

determined to be critical habitat as provided by section 4 of the Act;

(3) Additional information concerning the range, distribution, and population size of the species; and

(4) Current or planned activities in the subject areas and their possible impacts on the species.

The Service specifically solicits expert opinion from independent specialists regarding pertinent scientific or commercial data and assumptions relating to taxonomy, population models, and supportive biological and ecological information.

Final promulgation of the regulation on this species 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 by September 25, 1995. Such requests must be made in writing and be addressed to the Field Supervisor, Sacramento Field Office (see ADDRESSES section).

**National Environmental Policy Act**

The Fish and Wildlife Service has determined that Environmental Assessments or Environmental Impact Statements, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act of 1973, as amended. 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 herein is available upon request from the Field Supervisor, Sacramento Field Office (see ADDRESSES section).

**Author**

The primary author of this proposed rule is Elizabeth Warne, Sacramento Field Office (see ADDRESSES section).

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

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

**Proposed Regulation Promulgation**

Accordingly, the Service hereby proposes 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; 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 name	Status	When listed	Critical habitat	Special rules
Scientific name	Common name						
FLOWERING PLANTS							
* <i>Arctostaphylos pallida</i>	* Pallid manzanita .....	* U.S.A. (CA) .....	* Ericaceae—Heath .	* T	* NA	* NA	* 
* 	* 	* 	* 	* 	* 	* 	* 

Dated: July 5, 1995.  
**Mollie H. Beattie,**  
Director, Fish and Wildlife Service.  
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BILLING CODE 4310–55–P

**50 CFR Part 17**  
**RIN 1018–AD36**

**Endangered and Threatened Wildlife and Plants; Proposed Endangered Status for Nine Plants from the Grasslands or Mesic Areas of the Central Coast of California**

**AGENCY:** Fish and Wildlife Service, Interior.  
**ACTION:** Proposed rule.

**SUMMARY:** The Fish and Wildlife Service (Service) proposes to list *Alopecurus aequalis* var. *sonomensis* (Sonoma alopecurus), *Astragalus clarianus* (Clara Hunt's milkvetch), *Carex albida* (white sedge), *Clarkia imbricata* (Vine Hill clarkia), *Lilium pardalinum* ssp.

*pitkinense* (Pitkin Marsh lily), *Plagiobothrys strictus* (Calistoga allocarya), *Poa napensis* (Napa bluegrass), *Sidalcea oregana* ssp. *valida* (Kenwood marsh checkermallow), and *Trifolium amoenum* (showy Indian clover) as endangered pursuant to the Endangered Species Act of 1973, as amended (Act). These nine species grow in a variety of habitats including valley grasslands, meadows, freshwater marshes, seeps, and broad-leaf upland forests in Marin, Napa, and Sonoma counties on the central coast of California. Habitat loss and degradation, competition from aggressive plant species, elimination through plant community succession, grazing, inadequate regulatory mechanisms, collection for horticultural use, and hydrological modifications to wetland areas threaten the continued existence of these plants. 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 October 9, 1995. Public hearing requests must be received by September 25, 1995.

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

**FOR FURTHER INFORMATION CONTACT:** Dale Pierce, Assistant Field Supervisor, Sacramento Field Office (see ADDRESSES section) (telephone 916/979–2710; facsimile 916/979–2723).

**SUPPLEMENTARY INFORMATION:**

**Background**

Populations of the nine plant species in this proposed rule are found in Sonoma County and east as far as Napa Valley, California. *Alopecurus aequalis*

var. *sonomensis* (Sonoma alopecurus), *Carex albida* (white sedge), *Clarkia imbricata* (Vine Hill clarkia), *Lilium pardalinum* ssp. *pitkinense* (Pitkin Marsh lily), *Sidalcea oregana* ssp. *valida* (Kenwood Marsh checkermallow), and *Trifolium amoenum* (showy Indian clover) are found in mesic areas mostly within 33 kilometers (km) (15 miles (mi)) of the central coast of California. *Astragalus clarianus* (Clara Hunt's milkvetch), *Plagiobothrys strictus* (Calistoga allocarya), and *Poa napensis* (Napa bluegrass) are found up to 70 km (32 mi) inland in a variety of habitats around the City of Calistoga in the Napa Valley, California. Urbanization, road construction, a possible water storage project, airport construction, development of hot springs into commercial resorts, agricultural land conversion, wetland drainage, waste disposal, competition with aggressive plant species, collection for horticultural use, and livestock grazing have destroyed much of the habitat and numerous populations of these nine plant species. Historically, these nine species have not been known to occur outside of Alameda, Marin, Mendocino, Napa, Santa Clara, Solano, and Sonoma counties.

#### Discussion of Inland Species

The habitats in which *Plagiobothrys strictus* and *Poa napensis* can be found include meadows near small thermal hot springs underlain by gravelly loams mixed with clays that are associated with high water tables. High concentrations of boron, arsenic, and sulfates, which are usually toxic to plants, are found in thermal pools and meadows. A few unique plants have evolved under these normally adverse conditions, including *P. strictus* and *P. napensis*. *Astragalus clarianus* occurs in openings within valley grasslands or in broad-leaf upland forests. *Astragalus clarianus*, *P. strictus*, and *P. napensis* have only been found in Napa and Sonoma counties. Large amounts of habitat have been lost to urbanization, road construction, lake building, airport construction, and development of hot springs into commercial resorts.

Willis Jepson (1925a) first described *Astragalus clarianus* in 1909 from specimens collected by Clara Hunt in the Conn Valley near St. Helena, Napa County, California. Axel Rydberg (1929) and Willis Jepson (1936) treated this taxon as *Hamosa clariana* and *Astragalus rattanii* var. *clarianus*, respectively. Rupert Barneby (1950) re-established *Astragalus clarianus* as a full species. *Astragalus clarianus* is a low-growing annual herb belonging to

the pea family (Fabaceae). *Astragalus clarianus*, a slender, sparsely leafy plant, is sparingly covered with sharp, stiff, appressed hairs. The simple single or few basally branching, ascending stems reach 7 to 20 centimeters (cm) (3 to 8 inches (in.)) in height. The leaves are alternate, 1.5 to 6.0 cm (0.5 to 2.5 in.) long, with 5 to 9 uncrowded leaflets 2 to 10 millimeters (mm) (0.1 to 0.4 in.) long. The leaflets are oblong to obovate, narrow at the base, and notched at the tip. Small, pea-like flowers appear from March through April. The petals are bicolored, with the wings whitish and the banner and keel purple in the upper third. The keel is longer and wider than the wings. The horizontal to declining seed pods are narrow, linear, slightly curved, pointed at both ends, and occur on a 1.5 to 2.5 mm (0.06 to 0.10 in.) long slender stalk. *Astragalus rattanii* var. *jepsonianus* looks similar to *A. clarianus*, but grows 10 to 36 cm (4 to 14 in.) tall, has larger flowers, and seed pods that are not elevated on a seed stalk.

*Astragalus clarianus* is found on thin, rocky clay soils derived from volcanic substrates in foothill grasslands, in openings in *Arctostaphylos* (manzanita), and in openings in *Quercus douglasii* (blue oak) woodlands over an elevational range of 75 to 225 meters (m) (240 to 750 feet (ft)). Historically, six populations were known from Napa and Sonoma counties. Two historical populations have been extirpated by urbanization and viticulture (California Natural Diversity Data Base (CNDDB) 1993). The population at the type locality was reduced in size by the creation of Lake Hennessey in the 1940s. Currently, three populations are found in northwestern Napa County and one on the eastern side of adjacent Sonoma County. Collectively, the four populations of *A. clarianus* are scattered over approximately 16 hectares (ha) (40 acres (ac)) (CNDDB 1994). "The trend for Clara Hunt's milkvetch is one of decline as a result of habitat destruction and modification" (California Department of Fish and Game (CDFG) 1991). The four populations of *A. clarianus* are variously threatened by urbanization, recreational activities, airport maintenance, elimination due to plant community succession, competition from nonnative weed species, inadequate regulatory mechanisms, stochastic events, and a possible future water storage project. One population occurs in the Bothe Napa Valley State Park. Another population occurs on the shore of Lake Hennessey and is owned by The City of

Napa. Two remaining populations occur on private land.

Edward Greene (1892) and Willis Jepson (1901) treated *Plagiobothrys strictus* as *Allocarya stricta* and *Allocarya californica* var. *stricta*, respectively, before Ivan Johnston (1923) assigned the present name, *Plagiobothrys strictus*, to specimens collected on alkaline flats near sulphur springs at Calistoga, Napa County, California. *Plagiobothrys strictus* is a small, erect, annual herb belonging to the borage family (Boraginaceae). *Plagiobothrys strictus* grows 1 to 4 decimeters (dm) (4 to 15 in.) in height. The nearly hairless plant has either a single stem or branches from near the base. The linear lower leaves are 4 to 9 cm (1.5 to 4 in.) long. Small, usually paired, white flowers appear in March to April in a slender, unbranched inflorescence. The fruit is an egg-shaped nutlet about 1.5 mm (0.6 in.) long, keeled on the back, with wart-like projections without any prickles. *Plagiobothrys greenei*, *P. lithocaryus*, *P. mollis* var. *vestitus*, *P. stipitatus*, and *P. tener* occur in vernal pools and have ranges that overlap with the range of *Plagiobothrys strictus*, but they do not resemble *P. strictus*.

