon (1904) described *Lupinus deflexus* from specimen that he collected near Mariposa Creek in Mariposa County in 1903. Willis Jepson (1936) revised the treatment of this species and reduced the plant to the varietal status, *Lupinus citrinus* var. *deflexus*. *Lupinus citrinus* var. *deflexus* is an erect, diffusely-branched annual herb belonging to the pea family (Fabaceae). The 3 to 5 dm (12 to 20 in) high plants are short-hairy to hairless and have palmately compound leaves that are 15 to 25 mm (.5 to 1.0 in) long. The six to nine leaflets are about one-third as wide as they are long and are linear or spatulate in shape with rounded or obtuse tips. The white with pink or lavender tipped flowers appear in April through May.

Lupinus citrinus var. *deflexus* grows on decomposed granitic sands on ridgetops and hillsides in openings in foothill woodlands from 475 to 580 m (1,400 to 1,900 ft) in elevation. The four populations of this plant occur on private lands in Mariposa County over a 40 sq km (15 sq mi) area. Two of the four populations co-occur with *Calyptidium pulchellum*. *Lupinus citrinus* var. *deflexus* is threatened by urbanization, inadequate State

regulatory mechanisms, and potentially by overgrazing.

Lawrence Heckard and Rimo Bacigalupi (1986) first described *Mimulus shevockii* from specimen first collected by James Shevock around the Kelso Creek area near the east base of the Piute Mountains in Kern County. *M. shevockii* is an erect, desert annual in the snapdragon family (Scrophulariaceae). This plant grows to 1 dm (4 in) in height and has opposite, sessile, somewhat fleshy leaves along reddish stems. Asymmetric flowers appear from late March to May. The corolla is two-lipped. The upper flower lip has two short, entire, lateral maroon-purple lobes. The lower flower lip is similar but larger in size and has an additional large, partially divided yellow lobe with red mottling. *Mimulus androsaceus* and *M. fremontii* grow with *M. shevockii* and have some similar vegetative features but differ in flower color. *Mimulus androsaceus* has a red-purple flower and *M. fremontii* has a rose-purple flower.

Mimulus shevockii occurs predominately in loamy, coarse sands on alluvial fans and deposits of granitic origin within the Joshua tree (*Yucca brevifolia*) or California juniper (*Juniperus californica*) xeric woodlands in Kern County. *M. shevockii* is found within an elevational range of 975 to 1,250 m (3,200 to 4,100 ft). Six of the seven populations of *M. shevockii* are within a 31 sq km (12 sq mi) area, with the remaining population 14 km (9 mi) to the northwest. Two populations are found on private lands and five populations occur partially on BLM land and partially on private land. *M. shevockii* is threatened by urbanization, off-highway vehicle use, and agricultural land conversion.

Frederick Coville (1893) first described *Navarretia setiloba* from plants he collected from a ridge between Kernville and Havilah in Kern County. *Navarretia setiloba* is an erect annual herb in the phlox family (Polemoniaceae), and grows to a height of 8 to 20 cm (3 to 8 in). The linear, pinnately-lobed leaves have rigid, spinose lobes. The terminal lobe is broadly lanceolate and often purplish. The 20 to 30 purple-flowered inflorescence appears from April through June and is about 10 mm (0.4 in) long. The flowers are subtended by spiny bracts that are constricted in the middle. *Navarretia setiloba* is distinguished from sympatric congeners by the broad terminal lobe on each leaf, and by its purple flowers.

The plant grows on heavy, often red-colored clay soils within blue oak, digger pine, or juniper woodlands

between 300 to 960 m (1,000 to 3,200 ft) in elevation. Six populations of *Navarretia setiloba* are known from northern Kern County over a 4,000 sq km (1,560 sq mi) area. One population occurs on land administered by the BLM and five populations are found on private lands. *Navarretia setiloba* is threatened by urbanization and off-highway vehicle use.

Harold A. Moldenke (1942) first described *Verbena californica* from specimen collected by Robert Hoover from an area north of Keystone in Tuolumne County. *Verbena californica* is an erect perennial herb in the vervain family (Verbenaceae), and grows to 60 cm (23 in) in height with opposite, bright green, sessile leaves. White-blue to purple blossoms appear from May through September. No closely related species co-occur with *Verbena californica*.

The nine historic and current populations of *Verbena californica* grow along intermittent and perennial streams underlain by serpentine rocks in the Red Hills of Tuolumne County. The populations have an elevational range from 260 to 335 m (850 to 1,150 ft) and are distributed over a 62 sq km (24 sq mi) area. Fifteen percent of the *V. californica* plants occur on lands administered by the BLM, and 85 percent of the plants occur on privately owned lands (CDFG 1993). *Verbena californica* is threatened by urbanization, recreational placer gold mining, and potentially by overgrazing.

Previous Federal Action

Federal government actions on these 10 plants began as a result of section 12 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1533), 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 *Brodiaea pallida* and *Navarretia setiloba* as endangered and *Fritillaria striata* and *Lupinus citrinus* var. *deflexus* as threatened. The Service published a notice in the July 1, 1975, **Federal Register** (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 in the **Federal Register** (41 FR 24523) to

determine approximately 1,700 vascular plant species 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. *Brodiaea pallida*, *Calyptridium pulchellum*, and *Navarretia setiloba* were included as endangered in the June 16, 1976, **Federal Register** document.

