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.

Šidalcea 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; CNDDB 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