*Plagiobothrys strictus* is found in vernal pools adjacent to and fed by hot springs and small geysers in foothill grasslands at an elevational range of 90 to 160 m (300 to 500 ft). Three historical populations occurred within a 3 km (2 mi) radius of Calistoga, Napa County, California. One population has been extirpated by urbanization and agricultural land conversion. One remaining population of *P. strictus* occurs at a small, undeveloped thermal hot spring. The other population occurs at the Calistoga Airport in the center of the city of Calistoga. The combined area of the two remaining populations in Napa County is less than 80 square (sq) m (900 sq ft) (California Native Plant Society (CNPS) 1990). Most of the thermal hot springs in Napa County have been developed. The remaining undeveloped hot springs occupy very few acres (Dave Steiner, Napa County Soil Conservation Service, pers. comm. 1993). "The overall trend for Calistoga popcornflower (*Plagiobothrys strictus*) is one of decline" (CDFG 1991). The species is threatened by recreational activities, airport maintenance, urbanization, inadequate regulatory mechanisms, and stochastic events. Both populations occur on private land and neither is protected.

Alan Beetle (1947) first described *Poa napensis* in 1946 from specimens that he collected in a meadow moistened by seepage from hot springs, 3 km (2 mi)

north of Calistoga at Myrtle Dale Hot Springs, Napa County, California. *Poa napensis* is an erect, tufted perennial bunchgrass belonging to the grass family (Poaceae) that grows to 1 dm (4 in.) in height. Leaves are folded, stiffly erect, 1 mm (0.04 in.) wide, with the basal leaves 20 cm (8 in.) long and upper stem leaves to 15 cm (6 in) in length. A few stiff, erect flowering stems appear in May and grow 7 dm (27 in) in height. Flower clusters occur as a pale green to purple, condensed, oblong-oval panicle 10 to 15 cm (4 to 6 in) long and 2 to 5 cm (0.8 to 2.0 in) wide. *Poa napensis* most closely resembles *P. unilateralis* (ocean bluff bluegrass) but differs in leaf and panicle form as well as habitat.

*Poa napensis* is found in valley grasslands and moist, alkaline meadows fed by hot springs. The elevational range of this plant is 100 to 120 m (340 to 400 ft) within a radius of 6 km (4 mi) of Calistoga. Historically, the range of this plant has been diminished by the development of recreational hot springs and the growth of the town of Calistoga. The larger population of *P. napensis* near Myrtle Dale Hot Springs occurs in a 100 sq m (1,100 sq ft) area, with an additional small population of 100 plants just across an adjoining road (CDFG 1979). Both remaining populations of *P. napensis* are dependent on moisture derived from adjacent hot springs or overland runoff. Any development that would alter the hydrology or flow from these hot springs would be detrimental to these populations (CDFG 1979). "The trend for Napa bluegrass is one of decline" (CDFG 1991). *Poa napensis* is threatened by recreational activities, airport maintenance, urbanization, inadequate regulatory mechanisms, and stochastic events. The two extant populations are on private land and are not protected.

### Coastal Species

*Alopecurus aequalis* var. *sonomensis*, *Carex albida*, *Lilium pardalinum* ssp. *pitkinense*, and *Sidalcea oregana* ssp. *valida* are restricted to permanent freshwater wetlands in or near Pitkin Marsh, north of San Francisco Bay, California. *Clarkia imbricata* is restricted to a very narrow range in open grasslands near Pitkin Marsh. The Pitkin Marsh area, in which several disjunct and restricted species are found, is contained in the Franciscan area, described by Jepson (1925b) as a portion of the Coast Ranges that supports a high degree of plant endemism. The Coast Ranges in this area, south of the city of Healdsburg, are lower in elevation in comparison to areas north of Healdsburg, thus increasing the

exposure of this inland area to the influence of cool, moist ocean air currents. Many species in this region reach their southernmost limit and are often separated by long distances from the major portions of their ranges (Rubtzoff 1953). Historically, these five species were not known to occur outside Sonoma and Marin counties (CNDDDB 1993). *Carex albida* occurs in a sphagnum bog in Lower Pitkin Marsh, Sonoma County. *Alopecurus aequalis* var. *sonomensis*, *L. pardalinum* ssp. *pitkinense*, and *S. oregana* ssp. *valida* are restricted to moist soils in permanent freshwater marshes in Sonoma and Marin counties. *Clarkia imbricata* occurs on acid sands and has not been found outside a very restricted range in Sonoma County. Historically, the widest ranging of the nine species is *Trifolium amoenum*, which occurred from Mendocino County south to Sonoma, Marin, Alameda and Santa Clara counties and east to Napa and Solano counties. *Trifolium amoenum* typically was found in low, wet swales and grasslands. This species was considered extinct until 1993, when a single plant was discovered in Sonoma County. Seeds from this individual were collected and *T. amoenum* currently exists only in cultivation. The land that most recently supported this taxon is privately owned. Habitat of this species has been lost to land conversion for urbanization or agriculture, livestock grazing, wetland drainage, waste disposal, and competition with aggressive species.

On May 7, 1955, Peter Rubtzoff (1961) collected *Alopecurus aequalis* var. *sonomensis* in Guerneville Marsh, Sonoma County, California. He described the species in 1961. Specimens of this taxon collected as early as 1880 in Sonoma and Marin counties had been identified as *Alopecurus aequalis* Sobol., a circumboreal foxtail grass found as far south as Mendocino County. These specimens, however, deviated considerably from typical *A. aequalis* and were identified by Rubtzoff as *A. aequalis* var. *sonomensis*.

*Alopecurus aequalis* var. *sonomensis* is a tufted perennial in the grass family (Poaceae) that reaches 30 to 75 cm (12 to 30 in.) in height. The stems are mostly erect and either straight or weakly bent near the base. The leaf blades are up to 7.5 mm (0.3 in.) wide. The panicle is 2.5 to 9.0 cm (1.0 to 3.5 in.) long and 4 to 8 mm (0.1 to 0.3 in.) wide. The spikelets are usually tinged violet-gray near the tip. The awn is straight, and exceeds the lemma body by 1.0 to 2.5 mm (0.04 to 0.1 in.). This variety is distinguished from *A. aequalis*

var. *aequalis* by a more robust, upright appearance, generally wider panicle, violet-gray tinged spikelets, and longer awn (Rubtzoff 1961; W. Crins, Ontario Ministry of Natural Resources, *in litt.* 1993).

*Alopecurus aequalis* var. *sonomensis* is currently known from only five natural populations. The three sites in Sonoma County are privately owned and the two sites on the Point Reyes National Seashore, in Marin County, are federally owned (CNDDDB 1993; V. Norris, Marin CNPS, pers. comm. 1993). The elevational range of the species is from 6 to 210 m (20 to 680 ft). The total number of plants is estimated at 200 (B. Guggolz, CNPS, pers. comm. 1993). *Alopecurus aequalis* var. *sonomensis* was known historically from 16 populations. The historical range was approximately 48 km (30 mi), reaching north from Point Reyes Peninsula to Guerneville and east to Cunningham Marsh. Although fewer sites are now present, the range of the species has changed little. The numbers of populations of this species are declining due to competition from nonnative plant species, trampling and grazing by cattle, and low regeneration. The species is also threatened by inadequate regulatory mechanisms. Two attempts to reintroduce the species in the Point Reyes National Seashore failed. One attempt was destroyed by a flash flood (CNDDDB 1992; V. Norris, pers. comm. 1993).

John Bigelow collected the type specimen of *Carex albida* in 1854 on Santa Rosa Creek, Sonoma County, California. Liberty Bailey described the species in 1889. Specimens of the plant subsequently collected by John T. Howell and John W. Stacey in 1937 in Pitkin Marsh were described by them as *C. sonomensis* (Stacey 1937). Howell (1957) later stated that the herbarium specimen of *C. albida* had been misinterpreted by Stacey and others and that *C. sonomensis* is a synonym of *C. albida*.

*Carex albida* is a loosely tufted perennial herb in the sedge family (Cyperaceae). The stems are triangular, 4 to 6 dm (1.3 to 2.0 ft) tall, erect, and longer than the leaves. The leaves are flat and 3 to 5 cm (1 to 2 in.) wide with closed sheaths. The inflorescence consists of 4 to 7 ovoid or obovoid to oblong spikelets 8 to 18 mm (0.3 to 0.7 in.) long. The achenes (fruits) are three-sided when mature. The sacs (perigynia) surrounding the achenes are light green to yellow-green when mature and 3.0 to 4.5 mm (0.1 to 0.2 in.) long. Several traits distinguish *C. albida* from other closely related sedges. *Carex albida* has inflorescences with staminate flowers

above the pistillate flowers, especially on the terminal inflorescence, lateral spikelets, and leaves that are shorter than the stems and 3 to 5 mm (0.1 to 0.2 in.) wide.

