a *dependent child*), and, in the case of a child applying for or in receipt of pension in his or her own behalf (hereinafter in this section referred to as a *surviving child*), of any person with whom such child is residing who is legally responsible for such child's support.

(b) *Obligation to report changes in factors affecting entitlement.* Any individual who has applied for or receives pension must promptly notify the Secretary in writing of any change affecting entitlement in any of the following:

(1) Income;

(2) Net worth or corpus of estate;

(3) Marital status;

(4) Nursing home patient status;

(5) School enrollment status of a child 18 years of age or older; or

(6) Any other factor that affects entitlement to benefits under the provisions of this part.

(c) *Eligibility verification reports.* (1) For purposes of this section the term eligibility verification report means a form prescribed by the Secretary that is used to request income, net worth, dependency status, and any other information necessary to determine or verify entitlement to pension.

(2) The Secretary shall require an eligibility verification report under the following circumstances:

(i) If the Social Security Administration has not verified the beneficiary's Social Security number and, if the beneficiary is married, his or her spouse's Social Security number;

(ii) If there is reason to believe that the beneficiary or his or her spouse may have received income other than Social Security during the current or previous calendar year; or

(iii) If the Secretary determines that an eligibility verification report is necessary to preserve program integrity.

(3) An individual who applies for or receives pension as defined in § 3.3 of this part shall, as a condition of receipt or continued receipt of benefits, furnish the Department of Veterans Affairs an eligibility verification report upon request,

(d) If VA requests that a claimant or beneficiary submit an eligibility verification report but he or she fails to do so within 60 days of the date of the VA request, the Secretary shall suspend the award or disallow the claim.

(Authority: 38 U.S.C. 1506)

[FR Doc. 98–26781 Filed 10–5–98; 8:45 am]

BILLING CODE 8320–01–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[ME014–6994c; A–1–FRL–6172–8]

Approval and Promulgation of Air Quality Implementation Plans; Maine; Source Surveillance Regulation

AGENCY: Environmental Protection Agency (EPA).

ACTION: Withdrawal of direct final rule.

SUMMARY: On August 11, 1998, the EPA published a proposed rule (63 FR 42784) and a direct final rule (63 FR 42726) approving Maine's Chapter 117 ''Source Surveillance Regulation.'' The EPA is withdrawing this final rule due to adverse comments and will summarize and address the comments received in a subsequent final rule (based upon the proposed rule cited above).

DATES: This withdrawal of the direct final rule will be effective October 6, 1998.

ADDRESSES: Copies of the documents relevant to this action are available for public inspection during normal business hours, by appointment at the Office of Ecosystem Protection, U.S. Environmental Protection Agency, Region I, One Congress Street, 11th floor, Boston, MA and the Bureau of Air Quality Control, Department of Environmental Protection, 71 Hospital Street, Augusta, ME 04333.

FOR FURTHER INFORMATION CONTACT: Anne E. Arnold, (617) 565–3166.

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Nitrogen dioxide, Ozone, Particulate matter, Reporting and recordkeeping requirements, Sulfur oxides.

Authority: 42 U.S.C. 7401 *et seq.*.

Dated: September 28, 1998.

John P. DeVillars,

Regional Administrator, Region I.

[FR Doc. 98–26789 Filed 10–5–98; 8:45 am]

BILLING CODE 6560–50–P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018–AB75

Endangered and Threatened Wildlife and Plants; Determination of Endangered or Threatened Status for Five Desert Milk-vetch Taxa From California

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The U.S. Fish and Wildlife Service (Service) determines endangered status pursuant to the Endangered Species Act of 1973, as amended, (Act) for three plants—*Astragalus jaegerianus* (Lane Mountain milk-vetch), *Astragalus lentiginosus* var. *coachellae* (Coachella Valley milk-vetch), and *Astragalus tricarinatus* (triple-ribbed milk-vetch); and threatened status for two plants, *Astragalus lentiginosus* var. *piscinensis* (Fish Slough milk-vetch), and *Astragalus magdalenae* var. *peirsonii (Peirson's milk-vetch).* Many taxa in the genus *Astragalus*, including the taxa covered by this rule, are endemic to habitats with specific substrate or hydrologic conditions and are, therefore, naturally limited in distribution by the availability of habitat. The five taxa in this rule occur in specific habitats within the three deserts of California; the Sonoran, Mojave, and Great Basin deserts. *Astragalus jaegerianus* occurs in granitic soils in San Bernardino County; *A. lentiginosus* var. *coachellae* occurs in the dune system of the Coachella Valley in Riverside County; *A. lentiginosus* var. *piscinensis* grows in moist alkaline flats near the border of Inyo and Mono counties; *A. tricarinatus* occurs in canyon slopes and washes in Riverside and San Bernardino counties and *A. magdalenae* var. *peirsonii* occurs primarily on dunes in Imperial County.

These five plant taxa are threatened by one or more of the following—mining, urban development, off-highway vehicle (OHV) use and recreational development, pipeline maintenance, alteration of a wetland ecosystem, and low recruitment possibly due to rabbit herbivory or altered soil hydrology following fishery enhancement activities. Military training, and cattle grazing are potential threats. Two of the taxa are known from fewer than 200 individuals during the last decade. They are vulnerable to extinction from random natural events

or unplanned activities that can destroy a substantial portion of remaining individuals. This rule implements the protection and recovery provisions afforded by the Act for these plants.

DATES: This rule is effective on November 5, 1998.

ADDRESSES: The complete file for this rule is available for inspection, by appointment, during normal business hours at the U.S. Fish and Wildlife Service, Ventura Field Office, 2493 Portola Road, Suite B, Ventura, California, 93003.

FOR FURTHER INFORMATION CONTACT: Diane Steeck, Botanist, at the above address (telephone 805/644–1766).

SUPPLEMENTARY INFORMATION:

Background

The genus *Astragalus*, in the pea family (Fabaceae), is well represented in North America with close to 400 species. In California, the genus is highly diversified in the deserts and surrounding desert ranges. *Astragalus jaegerianus* (Lane Mountain milk-vetch), *Astragalus lentiginosus* var. *coachellae* (Coachella Valley milk-vetch), *Astragalus lentiginosus* var. *piscinensis* (Fish Slough milk-vetch), *Astragalus magdalenae* var. *peirsonii* (Peirson's milk-vetch), and *Astragalus tricarinatus* (triple-ribbed milk-vetch) are adapted to habitats with specific substrate or hydrologic conditions in the three deserts that occur in California. The southernmost desert, the Sonoran (or Colorado) Desert, includes the southeastern corner of California and the Coachella Valley, and extends southward into Mexico. The Sonoran Desert occurs at elevations primarily below 600 meters (m) (2,000 feet (ft)), where a diverse mixture of cacti and succulent plants comprise a significant component of the vegetation. To the north of the Sonoran Desert lies the Mojave Desert, with a transitional zone between these deserts occurring within the bounds of Joshua Tree National Park. The Mojave Desert, at elevations primarily between 600 and 1,200 m (2,000 and 4,000 ft), is characterized by the presence of Joshua trees (*Yucca brevifolia*) scattered within creosote bush (*Larrea tridentata*) scrub. The Great Basin Desert covers most of Nevada as well as portions of Utah, Idaho, and Oregon. In California, the Great Basin Desert extends from the Oregon border southward along the east side of the Sierra Nevada range, where it intergrades with the Mojave Desert in southern Owens Valley. The Great Basin Desert, at elevations above 1,200 m (4,000 ft), is characterized by the dominance of sagebrush (*Artemisia* spp.). Descriptions of Mojave and Sonoran Desert plant communities can be found in Rowlands et al. (1982), Thorne (1982), Thorne (1986), Vasek and Barbour (1988), and Burk (1988). The sagebrush-dominated communities of the Great Basin Desert are described by Young *et al.* (1986) and Holland and Keil (1990).

Discussion of the Five Taxa

Astragalus jaegerianus (Lane Mountain milk-vetch) was described by Philip A. Munz (1941) based on a specimen he collected ''. * * * 2 miles south of Jay Mine, about 12 miles south of Goldstone * * *'' in San Bernardino County, in April 1941. This species has been consistently recognized by botanists in floristic treatments (Munz and Keck 1959, Munz 1974, Spellenberg 1993).

Astragalus jaegerianus is a wispy perennial that is somewhat woody at the base, with stems 30 to 50 centimeters (cm) (12 to 20 inches (in)) long, that often grow in a zigzag pattern, usually up through low bushes. Leaves have 7 to 15 silvery pubescent linear leaflets, 5 to 25 millimeters (mm) (0.2 to 1.0 in) long. The flowers, 5 to 15 per stalk, are cream to purple, or lighter with veins of a deeper color. The keel petals are less than 10 mm (0.4 in) long. Fruits are pencil-shaped, linear, smooth, and pendant, 16 to 25 mm (0.6 to 1.0 in) long.

After the early collections in 1939 and 1941, the plant was not collected again until it was rediscovered in 1985 about 8 kilometers (km) (5 miles (mi)) north of the presumed type locality. A total of 87 plants were counted (Mark Bagley, John Chesnut, and Mary DeDecker, *in litt.* 1985). Intensive surveys over the next seven years led to the discovery of a few additional small populations. The most recently discovered population, located a few miles west of Lane Mountain, closely approximates the type locality (Connie Rutherford, U.S. Fish and Wildlife Service (Service), *in litt.* 1992; Brandt *et al.* 1993).

Currently, *Astragalus jaegerianus* is known from four general sites. Three of the sites occur within an area of about 35 square km (14 sq mi) and the plants within each site are widely scattered. Fewer than 130 plants have been located at these three sites in the last decade, although repeated searches of suitable habitat have been made (J. Chestnut, M. Bagley, and M. DeDecker, *in litt.* 1985; Brandt *et al.* 1993; C. Rutherford, *in litt.* 1995). The fourth site, near Lane Mountain, is located about 14 km (9 mi) to the south. No more than 30 plants have been found at the Lane Mountain site since its discovery in 1992 (Connie Rutherford, Service, pers. comm. 1996). At the northern sites, *A. jaegerianus* occurs on lands managed by the Department of Defense (DOD) at the National Training Center (NTC) of Fort Irwin, and on adjacent lands managed by the Bureau of Land Management (BLM). At the southernmost site, near Lane Mountain, plants are known to occur on BLM lands, although Lane Mountain Mesa is a patchwork of public and private lands.

At the northern sites, *Astragalus jaegerianus* has been found most often in shrub associations where Mormon tea (*Ephedra nevadensis*) or Cooper goldenbush (*Ericameria cooperi*) are the dominant or subdominant shrub species within the larger creosote bush/white bursage (*Larrea tridentata/Ambrosia dumosa*) community (Brandt *et al* 1993). At all sites, Astragalus jaegerianus plants are almost exclusively found growing up through shrubs or, occasionally, through clumps of dead bunchgrass (Brandt *et al* 1993; C. Rutherford, pers. comm. 1996). On the NTC, *Astragalus jaegerianus* grows in granitic soils that are more coarse, at least on the surface, than surrounding soils (Brandt *et al* 1993).