General comments received in relation to the 1976 proposal were summarized in an April 26, 1978, **Federal Register** publication (43 FR 17909). The Endangered Species Act amendments of 1978 required that all proposals over 2 years old be withdrawn. A 1-year grace period was given to those proposals already more than 2 years old. In the December 10, 1979, **Federal Register** (44 FR 70796), the Service published a notice of withdrawal 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). The notice included *Allium tuolumnense* (as *Allium sanbornii* var. *tuolumnense*), *Brodiaea pallida*, *Calyptridium pulchellum*, *Clarkia springvillensis*, *Fritillaria striata*, *Lupinus citrinus* var. *deflexus* (as *Lupinus deflexus*), *Navarretia setiloba*, and *Verbena californica* as category 1 candidates and *Carpenteria californica* as a category 2 candidate for Federal listing. Category 1 species are those for which the Service has on file substantial information on biological vulnerability and threats to support preparation of listing proposals. Category 2 species are those for which data in the Service's possession indicate listing is possibly appropriate, but for which substantial data on biological vulnerability and threats are not currently known or on file to support rules. On November 28, 1983, the Service published in the **Federal Register** a supplement to the notice of review (48 FR 53640). This supplement contained *Allium sanbornii* var. *tuolumnense*, *Brodiaea pallida*, and *Verbena californica* as category 1 candidates for Federal listing. This supplement also elevated *Carpenteria californica* to a category 1 candidate and reclassified *Clarkia springvillensis*, *Calyptridium pulchellum*, *Fritillaria striata*, *Lupinus citrinus* var. *deflexus*, and *Navarretia setiloba* to category 2. This supplement also added *Mimulus* sp./sp. nov. ined. (Kern County) and *Mimulus* sp./sp. nov. ined. (Tulare County) as a category 2 species. This

species is now known as *Mimulus shevockii*.

The plant notice was revised on September 27, 1985 (50 FR 39526). The status of these 10 plants remained unchanged from the 1983 supplement. In the February 21, 1990 (55 FR 6184) notice, *Clarkia springvillensis*, *Navarretia setiloba*, and *Mimulus shevockii* were elevated to category 1 status. The status of the other seven taxa remained unchanged. In the September 30, 1993, plant notice of review (58 FR 51144), *Calyptridium pulchellum* was included as a category 2 species and the remaining nine taxa were included as category 1 species. Since publication of the 1990 notice and based on additional information received from botanists knowledgeable about the status of *Calyptridium pulchellum*, *Fritillaria striata*, and *Lupinus citrinus* var. *deflexus*, these species were placed in category 1 by the Director's approval.

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 requires that all petitions pending on October 13, 1983, be treated as having been newly submitted on that date. This was the case for *Brodiaea pallida*, *Fritillaria striata*, *Lupinus citrinus* var. *deflexus*, and *Navarretia setiloba* because the 1975 Smithsonian report had been accepted as a petition. On October 13, 1983, the Service found that the petitioned listing of these species was warranted but was 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 reviewed in October of 1983 through 1993. Publication of this proposal constitutes the final finding for the petitioned action.

Summary of Factors Affecting the Species

Section 4 of the Endangered Species Act (16 U.S.C. 1533) and regulations (50 CFR Part 424) promulgated to implement the listing provisions of the Act set forth the procedures for adding species to the Federal lists. A species may be determined to be endangered or threatened due to one or more of the five factors described in section 4(a)(1). These factors and their application to *Allium tuolumnense* (Traub) Denison and McNeal (Rawhide Hill onion), *Brodiaea pallida* Hoover (Chinese Camp brodiaea), *Carpenteria californica* Torrey (carpenteria), *Calyptridium*

pulchellum (Eastwood) Hoover (Mariposa pussypaws), *Clarkia springvillensis* Vasek (Springville clarkia), *Fritillaria striata* Eastwood (Greenhorn adobe lily), *Lupinus citrinus* Kellogg var. *deflexus* (Congdon) Japson (Mariposa lupine), *Mimulus shevockii* Heckard and Bacigalupi (Kelso Creek monkeyflower), *Navarretia setiloba* Coville (Piute Mountains navarretia), and *Verbena californica* Moldenke (Red Hills vervain) are as follows:

A. The present or threatened destruction, modification, or curtailment of their habitat or range. *Brodiaea pallida*, *Calyptridium pulchellum*, *Clarkia springvillensis*, *Lupinus citrinus* var. *deflexus*, *Mimulus shevockii*, *Allium tuolumnense*, *Carpenteria californica*, *Fritillaria striata*, *Navarretia setiloba*, and *Verbena californica* are restricted to grassland and woodland communities in the foothills of the Sierra Nevada and Tehachapi Mountains in California. The primary threat facing these 10 plants is the ongoing and threatened destruction and adverse modification of their habitats. The habitats of these 10 plants are being threatened by one or more of the following: urbanization, agricultural land conversion, off-highway vehicle use, mining, road and rights-of-way maintenance associated with hydroelectric operations, logging, illegal dumping, incompatible fire management techniques, and highway construction and maintenance projects.

The human populations in the counties where these species of plants occur are projected to grow significantly over the next decade. For example, Tuolumne County is projected to increase 46 percent between 1992 and 2005, Fresno County is predicted to grow 53 percent by 2005, and Tulare and Kern Counties are expected to increase 40 percent and 44 percent, respectively, by the year 2005 (California Department of Finance 1991, 1992). The increase in housing construction that will likely accompany this population growth threatens the populations of the 10 plants that occur on privately owned land.