*Carex albida*, which was thought to be extinct, is currently known from only one population, discovered in 1987. The population contains approximately 800 to 1,000 plants on privately owned property in Sonoma County (CDFG 1993a, CNDDDB 1993). *Carex albida* was known historically from four other locations: the type locality on Santa Rosa Creek, one site in Perry Marsh, and two sites in Pitkin Marsh, all in Sonoma County. The marsh habitat containing *C. albida* at the Santa Rosa Creek site was destroyed in the 1960s by channelization and other alterations to Santa Rosa Creek (B. Guggolz, *in litt.* 1993). The Perry Marsh site has been used for cannery waste disposal beginning in 1971, causing the probable loss of the population (CNDDDB 1993). One of the Pitkin Marsh populations has not been seen since 1951. Permission for access to the second Pitkin Marsh site has been denied since 1976. The occurrence has not been confirmed since that time. Pitkin Marsh, which has become drier in recent years because of the addition of wells and other construction that have altered marsh hydrology, likely no longer supports the species (B. Guggolz, *in litt.* 1993). The known remaining population of *C. albida* is found in a sphagnum bog near Pitkin Marsh, between 45 and 60 m (150 and 200 ft) in elevation. The original habitat of all populations occurred within an area of approximately 10 sq km (4 sq mi). The species occurs in conjunction with *Lilium pardalinum* ssp. *pitkinense*, spikerush (*Eleocharis* spp.), rush (*Juncus* spp.), and Himalayan blackberry (*Rubus discolor*). *Carex albida* is threatened by potential alteration of hydrology from changes in land use or potential disturbance from a proposed wastewater treatment project, inadequate regulatory mechanisms, competition from nonnative species, stochastic events, small population size, and potential disturbance from repair or alteration of a nearby State highway.

Frank H. Lewis and Margaret Lewis (1953) described *Clarkia imbricata* from specimens they collected on July 10, 1951, along the roadside of Vine Hill Road, near Pitkin Ranch. Searches for this plant at the type locality have been made since 1974, but no plants have been observed (CNDDDB 1994). Currently, *C. imbricata* is known from two populations in southern Sonoma County.

*Clarkia imbricata* is an erect, annual herb in the evening-primrose family (Onagraceae). The stems grow to 6 dm (2.5 ft) tall, unbranched or with numerous short branches in the upper parts. This plant is densely leafy, with entire, lanceolate leaves 2.0 to 2.5 cm (0.8 to 1.0 in.) long and 4 to 7 mm (0.2 to 0.3 in.) broad that are ascending and overlapping. The showy inflorescences appear from June through July. The flowers are grouped closely together and each flower has a conspicuous funnel-shaped tube at its base. Each flower has four fan-shaped, lavender petals 2.0 to 2.5 cm (0.8 to 1.0 in.) long with a V-shaped purple spot extending from the middle to the upper margin of the petal. *Clarkia purpurea* ssp. *viminea* is the only other *Clarkia* taxon with which *C. imbricata* can be confused. *Clarkia purpurea* ssp. *viminea* has a much shorter, funnel-shaped tube and does not have the relatively broad, ascending, overlapping leaves of *C. imbricata*.

Historically, *Clarkia imbricata* has never been common. This taxon is only known from two populations found in grasslands on acidic sand in Sonoma County. The type locality is presumed to have been extirpated by changing land uses (CNDDDB 1994, B. Guggolz, *in litt.* 1993). The remaining natural population was the source population for cuttings that were transplanted into a preserve in 1974. The elevational range for the two extant populations is 60 to 75 m (200 to 250 ft). The two populations are 1.2 km (0.75 mi) apart and occur on privately owned land. The natural population contains 2,000 to 5,000 plants and occurs on an open, flat grassland surrounded by a variety of introduced trees and shrubs. The planted population, located in a 0.6 ha (1.5 ac) preserve, has fluctuated between 200 and 300 plants. The preserve is owned and managed by the California Native Plant Society. The planted population recently has expanded its range onto the adjacent private parcel east of the preserve, where 70 to 100 plants were found in 1993. Both populations are threatened variously by agricultural land use conversion, inadequate regulatory mechanisms, stochastic events, and damage associated with trespassers collecting other rare plants found in the preserve (B. Guggolz, *in litt.* 1993).

Lawrence Beane and Albert M. Vollmer first collected *Lilium pardalinum* ssp. *pitkinense* on July 20, 1954, in Pitkin Marsh, Sonoma County, California. Beane (1955) described the plant as *Lilium pitkinense*. The plant subsequently was treated as a subspecies of *L. pardalinum* (Skinner 1993).

*Lilium pardalinum* ssp. *pitkinense* is an herbaceous, rhizomatous perennial in the lily family (Liliaceae). The slender, erect stems reach 1 to 2 m (3 to 6 ft) in height. Leaves are yellow-green, up to 14 cm (5.5 in.) long, and 1 to 2 cm (0.4 to 0.8 in.) wide. The leaves are generally scattered along the stem, but in some plants occur in 2 or 3 whorls of 3 to 6 leaves near the middle of the stem. The inflorescence is a terminal raceme. The flowers are large, showy, and nodding. The petals, which are reflexed from the middle, are red at the outer edge changing to yellow at the center with small, deep maroon dots mostly within the yellow zone. Anthers are purple-brown. The fruit is an elliptical capsule containing many rounded seeds (CDFG 1993b). The species flowers from June to July. *Lilium pardalinum* ssp. *pitkinense* is distinguished from *L. pardalinum* ssp. *pardalinum* by generally shorter petals and anthers.

*Lilium pardalinum* ssp. *pitkinense* grows only in permanently saturated, sandy soils in freshwater marshes and wet meadows that are 35 to 60 m (115 to 200 ft) in elevation. Only three populations of *L. pardalinum* ssp. *pitkinense* were recorded historically. All the sites are found in Sonoma County on privately owned land. The three populations, located over a distance of 13 km (8 mi), are presumed extant. Since 1975, access to one of the sites has been denied by the landowner (CNPS 1988a). As a result, the status of this population has not been confirmed. Currently, 200 individual plants remain on the two known sites (CDFG 1993b; B. Guggolz, pers. comm. 1993). The extent of the two populations has declined from loss of habitat from urbanization and competition with blackberries (*Rubus* spp.) (CDFG 1993b). Collection of plants, seeds, and bulbs for horticultural use, competition from invasive plant species, potential disturbance from a proposed subdivision, grazing, stochastic events, inadequate regulatory mechanisms, and low plant numbers threaten this species (Lynn Lozier, The Nature Conservancy (TNC), *in litt.* 1990).

Edward L. Greene (1897) first described *Sidalcea oregana* ssp. *valida* in June, 1894, based on material he collected from Knight's Valley, Sonoma County, California. Since then, this taxon has been known as *S. maxima* (Baker), *S. oregana* var. *spicata* (Jepson), *S. eximia* (Baker), and *S. spicata* ssp. *valida* (Wiggins) (CNPS 1988c). Charles Hitchcock (1957) treated the genus *Sidalcea* and recognized four subspecies, including *S. oregana* ssp. *valida*.

*Sidalcea oregana* ssp. *valida* is a perennial herb in the mallow family (Malvaceae). The plants are 1 to 2 m (3 to 6 ft) tall. The leaves are rounded. Lower leaves have 5 to 7 shallow lobes; upper leaves are generally smaller and divided into 3 to 5 entire, lanceolate segments. The compound inflorescence consists of densely flowered, spike-like racemes 2 to 5 cm (0.8 to 2.0 in.) long. Petals are 1.0 to 1.5 cm (0.4 to 0.6 in.) long, notched at the apex, and deep pink-mauve. The flowers appear from late June to September. *Sidalcea oregana* ssp. *valida* differs from *S. oregana* ssp. *eximia* in having a hairless calyx.

*Sidalcea oregana* ssp. *valida* has never been recorded as abundant and only two occurrences, both located on privately owned land, have ever been known. *Sidalcea oregana* ssp. *valida* inhabits freshwater marshes approximately 150 m (490 ft) in elevation, at Kenwood Marsh and Knight's Valley, Sonoma County, California. The two sites are located approximately 29 km (18 mi) apart. The Knight's Valley population covers less than 0.1 ha (0.25 ac). This population was reported to have fewer than 100 plants in 1979 (CDFG 1987) and approximately 60 plants in 1993 (N. Wilcox, State Water Resources Control Board, pers. comm. 1993). The Kenwood Marsh population contained approximately 70 individuals in 1993 (A. Howald, CDFG, pers. comm. 1993). Both populations are adversely affected by trampling and reduced seed set resulting from cattle grazing. Potential alteration of the hydrology of Kenwood Marsh due to urbanization and water withdrawal threatens the species (A. Howald, pers. comm. 1993). The plants may also suffer from competition by common tule (*Scirpus acutus*) and yellow star-thistle (*Centaurea solstitialis*), and from periodic maintenance of the Sonoma Aqueduct located in Kenwood Marsh (A. Howald, pers. comm. 1993). This species is also threatened by stochastic events and inadequate regulatory mechanisms.