Threats to *Astragalus jaegerianus* include habitat destruction from dry wash gold mining, other mining activities (materials lease mining), rock and mineral collecting, off-highway vehicle (OHV) activity, and potentially from increasing fire frequency and any associated fire suppression activities. At the time the proposed rule was being prepared, military vehicle maneuvers occurred in the plant's habitat. Since that time, the military has installed protective fencing; however, trespass by military vehicles remains a potential threat until the efficacy of the fencing can be determined. In addition, an expansion of the NTC at Fort Irwin onto surrounding BLM lands has been proposed. Although the location of the expansion has not yet been chosen, locations that support *A. jaegerianus* are being considered. Few individuals combined with the proximity of the species to roads and active mining areas in both the northern and Lane Mountain sites, and to private lands and dwellings at the Lane Mountain site, make *A. jaegerianus* vulnerable to unplanned, potentially destructive, human activities. In the proposed rule, sheep grazing was considered a minor threat. Sheep grazing no longer occurs on the lands where *A. jaegerianus* grows (Tom Eagen, BLM, pers. comm. 1996).

Astragalus lentiginosus was first described by Sir William Jackson Hooker (1831) based on a specimen collected by David Douglas in the ''. . .

subalpine ranges of the Blue Mountains [Oregon] of North-West America.'' The species has been placed in three different genera—*Tragacantha lentiginosa* (Kuntze 1891), *Phaca lentiginosa* (Piper 1906), and *Cystium lentiginosum* (Rydberg 1913). However, these segregate genera have not been sustained in the literature and this species is currently recognized as *Astragalus lentiginosus* (Barneby 1945, Munz and Keck 1959, Munz 1974, Spellenberg 1993). The epithet *lentiginosus* means ''freckled'' and refers to its mottled fruit or pod.

Astragalus lentiginosus var. *coachellae* (Coachella Valley milk-vetch) was described by Rupert Barneby in Shreve and Wiggins (1964) based on a 1913 collection by Alice Eastwood near Palm Springs, Riverside County. Prior to publication of this variety, Barneby (1945) had included this taxon under *A. lentiginosus* var. *coulteri.* Subsequently, Barneby determined that variety *coulteri* was based upon material that was quite different, resulting in the description of the variety *coachellae.* The recent treatment by Spellenberg (1993) supports Barneby's treatment.

Astragalus lentiginosus var. *coachellae* is an erect winter annual or short-lived perennial, 20 to 30 centimeters (cm) (8 to 12 in) tall and covered with white-silky hairs. The flowers are deep pink-purple, in a loose or dense 13-to 25-flowered raceme (an inflorescence in which stalked flowers are arranged singly along a central stem). The two-chambered fruits are strongly inflated.

Astragalus lentiginosus var. *coachellae* is found on loose wind-blown or alluvial sands on dunes or flats in the Coachella Valley, Riverside County, California. Barneby (1964) described this taxon as ''. . . apparently confined to Coachella Valley . . . ,'' although in 1973, he identified specimens collected from an area about 80 km (50 mi) to the east, near Desert Center, as *A. lentiginosus* var. *coachellae* (specimens located at the herbarium of Rancho Santa Ana Botanic Garden; Gary D. Wallace, Service, pers. comm. 1996). Currently, populations are known only from the Coachella Valley between Cabazon and Indio (California Natural Diversity Database (CNDDB) 1996; Katie Barrows, Coachella Mountains Conservancy, *in litt.* 1996).

The historical abundance of *Astragalus lentiginosus* var. *coachellae* in the Coachella Valley is unknown. Twenty to twenty-five ''occurrences'' of *A. lentiginosus* var. *coachellae* have been recorded as extant within the past decade (CNDDB 1996; K. Barrows, *in litt.* 1996) and 90 percent of these are located within 5 km (3 mi) of Interstate 10 from north of Indio to Cabazon (Barrows 1987, CNDDB 1996, K. Barrows, *in litt.* 1996). About 20 to 25 percent of the occurrences of *A. lentiginosus* var. *coachellae* are protected in the three preserves of the Coachella Valley Preserve System. The largest preserve protects populations of *A. lentiginosus* var. *coachellae* in the southeastern part of its range and two other preserves in the central range of this taxon also support populations. The Coachella Valley Preserve System, jointly owned and managed by the BLM, The Nature Conservancy (TNC), California Department of Fish and Game (CDFG), California Department of Parks and Recreation, and the Service, was established in 1986 to conserve habitat for the federally threatened Coachella Valley fringe-toed lizard (*Uma inornata*), and other taxa endemic to the habitats of the Coachella Valley. None of the plants in the northwestern part of the range of *A. lentiginosus* var. *coachellae* are currently protected, although acquisition of habitat in this region is being considered by the Coachella Valley Mountains Conservancy (K. Barrows, pers. comm. 1996). About 75 to 80 percent of the occurrences of *A. lentiginosus* var. *coachellae* are located on unprotected lands. Of those, about 7 percent are on lands owned by Southern California Edison, about 7 percent are on lands owned by the Agua Caliente Indian Reservation, and the remainder are privately owned.

Population sizes vary widely from year to year, depending on environmental conditions, making assessment of total numbers of individual plants difficult. At sites where *Astragalus lentiginosus* var. *coachellae* was monitored in 1995, densities varied from 1.25 plants per hectare (ha) (.67 plants per acre (ac)) to 60 plants per ha (24 plants per ac) (Sanders and Thomas Olsen Associates 1995). One of the largest known remaining sites for this taxon occurs in the north, near Snow Creek Road. In 1995, this area supported about 60 plants per ha (24 plants per ac), the greatest densities of *A. lentiginosus* var. *coachellae* found during 1995 surveys (Barrows 1987, Sanders and Thomas Olsen Associates 1995).

The primary threat to *Astragalus lentiginosus* var. *coachellae* is habitat destruction due to the extensive urban development occurring in the Coachella Valley. Urbanization destroys populations by direct conversion of the land on which they occur and by altering or reducing the source and transport of blow sands that maintain the sand habitats of the Coachella Valley. Populations of *A. lentiginosus* var. *coachellae* have been altered by development of wind energy parks and degraded by OHV use (Barrows 1987; K. Barrows, pers. comm. 1996). Initially, *A. lentiginosus* var. *coachellae* may respond favorably to low-levels of artificial disturbance, but its long-term response in these situations is unknown (Stevens and Pearson 1984; BLM, *in litt.* 1992; Pearson *in litt.* 1993).

Astragalus lentiginosus var. *piscinensis* (Fish Slough milk-vetch) was described by Barneby (1977) based on a collection made by Mary DeDecker in 1974, from BLM Spring, Fish Slough, northwest of Bishop. Spellenberg (1993) retained this variety in his treatment of *Astragalus.* The plant is a prostrate perennial, with few-branching stems that are up to 1 m (3 ft) long and are covered with stiff appressed hairs. The leaflets are reduced to only 1 to 2 pairs laterally, with a greatly elongated terminal leaflet. The lavender flowers are arranged in loose but short 5-to 12-flowered racemes. The fruits are papery, strongly inflated with a complete septum, and are covered with appressed hairs.

Astragalus lentiginosus var. *piscinensis* is restricted to a 6-mile stretch of alkaline flats paralleling Fish Slough, a desert wetland ecosystem in Inyo and Mono counties, California. It grows in seasonally moist alkaline flats that support a cordgrass-dropseed (*Spartina-Sporobolis*) association and is absent from nearby lower areas that are seasonally flooded (Ferren 1991a; Wayne Ferren, University of California at Santa Barbara, *in litt.* 1992). Appropriate alkali habitat covers less than 219 ha (540 ac) of the slough and portions of this area do not currently support *A. lentiginosus* var. *piscinensis,* for unknown reasons (Ferren 1991, Odion *et al.* 1991).

At the time this taxon was proposed, the total number of plants at Fish Slough was thought to be about 700. In 1992, during intensive surveys of all potential habitat of *Astragalus lentiginosus* var. *piscinensis* within Fish Slough, about 3,200 individuals were found widely scattered or grouped over approximately 212 ha (530 ac) (Patti Novak, Los Angeles Department of Water and Power (LADWP), *in litt.* 1992). This first complete, intensive, survey for this species was conducted over several days and covered all suitable alkali habitat at Fish Slough. During the survey, several of the previously monitored sites were found to be much greater in extent than had been previously known. However, one site that had supported six plants in

earlier visits failed to support any, and another previously recorded site showed a substantial decline—44 plants in 1983, 29 in 1985, and 8 in 1992. The four-fold increase in the total number of plants encountered in the 1992 survey does not suggest an increase or decrease in population size, but provides the first comprehensive data on the species-wide abundance of *A. lentiginosus* var. *piscinensis*. Over 60 percent of this population is located in the northern portion of the slough on land owned by the LADWP and approximately 35 percent of known *A. lentiginosus* var. *piscinensis* plants grow in the central zone of the slough on lands owned and managed by both BLM and LADWP. About 5 percent are in scattered patches downstream as far as McNally Canal, but Fish Slough is narrow at its southern end, with little suitable habitat (P. Novak, *in litt.* 1992; W. Ferren, *in litt.* 1992).

In 1991, LADWP constructed a 32 ha (80 ac) cattle exclosure at the northern end of the slough. In 1992, over 95 percent of the *Astragalus lentiginosus* var. *piscinensis* plants in the northern zone were within the exclosure. Other than the area encompassed by the exclosure in the north end of Fish Slough, lands under LADWP management that support this taxon are grazed (Paula Hubbard, LADWP, pers. comm. 1996). Grazing is not permitted in the habitat of *A. lentiginosus* var. *piscinensis on lands* managed by BLM, in the central zone of the slough.

Current threats to *Astragalus lentiginosus* var. *picinensis* include a lack of recruitment in the central zone population of Fish Slough, trampling and grazing by cattle, modification of wetlands, and alteration of slough hydrology. A long-term threat may be the expansion of Fish Slough Lake, which may be due to natural geologic processes or the existence of Red Willow Dam, resulting in increased inundation of soils and loss of suitable alkali habitat for this taxon (W. Ferren 1991c, W. Ferren, *in litt.* 1992). Historical alterations of the Fish Slough ecosystem to enhance fisheries appear to have caused similar increases in seasonally flooded habitats, which are less suitable for *A. lentiginosus* var. *piscinensis*. Modifications include creation of dams and weirs in the main slough channel, construction of a dirt road through milk-vetch habitat, and soil compaction and trail creation by cattle. These activities have altered the slough hydrology by causing an increase in permanently flooded habitats, artificial ponding, alteration in drainage patterns, and changes in seasonal flooding of milk-vetch habitat. These changes have resulted in expansion of emergent wetland vegetation and conversion of alkali flat habitats which support *A. lentiginosus* var. *piscinensis* to other vegetation types (Ferren 1991b; Ferren *in litt.* 1992). Trampling and grazing by cattle, and associated ecological changes, also potentially threaten this taxon.

Astragalus magdalenae var. *peirsonii* (Peirson's milk-vetch) was originally described as *A. peirsonii* by Munz and McBurney from two collections (cotypes) from sand dunes west of Yuma in Imperial County, California (Munz 1932). One specimen was collected by Munz and Hitchcock in 1932, while the other was collected by Frank Peirson, for whom the taxon was named, in 1927. *Astragalus peirsonii* was variously included with *A. crotalariae* var. *piscinus* (Jepson 1936) and *A. niveus* (Barneby 1944), before its affiliation with *A. magdalenae* was clarified (Barneby 1958).