Brodiaea pallida is only known from one population of 1,600 plants in the Red Hills. A portion of the population was destroyed prior to 1982 (CNDDDB 1993). A subdivision has been proposed for the area containing the remainder of the population. Although the project has apparently been revised to exclude most of the *B. pallida* population from the area proposed for housing, the project is still expected to adversely affect the plant through its plan to encourage recreational activities in the area containing *B. pallida*. The project would

also adversely affect this species because it would negatively impact the hydrological conditions necessary for growth and reproduction (Blaine Rogers, San Joaquin Delta College, *in litt.*, 1985).

Six of the seven populations of *Calyptridium pulchellum* contain fewer than 300 plants (CNDDDB 1993). The seventh population of *C. pulchellum* contains approximately 800 plants. Residential development threatens four populations of *C. pulchellum*. Two populations of *C. pulchellum* occur on 1-acre lots that are for sale in the midst of an existing subdivision (CNDDDB 1993). A third population of *C. pulchellum* occurs on a ranch that is for sale; the potential exists for the ranch to be subdivided after it is sold (CNDDDB 1993). A fourth population of *C. pulchellum* occurs on a vacant lot adjacent to and downslope from a developed lot. Run-off from landscape maintenance of the developed lot threatens this population (CNDDDB 1993). This fourth population has not been seen since 1983 and may be extirpated (CNDDDB 1993).

Disturbance associated with suburban foothill development destroyed part of one population of *Lupinus citrinus* var. *deflexus* in the early 1980s (CDFG 1989a). Since then, this population appears to be recovering (CDFG 1989a). The rapidly accelerating development of the western slope of the Sierra Nevada is a serious potential threat to all four populations of this species (CDFG 1989a). Presently, a home occupies each of the population sites south of the town of Mariposa in Mariposa County (California Native Plant Society (CNPS) 1990). The construction of these homes destroyed some of the plants.

The Joshua tree and pinyon-juniper woodland communities where *Mimulus shevockii* occurs are desirable for development because of their scenic viewsheds. Current mobile home development projects and associated road construction is adversely affecting *M. shevockii* at six sites; development projects planned for the future will also adversely affect this species (CNDDDB 1993). Five of the populations of *M. shevockii* occur on a mixture of BLM and private lands and two populations occur on private lands. Parts of two populations have been destroyed by construction of a gravel road and an off-highway vehicle road (CNDDDB 1993). Agricultural land conversion and mobile home lot development already have destroyed part of one of these populations and the remaining portion of this population is threatened with additional agricultural land conversion (CNDDDB 1993).

Urbanization has destroyed one population of *Allium tuolumnense*. The type locality of *A. tuolumnense* once covered several hundred acres but has now been reduced to a total of 14 hectares (35 acres) as a result of land clearing for housing construction (CNDDDB 1993). Urbanization continues to threaten this population; the 17 hectare (40 acre) Heavenly Hills subdivision is proposed for this site (CNDDDB 1993). The 220 hectare (540 acre) Gardella subdivision southwest of Jamestown has been recently proposed, and would adversely affect an additional population of *A. tuolumnense* (Robin Wood, Tuolumne County Planning Department, *in litt.*, 1993, Skenfield 1992; Steve Stocking, San Joaquin Delta College, *in litt.*, 1993). A 760 hectare (1,890 acre) proposed subdivision called Shotgun Creek Estates would adversely affect another population northwest of Jamestown (CNDDDB 1993). The above three proposed subdivisions could directly affect *A. tuolumnense* through destruction of plants and habitat, or could indirectly affect the populations by altering the site hydrology through increased urban run-off of herbicides, pesticides, and fertilizers, or by lowering the water table.

As mentioned above, Fresno County is predicted to grow 53 percent by the year 2005 (California Department of Finance 1991, 1992). The development and construction of proposed subdivisions in Fresno County foothills will adversely affect the two populations of *Carpenteria californica* that occur on private land. These populations are already under threat from development projects (CNDDDB 1993). The expansion of a portion of State Highway 168 from a two-lane to four-lane freeway partially destroyed and fragmented the largest population of *C. californica* (Joanna Clines, Sierra National Forest, pers. comm., 1993). The proposed realignment and expansion to four lanes of an additional section of the same highway potentially threatens portions of two populations of this plant (CNDDDB 1993).

The University of California proposes to establish a new campus at one of three sites in the San Joaquin Valley (University of California 1993), including a site in Fresno County at the base of the foothills where *Carpenteria californica* occurs. The proposed new campus at the Fresno location and the attendant growth-inducing effects of 40,000 to 50,000 people are a potential threat to *C. californica* (Howard Latimer, California State University, Fresno, pers. comm., 1993).

The type locality of *Clarkia springvillensis* was destroyed by mobile home development in 1983 (CNPS 1988). Historically, road widening and cattle grazing have seriously reduced populations of *C. springvillensis* at six sites (CNPS 1988). Ongoing residential development, road maintenance activities, and timbering operations threaten three populations of *C. springvillensis* on private lands (CNDDDB 1993). Prior to acquisition by CDFG, a preserve containing the largest population of *C. springvillensis* had an access road cut into the area, a well drilled, and a knoll levelled as a pad for home construction. These activities reduced and fragmented the population of *C. springvillensis* at that site. No restoration has occurred. One population of *Navarretia setiloba* occurs in a mobile home park (CNDDDB 1993). Urbanization threatens two populations of *N. setiloba* near Lake Isabella and one population on Grapevine Peak in Kern County (Diane Mitchell, botanist, pers. comm., 1992). The Andrews Creek population of *Verbena californica*, containing 25 percent of all the plants, is threatened with a proposed subdivision (CNDDDB 1993, CDFG 1993; Robin Wood, *in litt.*, 1993). The Big Creek population of this plant, containing 40 percent of the population, is potentially threatened by residential development (Pat Stone, CNPS, pers. comm., 1992).