Edward L. Greene described *Trifolium amoenum* in 1891 from specimens that he collected near Vanden, Solano County, California, in 1890. Historically, this species has been found in a variety of habitats including low, wet swales, grasslands, and grassy hillsides up to 310 m (1,020 ft) in elevation. This annual plant, which is a member of the pea family (Fabaceae), is hairy, erect, and grows to 1 to 6 dm (4 to 27 in.) in height. The leaves are pinnately compound, widely obovate, and 2 to 3 cm (0.8 to 1.2 in.) long. The flowers, which are purple with white tips, are 12

to 16 mm (0.5 to 0.6 in.) long and occur in dense, round or ovoid heads, 2 to 3 cm (0.8 to 1.2 in.) long. Flowers appear from April to June. *Trifolium amoenum* is similar in appearance to *T. macraei*, but is generally larger and the flowers lack subtending bracts.

In 1993, Peter Connors, Bodega Marine Laboratory, discovered a single *Trifolium amoenum* plant in Sonoma County. The species was previously considered extinct. The land on which this plant was found is privately owned and is currently for sale (P. Connors, Bodega Marine Laboratory, pers. comm. 1994; CNDDDB 1994). This property currently is not being used. If it is sold, it may be converted to residential use, similar to other land parcels surrounding this site (P. Connors, pers. comm. 1994). In 1994, Dr. Connors grew 18 plants in cultivation from seed produced by the single plant found in 1993 (Connors 1994). These plants were grown to produce seed for later reintroduction efforts (P. Connors, pers. comm. 1994). The soil seed bank in the remaining natural habitat within the species' historical range may contain *T. amoenum* seed. Should *T. amoenum* be found in these areas, the species would likely be threatened by urbanization, competition with nonnative plants, land conversion to agriculture, livestock grazing, stochastic events, and inadequate regulatory mechanisms.

#### Previous Federal Action

Federal government actions on these nine species began as a result of section 12 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (Act) 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 *Astragalus clarianus*, *Carex albida*, *Clarkia imbricata*, *Lilium pardalinum* ssp. *pitkinense* (as *L. pitkinense*), *Plagiobothrys strictus*, *Poa napensis*, and *Trifolium amoenum* as endangered and *Sidalcea oregana* ssp. *valida* 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 eight 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. *Astragalus clarianus*, *Carex albida*, *Clarkia imbricata*, *Lilium pardalinum* ssp. *pitkinense*, *Poa napensis*, and *Trifolium amoenum* were included 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 6, 1976, proposal, along with four other proposals that had expired.

The Service published a Notice of Review for plants on December 15, 1980 (45 FR 82480). This notice included *Alopecurus aequalis* var. *sonomensis*, *Astragalus clarianus*, *Carex albida*, *Clarkia imbricata*, *Lilium pardalinum* ssp. *pitkinense*, *Plagiobothrys strictus*, *Poa napensis*, *Sidalcea oregana* ssp. *valida*, and *Trifolium amoenum* as Category 1 candidate species. Category 1 taxa are those for which the Service has on file substantial information on biological vulnerability and threats to support preparation of listing proposals. On November 28, 1983, the Service published a supplement to the Notice of Review in the **Federal Register** (48 FR 53640). This supplement changed *Alopecurus aequalis* var. *sonomensis*, *Astragalus clarianus*, *Plagiobothrys strictus*, *Poa napensis*, *Sidalcea oregana* ssp. *valida*, and *Trifolium amoenum* from Category 1 to Category 2 candidates. Category 2 taxa 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 proposed rules.

The plant notice was revised again on September 27, 1985 (50 FR 39526). The candidate status of eight of the plant species remained unchanged in this notice. *Trifolium amoenum* was included as a Category 2\* candidate, indicating that the Service had evidence that the species might be extinct. Another revision of the plant notice was

published on February 21, 1990 (55 FR 6184). In this revision, *Astragalus clarianus*, *Plagiobothrys strictus*, *Poa napensis*, and *Sidalcea oregana* ssp. *valida* were returned to Category 1 status. The Service made no changes to the status of any of the nine species in the plant notice published on September 30, 1993 (58 FR 51144). The Service approved Category 1 status for *Alopecurus aequalis* var. *sonomensis* on August 26, 1993. However, the status change was inadvertently not published in the plant notice published on September 30, 1993. Since the publication of that notice, additional information has been received on the status of *Trifolium amoenum*, indicating its rediscovery. The Service, therefore, believes that sufficient information is now available to support the listing of these nine species.

Section 4(b)(3)(B) of the Act requires the Secretary to make 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, 1982, be treated as having been newly submitted on that date. This was the case for *Astragalus clarianus*, *Carex albida*, *Clarkia imbricata*, *Lilium pardalinum* ssp. *pitkinense*, *Plagiobothrys strictus*, *Poa napensis*, *Sidalcea oregana* ssp. *valida*, and *Trifolium amoenum* because the 1975 Smithsonian report had been accepted as a petition. The Service found that the petitioned listing of those eight taxa was warranted but precluded by other higher priority listing actions. The finding was reviewed annually in October from 1983 through 1993. Publication of this proposal constitutes the final finding for the petitioned action for these eight species.

#### Summary of Factors Affecting the Species

Section 4 of the Endangered Species Act 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 an 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 *Alopecurus aequalis* Sobol. var. *sonomensis* Rubtzoff (Sonoma alopecurus), *Astragalus clarianus* Jepson (Clara Hunt's milkvetch), *Carex albida* Bailey (white sedge), *Clarkia imbricata* Lewis and Lewis (Vine Hill clarkia), *Lilium pardalinum* Kellogg, ssp. *pitkinense* (Beane and Vollmer) M. Skinner (Pitkin Marsh lily), *Plagiobothrys strictus*

(Greene) I.M. Johnston (Calistoga allocarya), *Poa napensis* Beetle (Napa bluegrass), *Sidalcea oregana* (Nutt.) Gray ssp. *valida* (Greene) C.L. Hitchcock (Kenwood Marsh checkermallow), and *Trifolium amoenum* Greene (showy Indian clover) are as follows:

#### A. The Present or Threatened Destruction, Modification, or Curtailment of Their Habitat or Range

Habitat destruction, including urbanization, land use changes, and alteration in hydrology of springs poses the most serious threat to the survival of most of these nine plant species.

#### Inland Species

*Astragalus clarianus* is known currently from three populations in Napa County and one in Sonoma County (CNDDB 1993, CNPS 1989). The four populations face a variety of threats to their continued existence. Historically, one population in Napa County occupied a larger area but the creation of Lake Hennessey in the 1940s inundated much of the site (Lynn Lozier, pers. comm. 1993). The city of Napa owns the lake and uses Lake Hennessey as a water source for the town. Recently, the city of Napa conducted a feasibility study that considered raising the elevation of the dam as part of a project to increase water storage for the city. Such an elevation change would have raised the lake level, submerging the population of *A. clarianus* (Jake Ruygt, CNPS, *in litt.* 1993). This increased water-storage project at Lake Hennessey has been determined by the city of Napa to be too costly (Don Ridenhour, Public Works Dept., city of Napa, pers. comm. 1993). Any future water storage project that would involve increasing the height of the dam and raising the level of Lake Hennessey would constitute a threat to the population of *A. clarianus* due to its proximity to the lakeshore. In December 1990, this remnant population was nearly destroyed when dredge spoils from the lake were placed on top of it (A. Howald, pers. comm. 1993). Eight plants of *A. clarianus* were counted at this site in 1991, 325 plants in 1992, and 156 plants in 1993 (CDFG 1989; J. Ruygt, *in litt.* 1993). The city of Napa, in cooperation with CDFG, removed most of the dredge spoils and fenced the 1 ha (2 ac) area, placing a gate in the fence for fishing access to the lake. Disturbance associated with dredge spoils removal resulted in proliferation of nonnative weeds that further threaten the site, as discussed below under Factor E. The fenced and gated area remains a favorite fishing access to the lake and receives significant use by the

public (CDFG 1989). The city of Napa has repaired damage to the fence several times (A. Howald, pers. comm. 1993).

Another population of *Astragalus clarianus* exists in Bothe Napa Valley State Park. Plant numbers have ranged from 8 plants in 1988 to 101 plants in 1993 on a 1 ha (2 ac) monitoring site (J. Ruygt, *in litt.* 1993). The larger portion of the population of *A. clarianus* outside of the monitoring zone occurs sparsely on a 6 ha (15 ac) area. This area has been historically protected by placing brush piles next to a foot trail to divert people away from the population (Bill Grummer, Bothe Napa Valley State Park, California Dept. of Parks and Recreation, pers. comm. 1993). Although the general plan for the park indicates a campground to be placed over the larger portion of *A. clarianus*, the Service does not consider this plan as an imminent threat because of lack of funding and possible revisions to the park plan (B. Grummer, pers. comm. 1993). Although the campground development may be relocated away from the population of *A. clarianus*, the Service considers that increased recreational use from an additional campground in this park constitutes a potential threat.