Astragalus magdalenae var. *peirsonii* is a stout, short-lived perennial reaching 20 to 70 cm (8 to 27 in) high. The stems and leaves are covered with fine silky hairs and the leaves are 5 to 15 cm (2 to 6 in) long, with 3 to 13 small oblong leaflets. The flowers are dull purple, arranged in 10- to 17-flowered racemes and the resulting pods are 2 to 3.5 cm (0.8 to 1.4 in) long, inflated, with a triangular beak. The variety *peirsonii* is separated from two other varieties of *A. magdalenae* based on the number of leaflets, the length of the peduncles, and the length and diameter of the fruits. With a length of 4.5 to 5.5 mm (0.2 in), *A. magdalenae* var. *peirsonii* has the largest seeds of any *Astragalus* in North America (Barneby 1964).

Astragalus magdalenae var. *peirsonii* grows in the Sonoran Desert, on the slopes and hollows of windblown dunes. According to Munz and Keck (1959) and Barneby (1964), it is known from the Borrego Valley, in San Diego County, and the Algodones Dunes, in Imperial County, which extend just south of the International Border into northeastern Baja California (Westec 1977). Since the proposed rule was published, the Service has also become aware of collections of *A. magdalenae* var. peirsonii from the Gran Desierto in Sonora, Mexico. The specimens from Sonora were all collected south and southeast of the Sierra Pinacate lava field in the southern Gran Desierto over a 15-year period (Richard Felger, Drylands Institute, pers. comm. 1996; J. Rebman, San Diego Museum of Natural History, pers. comm. 1996; Alan Romspert, California Desert Studies Center, pers. comm. 1996; Gary D. Wallace, Service, pers. comm. 1996). The Service is unaware of any information that *A. magdalenae* var. *peirsonii* occurs elsewhere in the Gran Desierto, and could not locate any information on size of populations that occur in the Gran Desierto. Although Wiggins (1980) included San Felipe, in central Baja California, within the range of this taxon, no collections of variety *peirsonii* could be located from that region. Botanists preparing a flora for the area have located other varieties of *A. magdalenae* from the dunes of the San Felipe area, but not variety *peirsonii* (Jon Rebman, San Diego Museum of Natural History Herbarium, pers. comm. 1996). A report of *A. magdalenae* var. *peirsonii* occurring in the dunes west-southwest of the Salton Sea in Imperial County, California, remains unconfirmed (CDFG, Natural Diversity Database record 1996).

Within San Diego County, *Astragalus magdalenae* var. *peirsonii* has not been seen for several decades (M. Beauchamp, Pacific Southwest Biological Services, pers. comm. 1996). Surveys in 1978 failed to locate the variety in the Borrego Valley where it was originally collected (Spolsky 1978), and a portion of the dune habitat in Borrego Valley is currently used as a county landfill (Jim Dice, CDFG, pers. comm. 1996). A major landowner in the area, the California Department of Parks and Recreation, does not have any information or reports of this taxon occurring in Anza Borrego Desert State Park (Paul Johnson, Anza Borrego Desert State Park, pers. comm. 1996).

The only location where the Service could confirm that *Astragalus magdalenae* var. *peirsonii* is extant in the United States is on the Algodones Dunes, an active dune system located southeast of the Salton Sea and extending south about 2.5 km (1.5 mi) into Baja California (Westec 1977, BLM 1987). In 1977, a survey of the sensitive plant taxa of the Algodones Dunes showed that *A. magdalenae* var. *peirsonii* was distributed in what can be considered one extensive population of scattered colonies spanning the length of the dune system, primarily along its western side. The Algodones Dunes are a linear dune system, approximately 64 km (40 mi) long and 8 km (5 mi) wide, supporting several species of plants and animals that occur only in dune systems in the Sonoran Desert (Westec 1977, BLM 1987). Managed by the BLM, the Algodones Dunes, also known as the Imperial Sand Dunes Recreation Area, are the most intensively used OHV recreation area in California's deserts, attracting several hundred thousand OHV users each year (BLM 1987).

The primary threat to *Astragalus magdalenae* var. *peirsonii* is destruction of individuals and dune habitat from OHV use and the recreational development associated with it. Approximately 75 percent of the Algodones Dune system is open to motorized vehicle use (BLM 1987) and between 75 and 80 percent of all known colonies of *A. magdalenae* var. *peirsonii* in 1977 are within those areas. The greatest concentration of colonies was located in the central dunes, within a 4-mile radius of the southern end of Gecko Road (Westec 1977), an area that has since been more fully developed for recreational use (BLM 1987). Surveyors in 1977 reported that no seedlings of any of the sensitive plant taxa, including *A. magdalenae* var. *peirsonii*, could be found in areas receiving heavy OHV use (Westec 1977), and large areas receiving intensive OHV use showed a virtually complete loss of all plant cover (Bury and Luckenback 1983). By 1990, colonies of mature *A. magdalenae* var. *peirsonii* plants could not be located in areas of heavy OHV use and colonies located in areas receiving moderate OHV use had lower reproductive success and poorer health than comparable populations located in areas closed to OHVs (ECOS 1990).

Approximately 9,300 ha (23,000 ac), or 18 percent, of the Algodones Dunes has been closed to motorized vehicle use since 1972 (BLM 1987). In 1994, most of this closed area and an extension to the north, a total of 13,060 ha (32,240 ac) or about 25 percent of the dune system, was designated the North Algodones Dunes Wilderness (CDPA 1994; T. Finger, BLM, pers. comm. 1996). The wilderness, a linear section of the northern dunes, is bounded by an area designated for intensive OHV use to the north and by Highway 78 and an intensively-used OHV area to the south. Approximately 20–25 percent of the known colonies of *Astragalus magdalenae* var. *peirsonii* occur in the wilderness area (Westec 1977).

Astragalus tricarinatus (triple-ribbed milk-vetch) was described by Asa Gray (1876) based on a specimen collected by Charles C. Parry at Whitewater Canyon, Riverside County in 1876. Per Axel Rydberg (1927) transferred this species to the segregate genus *Hamosa*, as *H. tricarinata*. This combination was not widely accepted and the species continues to be listed as *A. tricarinatus* in floristic treatments (Jepson 1936, Munz and Keck 1959, Shreve and Wiggins 1964, Munz 1974, Spellenberg 1993).

Astragalus tricarinatus is a short-lived erect perennial, reaching 5 to 25 cm (2 to 10 in) in height. Leaves are 7 to 20 cm (1.3 to 2.7 in) long, with 17 to 20 leaflets that are silvery strigose on the upper surface. The flowers are white or pale cream-colored, arranged in loose 6- to 17-flowered racemes. The fruit is narrow, 2 to 4 cm (0.8 to 1.6 in) long, glabrous and distinctly three-ribbed.

Astragalus tricarinatus grows in sandy and gravelly soils in dry washes, at the base of canyon slopes, and on steep scree slopes of decomposed granite (Barrows 1987b, Sanders and Thomas Olsen Associates 1995). Although *A. tricarinatus* is a short-lived perennial, its numbers fluctuate significantly from year to year and the species may not be present above-ground in drought years (Barrows 1987b; Robin Kobaly, BLM, pers. comm. 1996).

According to Munz and Keck (1959) the range of *Astragalus tricarinatus* extends from Morongo and Whitewater Pass, located at the north end of the Coachella Valley, south to the Orocopia Mountains. During the last 2 decades, *A. tricarinatus* has been located in four areas—in the north at Big Morongo Canyon and its tributary canyons; at two nearby locations at Whitewater Canyon and Mission Creek; and at a disjunct location about 40 miles to the south in Agua Alta Canyon.

The occurrence of *Astragalus tricarinatus* in Agua Alta Canyon was discovered in 1985 by Jon Stewart and consisted of only one plant. The taxon had not been seen during previous explorations of this canyon wash nor has it been seen since, although the site was searched the following two years (Jon Stewart, *in litt.* 1985; J. Stewart, pers. comm., 1996). In the north, Whitewater Canyon is the type locality for *A. tricarinatus* and specimens were collected there in the 1940s, 1960s and mid 1980s (A. Sanders, herbarium of University of California at Riverside, pers. comm. 1996). A search of the east ridge of Whitewater Canyon over several days in 1995 failed to locate a population there, although a single immature plant was discovered in alluvial sands from the wash (A. Sanders, pers. comm., 1996). The Mission Creek occurrence is also known from only one plant, discovered during 1995 surveys for this taxon (Sanders and Thomas Olsen Associates 1995). Although *A. tricarinatus* has the potential to occur in other canyons within its range, populations of greater than one plant are currently known only from Big Morongo Canyon and may occur at Whitewater Canyon.

Astragalus tricarinatus at Big Morongo Canyon is within the Big Morongo Preserve, managed by the BLM. In 1984 one site in Big Morongo Canyon that supported fewer than 10 plants was bulldozed during maintenance for a gas pipeline (Barrows 1987b). No plants have been found at that site since 1984, although searches were conducted in 1987, 1992, and 1994 (Barrows 1987b, Carol Jacobsen, *in litt.* 1993, Mathews 1994). *A. tricarinatus* also occurs 3 to 4 km (2 mi) farther down Big Morongo Canyon and within the mouths of two tributary canyons. In 1992 botanists surveyed this region and counted 70 plants in 5 groupings scattered along a 2 to 3 km (1 to 2 mi) stretch of canyon floor (C. Jacobsen, *in litt.* 1993). In 1993, 33 plants were counted along this same stretch (Roland DeGouvenian, BLM, *in litt.* 1993) and in 1994 a total of 20 plants in 5 patches were found there (Mathews 1994).

In spring of 1995, the Four Corners Pipeline Company conducted substantial earth-moving activities along this stretch of Big Morongo Canyon to realign segments of a crude oil pipeline that had been exposed during winter storms in 1992–1993 (Service 1995). In 1996, weather conditions appeared poor for growth of *Astragalus tricarinatus*. BLM staff conducted limited surveys and found no plants in the canyon, in either disturbed or undisturbed areas (R. Kobaly, pers. comm. 1996).

Astragalus tricarinatus is threatened by maintenance activities for the crude oil pipeline which runs through its habitat at Big Morongo Canyon and by vehicle use in the canyons. Its limited number of individuals make it especially vulnerable to unanticipated events, such as pipeline leaks, breaks, or emergency repairs.

Previous Federal Action

Federal action on one of these plants began as a result of section 12 of the 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 recommended *Astragalus jaegerianus* for endangered status. The Service published a notice in the July 1, 1975, **Federal Register** (40 FR 27823), of its acceptance of the report as a petition within the context of section 4(c)(2) of the Act (petition provisions are now found in section 4(b)(3)) and of the Service's intention thereby to review the status of the plant taxa named therein, including *Astragalus jaegerianus*. The Service published a proposal in the June 16, 1976, **Federal Register** (41 FR 24523) to determine approximately 1,700 vascular plant species to be endangered species pursuant to section

4 of the Act. *Astragalus jaegerianus* was included in the June 16, 1976, **Federal Register** document.