Road maintenance activities adversely affect populations of several of the 10 plants included in this rule. Firebreak construction and road maintenance have destroyed part of one population of *Allium tuolumnense* (CNDDDB 1993). The grading of access roads along hydroelectrical powerlines and the clearing of vegetation from powerlines and towers as part of hydroelectric operations of an electrical municipality potentially threaten one population of *Carpenteria californica* (CNDDDB 1993). Historically, road widening and cattle grazing have seriously reduced populations of *C. springvillensis* at six sites (CNPS 1988). Two populations of *C. springvillensis* are currently threatened by road and fire break maintenance activities such as mowing and spraying (CNDDDB 1993). Three of the four populations of *C. springvillensis* in the Sequoia National Forest occur along a road right-of-way for an electric municipality and are fenced and signed for protection but emergency maintenance activities, including vegetation removal, of the power towers and powerlines remains a threat (CNDDDB 1993). A firebreak bisects one population of *Fritillaria*

striata in Kern County and a powerline access road near Kern River State Park continues to adversely affect another population (CNDDDB 1993). Vehicles driven along these access roads destroy the plants that grow in the roadway. Two populations of *F. striata* along Rancheria Road in Kern County face threats from a proposed road widening project (Stebbins 1989). Because of this species' affinity for clay soils that are unstable during wet months, emergency slope stabilization activities, such as road widening, could negatively affect two populations of *F. striata* along Rancheria Road in Kern County (Stebbins 1989).

Small scale logging on the privately-owned lands within the boundary of the Sierra National Forest has destroyed some plants and continues to threaten some populations of *Carpenteria californica* (J. Clines, pers. comm., 1993). Heavy equipment is driven across the plant populations to access the logging sites, and some plants are destroyed.

Proposed placer gold mining for a mining operation on private land threatens several populations of *Allium tuolumnense* (Robin Wood, *in litt.*, 1993; Pat Stone, *in litt.*, 1993). The proposed project is currently on hold. If planning were to resume, the resulting operation would adversely affect this plant through the placement of overburden on the plants occurring at these sites. Recreational gold mining and trampling associated with that activity adversely affects the four populations of *Verbena californica* at Six Bit Gulch, which contain 15 percent of the total individuals of the species (B. Rogers, pers. comm., 1992; CDFG 1993).

Conversion of land to agricultural uses threatens three of the subject species. *Fritillaria striata* was once known from the Frazier Valley, Porterville, Lindsay, and Strathmore. Agricultural land conversion has extirpated four populations of *F. striata* from those areas (Stebbins 1989). Most of the existing known populations of *F. striata* are threatened by agricultural land conversion, overgrazing, competition from nonnative grasses, and urbanization (Stebbins 1989). The spread of citrus orchards threatens three populations of *F. striata* at the lower elevations on the slopes of Lewis Hill near Frazier Valley (Stebbins 1989, 1991). One population of *Mimulus shevockii* is threatened with agricultural land conversion (CNDDDB 1993). The type locality of *Navarretia setiloba* was extirpated by agricultural land conversion.

B. *Overutilization for commercial, recreational, scientific, or educational*

purposes. Overutilization is not currently known to be a factor for these 10 plants but unrestricted collecting for scientific or horticultural purposes or excessive visits by individuals interested in seeing rare plants could result from increased publicity following publication of this proposal. *Carpenteria californica* is well established in the cultivation and horticultural trade both in California and England. The plant is propagated by cuttings and is not threatened by collecting in the wild.

C. *Disease or predation*. One population of *Calyptidium pulchellum* is potentially threatened by grazing (CNDDDB 1993). Two populations of *Verbena californica* and eight populations of *Allium tuolumnense* that occur on lands managed by BLM in the Red Hills are grazed by cattle. Observations in Andrews Creek in the Red Hills indicate that *Verbena californica* is able to withstand only light grazing before it disappears (Rogers 1983). Plants of *V. californica* were heavily cropped and noticeably smaller than in ungrazed sites (BioSystems Analysis 1984). Although current grazing levels do not appear to be adversely affecting these species, changes in timing or an increase in the number of animals grazing in the area is a potential threat to these populations. Moderate to heavy grazing adversely affects *Clarkia springvillensis* and *Lupinus citrinus* var. *deflexus* at five sites (CDFG 1987, CNPS 1990). The largest population of *C. springvillensis*, containing more plants than the other six populations combined, is protected in a 1.8 hectare (4.5 acre) ecological preserve owned by the California Department of Fish and Game (CNDDDB 1993). The preserve boundary was not surveyed. The original fence was placed some distance off the boundary line and included some adjacent land. This error has protected a substantial portion of the currently extant population of *C. springvillensis* from the heavy grazing that occurs outside the fenced enclosure. If, in the future, the fence is placed on the actual boundary, livestock grazing could adversely impact approximately half the remaining *C. springvillensis* on this site (CDFG 1989). Another population of *C. springvillensis* on the Sequoia National Forest is potentially threatened by overgrazing (CNDDDB 1993).