Another population of *Astragalus clarianus* occurs nearer to the city of Santa Rosa in eastern Sonoma County. This population, scattered over 6 ha (15 ac), is on privately owned land under a voluntary protection agreement with TNC. Upslope and adjacent to this population is the 454 ha (1,350 ac) approved subdivision, Saddle Mountain Development. Soil erosion from proposed road and pad construction for house lots potentially threatens this population of *A. clarianus* (J. Ruygt, *in litt.* 1993).

Over 70 percent of the original habitat of *Plagiobothrys strictus* has been destroyed by urbanization and viticulture (CNPS 1990). The two remaining populations of *P. strictus* are threatened by urbanization (CNDDB 1994, CNPS 1990). One population site occurs at the Calistoga Airport. The construction of the airport fragmented and reduced this population to fewer than 100 plants. Further development at this site could potentially threaten this population (J. Ruygt, *in litt.* 1993). Another population of *P. strictus* is scattered over a 4 ha (10 ac) area of private land near Myrtle Dale Hot Springs. This population has been bisected by an asphalt road. The landowner has proposed to build a convalescent community on this site, but has been unsuccessful due to current zoning status (CDFG 1988; J. Ruygt, *in litt.* 1993).

Historically, the habitat of each of the two remaining populations of *Poa napensis* has been reduced by the development of health spas and resorts in the city of Calistoga and other construction activities at the Calistoga Airport (CNPS 1987). The remnant population of *P. napensis* at the Calistoga Airport was thought to be extirpated as a result of construction activities in 1981, because no plants were found that year. By 1987, however, 500 plants were counted at the airport location (CDFG 1979; J. Ruygt, *in litt.* 1993). Because *Poa napensis* and *Plagiobothrys strictus* co-occur at the Calistoga Airport and another site in the city of Calistoga, the threats from urbanization, including construction of a hospital, are similar for both species at these sites (CNPS 1987, 1990; J. Ruygt, *in litt.* 1993).

### Coastal Species

The single known population of *Carex albida* is located approximately 46 m (150 ft) from State Highway 116, which is a potential source of disturbance. Any change in hydrology of the area resulting from highway construction or maintenance or change in land use would adversely affect the population. Draining the wetland would not only directly impact the species, but would encourage the spread of blackberry (*Rubus* spp.). Invading blackberry vines have become dominant in other parts of Pitkin Marsh that have been drained (CNDDDB 1993; B. Guggolz, *in litt.* 1993).

A wastewater treatment project for the cities of Forestville and Graton, Sonoma County, is proposed to be built 0.3 km (0.2 mi) from the single extant population of *Carex albida*. Potential impacts from this project include application of recycled wastewater and temporary or permanent removal of wetlands, riparian vegetation, and special status plants and their habitats (Environmental Science Associates (ESA) 1993). From 1,200 to 4,900 cubic m (1 to 4 ac-ft) of wastewater per year would be applied on approximately 14 to 27 ha (35 to 60 ac) of land. Although the population of *C. albida* would not be directly impacted, the application of this volume of wastewater could result in the alteration of the remaining habitat within the historical range of *C. albida* through modification of surface drainage patterns (ESA 1993). The historical ranges of *Lilium pardalinum* ssp. *pitkinense* and *Alopecurus aequalis* var. *sonomensis* also occur within the project boundaries.

The type locality of *Clarkia imbricata* along the roadside at Pitkin Ranch was extirpated prior to 1974, as a probable result of changes in land use or roadside

maintenance (B. Guggolz, *in litt.* 1993). Another population of *C. imbricata* in Sonoma County has been extirpated as a result of Christmas tree farming and weed control activities (B. Guggolz, *in litt.* 1993). The larger of the two extant populations of *C. imbricata* is threatened by changing land use such as agricultural land conversion (B. Guggolz, *in litt.* 1993).

One population of *Lilium pardalinum* ssp. *pitkinense* was largely destroyed by urbanization in 1961; however, approximately 200 plants remain (CDFG 1993b; B. Guggolz, pers. comm. 1993). Although a subdivision is currently planned for the area surrounding a portion of this population, the landowner has agreed to place the *L. pardalinum* ssp. *pitkinense* habitat area in a conservation easement. The agreement between CDFG and the landowner places all sensitive natural resource areas in a conservation easement for long-term management, with CDFG as easement holder (A. Buckmann, CDFG, *in litt.* 1993). Wetland fills at Pitkin Marsh have lowered the water table and resulted in drier soil conditions, which has negatively affected *L. pardalinum* ssp. *pitkinense*. This change in habitat quality is considered an ongoing threat to the population at Pitkin Marsh, since there are only two plants remaining (CDFG 1993b).

The two populations of *Sidalcea oregana* ssp. *valida* are threatened by permitted and apparently unauthorized water diversions from the unnamed stream that feeds Kenwood Marsh. In the past, unauthorized diversions have removed all water from the stream channel, eliminating one source of surface water to the marsh (A. Howald, pers. comm. 1993). Plant census data from 1991 indicate that the eastern subpopulation in Kenwood Marsh declined by approximately 40 percent and the western subpopulation declined by approximately 30 percent compared to 1989 and 1990 data. These figures suggest that the Kenwood Marsh population may be experiencing a delayed response to a drought. The effects of the drought may be exacerbated by effects of increased surface water diversion and result in a further decline in the population (John Turner, CDFG, *in litt.* 1993).

*Trifolium amoenum* has been extirpated from all of its 24 historical occurrences in 7 counties. Loss of this habitat resulted primarily from urbanization and land conversion to agriculture (Zoe Chandik, CNPS, *in litt.* 1993). The most recently discovered occurrence, found in 1993 in Sonoma County, consisted of one plant located

on privately owned property that is currently for sale (CNDDDB 1994). If this property is developed or altered, it may no longer contain suitable habitat for *T. amoenum*. In addition, the human population of Sonoma County is expected to grow by 21.4 percent by the year 2000 (California Department of Finance 1992), and any remaining *T. amoenum* habitat may be converted to urban use.

### B. Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

One of the two populations of *Lilium pardalinum* ssp. *pitkinense* has been nearly extirpated by uncontrolled collection of plants, seeds, and bulbs for horticultural use. This species was abundant historically at the Pitkin Marsh site, but the removal of plants and bulbs for horticultural use has reduced this population to two plants (CDFG 1993b). Similar activities at the remaining site, containing only 200 plants, would result in the extinction of the species (B. Guggolz, pers. comm. 1993). Of the two remaining populations of *Clarkia imbricata*, one population is found in a preserve owned by the California Native Plant Society (CNPS). Although CNPS has attempted to discourage unauthorized collection by fencing the preserve and by not publicizing the exact location of the site, trespassers have damaged the fence, trampled the vegetation, and collected seed of *C. imbricata* on several occasions (B. Guggolz, *in litt.* 1993). Any occurrences of *Trifolium amoenum* that may be discovered in the future also may attract collectors of plants or seed because the species was previously considered to be extinct. Overutilization is currently not known to be a factor for the remaining six species, but unrestricted collecting for scientific or horticultural purposes or excessive visits by individuals interested in seeing rare plants could result from increased publicity as a result of this proposal.

### C. Disease or Predation

All five populations of *Alopecurus aequalis* var. *sonomensis* are grazed by cattle (CNDDDB 1993), but only two populations in Sonoma County, containing a total of 50 plants, are currently threatened by cattle grazing (CNDDDB 1993). One population on the Point Reyes National Seashore was fenced in 1987 to stop cattle from overgrazing (V. Norris, *in litt.* 1993). The species presently consists of only 200 known plants.

*Carex albida* is currently not grazed, although cattle graze other portions of the parcel on which the species is



located. A change in management of the site to allow grazing near *C. albida* may adversely affect the species (B. Guggolz, *in litt.* 1993). The associated trampling and disturbance of the wet soils would also be detrimental to the species (J. Mastrogioseppe, Washington State Univ., pers. comm. 1993).

*Sidalcea oregana* ssp. *valida* is adversely affected at both of its locations by trampling and reduced seed set resulting from cattle grazing (CNDDDB 1993). *Lilium pardalinum* ssp. *pitkinense* has been enclosed with 2 m (6 ft) high wire fencing at both locations to prevent grazing by cattle, horses, and deer. In spite of this effort, the plants continue to suffer herbivory resulting in loss of flowers and seeds (L. Lozier, *in litt.* 1990).

*Trifolium amoenum* may have disappeared from some of its former locations due to grazing (Connors 1994). This species is a large clover that blooms when many grassland plants have already turned brown, likely making it attractive to grazing herbivores. Most recent sightings of the plant were located outside of fences along roadsides, suggesting that the species survived for a period where it was protected from grazing (Connors 1994). Although no naturally occurring populations of this species are currently known, any populations that are subsequently discovered on pasture land may be subject to the same grazing pressure as historical populations.