General comments received in regard to the 1976 proposal were summarized in the April 26, 1978, **Federal Register** (43 FR 17909). The Act Amendments of 1978 required that all proposals over two years old be withdrawn. A one-year grace period was given to those proposals already more than two 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 an updated Notice of Review for plants in the December 15, 1980 **Federal Register** (45 FR 82480). This notice included *Astragalus jaegerianus*, *A. lentiginosus* var. *coachellae*, *A. lentiginosus* var. *piscinensis*, and *A. magdalenae* var. *peirsonii* as category 1 candidate species (species for which information in the Service's possession was sufficient to support proposals for listing). On November 28, 1983, the Service published in the **Federal Register** a supplement to the Notice of Review (48 FR 53640), in which *A. jaegerianus* and *A. magdalenae* var. *peirsonii* were included as category 2 candidate species (species for which information in the Service's possession indicated listing may be appropriate, but for which additional information was needed to support a proposed rule). The plant notice was again revised on September 27, 1985 (50 FR 39526), and on February 21, 1990 (55 FR 6184). In both of these notices, both varieties of *Astragalus lentiginosus* were included as category 1 candidate species, while *A. jaegerianus* and *A. magdalenae* var. *peirsonii* were included as a category 2 candidate species. *Astragalus tricarinatus* was included in the February 21, 1990, notice for the first time as a category 2 candidate (the use of candidate categories has subsequently been discontinued by the Service (55 FR 7596)).

Section 4(b)(3)(B) of the Act requires the Secretary to make certain findings on pending petitions within 12 months of their receipt. Section 2(b)(1) of the 1982 amendments further requires that all petitions pending on October 13, 1982, be treated as having been newly submitted on that date. This was the case for *Astragalus jaegerianus* because the 1975 Smithsonian report had been accepted as a petition. On October 13, 1983, the Service found that the petitioned listing of this species was warranted, but precluded by other pending listing actions, in accordance with section 4(b)(3)(B)(iii) of the Act. Notification of this finding was published on January 20, 1984 (49 FR 2485). The Act requires that following such a warranted but precluded finding, the petition be recycled pursuant to section 4(b)(3)(C)(i). The finding was reviewed in October of 1984, 1985, 1986, 1987, 1988, 1989, 1990, and 1991. Publication of the proposed rule constituted the warranted finding for the petitioned taxa.

On May 8, 1992, the Service published a proposed rule in the **Federal Register** (57 FR 19844) to list seven *Astragalus* taxa, including the five taxa addressed in this rule. *Astragalus jaegerianus* and *A. magdalenae* var. *peirsonii* were included in the proposal on the basis of new information gathered during surveys performed in 1990 and 1991 that resulted in their elevation to category 1 candidate status. *Astragalus tricarinatus* was included in the proposal after a review of existing information indicated that the species should be elevated to category 1 candidate status and that listing was warranted. The taxa included in the proposed rule but not addressed in this document, *A. lentiginosus* var. *micans* and *A. lentiginosus* var. *sesquimetralis*, are being withdrawn and are addressed in a separate document published concurrently in the proposed rule section of this issue of the **Federal Register**.

The processing of this final rule conforms with the Service's Final Listing Priority Guidance for Fiscal Year (FY) 1998 and 1999, published in the **Federal Register** on May 8, 1998 (63 FR 25502). The guidance clarifies the order in which the Service will process rulemakings. The guidance calls for giving highest priority to handling emergency situations (Tier 1), the second highest priority (Tier 2) includes actions to—resolve the listing status of the outstanding proposed listings, process new proposals to add species to the lists, and process administrative petition findings on petitions to list, delist, and reclassify species. This final rule for five desert milk-vetch species from California falls under Tier 2. The species discussed in this rule face high magnitude threats to their continued existence. Tier 3 includes processing of critical habitat designations.

Comments received during the original comment period and the re-opening of the public comment period in September 1996 (61 FR 46430) for the proposed rule have resulted in new information that has been incorporated into this final rule and the concurrently published withdrawal for two of the species originally proposed for listing in 1992.

Summary of Comments and Recommendations

In the May 8, 1992, proposed rule and associated notifications, all interested parties were requested to submit factual reports or information that might contribute to the development of a final rule. A 60-day comment period closed on July 7, 1992. A final determination on the proposal was delayed by other listing priorities, a limited budget, and the Federal moratorium on final listing actions. Due to the amount of time that had passed since the proposed rule was published, the Service opened a second comment period for 45 days on September 3, 1996 (61 FR 46430). Appropriate State and Federal agencies, County governments, scientific organizations, and other interested parties were contacted and requested to comment. During the comment periods newspaper notices were published in the *Palm Springs Desert Sun* (June 4, 1992; October 5, 1996), the *Imperial Valley Press* (May 28, 1992; October 3, 1996), the *San Bernardino Sun* (June 2, 1992; October 7, 1996), the *Barstow Desert Dispatch* (October 3, 1996), and the *Inyo Register* (May 29, 1992; October 2, 1996), inviting public comments on the proposed rule.

Peer Review

In accordance with the interagency Peer Review Policy published on July 1, 1994 (59 FR 34270), the Service solicited the expert opinions of three independent specialists regarding pertinent scientific or commercial data and assumptions relating to the taxonomy, population estimations, and supportive biological and ecological information for taxa under consideration for listing. The purpose of such review is to ensure listing decisions are based on scientifically sound data, assumptions, and analyses, including input of appropriate experts and specialists. Two specialists responded and their comments on the biology, population numbers and sizes, and threats, have been incorporated into this rule and the concurrently published withdrawal.

During the two comment periods, the Service received comments from 23 parties addressing the listing of the 7 taxa included in the proposed rule. Twelve commenters supported some or all of the proposed action, six commenters opposed some or all of the proposed action, and five commenters provided information or raised issues about which they were concerned. Technical information provided by commenters has been incorporated into this rule where appropriate. Comments

have been organized into specific issues. These issues and the Service's response to each issue are summarized as follows.

Issue 1: Two commenters were concerned that the listing of varieties is improper and constitutes a misuse of the Act. One of these commenters elaborated that since subspecies contain the same genetic makeup as the species with a slight variation, ''(i)f we save the species as a whole, we will have the genetic basis from which the subspecies evolved.''

Service Response: Section 3(16) of the Act states that ''(t)he term 'species' includes any subspecies of fish or wildlife or plants . . . which interbreeds when mature.'' In response to concerns from the Smithsonian Institution that the definition included subspecies but not varieties, the Service discussed in a **Federal Register** notice published on April 26, 1978 (43 FR 17912), the common use of both terms by botanists, and concluded that plants named as ''varieties'' are essentially subspecies and, therefore, ''species'' as defined in the Act.

Issue 2: Two commenters asserted that insufficient data are presented in the proposal on which to base the listing of these plants. One of these commenters believed that not enough information was presented about the biology of the species and that information concerning the types of OHV activity that threaten the taxa should be described more thoroughly.

Service Response: Section 4 of the Act directs the Service to use the best scientific and commercial data available in preparation of proposed and final rules. After reviewing new information available since the original proposal was published and reevaluating existing information, the Service is withdrawing the proposals to list two of the taxa included in the proposed rule. For the five taxa being listed in this final rule, the Service has presented adequate detail to indicate the types of activities that threaten these taxa and to discuss their biology. Readers wishing additional detailed information should refer to the documents cited in the text.

Issue 3: Two commenters expressed the opinion that the listing of *Astragalus lentiginosus* var. *piscinensis* is unnecessary because sufficient protection from grazing and OHV use was provided by the multi-agency management of the Fish Slough Area of Critical Environmental Concern (ACEC). One commenter stated that no data exists documenting that the species is threatened by OHV use, agricultural discing, predation by rabbits, and groundwater pumping.

Service Response: The Service acknowledges that agricultural discing is not currently known to be a threat to this taxon. Vehicle use has, and continues to result in the loss of some habitat for *Astragalus lentiginosus* var. *piscinensis* south of BLM Spring, on the east side of the Slough, where a road currently bisects one population (BLM, *in litt.* 1993; Diane Steeck, Service, pers. obs. 1996) and there has been some OHV use of the area noted in the west-central area of the Slough as recently as 1992 (P. Novak, in lit. 1992). The soil compaction and topographical changes caused by roads can alter flooding and draining of slough habitats, resulting in changes in length of seasonal inundation to which the milk-vetch is subjected. Mazer and Travers (1992) and Novak (*in litt. 1992*) have documented substantial herbivory of the flowers and fruit of *A. lentiginosus* var. *piscinensis* at Fish Slough.

The Service recognizes the efforts of all agencies involved in the establishment of the Fish Slough ACEC and those cooperating in the management of the ACEC. However, the suite of factors that threaten *Astragalus lentiginosus* var. *piscinensis* are complex. Because of the long narrow configuration of the Slough, bounded by uplands on both sides, the specific alkali wetland habitat required by *A. lentiginosus* var. *piscinensis* is limited. Human activities or natural changes in the landscape that cause an increase in the area of seasonal flooding of alkali habitat have decreased the habitat suitable for this taxon, which tolerates seasonally moist, but not flooded soils. Monitoring conducted by the BLM suggests a lack of recruitment in one population of *A. lentiginosus* var. *piscinensis* in the central region of Fish Slough. The reasons for this are as yet unexplained, but may include rabbit herbivory or larger landscape changes (alterations in soil hydrology or chemistry) that result in a decline in habitat suitability.

The Service recognizes the efforts of the LADWP to protect *Astragalus lentiginosus* var. *piscinensis* from the direct effects of trampling in the north region of the Slough by constructing a fenced exclosure, and commends the efforts of the BLM and LADWP to monitor the status of the plant. The Service also recognizes that conflicts that arise in the management of the Slough have not been easily resolved in the past and that the past modifications of the slough environment have caused changes in the hydrology that are not well understood nor easily returned to their original condition. The Service maintains that despite the best intentions of the current managing committee for the Fish Slough ACEC, the threats facing the limited number of individuals of *A. lentiginosus* var. *piscinensis* are important enough to warrant its listing as threatened.

A draft Owens Basin Wetland and Aquatic Species Recovery Plan was produced by the Service in 1996 that addressed *Astragalus lentiginosus* var. *piscinensis*, two endangered fish species, and selected species of concern. Public and agency comment on this plan was solicited during two public comment periods—August 26, 1996, to October 25, 1996, and January 13, 1997, to April 14, 1997. The Service is currently revising the recovery criteria and discussion of *A. lentiginosus* var. *piscinensis* to more accurately reflect the current knowledge of the species' status and the activities needed to ensure its protection and recovery in the Fish Slough ecosystem. Additional discussions of *Astragalus lentiginosus* var. *piscinensis* are included under the ''Summary of Factors Affecting the Species'' section of this final rule.

Issue 4: Two commenters in 1992 suggested that livestock grazing is compatible with maintaining populations of *Astragalus lentiginosus* var. *piscinensis* and one commenter, in 1996, stated that the Service did not provide adequate evidence to support the conclusion that grazing was a threat to this taxon. In 1996, one of the parties used data collected by biologists from the grazed and ungrazed areas on LADWP lands to conclude that, from 1991 to 1996, ''(t)he areas grazed by livestock show an 8 percent increase in vetch [sic] populations.'' and ''(t)he ungrazed area shows a 42 percent reduction in vetch [sic] numbers.''

Service Response: The LADWP gathered population trend data from 5 plots (radius 3.6 m (11.8 ft)) in the Fish Slough ecosystem from 1991 to 1996 (LADWP, *in litt.* 1996; Paula Hubbard, LADWP, pers. comm. 1996). Two plots are located in the cattle exclosure in north Fish Slough and have been inaccessible to cattle since 1991, one plot is north of this exclosure in a pasture that receives cattle use, and two more are in the middle region of Fish Slough, north of BLM Spring, in an area also used by cattle.