Heavy grazing by domestic livestock and rodents adversely affects three of four populations of *Fritillaria striata* in Kern County and a fourth population in Tulare County (Stebbins 1989, CNDDDB 1993). In addition to grazing, trampling of individual plants by livestock in

populations in Kern County also negatively affects this species (Stebbins 1989, CNDDB 1993). Overgrazing currently adversely affects portions of two populations of *Carpenteria californica* in Fresno County (CNDDB 1993).

Clarkia springvillensis is susceptible to predation by the larvae of sphinx moths (Sphingidae). Larvae of this moth were observed feeding on the plant at one site (CDFG 1987). Sphinx moth predation may occur at other sites as well. However, the extent to which this factor threatens the plant is not known.

High numbers of California ground squirrels (*Spermophilus beecheyi*) frequently are associated with heavily grazed areas in the southern San Joaquin Valley and adjacent foothills. Ground squirrels likely feed on the subject plant species in addition to cattle in heavily grazed areas.

Deer were observed to have eaten most of the mature inflorescences of *Fritillaria striata* at the Tejoh Hills population (about 5,000 plants) during 1 week in 1987 (D. Taylor, pers. comm., 1988 in Stebbins 1989).

D. *The inadequacy of existing regulatory mechanisms.* The California Fish and Game Commission has listed *Brodiaea pallida* and *Clarkia springvillensis* as endangered species under the California Endangered Species Act (Chapter 1.5 § 2050 et seq. of the California Fish and Game Code and Title 14 California Code of Regulations 670.2). The Commission also has listed *Carpenteria californica*, *Fritillaria striata*, and *Lupinus deflexus* (now known as *Lupinus citrinus* var. *deflexus*) as threatened species. Listing by the State requires individuals to obtain a memorandum of understanding with the California Department of Fish and Game (CDFG) to possess or "take" a listed species. Although both the California Native Plant Protection Act and the California Endangered Species Act prohibit the "take" of State-listed plants, State law exempts the taking of such plants via habitat modification or land use changes by the owner. After CDFG notifies a landowner that a State-listed plant grows on his or her property, State law only requires that the land owner 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 § 1913).

The California Environmental Quality Act (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 but are not so listed are given the same protection as those species that are officially listed with the State or Federal governments. 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 even though they may cause significant environmental damage, such as destruction of an endangered species. Protection of listed species through CEQA is, therefore, dependent upon the discretion of the agency involved.

Verbena californica and *Brodiaea pallida* grow in mesic areas along defined stream channels that are generally small and may be treated as isolated wetlands or waters of the United States for regulatory purposes by the U.S. Army Corps of Engineers under section 404 of the Clean Water Act. Nationwide Permit No. 26 (33 CFR part 330.5 (a)(26)) was established by the Corps to facilitate issuance of permits for discharge of fill into wetlands up to 4 hectares (10 acres). For project proposals falling under Nationwide Permit 26, the Corps has been reluctant to withhold authorization unless a federally proposed or listed threatened or endangered species is known to be present, regardless of the significance of other wetland resources. The 404 regulations require an applicant to obtain an individual permit to fill isolated wetlands or waters greater than 4 hectares (10 acres). In either case, candidate species receive no special consideration. Additionally and equally important, the upland watersheds (mesic pools and seeps next to streams) are not provided any protection. Disturbance to or loss of pool hydrology has damaged populations and habitat of these two plants as discussed previously in Factor A. Reductions in water volume and inundation adversely affect these plants. Thus, as a consequence of the small scale of these stream channels and lack of protection of associated uplands, this regulatory mechanism is inadequate to protect these two species.

Of the 10 plants included in this proposed rule, only *Clarkia springvillensis*, *Calyptridium*

pulchellum, and *Carpenteria californica* receive any kind of formal protection.

The largest population of *Clarkia springvillensis* occurs on a 1.8 hectare (4.5 acre) preserve owned by the California Department of Fish and Game (CDFG). A draft interim management plan was developed in 1989, but has not been finalized in part due to a lack of funding. No on-the-ground management of this population has occurred. The Sequoia National Forest developed a management plan in 1987 for the populations of *C. springvillensis* that occur on Forest Service land. Although three of the four populations are now fenced, no active management of the populations is occurring to protect and promote the recovery of the species.

One portion of a population of *Carpenteria californica* is protected at the Black Mountain Preserve, owned by The Nature Conservancy. Some recovery activities such as prescribed burns are not being conducted because of a lack of funding and concerns that prescribed burns would result in a wildfire (J. Clines, pers. comm., 1993). The Sierra National Forest has designated and fenced a botanical area for the preservation of one portion of a population of *C. californica*, but no active management is taking place to enhance and promote the recovery of the species.

One small population of *Calyptridium pulchellum* occurs on lands administered by the Sierra National Forest and is fenced to protect it from livestock trampling and grazing (J. Clines, pers. comm., 1993). However, the remaining populations are not protected.

E. *Other natural or manmade factors affecting their continued existence.* Low seedling establishment, trampling, competition from native brush, off-road vehicle (ORV) activity, potential realignment of a preserve boundary fence, fire suppression, illegal dumping, and stochastic extinction variously affect some populations of *Brodiaea pallida*, *Clarkia springvillensis*, *Fritillaria striata*, and *Carpenteria californica*.