#### D. The Inadequacy of Existing Regulatory Mechanisms

The California Fish and Game Commission has listed *Carex albida*, *Clarkia imbricata*, *Lilium pardalinum* ssp. *pitkinense*, *Poa napensis*, and *Sidalcea oregana* ssp. *valida* as endangered species under the California Endangered Species Act (Division 3, Chapter 1.5 section 2050 et seq. of the California Fish and Game Code and Title 14 California Code of Regulations 670.2). The California Fish and Game Commission has also listed *Astragalus clarianus* and *Plagiobothrys strictus* as threatened species. Listing by the State of California requires individuals to obtain a memorandum of understanding with CDFG to possess or "take" a listed species. Although the "take" of State-listed plants is prohibited (California Native Plant Protection Act, Division 2, Chapter 10, section 1908 and California Endangered Species Act, Division 3, Chapter 1.5, section 2080), 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 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, Division 2, Chapter 10, section 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 State 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 that cause significant environmental damage, such as destruction of endangered species. Protection of listed species through CEQA is, therefore, dependent upon the discretion of the agency involved.

Hot spring areas and perennial freshwater emergent marshes are generally small and scattered, and treated as isolated wetlands or waters of the United States for regulatory purposes by the U.S. Army Corps of Engineers (Corps) under section 404 of the Clean Water Act. However, this law by itself does not protect *Alopecurus aequalis* var. *sonomensis*, *Carex albida*, *Lilium pardalinum* ssp. *pitkinense*, *Poa napensis*, *Plagiobothrys strictus*, *Sidalcea oregana* ssp. *valida*, and *Trifolium amoenum*. Nationwide Permit No. 26 (33 CFR part 330 Appendix B (26)) was established by the Corps to facilitate issuance of permits for discharge of fill into wetlands up to 4 ha (10 ac). For project proposals falling under Nationwide Permit 26, the Corps has been reluctant to withhold authorization unless a listed threatened or endangered species is known to be present, regardless of the significance of other wetland resources. Section 404 regulations require an applicant to obtain an individual permit to fill isolated wetlands or waters greater than 4 ha (10 ac). In either case, candidate species receive no special consideration.

Additionally and equally important, the upland watersheds that contribute significantly to the hydrology of marshes are not provided any direct protection under section 404.

Disturbance to or loss of seep or marsh habitat and alteration of hydrology have damaged populations and habitat as discussed previously under Factor A. Reductions in water volume or inundation of the sites have the potential to adversely affect the seven plant taxa listed above. Thus, as a consequence of the small size of these marsh, meadow, and hot spring areas and lack of protection of associated uplands, these types of habitats receive insufficient protection under section 404 of the Clean Water Act.

The Sonoma County Department of Planning has designated Pitkin, Cunningham, and Kenwood Marshes as "critical habitat" (Sonoma County 1989). The streams within these marshes are designated as "riparian corridors." It is not likely that these designations will adequately protect the species involved. County policies for "critical habitat" designation include 15 m (50 ft) setbacks of construction from wetland boundaries and preparation of biotic resource assessments for development of mitigation measures, if the planning director determines that a "critical habitat" area will be impacted (Sonoma County 1989). A setback may be waived, however, if the setback is determined to make the parcel unsuitable for construction. The single population of *Carex albida* and the larger population of *Lilium pardalinum* ssp. *pitkinense* occur within 15 m (50 ft) of streams in Sonoma County (CNDDDB 1993). The Sonoma County policy for "riparian corridors" allows the removal of riparian vegetation as part of a pest management program administered by the County Agricultural Commissioner, as well as construction of roads and summer dams (Sonoma County 1989). In addition, agricultural projects that may involve removal of native vegetation, including the proposed species or alteration of their habitats, are considered in Sonoma County to be "ministerial" (K. Ellison, Sonoma County Department of Planning, pers. comm. 1993). Ministerial projects are those projects that the public agency must approve after the applicant shows compliance with certain legal requirements. They may be approved or carried out without undertaking CEQA review.

Only a few measures have been taken to protect some of the species in this proposed rule. In 1989, the landowners of the two confirmed populations of *Lilium pardalinum* ssp. *pitkinense*



entered into voluntary protection agreements with TNC (CDFG 1993b). Since that time, TNC and the California Conservation Corps have jointly built and maintained cattle exclosures in an attempt to protect the plants at both sites. Some plants, however, continue to suffer herbivory from livestock and wildlife, resulting in loss of flowers and seeds (L. Lozier, *in litt.* 1990). A Memorandum of Understanding is currently in effect between CDFG and the Berry Botanic Garden, Portland, Oregon, for research on germination and recovery of this species (CDFG 1993b). Additionally, TNC obtained a voluntary agreement in 1990 with private landowners to protect one population of *Astragalus clarianus*. CDFG is proposing to purchase approximately 37 ha (90 ac) of the Kenwood Marsh as an ecological preserve (A. Howald, pers. comm. 1993). The date for acquisition of the preserve, however, is dependent on cooperation with the current landowners. The owner of one parcel, which contains approximately one half of the Kenwood population, has declined to sell her property to the State (N. Wilcox, pers. comm. 1994). Purchase of the land as a preserve would prevent grazing on the site and would allow direct management of the plant population with possible opportunities to expand the population (A. Howald, pers. comm. 1993). The preserve would be comprised of only a small portion of the watershed, however, limiting the protection that the preserve could afford to the hydrology of the marsh (N. Wilcox, pers. comm. 1994). TNC also has entered into a verbal conservation agreement with a landowner for the protection of one of the two populations of *Clarkia imbricata*. However, this larger population of *C. imbricata* was mowed before seed set in 1989 and 1991, reducing the seed production and number of plants in the years following mowing (B. Guggolz, *in litt.* 1993).

Seed from cultivated *Trifolium amoenum* plants is currently being collected for future reintroduction efforts (P. Conners, pers. comm. 1994). In addition, half of the seed that was recovered from the single plant in 1993 was deposited for long-term storage at the U.S. Department of Agriculture National Seed Storage Laboratory in Fort Collins, Colorado (Conners 1994).

Although Point Reyes National Seashore (Seashore) is part of the National Park system, 17 cattle and dairy ranches are contained within the Seashore boundaries. Grazing and ranching, which have occurred on the peninsula for more than a century, have been determined to be "consistent with the purpose for which the Seashore was

authorized" (Clark and Fellers 1987). Fowler and Fellers (1985) state that grazing has been a serious threat to *Alopecurus aequalis* var. *sonomensis* occurrences located on the Seashore.

#### *E. Other Natural or Manmade Factors Affecting Their Continued Existence*

*Alopecurus aequalis* var. *sonomensis* suffers from competition from aggressive emergent wetland species, including rushes (*Juncus* spp.) and sedges (*Cyperus* spp.) at one location. These wetland plants have nearly extirpated *A. aequalis* var. *sonomensis* from that site (V. Norris, *in litt.* 1993; CNDDDB 1993). Additionally, *A. aequalis* var. *sonomensis* is not readily propagated. Two attempts to reintroduce the species from seed to suitable habitat within its range have failed. Naturally occurring floods also may be an ongoing threat. One reintroduction failed due to a flash flood in 1993 (V. Norris, pers. comm. 1993).

The population of *Astragalus clarianus* located on the north shore of Lake Hennessey has an infestation of an aggressive and dominating nonnative weed, yellow star-thistle (*Centaurea solstitialis*). This nonnative weed infestation was a direct result of ground disturbance associated with the removal of dredge spoils that were placed on top of this population as discussed under Factor A (A. Howald, pers. comm. 1993). Competition from this nonnative annual weed is also considered a threat to the population of *A. clarianus* at the Bothe Napa Valley State Park (J. Ruygt, *in litt.* 1993). A proposed application to build two small agricultural water storage reservoirs along a creek in Napa County would avoid direct impacts to another population of *A. clarianus*, but ground disturbance would most likely introduce this same nonnative aggressive weed (A. Howald, pers. comm. 1993). Establishment of yellow star-thistle from this proposed activity is considered a threat to this population.

Plant succession may be excluding or reducing the population of *Astragalus clarianus* at one site (J. Ruygt, *in litt.* 1993) where *A. clarianus* grows sparingly in the interspaces of the developing manzanita plant community. As new manzanita seedlings emerge and grow and the existing plants grow larger, less and less interspace between plants is available for *A. clarianus*. Fire suppression has reduced fire occurrences in the manzanita community. Periodic fire is needed to reduce manzanita cover and create interspaces for this plant. This species, therefore, is vulnerable to habitat loss from advancing plant succession. Another population of *A. clarianus* is

threatened by competition from French broom (*Genista monosperma*), a nonnative aggressive shrub (CNDDDB 1993).