The monitoring data indicate that the total number of plants in the three plots from the grazed area consisted of 16 seedlings, 24 mature plants, 0 immature plants in 1991 and 14 seedlings, 25 mature plants, 4 immature plants in 1996. Plots in the ungrazed exclosure supported 56 seedlings, 72 mature plants, 0 immature plants in 1991 and 0 seedlings, 83 mature plants, 1

immature plant in 1996. In arriving at the stated percentage increases and declines the commenter used counts of total plants. Typically, when biologists analyze simple changes in the sizes of plant populations, they focus on changes in the number of mature individuals (plants of reproductive size or age). Seedlings are typically not grouped with mature plants because it is common for many more seedlings to emerge initially than will survive to reproduce.

In the data described above, from 1991 to 1996 the combined number of mature *Astragalus lentiginosus* var. *piscinensis* plants increased by 1 in the grazed plots (from 24 to 25 plants, a 4 percent increase) and increased by 11 individuals in the ungrazed plots (from 72 to 83 plants, a 15 percent increase). These data show a slight increase in numbers of mature plants in grazed plots and a larger increase in the number of mature individuals in ungrazed plots from 1991 to 1996. Several aspects of the data illustrate the need for a longer monitoring period before drawing conclusions, however. First, in both grazed and ungrazed areas the multiple plots failed to show consistent trends; that is, of the two ungrazed plots, one showed an increase in the number of mature plants from 1991 to 1996, the other a decrease. A similar situation occurred in the grazed plots. The small number of plots sampled make the data very susceptible to site differences that may result from environmental conditions other than grazing. Secondly, numbers of plants within a single plot fluctuated from year to year; that is, none of the five plots showed a consistently increasing or consistently declining trend. In this situation, using only two years of data from the data set (for example, considering only the years 1991 and 1996) can lead to erroneous conclusions. These data suggest that population growth is occurring in the north Fish Slough Area and north of BLM Springs in both grazed and ungrazed areas. This potential growth is important, since recruitment has not been observed in one area in the central zone of the Slough that BLM has monitored since 1991.

The Service concludes that data collected by LADWP do not conclusively demonstrate that *Astragalus lentiginosus* var. *piscinensis* plants located in plots in the grazed areas fared any better or worse than those in the ungrazed exclosures during the past five years. If cattle grazing will continue in habitat for *A. lentiginosus* var. *piscinensis* at Fish Slough, the Service recommends increasing the number of monitoring plots in both grazed and ungrazed areas to help clarify the relationship between cattle grazing and population dynamics of *A. lentiginosus* var. *piscinensis.* The Service remains concerned about the effects of cattle grazing on the alkali wetland habitat that supports *A. lentiginosus* var. *piscinensis*, including the potential for grazing to cause changes in the composition of the plant community or maintain changes that have already occurred, and the potential for the creation of cattle trails to alter the topography and change drainage patterns.

Issue 5: One commenter suggested that listing *Astragalus lentiginosus* var. *coachellae* would be unnecessary if a conservation plan for that species could be developed, perhaps by incorporating it into the management of the existing Coachella Valley Preserve.

Service response: The Coachella Valley Preserve System, established primarily to protect the Coachella Valley fringe-toed lizard (*Uma inornata*), contains populations of *Astragalus lentiginosus* var. *coachellae* on three preserve lands in the south and central range of this taxon. No populations in the northern range of *A. lentiginosus* var. *coachellae* are currently protected. Within the last two years, the Coachella Valley Association of Governments and the Coachella Valley Mountains Conservancy have begun a planning process to address conflicts between conservation needs and economic development within a 4500sq km (1,850 sq mi) area that includes the Coachella Valley and surrounding region in Riverside County. The expected result of this process, a Coachella Valley Multispecies Habitat Conservation Plan (CVMSHCP), will address conservation needs for 12 species that are listed or proposed for listing, 21 candidate species, and 17 additional species of concern. *Astragalus lentiginosus* var. *coachellae* is to be addressed in the plan.

The Service recognizes the importance of such a planning process for the Coachella Valley and is participating through the Scientific Advisory Committee, as are other agencies responsible for resource protection in the area. The planning process is in its initial stages, however, and its funding is not secured, nor is a product yet available that can be implemented. Thus, development of the CVMSHCP does not provide current protection for *Astragalus lentiginosus* var. *coachellae* and is not sufficient to preclude the need to list the species at this time.

Issue 6: One commenter speculated that the proposed rule had been promulgated to fulfill the requirements of a settlement resulting from the suit filed against the Service by the California Native Plant Society (CNPS).

Service Response: The procedures for designating species as threatened or endangered are outlined in section 4(a)(1) of the Act and promulgated regulations (50 CFR part 424). As discussed in detail in the ''Background'' section of this rule, Federal action on several of these taxa began as early as 1975. The proposed rule did, in fact, comply with the terms and conditions of the settlement stemming from the CNPS suit. While the CNPS lawsuit settlement may have accelerated the rate at which species were proposed for listing, the suit did not address final determinations, nor did it change the standards by which species are evaluated for potential listing.

Issue 7: Two commenters expressed concern over potential land use restrictions where listed species occur. One of these commenters stated that the listing of these plants ''. . . would result in large acreage throughout the west being ''locked up'' to preserve these forbs or weeds.'' The other commenter believed that the Service's true intent is ''. . . full control over land management activities . . .'' on private, as well as public lands.

Service Response: Listing of plant species under the Act triggers the protective measures of section 9 of the Act, including prohibiting the collection, destruction, or damaging of these species on any area if it is in knowing violation of any State law (see the ''Available Conservation Measures'' section of this rule for a complete discussion). In addition, the Act requires that Federal agencies, in consultation with the Service, insure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of any listed species, or destroy or adversely modify its critical habitat, if any is designated. Thus for any activity on private land requiring Federal action (such as a section 404 permit under the Clean Water Act (33 U.S.C. 1251–1376)) that may affect listed species, the Federal action agency is required to enter into the section 7 consultation process with the Service.

These protections afforded to plants listed under the Act do not ''lock up'' private land. Conservation measures and recovery planning for these species rarely include recommendations for land acquisition or easements involving private landowners. These efforts would be undertaken with the cooperation of

the landowners. In most cases, private landowners are not precluded from utilizing their land in the manner originally intended.

Issue 8: One commenter questioned whether the listing of these plants could be justified in light of the numerous species already listed and the thousands more that are candidates for listing, and questioned what benefit there would be to mankind in saving these species. The commenter pointed out that because ''the law of the land is survival of the fittest,'' certain species were not meant to survive forever and a niche vacated by one species would be taken over by another.

Service Response: In enacting the Act in 1973, Congress recognized that ''various species of fish, wildlife, and plants in the United States have been rendered extinct as a consequence of economic growth and development untempered by adequate concern and conservation.'' It further stated ''these species of fish, wildlife, and plants are of aesthetic, ecological, educational, historical, recreational, and scientific value to the Nation and its people.'' Although it is true that extinction is a natural process, it is human-caused extinction that the Act is attempting to minimize. A number of studies have estimated rates of extinction throughout geologic time and, more recently, since the influence of European man. The studies indicate that rates of extinction over the past 200 years are unparalleled in human history, and extinction rates are continuing to increase (Reid and Miller 1989, Raven 1993). The Service concludes that proceeding with this listing action is within the intent of the Act.

Issue 9: One commenter stated that the Service must prepare an Environmental Impact Statement (EIS) and a Takings Implication Assessment before issuing a final rule.

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

Takings Implications Assessments (TIAs) are prepared pursuant to the requirements of Executive Order 12630, ''Government Actions and Interference with Constitutionally Protected Property Rights.'' The Attorney General has issued guidelines to the Department of the Interior (Department) regarding TIAs. The Attorney General's guidelines state that TIAs used to analyze the potential for Fifth Amendment taking claims are to be prepared after, rather than before, an agency makes a restricted discretionary decision. In enacting the Act, Congress required the Department to list a species based solely upon scientific and commercial data. The Service may not withhold a listing decision based upon economic concerns. Therefore, any TIA that may be required for a listing action would be prepared only after the final determination to list a species has been made.

Summary of Factors Affecting the Species

Section 4 of the 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 of endangered and threatened species. 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 *Astragalus jaegerianus* Munz (Lane Mountain milk-vetch), *A. lentiginosus* Douglas ex Hook. var. *coachellae* Barneby (Coachella Valley milk-vetch), *A. lentiginosus* Douglas ex Hook. var. *piscinensis* Barneby (Fish Slough milk-vetch), *A. magdalenae* Greene var. *peirsonii* (Munz & McBurney in Munz) Barneby (Peirson's milk-vetch) and *A. tricarinatus* A. Gray (triple-ribbed milk-vetch) are as follows:

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

All five taxa are threatened by loss of habitat due to one or more of the following factors—mining, urbanization in the form of commercial and residential development, motorized vehicle recreation and unauthorized motor vehicle use, pipeline maintenance activities, and loss of habitat due to modifications of a wetland ecosystem.

Astragalus jaegerianus is threatened by dry wash gold mining at the Lane Mountain site and potentially by a materials lease mining operation at one northern site on BLM lands. The majority of Lane Mountain Mesa, where *A. jaegerianus* occurs, and all of the adjacent Coolgardie Mesa, are covered by mining claims (BLM *in litt.* 1992; T. Eagen, pers. comm. 1996). Dry wash gold mining operations result in removal of vegetation as surface soils are mined. Mining that falls under the definition of ''casual use'' also can destroy the habitat of *A. jaegerianus* in the Lane Mountain area. ''Casual use'' mining is small scale recreational mining that can be carried out by a claim holder without submission of any plan or notice to BLM. In 1993, Coolgardie Mesa experienced a sharp increase in recreational gold mining. Within a few miles of the Lane Mountain population of *A. jaegerianus*, the BLM recorded 300 to 400 people mining within a 2.5 sq km (1 sq mi) area during a single weekend. Joshua trees (*Yucca brevifolia*) and other vegetation were uprooted and destroyed in this process (T. Eagen, pers. comm. 1996). The BLM has since developed guidelines to limit activities that fall under the definition of ''casual use'' mining. Under the new definition, ''casual use'' mining is limited to the use of non-mechanized tools and cannot result in the destruction of perennial vegetation. This still permits the digging of mining pits and soil surface disturbance that degrade habitat and could impact *A. jaegerianus*. Past disturbance has also resulted in an increase in non-native annual grasses in the area (T. Eagen, pers. comm. 1996) and this ongoing small scale disturbance provides new opportunities for further invasions of these highly competitive species. The sites where *A. jaegerianus* occurs on BLM land to the north, while not currently under claim, are available for claim, should mining interest renew in that area (J. Aardahl, BLM, pers. comm. 1997). Additional discussion of mining regulations can be found under Factor D of the ''Summary of Factors Affecting the Species Section'' of this rule.

To the north, *Astragalus jaegerianus* is also threatened by proliferation of OHV trails/tracks and cross country vehicle travel associated with decorative rock extraction, the potential for other mining exploration, and general recreation. Although the extraction activity is by permit through BLM, permit violations, including cross country vehicle travel and rock extraction outside the bounds of the permitted area occurred numerous times in 1995–1996, within and adjacent to *A. jaegerianus* habitat (T. Eagen, pers. comm. 1996). At least one of the populations of *A. jaegerianus* in the north is already bisected by a road (Bagley, *in litt.* 1985), and other roads/trails adjacent to the population are a concern. Recreational vehicle activity is also causing a proliferation of tracks through potential habitat just south of

the northern populations. At the Lane Mountain site, tracks have been seen near *A. jaegerianus* habitat. The area is laced with roads, and the majority of this small population occurs within about 100 m (300 ft) of a road, with some plants within 5 m (15 ft) of the road (C. Rutherford, pers. comm. 1996).