ORV use has destroyed some plants in the past at one population of *Lupinus citrinus* var. *deflexus*, however, recent damage is not evident (CDFG 1989a). An ORV road bisects one population of *Mimulus shevockii* and a gravel road bisects another population (CNDDB 1993). Ongoing ORV activity threatens this plant. Two populations of *Allium tuolumnense* were partially destroyed by ORV use in the Red Hills (The Nature Conservancy 1987), which is currently closed to ORVs. ORV use threatens four populations of *Carpenteria californica*

(CNDDDB 1993). One population of *Navarretia setiloba* in Kern County has received some disturbance from ORV use (CNDDDB 1993), and another population is bisected by an ORV road (CNDDDB 1993).

The single, small population of *Brodiaea pallida* is restricted to an intermittent drainage that is fed by some small springs. Any disruption to the hydrology of the springs or the upslope watershed would threaten this population of *B. pallida*. Local catastrophic events such as floods, disease outbreak, extended drought, landslides, or a combination of several such events could destroy a part or all of the population of *B. pallida*. Any local catastrophe could significantly decrease this population to so few individuals that the risk of extirpation due to genetic problems associated with small populations would increase.

Plants at one population of *Fritillaria striata* in Kern County have been trampled by cattle, and an additional population is potentially threatened by trampling (CNDDDB 1993).

Because no seedlings of *Fritillaria striata* have been observed in nature, it is unknown to what degree this species is reproducing sexually (Stebbins 1989). The distribution of *F. striata* may be limited partially by its apparent reliance on vegetative reproduction (Stebbins 1989). The populations of this plant are discontinuously distributed throughout its range, making sexual reproduction difficult. By relying solely on vegetative reproduction, the genetic diversity of the species can be reduced, weakening the long-term viability of the species. *Fritillaria striata* also faces threats from nonnative grasses such as *Avena* and *Bromus* that compete with the subject plant for space, light, and nutrients (Stebbins 1989).

Fire suppression on private lands is a threat to the long-term survival of *Carpenteria californica* (J. Clines, pers. comm., 1993). *Carpenteria californica* exhibits low seedling establishment (CDFG 1991). The germination and seedling establishment of *C. californica* in nature was not observed or documented prior to 1989. However, a 1989 wildfire in Fresno County stimulated vigorous regrowth of the plant and the first recorded seedling establishment (J. Clines, in. litt., 1993). Overgrazing and trampling by cattle directly after a wildfire, when seedlings are vulnerable, adversely affects the plant. *Carpenteria californica* requires more frequent fire than that is currently being experienced for successful sexual reproduction to occur (J. Clines, in. litt., 1993). Fire is also important for maintaining the vigor of established

individual shrubs of *C. californica*, by preventing associated species such as *Quercus wislizenii*, *Arctostaphylos mariposa*, and *Ceanothus leucodermis* from outcompeting *C. californica* for light, space, and nutrients (J. Clines, in. litt., 1993).

Because the private lands containing the populations of *Carpenteria californica* consist of many small ranchettes and multiple landowners, it is unlikely that a controlled burn over an area large enough to effectively promote necessary sexual reproduction of *C. californica* could be successfully organized and carried out. Continued fire suppression and the inability to conduct needed controlled burns on private lands threaten all populations of *C. californica* that occur on private lands. The necessity of fire for sexual reproduction and for the long-term survival of this plant is understood by the Sierra National Forest. The policy of continued fire suppression to protect upslope timber stands is a threat to populations of *C. californica* on public lands.

Illegal dumping has been reported at two populations of *Carpenteria californica* (Stebbins 1988). Trash dumping destroys individual plants and degrades the habitat by introducing a wide variety of pollutants that inhibit seed germination and plant growth.

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 propose this rule. Endangered or threatened status is proposed for these species because large-scale human population increases and attendant urban growth and changes in agricultural land uses have destroyed significant quantities of foothill habitats and continue to eliminate plant populations. These plants and their habitats face current and future threats from urbanization, agricultural land conversion, highway construction, overgrazing, maintenance of roads and rights-of-way activities, mining, logging, off-highway vehicle use, stochastic extinction from random natural events, inadequate regulatory mechanisms, and insect predation.

Because the majority of threats facing four of these species are imminent, *Brodiaea pallida*, *Calyptridium pulchellum*, *Lupinus citrinus* var. *deflexus*, and *Mimulus shevockii* are in immediate danger of extinction throughout all or a significant portion of their respective ranges and, thus, fit the definition of an endangered species as defined in the Act. The only population of *Brodiaea pallida* is threatened by urbanization, inadequate regulatory

mechanisms, and stochastic extinction. Four of the seven populations of *Calyptridium pulchellum* are imminently threatened by urbanization; one of those four sites is threatened potentially by overgrazing and an additional population threatened by grazing. Although TNC has voluntary verbal protection agreements with current landowners of one of the populations, no permanent preservation is assured at any of the populations sites. All four populations of *Lupinus citrinus* var. *deflexus* are threatened by urbanization and one population is potentially threatened by overgrazing. Although landowners of three of the four populations have registered each site with TNC for voluntary protection, no long-term protection is assured for any of the four known populations. Six of the seven known populations of *Mimulus shevockii* are threatened variously by mobile home development, agricultural land conversion, and off-highway vehicle use. None of the populations have any protection.