The potential for loss of the Kenwood Marsh population of *Sidalcea oregana* ssp. *valida* from stochastic events, because of the small population size, is exacerbated by drought and water diversions. In addition, this population is being encroached upon by aggressive weeds, including yellow star-thistle and blackberry (*Rubus* spp.) (A. Howald, pers. comm. 1993). One of the Kenwood Marsh subpopulations was driven over by Sonoma County personnel during maintenance of the Sonoma Aqueduct, which passes through Kenwood Marsh. The maintenance activity occurred late in the season when the soil was relatively dry, resulting in minimal damage to the plants. If maintenance activities occur during a time when the soil is saturated, they pose a threat to the plants (A. Howald, pers. comm. 1993).

Because it is unlikely that *Lilium pardalinum* ssp. *pitkinense* is self-pollinating, single plants or widely separated plants in sparse populations may not set viable seed (Mark Skinner, CNPS, pers. comm. 1993). The two remaining plants at Pitkin Marsh are monitored closely by CNPS volunteers and have not been observed to have set seed for several years (M. Skinner, pers. comm. 1993). Much of Pitkin Marsh has been invaded by blackberry vines that compete with *L. pardalinum* ssp. *pitkinense* for space, light, and nutrients (CDFG 1993b).

Grass mowing, vehicle traffic, and parking have impacted and continue to threaten one population of *Poa napensis* at the Calistoga Airport site (CNPS 1990; Robert Soreng, Cornell Univ., *in litt.* 1993). Grass mowing is done at regular intervals through the spring and summer growing season to reduce fire and aircraft safety hazards. The airport is used by a spray plane service, recreational gliders, and associated tow planes. The service vehicles for the planes and private vehicle traffic of the customers impact this population of *P. napensis*, especially during the spring and summer when airport use increases.

The extirpation of all historical populations of *Trifolium amoenum* may have partially been a result of competition with weedy, nonnative plant species. A recent germination study of other *Trifolium* species from historical *T. amoenum* habitat in Sonoma County suggested that some annual *Trifolium* species germinate in late November, well after many introduced species, including redstem storkbill (*Erodium cicutarium*), ripgut

brome (*Bromus diandrus*), and California burclover (*Medicago polymorpha*) (Connors 1994). By germinating and growing earlier, it is likely that nonnative species have reduced the numbers of *T. amoenum* plants by occupying available space (Connors 1994).

Small numbers of populations and small population size threaten most of the plants proposed herein. There are 5 populations of *Alopecurus aequalis* var. *sonomensis* with a total of 200 plants. There are 2 populations of *Lilium pardalinum* ssp. *pitkinense* with a total of 200 plants. There are 2 populations of *Sidalcea oregana* ssp. *valida* with fewer than 100 plants. These three species may be subject to increased genetic drift and inbreeding as a consequence of their small population sizes (Menges 1991, Ellstrand and Elam 1993). The increased homozygosity results in a loss of genetic fitness (Ellstrand and Elam 1993). The reduction in genetic fitness affords less chance of any species to successfully adapt to any environmental changes. The very small numbers make them extremely vulnerable to extirpation from stochastic events.

In addition to the 3 species listed above, there are only 4 populations of *Astragalus clarianus* with fewer than 2,000 plants; 1 population of *Carex albida* with 800 to 1,000 plants; 2 populations of *Clarkia imbricata* with fewer than 6,000 plants; 3 populations of *Plagiobothrys strictus* with fewer than 10,000 plants; and 3 populations of *Poa napensis* with fewer than 1,000 plants. Fewer than 18 *Trifolium amoenum* plants exist in cultivation. The combination of a few small populations, very narrow range, and restricted habitat makes these nine species susceptible to destruction of all or a significant portion of any population from random natural events, such as flood, drought, disease, or other natural occurrences (Shaffer 1981, Primack 1993). Such events are not usually a concern until the number of individuals or geographic distribution become as limited as is the case with the species discussed herein. Once a plant population is reduced due to habitat destruction and fragmentation, the remnant population has a higher probability of extinction from random events. Thus, all nine taxa are threatened by potential loss of genetic fitness associated with their small populations or damage and destruction by random natural events across the entire range of each taxon.

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. Cattle grazing or competition with aggressive plant species threatens 3 of the 5 remaining populations of *Alopecurus aequalis* var. *sonomensis*, totalling approximately 200 plants. Efforts to reintroduce this species to sites within its range have failed. *Alopecurus aequalis* var. *sonomensis* is susceptible to extinction due to small numbers of populations and individuals and is threatened by inadequate regulatory mechanisms. If combined, all four populations of *Astragalus clarianus* could fit into a 0.5 ha (1 ac) area and are threatened variously by a potential water storage project, a potential subdivision, competition from nonnative plant species, recreational activities, airport maintenance, inadequate regulatory mechanisms, stochastic events, and elimination through plant community succession. The single *Carex albida* population, totaling approximately 800 to 1,000 plants, is located 46 m (150 ft) from a State highway and is threatened by potential changes in the site's hydrology resulting from wetland drainage or fill, competition from aggressive plant species, changes in land management by the owner, highway construction or maintenance, potential disturbance from a proposed wastewater treatment project, inadequate regulatory mechanisms, and stochastic events. The two remaining populations of *Clarkia imbricata* are threatened by changing land use, unauthorized collection, inadequate regulatory mechanisms, and stochastic events. The 2 remaining populations of *Lilium pardalinum* ssp. *pitkinense*, totalling approximately 200 plants, suffer from uncontrolled collection of plants, seeds, and bulbs for horticultural use, and by grazing. One population is potentially threatened by a proposed wastewater treatment project; the other population is potentially threatened by a proposed subdivision. *Lilium pardalinum* ssp. *pitkinense* also is threatened by nature of its small populations, stochastic events, and inadequate regulatory mechanisms. If combined, the remaining populations of *Plagiobothrys strictus* and *Poa napensis* would occupy an area of less than 0.5 ha (1 ac) each and are surrounded by hot springs resorts or housing. *Plagiobothrys strictus* and *Poa napensis* co-occur at two sites and both species are threatened by airport activities, including traffic and vehicle parking on the plants, grass mowing, and potential development of remnant habitat, including the construction of a hospital at this site. Additionally, all populations of the two

species are threatened by potential alteration of hot springs hydrology, stochastic events, and inadequate regulatory mechanisms. The two populations of *Sidalcea oregana* ssp. *valida* are threatened by trampling and reduced seed set resulting from cattle grazing, aqueduct maintenance, competition from nonnative plant species, potential loss of normal hydrology from urbanization, inadequate regulatory mechanisms, and stochastic events and reduced genetic fitness because of the small number of individuals and populations.

*Trifolium amoenum* has been extirpated from all 24 historical occurrences in 7 counties; the species currently exists as 18 plants in cultivation. This species is threatened by stochastic events due to the small number of plants, competition with aggressive plant species, loss of habitat from urbanization, livestock grazing, and inadequate regulatory mechanisms.

These nine species are imminently threatened by extinction throughout all or a significant portion of their range by the factors summarized above and therefore meet the definition of endangered in the Act. Based on this evaluation, the preferred action is to list *Alopecurus aequalis* var. *sonomensis*, *Astragalus clarianus*, *Carex albida*, *Clarkia imbricata*, *Lilium pardalinum* ssp. *pitkinense*, *Plagiobothrys strictus*, *Poa napensis*, *Sidalcea oregana* ssp. *valida*, and *Trifolium amoenum* as endangered.

#### 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 a 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, as amended, and implementing regulations (50 CFR 424.12) require that, to the maximum extent prudent and determinable, the Secretary designate critical habitat at the time the species is determined to be endangered or threatened. The Service finds that designation of critical habitat is not

prudent for these nine plant taxa 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.

As required for proposals to designate critical habitat, the publication of maps and the precise locations of involved plant populations could contribute to the further decline of the nine taxa proposed herein and increase enforcement problems, particularly in the case of *Lilium pardalinum* ssp. *pitkinense*. This taxon, which is threatened primarily by uncontrolled collection for horticultural use, is especially at risk from additional publicity. Two of the three privately owned populations of *Alopecurus aequalis* var. *sonomensis* are found in close proximity to *L. pardalinum* ssp. *pitkinense*. Although *A. aequalis* var. *sonomensis* is not collected for horticultural use, any increase in publicity of *A. aequalis* var. *sonomensis* could lead to collection or destruction of that species, as well as increased collection of *L. pardalinum* ssp. *pitkinense*. One of the two populations of *Clarkia imbricata* in a preserve owned by the California Native Plant Society has experienced unauthorized collection, despite a deliberate decision not to publicize the preserve's exact location. Thus, the Service finds that designation of critical habitat for *Alopecurus aequalis* var. *sonomensis*, *Clarkia imbricata*, and *Lilium pardalinum* ssp. *pitkinense* is not prudent because of potential vandalism and uncontrolled collection for horticultural use. No *Trifolium amoenum* plants are currently known to exist in the wild, but designation of critical habitat could encourage vandalism and preclude recovery efforts for the species.

The single *Carex albida* population and a portion of one of the two populations of *Sidalcea oregana* ssp. *valida* are adjacent to State highways. Any specific locality information could subject these species to activities that would jeopardize their survival. Thus, the Service finds that designation of critical habitat is not prudent for *Carex albida* and *Sidalcea oregana* ssp. *valida* because of potential vandalism.