Within habitat for *Astragalus jaegerianus* on DOD lands, military maneuvers at the NTC at Fort Irwin, or National Guard training in 1992, may have destroyed plants (Steve Ahmann, NTC, *in litt.* 1993). Following this incident and the publication of the proposed rule, the military constructed a wire fence to restrict vehicle access from 260 ha 650 ac in 1993, which includes all of the *A. jaegerianus* plants known on military lands (S. Ahmann, *in litt.* 1993). No breaches of the fence have occurred in the past 2 years, although a military vehicle breached the fence three years ago (Ahmann, pers. comm. 1996). The military currently uses these fenced lands only for compass orienteering exercises. Impacts to this taxon from military training may increase following the expansion of the NTC at Fort Irwin. Although the size and location of the expansion has not been decided, it may encompass several hundred square miles of BLM lands including those which support *A. jaegerianus.*

Astragalus lentiginosus var. *coachellae* (Coachella Valley milk-vetch) is currently known from fewer than 25 occurrences in the Coachella Valley. Habitat destruction in the Coachella Valley began with the introduction of agriculture over a century ago, but urbanization has accelerated greatly in the past 40 years. In the 20 years from 1970 to 1990, the human population of the Coachella Valley more than doubled from under 100,000 to over 215,000 people. In the next 20 years the human population of the Coachella Valley is expected to again double, reaching a total of almost 500,000 people by the year 2010 (Coachella Valley Association of Governments, *in litt.* 1997). Significant dune habitats that once occurred along the southwest edge of the Coachella Valley, at the base of the Santa Rosa Mountains, now support cities such as Rancho Mirage and Palm Desert (Barrows 1987). Increased urbanization of the area has altered available habitat in the valley both through direct conversion of land and through alterations in the sand transport system responsible for the creation and maintenance of the region's sand habitats (Barrows 1987; A. Sanders, pers. comm. 1996; K. Barrows, *in litt.* 1996).

The historical loss of populations of *Astragalus lentiginosus* var. *coachellae* is not known. Since 1986, two occurrences and part of a third, located adjacent to roads on private land in the southern part of this taxon's range, have been repeatedly graded and curbs have been laid over portions of what was previously suitable habitat. Although they have not been resurveyed, these sites are degraded to the extent that they are unlikely to support viable populations of *A. lentiginosus* var. *coachellae*. A fourth occurrence, in the same region, was found to support no plants in 1987, although suitable habitat still remained at the site. By 1996, this site had been converted to a truck stop and suitable habitat had been eliminated (Barrows 1987; K. Barrows, *in litt.* 1996; K. Barrows, pers. comm. 1996).

Urbanization and development, like that occurring in the Coachella Valley, result in both direct loss of populations and the restriction of populations to fragments of suitable habitat. As areas are increasingly developed, these habitat fragments, especially those adjacent to roads, may be degraded by vehicle use or roadside maintenance activities and are often subsequently paved over or landscaped. Secondary impacts to *Astragalus lentiginosus* var. *coachellae* associated with increased urbanization include habitat damage from OHV use. OHV use has eliminated plants from a portion of one population in the northern part of the range of this variety where a commercial OHV rental operation exists. Plants are now found only on the margins of this site (K. Barrows, pers. comm. 1996).

Astragalus lentiginosus var. *piscinensis* is currently restricted to a 10-km (6-mi) stretch of alkaline flats paralleling Fish Slough on lands owned and managed by the LADWP and BLM. In 1984, BLM established an ACEC on these lands to protect the federally endangered Owens pupfish (*Cyprinodon radiosus*) and the entire wetland ecosystem. This ACEC encompasses the range of *A. lentiginosus* var. *piscinensis*. The ACEC is jointly managed by BLM, the Service, CDFG, University of California Natural Reserve System (NRS), and LADWP. Because of the availability of water and wetland vegetation at Fish Slough, the area has sustained extensive human-related uses, beginning with cattle grazing in the 1860s. Additional discussion of cattle impacts can be found under Factor E of the ''Summary of Factors Affecting the Species'' section of this rule. Ferren (1991b) summarized impacts to botanical resources at Fish Slough, noting that those related to the enhancement of fisheries (construction of ponds, impoundments, roads, and ditches) have resulted in the greatest losses to this taxon's specific alkali habitats. Because of the long narrow configuration of the Slough, bounded by uplands on both sides, this alkali wetland habitat is limited in extent. In the west-central zone of Fish Slough, Fish Slough Lake is expanding, perhaps due to natural geologic subsidence and/or construction of Red Willow Dam, resulting in loss of suitable habitat for *A. lentiginosus* var. *piscinensis* as the soils become increasingly saturated for greater portions of the year (Ferren 1991c; W. Ferren, *in litt.* 1992). Other impoundments created in the past, some for the protection of endangered fish habitat, have similarly altered the local hydrology (BLM 1984; Ferren 1991; BLM *in litt.* 1993).

Astragalus magdalenae var. *peirsonii* is currently known to be extant in the United States only within the Algodones Dunes, where it is threatened by increasing habitat loss from OHV use and associated recreational development. Approximately 75 percent of the dune system, supporting 75 to 80 percent of the colonies of *A. magdalenae* var. *peirsonii*, as mapped in 1977, are open to OHV recreation within the Imperial Sand Dunes Recreation Area (Westec 1977, BLM 1987). Between 1977 and 1985, OHV use in the Imperial Sand Dunes Recreation Area increased by over 60 percent (BLM 1987). With the rising popularity of all-terrain vehicles and the expanding human population in southern California, use is expected to more than double from 1985 to the year 2000 (BLM 1987). The most recent figures available from the BLM show that in 1996 the number of recorded visits at the recreation area rose to over 430,000, an increase of 15 percent from 1994 (BLM, *in litt.*, 1996).

Of the dune-restricted plant taxa, *Astragalus magdalenae* var. *peirsonii* appears to be the most vulnerable to destruction by OHVs. Its small stature provides little obstacle to riders (Romspert and Burke 1978, ECOS 1990); the brittle nature of its single stem causes plants to break, rather than bend, when hit by a vehicle (ECOS 1990); and a lack of lateral roots may reduce its ability to remain anchored and survive vehicle-induced damage (Romspert and Burke 1978). In addition, seedling establishment in *A. magdalenae* var. *peirsonii* occurs in winter and spring (Romspert and Burke 1978), which are also the most popular periods for recreational riding on the dunes. BLM estimates that an average winter weekend in the year 2000 will draw

about 7,000 OHV recreationalists to the dunes (BLM 1987).

Although the condition of *Astragalus magdalenae* var. *peirsonii* has not been documented throughout the dune system since 1977, the condition of its dune habitat has been declining. In 1977, biologists noted that no seedlings of any of the sensitive plant taxa could be found in the dune areas receiving high OHV use, although seedlings were abundant in other regions of the dunes (Westec 1977). In 1990, biologists monitoring the dunes noted that no seedlings or colonies of adult plants of *A. magdalenae* var. *peirsonii* could be found in these high use areas (ECOS 1990). The 1990 study compared colonies of *A. magdalenae* var. *peirsonii* located in areas closed to OHVs to those in areas receiving moderate OHV use. Biologists found that plants in moderate use areas had poorer health and lower reproductive success than those in areas closed to OHVs. In one comparison, 40 percent of the sampled individuals located in the closed area reproduced, while no individuals located in the area open to OHVs reproduced (ECOS 1990). As OHV use of the dunes increases, the amount of dune habitat experiencing ''moderate'' impacts will continue to expand. These results suggest that OHV use has a detrimental effect on populations beyond that due to the direct crushing of individuals. Factors such as sand compaction, disruption of hydrologic factors, or changes in community composition may also be responsible for the decline of *A. magdalenae* var. *peirsonii* in areas used by OHVs (ECOS 1990).

While loss of colonies and declines in reproductive success and health of *Astragalus magdalenae* var. *peirsonii* have been documented in areas receiving high and moderate levels of OHV use, a 20,000-ha (50,000-ac) central section of the dunes has been designated ''limited use'' under the California Desert Conservation Area Plan (BLM 1980). According to this plan, the ''limited use'' designation is designed to protect sensitive resource values, while allowing multiple use. However, *Astragalus magdalenae* var. *peirsonii* colonies in these areas may decline if present trends continue. Because the area is on a dune system, the ''limited use'' designation prohibits the construction of roads or campgrounds within its boundaries, but does not include any restriction on OHV use of the area. In 1988, BLM constructed a campground at the south end of Gecko Road, just 3/4 mile north of the boundary of the ''limited use'' zone and adjacent to the highest concentration of colonies of *A. magdalenae* var. *peirsonii* in the dune system. This region of dunes was also a Wilderness Study Area (WSA) in the 1970s and 1980s. When the BLM recommended against designating this WSA as wilderness in 1989, it cited four reasons for its recommendations—(1)''* * * the long tradition of motor vehicle use;'' (2) ''* * * the projected continued demand for OHV use;'' (3) ''* * * the WSA's potential for energy and mineral development;'' and (4) ''* * * the similarity of the area to a nearby WSA recommended for wilderness.'' (BLM 1989). While OHV use is expected to increase throughout the recreation area, OHV use in the former southern WSA is expected to increase faster than the overall rate, tripling from 1985 to the year 2000 (BLM 1987). In addition, these projections from BLM's 1987 Recreation Area Management Plan did not consider the increase in dispersed camping that is occurring along the railroad tracks and canal road that bound the central dunes on their east and west side (A. Schoeck, BLM, pers. comm. 1997). Camping in these areas facilitates quick, easy access to the central ''limited use'' dunes for OHV use (D. Steeck and T. Thomas, Service, pers. obs. 1997). Construction of a bridge over the All American Canal in the southern portion of the Algodones Dunes, planned for 1997 but as yet not constructed, will also increase ease of access to the central dunes, and may thereby encourage additional OHV use (Service, *in litt.* 1996). The Service concludes that the trend for habitat conditions of *A. magdalenae* var. *peirsonii* in the central, limited use, zone of the dunes is one of continuing decline.

Astragalus tricarinatus is known to be extant only in Big Morongo Canyon. This canyon bottom has been disturbed by pipeline maintenance activities several times in the last decade and these activities are likely to continue. One occurrence of fewer than 10 *A. tricarinatus* plants at the north end of the canyon was graded during maintenance of a gas pipeline access road in 1985 and has not been seen since, despite searches (Barrows 1987b; C. Jacobsen, *in litt.* 1993; Mathews 1994). In 1995, the Four Corner's Pipeline Company excavated and realigned three segments of a crude oil pipeline that extended through habitat for *A. tricarinatus* in Big Morongo Canyon and had been exposed by streambed scouring (Service 1994). One section of the realignment extended through a site that had supported 20 *A. tricarinatus* plants in 1992. Plants present at the time of construction were shielded from the construction zone by protective fencing, and the topsoil scraped from the site was stockpiled and later replaced (Service 1994; Ted Rado, consultant, pers. comm. 1996). However, the project, originally scheduled for October 1994, was not carried out until April 1995, the period when plants are flowering but before fruits have matured. Any damage to plants during this period would have resulted in diminished seed production by the population that year. *Astragalus tricarinatus* population sizes fluctuate widely from year to year and may depend on the persistence of a soil seedbank during years when weather limitations are unfavorable for growth or reproduction. Due to poor growing conditions for this taxon throughout the Canyon in 1996, the effect of this pipeline realignment on *A. tricarinatus* in Big Morongo Canyon has not yet been determined (R. Kobaly, BLM, pers. comm. 1996).