The plants proposed for listing as threatened are restricted to habitats somewhat less vulnerable to development and are faced with less imminent threats. However, these species are likely to become endangered in the foreseeable future unless current trends of urban development, agricultural land conversion, highway construction, road maintenance activities, improper fire management, off-highway vehicle use, and overgrazing are reversed. *Allium tuolumnense* is threatened by urbanization, overgrazing, mining, and off-highway vehicle use on 25 percent of its range on private lands. The remaining 75 percent of the population occurs on public lands and is potentially threatened by grazing on public lands. *Carpenteria californica* is imminently threatened by urbanization, highway construction, maintenance of roads and rights-of-way in connection with hydroelectrical operations, competition from native brush species, logging, illegal dumping, incompatible fire management activities, overgrazing, inadequate regulatory mechanisms, and off-highway vehicle use over the one-third of its range on private lands. *Carpenteria californica* is potentially threatened by alteration of natural fire cycles, off-highway vehicle use, and maintenance of roads and rights-of-way on the remaining two-thirds of its range on public lands. Four of the seven populations of *Clarkia springvillensis* are threatened by urbanization, road maintenance activities, insect predation, overgrazing, inadequate regulatory

mechanisms, and timber operations. The largest population is protected partially by a fenced preserve owned by the California Department of Fish and Game. A possible fence realignment potentially threatens a significant portion of this population. Although three of the four populations of *C. springvillensis* occurring on the Sequoia National Forest are fenced and signed for protection, those populations may be threatened by future emergency powerline maintenance. Of the 17 populations of *Fritillaria striata*, 9 populations are threatened variously by agricultural land conversion, urbanization, off-highway vehicle use, road widening, emergency road maintenance activities, overgrazing, and trampling. Additionally, all populations of *F. striata* are potentially threatened by inadequate State regulatory mechanisms and competition from nonnative grasses. Three of the six populations of *Navarretia setiloba* are threatened by urbanization and off-highway vehicle use. Seven of the nine populations of *Verbena californica*, containing 65 percent of the plants, are threatened by urbanization over a relatively small part of its range on private lands. Recreational placer gold mining threatens this plant and overgrazing potentially threatens this plant on its remaining range on public lands. These six plants are not yet in danger of extinction throughout all or a significant portion of their ranges, but appear likely to become in danger of extinction in the foreseeable future. As a result, the preferred action is to list *Allium tuolumnense*, *Carpenteria californica*, *Clarkia springvillensis*, *Fritillaria striata*, *Navarretia setiloba*, and *Verbena californica* as threatened species.

Critical Habitat

Section 4(a)(3) of the Act requires that, to the maximum extent prudent and determinable, the Secretary designate critical habitat at the time the taxa is listed. The Service finds that designation of critical habitat is not prudent for these species at this time. Because the 10 plants face numerous anthropogenic threats (see Factors A and E in "Summary of Factors Affecting the Species") and the 10 plants 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 under the Act publicizes the rarity of

these plants and, thus, can make these plants attractive to researchers or collectors of rare plants.

Protection of the habitat of these species will be addressed through the section 7 consultation and section 4 recovery processes. 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 would likely 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 conservation actions by Federal, State, and private agencies, groups, and individuals. The Act provides for possible land acquisition and cooperation with the State and requires that recovery actions be carried out 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) of the Act 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.

Federal activities potentially affecting 1 or more of the 10 plants include mining, grazing authorizations, and issuance of special use permits and rights-of-ways. Populations of 7 of the

10 plants occur on Federal lands. Approximately 70 percent of the *Carpenteria californica*, half the populations of *Clarkia springvillensis*, and one population of *Calyptiridium pulchellum* occur on lands managed by the U.S. Forest Service. Approximately one-third of the populations of *Allium tuolumnense*, one-seventh the populations of *Verbena californica*, one-half the populations of *Mimulus shevockii*, and one population of *Navarretia setiloba* occur on lands managed by the BLM. These agencies would be required to confer with the Service if any activities authorized, funded, or carried out by these two agencies would likely jeopardize the continued existence of these species.

Other Federal agencies that may become involved as a result of this proposed rule include the Veterans Administration through their Federal mortgage programs, the U.S. Department of Housing and Urban Development (Federal Home Administration loans), and the Federal Highways Administration through the construction of roads and highways. Since at least three of these plants exist in or near stream beds, perennial streams or drainages, the U.S. Army Corps of Engineers may become involved through jurisdiction of section 404 of the Clean Water Act.

Listing these 10 plants would provide for the development of recovery plans. Such plans would bring together both State and Federal efforts for conservation of the plants. The plans would establish a framework for agencies to coordinate activities and cooperate with each other in conservation efforts. The plans 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 10 plants. Additionally, pursuant to section 6 of the Act, the Service would be able to grant funds to affected States for management actions promoting the protection and recovery of these species.

The Act and its implementing regulations found at 50 CFR 17.61, 17.62, and 17.63 for endangered plants and 17.71 and 17.72 for threatened plants not covered by a special rule, set forth a series of prohibitions and exceptions that apply to listed plant species. With respect to the four plants proposed to be listed as endangered, the prohibitions of section 9(a)(2) of the Act, implemented by 50 CFR 17.61 would apply. These prohibitions, in part, make it illegal with respect to any endangered plant 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 these species in interstate or foreign commerce; remove and reduce to possession these species from areas under Federal jurisdiction; maliciously damage or destroy any such species on any area under Federal jurisdiction; or remove, cut, dig up, damage, or destroy any such endangered plant species on any other area in knowing violation of any State law or regulation or in the course of any violation of a State criminal trespass law.