Because *Astragalus clarianus*, *Plagiobothrys strictus*, and *Poa napensis* have very specific known habitat requirements and occur at very few

locations in or near cities, any activity that would adversely modify habitat or destroy plants would likely jeopardize the continued existence of each of these species. Therefore, the Service finds that designation of critical habitat is not prudent for *Astragalus clarianus*, *Plagiobothrys strictus*, and *Poa napensis* because it would not provide additional benefit beyond that provided by listing for the conservation of the species.

Additionally, publicity that might result in public trespass on privately owned sites by individuals seeking the plants could reduce the landowners' willingness to cooperate with public or private agencies in their protection efforts for the involved taxa (B. Guggolz, pers. comm. 1993). Designation would provide no additional benefit to any of these nine species beyond the benefit received by virtue of their designation as endangered species. Protection of these nine species will be addressed through the recovery process and through the section 7 consultation process.

#### Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Endangered Species Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing 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, as amended, 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 species proposed for listing 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 ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of the species or

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.

All nine plant species may be affected by Federal mortgage programs, including those managed by the Veterans Administration and the U.S. Department of Housing and Urban Development (Federal Home Administration loans). Since six of the nine taxa proposed herein exist in or near marshes, meadows, perennial streams, or thermal hot springs, the Corps may become involved in regulating fill of these wetland areas through jurisdiction of section 404 of the Clean Water Act (33 U.S.C. 1344 *et seq.*). The plants may also be affected by road and highway construction by the Federal Highway Administration. The National Park Service may become involved through section 7 consultation because of potential grazing impacts to *Alopecurus aequalis* var. *sonomensis* at Point Reyes National Seashore (Seashore). The Seashore has twice attempted to reintroduce *A. aequalis* var. *sonomensis* using seed collected within the Seashore. In 1987, the Seashore erected a cattle enclosure fence to protect this species from grazing (V. Norris, *in litt.* 1993).

Listing *Alopecurus aequalis* var. *sonomensis*, *Astragalus clarianus*, *Carex albida*, *Clarkia imbricata*, *Lilium pardalinum* ssp. *pitkinense*, *Plagiobothrys strictus*, *Poa napensis*, *Sidalcea oregana* ssp. *valida*, and *Trifolium amoenum* would provide for development of a recovery plan (or plans) for them. Such plan(s) would bring together both State and Federal efforts for conservation of the plants. The 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 the nine plant species. Additionally, pursuant to section 6 of the Act, the Service would be more likely to grant funds to affected states for management actions promoting the protection and recovery of these species.

The Act and its implementing regulations set forth a series of general prohibitions and exceptions that apply to all endangered plants. All prohibitions of section 9(a)(2) of the Act, implemented by 50 CFR 17.61, 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 up, or damaging or destroying of such plant species in knowing violation of any State law or regulation, including State criminal trespass law. Certain exceptions to the prohibitions apply to agents of the Service and State conservation agencies.

The Act and 50 CFR 17.62 and 17.63 also provide for the issuance of permits to carry out otherwise prohibited activities involving endangered plant species under certain circumstances. Such permits are available for scientific purposes and to enhance the propagation or survival of the species. The Service anticipates that few permits would ever be sought or issued for eight of the species because they are not common in cultivation or in the wild. *Lilium pardalinum* ssp. *pitkinense*, however, is collected for horticultural use.

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 of the nine plant species on proposed and ongoing activities within the species' range. The Service believes that activities such as landscape maintenance, clearing vegetation for firebreaks, and livestock grazing on privately owned lands, not under Federal funding or authorization, would not be considered a violation of section 9 of the Act. Questions regarding whether specific activities would constitute a violation of section 9 should be directed to the Field Supervisor of the Service's Sacramento

Field Office (see **ADDRESSES** section). 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, Ecological Services, Endangered Species Permits, 911 NE 11th Ave., Portland, Oregon 97232-4181 (phone 503/231-2063, facsimile 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 *Alopecurus aequalis* var. *sonomensis*, *Astragalus clarianus*, *Carex albida*, *Clarkia imbricata*, *Lilium pardalinum* ssp. *pitkinense*, *Plagiobothrys strictus*, *Poa napensis*, *Sidalcea oregana* ssp. *valida*, and *Trifolium amoenum*;

(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 pursuant to 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.

Final promulgation of regulations on these species 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 one or more public hearings on this proposal, if requested. Requests must be received by September 25, 1995. Such requests must be made in writing and addressed to the Field Supervisor, Sacramento Field Office (see **ADDRESSES** section).

**National Environmental Policy Act**

The Fish and Wildlife Service has determined that Environmental Impact Assessments and Environmental Impact Statements, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act of 1973, as amended. 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 herein is available upon request from the Field Supervisor, Sacramento Field Office (see **ADDRESSES** section).

**Authors**

The primary authors of this proposed rule are Elizabeth Warne and Kenneth Fuller, Sacramento Field Office (see **ADDRESSES** section).

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

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

**Proposed Regulation Promulgation**

Accordingly, the Service hereby proposes 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; 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 name	Status	When listed	Critical habitat	Special rules
Scientific name	Common name						
FLOWERING PLANTS							
<i>Alopecurus aequalis</i> var. <i>sonomensis</i> .	Sonoma alopecurus	U.S.A. (CA) .....	Poaceae .....	E	.....	NA	NA

Species		Historic range	Family name	Status	When listed	Critical habitat	Special rules
Scientific name	Common name						
<i>Astragalus clarianus</i>	Clara Hunt's milkvetch.	U.S.A. (CA)	Fabaceae	E		NA	NA
<i>Carex albida</i>	White sedge	U.S.A. (CA)	Cyperaceae	E		NA	NA
<i>Clarkia imbricata</i>	Vine Hill clarkia	U.S.A. (CA)	Onagraceae	E		NA	NA
<i>Lilium pardalinum</i> ssp. <i>pitkinense</i>	Pitkin Marsh lily	U.S.A. (CA)	Liliaceae	E		NA	NA
<i>Plagiobothrys strictus</i>	Calistoga allocarya	U.S.A. (CA)	Boraginaceae	E		NA	NA
<i>Poa napensis</i>	Napa bluegrass	U.S.A. (CA)	Poaceae	E		NA	NA
<i>Sidalcea oregana</i> ssp. <i>valida</i>	Kenwood Marsh checkermallow.	U.S.A. (CA)	Malvaceae	E		NA	NA
<i>Trifolium amoenum</i>	Showy Indian clover	U.S.A. (CA)	Fabaceae	E		NA	NA

Dated: July 5, 1995.

**Mollie H. Beattie,**

Director, Fish and Wildlife Service.

[FR Doc. 95-18812 Filed 8-1-95; 8:45 am]

BILLING CODE 4310-55-P

**50 CFR Part 17**

[RIN 1018-AD09]

**Endangered and Threatened Wildlife and Plants; Proposed Rule to Determine Five Plants and a Lizard from Monterey County, California, as Endangered or Threatened**

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 and a reptile: *Astragalus tener* var. *titi* (coastal dunes milk-vetch), *Piperia yadonii* (Yadon's piperia), *Potentilla hickmanii* (Hickmann's potentilla), *Trifolium trichocalyx* (Monterey clover) and the black legless lizard (*Anniella pulchra nigra*); and

threatened status for *Cupressus goveniana* ssp. *goveniana* (Gowen cypress). The six taxa are found primarily along the coast of northern Monterey County, California. The five plant taxa and the lizard are threatened by one or more of the following: alteration, destruction, and fragmentation of habitat resulting from urban and golf course development; recreational activities; highway widening; military activities; competition with non-native species; and alteration of natural fire cycles. All taxa are also threatened with stochastic extinction due to the small numbers of populations or individuals. This proposed rule, if made final, would extend the Act's protection to these taxa.

**DATES:** Comments from all interested parties must be received by October 9, 1995. Public hearing requests must be received by September 25, 1995.

**ADDRESSES:** Comments and materials concerning this proposal should be sent to the Field Supervisor, Ventura Field Office, U.S. Fish and Wildlife Service, 2493 Portola Road, Suite B, Ventura,

California, 93003. Comments and materials received will be available for public inspection, by appointment, during normal business hours at the above address.

**FOR FURTHER INFORMATION CONTACT:** Carl Benz, Assistant Field Supervisor, Ventura Field Office (see ADDRESSES section) (telephone number 805/644-1766; facsimile 805/644-3958).

**SUPPLEMENTARY INFORMATION:**

**Background**

The Monterey Peninsula on the central California coast has been noted for a high degree of species endemism (Axelrod 1982, Howitt 1972, Raven and Axelrod 1978). Species with more northern affinities reach their southern limits on the Peninsula; species with more southern affinities reach their northern limits here as well (Howitt and Howell 1964). The Monterey Peninsula is influenced by a maritime climate that is even more pronounced due to the upwelling of cool water from the Monterey submarine canyon. Rainfall amounts to only 38 to 51 centimeters (cm) (15 to 20 inches) per year, but summer fog-drip is a primary source of