Astragalus tricarinatus is threatened by maintenance activities for the crude oil pipeline which runs through its habitat at Big Morongo Canyon and by vehicle use in the canyons. Its limited number of individuals make it especially vulnerable to unanticipated events, such as pipeline leaks, breaks, or emergency repairs.

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

Overutilization has not been documented for the five taxa discussed in this final rule. However, rare taxa have, at times, become vulnerable to collecting by curiosity seekers as a result of increased publicity following publication of a listing proposal. The extremely limited number of *Astragalus jaegerianus* and *A. tricarinatus* make them vulnerable to scientific collectors. The potential for collection of these plants upon publication of this final rule may increase.

C. Disease or Predation

Disease is not known to be a factor for any of the taxa. Evidence exists that native herbivores may exert a substantial effect on reproduction of individual plants of *Astragalus lentiginosus* var. *piscinensis*. It is unclear whether gradual increases in soil saturation are reducing plant vigor in the central zone of Fish Slough, making them more vulnerable to attack by native herbivores. Whatever the causes, infestations of vegetative parts and root systems by phloem-sucking insects and red ants, respectively, and high rabbit herbivory have all been reported for individuals of *A.*

lentiginosus var. *piscinensis* in the central zone of Fish Slough (Mazer and Travers 1992; BLM, *in litt.* 1993; LADWP, *in litt.* 1996). Ferren (1991a) observed rabbit feces adjacent to individuals of *A. lentiginosus* var. *piscinensis* that had been virtually stripped of leaves, flowers, and seeds. Mazer and Travers (1992) found that plants in the central western zone of Fish Slough suffered high herbivory levels when compared to plants in the north section of the Slough. By August, sampled plants in the central zone of the Slough had 80 percent of their branches grazed by rabbits or rodents, while in the north zone of the Slough fewer than 20 percent of branches of sampled plants had been grazed. It is unknown whether the reduced reproduction of *A. lentiginosus* var. *piscinensis* caused by native herbivores results in lowered recruitment, or whether native herbivores may be responsible for the low recruitment seen in certain areas by preferentially feeding on seedlings. In addition to herbivory by rodents and rabbits, in 1996, plants of *A. lentiginosus* var. *piscinensis* appeared to have been killed by red ants, probably through damage to the root system (LADWP *in litt.* 1996).

D. The Inadequacy of Existing Regulatory Mechanisms

Existing regulatory mechanisms that may provide some protection for these taxa include—(1) the California Endangered Species Act (CESA), (2) the California Environmental Quality Act (CEQA), (3) the Federal Endangered Species Act, in those cases where these taxa occur in habitat occupied by other listed species, (4) the Clean Water Act, (5) the Federal Land Policy and Management Act, and (6) regional planning efforts.

Pursuant to the Native Plant Protection Act (chapter 10 section 1900 *et seq.* of the California Fish and Game Code) and CESA (chapter 1.5 section 2050 *et seq.* of the Fish and Game Code), the California Fish and Game Commission listed *Astragalus magdalenae* var. *peirsonii* as endangered in 1979. California Senate Bill 879, passed in 1997 and effective January 1, 1998, requires individuals to obtain a section 2081(b) permit from CDFG to take a listed species incidental to otherwise lawful activities, and requires that all impacts be fully mitigated and all measures be capable of successful implementation. *Astragalus magdalenae* var. *peirsonii* is currently known only from public lands under BLM management, however, and these CESA provisions do not apply to Federal agencies. In an attempt to address management of the Algodones Dune system on an ecosystem basis for the conservation of its wildlife and botanical resources, the BLM and CDFG developed a habitat management plan (HMP) for the Algodones Dunes in 1987. The plan included a monitoring program to track the effects of the 1988 construction of Roadrunner campground and the subsequent increase in OHV use on the wildlife and vegetation in the central dunes. In the HMP, the BLM also agreed to establish monitoring transects for sensitive plants, including *A. magdalenae* var. *peirsonii*, in all land use classes and monitor them every other year until trends were established. Little of the monitoring specific to sensitive plant species has been carried out (N. Nicolai, BLM, pers. comm. 1996, J. Dice, CDFG, pers. comm. 1997). At the Service's request for distribution and abundance data, the BLM provided only sensitive plant monitoring data from 1990, and the baseline studies conducted in 1977 and 1978.

In Mexico, the Gran Desierto, where *Astragalus magdalenae* var. *peirsonii* occurs, was designated a UNESCO Biosphere Reserve in 1993. Although this designation recognizes the unique resource values of the area, actual enforcement of conservation laws will be dictated by the availability of the limited resources of the Mexican government. The status of *A. magdalenae* var. *peirsonii* in Mexico is not well documented.

CEQA requires a full disclosure of 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 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.'' If significant effects are identified, the lead agency has the option to require mitigation for effects through changes in the project or to decide that overriding considerations make mitigation infeasible. In the latter case, projects may be approved that cause significant environmental damage, such as destruction of endangered species and their habitats. Protection of species through CEQA is, therefore, dependent upon the discretion of the lead agency.

Of the taxa included in this proposed rule, only *Astragalus lentiginosus* var. *coachellae* occurs on private lands that are subject to CEQA. Protection of *A. lentiginosus* var. *coachellae* has not been adequately considered in the CEQA process. For instance, projects are sometimes approved when biological surveys have not been conducted at the appropriate time of year to locate this taxon (K Barrows, pers. comm. 1997). The biology of the taxon may also result in it being missed or the extent of its distribution severely underestimated if surveys are carried out in years of low rainfall, or other times when plants may occur at very low densities. In addition, development of lands in the Coachella Valley may have an indirect effect on *A. lentiginosus* var. *coachellae* by blocking transport of sands throughout the Valley. These indirect, cumulative effects could result in large-scale changes to the sand habitats of the Coachella Valley, but are not often addressed on an individual project basis.

The taxa in this rule may already receive some habitat protection from the Act where their ranges overlap those of species already listed under the Act. The range of *Astragalus lentiginosus* var. *coachellae* overlaps with that of the Coachella Valley fringe-toed lizard. The three preserves set aside for the lizard support populations of *A. lentiginosus* var. *coachellae*, but this represents only 20 to 25 percent of the occurrences of this taxon. Over 75 percent of the occurrences of this plant are located on unprotected sites on private or tribal lands.

The range of *Astragalus jaegerianus* overlaps with that of the desert tortoise (*Gopherus agassizii*) on some portions of DOD lands at Fort Irwin and on some BLM lands. However, the distribution of *A. jaegerianus* is very localized and areas too small or fragmented to support viable tortoise populations could support significant numbers of the plant. Overlapping range with the tortoise does not provide adequate protection for *A. jaegerianus*. *Astragalus magdalenae* var. *peirsonii* and *A. tricarinatus* do not co-occur with any taxa already listed under the Act.

Astragalus lentiginosus var. *piscinensis* occurs within the Fish Slough ecosystem, a wetland supporting the Owens pupfish (*Cyprinodon radiosus*), a federally listed endangered species. The listing of the Owen's pupfish under the Act has provided additional recognition of the need to protect the Fish Slough ecosystem, and in that way has indirectly benefitted *A. lentiginosus* var. *piscinensis*. Conversely, impoundments and other manipulations of the spring system of the slough, created in part to provide habitat for the pupfish, have resulted in

the loss of alkali meadow habitat of *A. lentiginosus* var. *piscinensis*. Management emphasis on only one species or group of related species (e.g. endangered fishes) will not provide adequate protection to all sensitive species in the wetland system and, as in this case, may be detrimental to the survival or recovery of co-occurring species. The occurrence of federally listed fish species in Fish Slough does not provide adequate protection for *A. lentiginosus* var. *piscinensis* in its adjacent wetland habitat.

Under section 404 of the Clean Water Act, the U.S. Army Corps of Engineers (Corps) regulates the discharge of fill into waters of the United States, including navigable waters, wetlands, and other waters (33 CFR parts 320–330). The Clean Water Act requires project proponents to obtain a permit from the Corps prior to undertaking many activities (e.g., grading, discharge of soil or other fill material, etc.) that would result in the filling of wetlands subject to the Corps' jurisdiction. The habitat of *Astragalus lentiginosus* var. *piscinensis* is seasonally moist alkaline flats adjacent to Fish Slough and is a jurisdictional wetland under the purview of section 404. Some protection from wetland fill activity, such as the construction of new dams, may be afforded by the regulatory process. However, unless a population of *A. lentiginosus* var. *piscinensis* were directly within the footprint of the fill area, impacts of the project on the species, e.g., changes in hydrology, may not be considered. Fluctuating water levels behind the dams at Fish Slough are not subject to regulation under section 404, but can result in undesirable changes in the hydrologic characteristics of the habitat of *A. lentiginosus* var. *piscinensis*, a primary threat to the species. Protections afforded to wetland areas under section 404 of the Clean Water Act are not sufficient to preclude listing the species.

Currently, the majority of *Astragalus jaegerianus* sites are either covered by mining claims, or are available for claims for mineral extraction. The BLM has only limited authority under the Federal Land Policy and Management Act (FLPMA) to control surface mining once claims are made. The policy of FLPMA, as expressed by regulation, grants individuals a statutory right to mine certain Federal lands (43 CFR 3809.0–6). Although mining projects are required to submit a Plan of Operations (for projects over 2 ha (5 ac) in size) or a Notice of Operations (for projects under 2 ha (5 ac), including exploratory mining), the BLM has only 15 days in which to respond. Since the notices may be submitted at times when the plants are not present above-ground, BLM must frequently base its response on existing knowledge of where plants are located, or were located in the past, rather than on field surveys to determine if a site supports this species. The options that are available to the Service and the BLM in response to a project are limited, unless an action may jeopardize the continued existence of the listed species pursuant to section 7 of the Act. *Astragalus jaegerianus* currently receives minimal regulatory protection in areas where mining activity is occurring.

Astragalus jaegerianus is included within the planning area of the West Mojave Coordinated Management Plan, a multi-agency effort to coordinate resource information and provide general resource management direction in the west Mojave Desert. Unresolved issues stalled the planning team's progress in 1996. The planning effort has since been reinitiated, with a modified objective and fewer species to be addressed. Although *A. jaegerianus* is one of the included taxa, the planning process is not yet at a stage that will provide it protection.

Astragalus lentiginosus var. *piscinensis* occurs within Zone 1 of an ACEC on public lands managed by the BLM, and on lands owned by the LADWP. A joint management committee composed of representatives of the LADWP, BLM, the Service, CDFG, and the University of California Natural Reserve System provide guidance on management issues. Although the management committee is making progress in addressing the needs of the sensitive plants and animals in the Fish Slough ecosystem, the changes in slough hydrology resulting from existing dams and, potentially, from natural causes (Ferren 1991c), are complex and will not be easily resolved. The Service concludes that the existence of the Fish Slough ACEC and management committee do not preclude the need to list *A. lentiginosus* var. *piscinensis* at this time.