The six plants proposed to be listed as threatened would be subject to similar prohibitions (16 U.S.C. 1538(a)(2)(E); 50 CFR 17.61, 17.71). Seeds from cultivated specimens of threatened plant taxa 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. 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 that trade permits may be sought or issued for at least 1 of these 10 plant species because *Carpenteria californica* is common in cultivation in England and California. Requests for copies of the regulations on listed plants and inquiries regarding them may be addressed to the U.S. Fish and Wildlife Service, Ecological Services, Endangered Species Permits, 911 N.E. 11th Avenue, Portland, Oregon 97232-4181 (503/231-2063; FAX 503/231-6243).

Public Comments Solicited

The Service intends that any final action resulting from this proposal will

be as accurate and as effective as possible. Therefore, comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, or any other interested party concerning this proposed rule are hereby solicited. Comments particularly are sought concerning:

- (1) Biological, commercial trade, or other relevant data concerning any threat (or lack thereof) to these taxa;
 - (2) The location of any additional populations of these species and the reasons why any habitat should or should not be determined to be critical habitat as provided by section 4 of the Act;
 - (3) Additional information concerning the range, distribution, and population size of these species; and
 - (4) Current or planned activities in the subject area and their possible impacts on these species.
- Any final decision on this proposal will take into consideration the comments and any additional information received by the Service, and such communications may lead to a final regulation that differs from this proposal.

The Endangered Species Act provides for a public hearing on this proposal, if requested. Requests must be received within 45 days of the date of publication of the proposal. Such requests must be made in writing and addressed to the Field Supervisor of the Sacramento Field Office (see ADDRESSES section).

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).

References Cited

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

Author

The primary author of this proposed rule is Kenneth Fuller, Sacramento Field Office (see ADDRESSES section); telephone 916/978-4866.

List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, and Transportation.

Proposed Regulation Promulgation

Accordingly, it is hereby proposed to amend Part 17, Subchapter B of Chapter I, Title 50 of the Code of Federal Regulations, as set forth below:

PART 17--[AMENDED]

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

Authority: 16 U.S.C. 1361-1407; 16 U.S.C. 1531-1544; 16 U.S.C. 4201-4245; Public Law 99-625, 100 Stat. 3500, unless otherwise noted.

2. Section 17.12(h) is amended for plants by adding the following, in alphabetical order under the plant families indicated, and by adding a new family, "Philadelphaceae—Mock orange family", in alphabetical order, to the List of Endangered and Threatened Plants:

§ 17.12 Endangered and threatened plants.
 * * * * *
 (h) * * *

Species		Historic range	Status	When listed	Critical habitat	Special rules
Scientific name	Common name					
Fabaceae—Pea family:						
<i>Lupinus citrinus</i> var. <i>deflexus</i> (= <i>Lupinus deflexus</i>)	Mariposa lupine	U.S.A. (CA)	E		NA	NA
Liliaceae—Lily family:						
<i>Allium tuolumnense</i> (= <i>Allium sanbornii</i> var. <i>tuolumnense</i>)	Rawhide Hill onion	U.S.A. (CA)	T		NA	NA

Species		Historic range	Status	When listed	Critical habitat	Special rules
Scientific name	Common name					
<i>Brodiaea pallida</i>	Chinese Camp brodiaea	U.S.A. (CA)	E		NA	NA
<i>Fritillaria striata</i>	Greenhorn adobe lily	U.S.A. (CA)	T		NA	NA
Onagraceae—Evening primrose family:						
<i>Clarkia springvillensis</i>	Springville clarkia	U.S.A. (CA)	T		NA	NA
Philadelphaceae—Mock orange family:						
<i>Carpenteria californica</i>	Carpenteria	U.S.A. (CA)	T		NA	NA
Polemoniaceae—Phlox family:						
<i>Navarretia setiloba</i>	Piute Mountains navarretia	U.S.A. (CA)	T		NA	NA
Portulacaceae—Purslane family:						
<i>Calyptridium pulchellum</i>	Mariposa pussypaws	U.S.A. (CA)	E		NA	NA
Scrophulariaceae—Snapdragon family:						
<i>Mimulus shevockii</i>	Kelso Creek monkeyflower	U.S.A. (CA)	E		NA	NA
Verbenaceae—Vervain family:						
<i>Verbena californica</i>	Red Hills vervain	U.S.A. (CA)	T		NA	NA

Dated: September 27, 1994.

Mollie H. Beattie,

Director, U.S. Fish and Wildlife Service.

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50 CFR Part 17

RIN 1018-AC 98

Endangered and Threatened Wildlife and Plants; Proposed Endangered Status for the Plant *Lessingia Germanorum* (San Francisco *Lessingia*) and Threatened Status for the Plant *Arctostaphylos Imbricata* (San Bruno Mountain manzanita) From California

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: The U.S. Fish and Wildlife Service (Service) proposes endangered status pursuant to the Endangered

Species Act of 1973, as amended (Act) for *Lessingia germanorum* (San Francisco *lessingia*), and threatened status for *Arctostaphylos imbricata* (San Bruno Mountain manzanita), two plants from the San Francisco peninsula of California. *Lessingia germanorum* occurs in central dune scrub, and is known from five sites on the Presidio in San Francisco County, and one site on San Bruno Mountain in San Mateo County, California. This taxon has been affected by and is endangered by competition with invasive alien vegetation, residential and commercial development, sand quarrying, increased pedestrian traffic and recreational activities, inadequate regulatory mechanisms, bulldozing, shading by