Astragalus lentiginosus var. *coachellae* occurs within the bounds of the Coachella Valley Multispecies Habitat Conservation Planning (CVMSHCP) area. This planning process is being coordinated by the Coachella Valley Association of Governments and the Coachella Valley Mountains Conservancy to address a 4500 sq km (1,850 sq mi) area that includes the Coachella Valley and surrounding region in Riverside County. The plan is expected to address conservation needs for 12 species that are listed or proposed for listing as endangered or threatened species, 21 candidate species, and 17 additional species of concern to the Service. However, the planning process is in its initial stages and its funding is not secured, nor is a product yet available that can be implemented. Thus, the inclusion of *A. lentiginosus* var. *coachellae* in the CVMSHCP planning process is not sufficient to preclude the need to list the species at this time.

E. Other Natural or Human-caused Factors Affecting Their Continued Existence

A potential threat to *Astragalus jaegerianus* is habitat destruction from emergency fire suppression activities in response to wildfires occurring at Lane Mountain Mesa. An increase in fire frequency has been documented for the nearby Superior Dry Lake area (T. Eagen, pers. comm. 1997) and the Lane Mountain Mesa area is experiencing similar increases in human activity (the ignition source) and nonnative annual plant species (the significant fuel source) (T. Eagen, pers. comm. 1996). Although the population of *A. jaegerianus* has not been burned recently, the existence of fewer than 30 plants at this site make it extremely vulnerable to emergency fire suppression activities or similar unplanned events.

Lack of recruitment is a potential threat to *Astragalus lentiginosus* var. *piscinensis*. BLM has been monitoring this taxon in the central-eastern zone of Fish Slough since 1992 and has observed no recruitment in the area during that time (BLM, *in litt.* 1993, 1996; Anne Halford, BLM, pers. comm. 1996). Two potential explanations for this are high rabbit/rodent herbivory of seedlings and changes in soil hydrology or chemistry that make the area less hospitable for seedlings. Alterations in the extent and timing of soil saturation have occurred in several areas of the slough due to past hydrologic modifications, most recently for the enhancement of endangered fish habitat.

Astragalus lentiginosus var. *piscinensis* is subject to grazing from livestock. The Fish Slough area was first grazed by cattle in the 1860s, and grazing currently occurs on all LADWP lands that support *A. lentiginosus* var. *piscinensis* except for those within the northern 32-ha 80-ac exclosure (P. Hubbard, pers. comm. 1996). Data on plant numbers, collected from plots in grazed and ungrazed areas of Fish Slough from 1991 to 1996, suggest that some recruitment of new individuals into the population is occurring in both the grazed and ungrazed sample areas. The sampled plots are few (three grazed

plots and two ungrazed plots) and numbers of plants within the plots fluctuated substantially over the sampling period without clear increasing or declining trends.

Grazing by livestock alters the composition of the plant community over time by reducing or eliminating those species that cannot tolerate trampling and by enabling those that can to increase in abundance. Other taxa that were not previously part of the native plant community may be introduced and flourish under the disturbance caused by grazing and may reduce or eliminate native taxa through competition for resources. The Service considers cattle grazing a potential threat until more conclusive evidence is available. Additional discussion of cattle grazing can be found in this document in the Service's ''Response to Comments'' section of this final rule (see Issue 4).

Astragalus tricarinatus is vulnerable to crushing by motorized vehicles in Big Morongo Wash. Although access to the bottom of the canyon is gated, botanists conducting surveys for *A. tricarinatus* in 1994 noted motor vehicle tracks within several feet of the plants. While some of the vehicle activity may have been associated with pipeline maintenance, other vehicle use may have been recreational (Mathews 1994). Due to the limited number of individuals (less than 100 known plants), *A. tricarinatus* remains extremely vulnerable to loss of plants due to OHVs, maintenance operations, and unforseen events relating to the pipeline (e.g., pipeline breaks or leaks) that could cause local population extirpation and potentially lead to extinction of the species.

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by these taxa in determining to make this rule final. Based on new information that has come to light since these taxa were proposed and based on reevaluation of existing data, the Service's preferred action is to list *Astragalus jaegerianus, A. tricarinatus,* and *A. lentiginosus* var. *coachellae* as endangered, and *A. lentiginosus* var. *piscinensis* and *A. magdalenae* var. *peirsonii* as threatened. The three endangered taxa face the following threats—habitat alteration and destruction resulting from construction, urban development, mining, pipeline maintenance, and OHV activity; and the inadequacy of existing regulatory mechanisms. The low numbers and small population sizes of *A. jaegerianus* and *A. tricarinatus* make them particularly vulnerable to extinction from random natural events (e.g., flooding that could wash substantial amounts of the seedbank into unsuitable habitat) or unforeseen events (e.g., wildfire suppression activities, pipeline breaks, leaks, or repairs). Because these three taxa are in danger of extinction throughout all or a significant portion of their ranges, they meet the definition of endangered under the Act.

Both *Astragalus magdalenae* var. *peirsonii* and *A. lentiginosus* var. *piscinensis* were originally proposed for endangered status. Since the proposed rule was published, the northern portion of Algodones Dunes habitat that supports *A. magdalenae* var. *peirsonii* was formally designated as wilderness in 1994 under the California Desert Protection Act. This wilderness is permanently closed to motorized-vehicle use. Since publication of the proposed rule, the Service has also become aware of collections of *A. magdalenae* var. *peirsonii* from the Gran Desierto in Sonora, Mexico. The specimens from Sonora were all collected from the southern Gran Desierto over a 15-year period (Richard Felger, Drylands Institute, pers. comm. 1996; J. Rebman, San Diego Museum of Natural History, pers. comm. 1996; Alan Romspert, California Desert Studies Center, pers. comm. 1996; Gary D. Wallace, Service, pers. comm. 1996). While this taxon remains vulnerable to the OHV use occurring over most of its dune habitat, the Service believes that the dispersed nature of its colonies and the wilderness designation reduce the potential for immediate extinction. Therefore, a designation of threatened is appropriate for this taxon. *Astragalus lentiginosus* var. *piscinensis* is threatened by hydrologic modification of its wetland ecosystem, and reduced recruitment that may be due to past alteration of habitat or rabbit/rodent herbivory. A significant portion of the northern population is protected by an exclosure, reducing the threat from grazing. In addition, the lands on which it occurs receive specific management consideration due to its inclusion in an ACEC. The Service determines that, while this taxon may not be in immediate danger of extinction, it is likely to become endangered in the foreseeable future throughout all or a significant portion of its range, thus a threatened designation is appropriate. Critical habitat is not being designated for these five taxa for reasons discussed in the following section.

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 considerations 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 are determined to be endangered or threatened. 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 such threat to the species, or (2) such designation of critical habitat would not be beneficial to the species.

Section 7(a)(2) of the Act requires Federal agencies to consult with the Service to ensure that any action authorized, funded, or carried out by such agency, does not jeopardize the continued existence of a federally listed species or destroy or adversely modify designated critical habitat. The requirement that Federal agencies must not destroy or adversely modify critical habitat in any action authorized, funded or carried out by such agency (agency action) is in addition to the section 7 prohibition against jeopardizing the continued existence of a listed species; and it is the only mandatory legal consequence of a critical habitat designation. The Service's implementing regulations (50 CFR part 402) define ''jeopardize the continuing existence of'' and ''destruction or adverse modification of'' in very similar terms. To jeopardize the continuing existence of a species means to engage in an action ''that reasonably would be expected to reduce appreciably the likelihood of both the survival and recovery of a listed species.'' Destruction or adverse modification of habitat means an ''alteration that appreciably diminishes the value of critical habitat for both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species.''

Common to both definitions is an appreciable detrimental effect to both the survival and recovery of a listed species. An action that appreciably diminishes habitat for recovery and survival may also jeopardize the continued existence of the species by reducing reproduction, numbers, or distribution because negative impacts to such habitat may reduce population numbers, decrease reproductive success, or alter species distribution through habitat fragmentation.

For a listed plant species, an analysis to determine jeopardy under section 7(a)(2) would consider loss of the species associated with habitat impacts. Such an analysis would closely parallel an analysis of habitat impacts conducted to determine adverse modification of critical habitat. As a result, an action that results in adverse modification also would almost certainly jeopardize the continued existence of the species concerned. Listing these species will ensure that section 7 consultation occurs and potential impacts to the species and their habitat are considered for any Federal action that may affect these species. In many cases, listing also ensures that Federal agencies consult with the Service even when Federal actions may affect unoccupied suitable habitat where such habitat is essential to the survival and recovery of the species. This is especially important for plant species where consideration must be given to the seed bank component of the species, which are not necessarily visible in the habitat throughout the year. A significant portion of their vegetative structure may not be in evidence during cursory surveys; occupancy of suitable habitat can only be reliably determined during the growing season. In practice, the Service usually consults with Federal agencies proposing projects in areas where the species was known to recently occur or to harbor known seed banks.

Specific areas outside the geographical area occupied by a species are included in the Act's definition of ''critical habitat.'' Critical habitat can be designated for suitable, but unoccupied, habitat of listed species. However, the Act indicates that critical habitat ''shall not include the entire geographical area which can be occupied by the threatened or endangered species'' except when determined by the Secretary. In the case of the species addressed in this final rule, the Service does not know specifically why some areas that seem suitable are unoccupied. Designating all potentially suitable areas could, therefore, encompass ''the entire geographical area'' which can be occupied by the species. Furthermore, the Service has not yet made a determination as to how much habitat is required for recovery. Designating all or a portion of unoccupied habitat under these circumstances seems inappropriate and contrary to Congressional intent. The Service believes the issue of conserving and managing potentially suitable unoccupied habitat is best addressed during the recovery planning process as biologists learn more about these species and are able to work directly with affected landowners on how to best manage these habitats.

Apart from section 7, the Act provides no additional protection to lands designated as critical habitat. Designating critical habitat does not create a management plan for the areas where the species occurs; does not establish numerical population goals or prescribe specific management actions (inside or outside of critical habitat); and does not have a direct effect on areas not designated as critical habitat.

Critical habitat would provide no benefit to the species addressed in this rule on non-Federal lands (i.e., private, State, County or City lands) beyond that provided by listing. Critical habitat provides protection on non-Federal lands only if there is Federal involvement (a Federal nexus) through authorization or funding of, or participation in a project or activity on non-Federal lands. In other words, designation of critical habitat on non-Federal lands does not compel or require the private or other non-Federal landowner to undertake active management for the species or to modify any activities in the absence of a Federal nexus. Possible Federal agency involvement or funding that could involve the species addressed in the rule on non-Federal lands include the BLM, DOD, and the Corps. Federal involvement, if it does occur, will be addressed regardless of whether critical habitat is designated because interagency coordination requirements such as the Fish and Wildlife Coordination Act (FWCA) and section 7 of the Act are already in place. When these plant species are listed, activities occurring on all lands subject to Federal jurisdiction that may adversely affect these species would prompt the requirement for consultation under section 7(a)(2) of the Act, regardless of whether critical habitat has been designated.

While a designation of critical habitat on private lands would only affect actions where a Federal nexus is present and would not confer any additional benefit beyond that already provided by section 7 consultation because virtually any action that would result in an adverse modification determination would also likely jeopardize the species, a designation of critical habitat on private lands could result in a detriment to the species. This is because the limited effect of a critical habitat designation on private lands is often misunderstood by private landowners whose property boundaries could be included within a general description of critical habitat for a specific species. Landowners may mistakenly believe that critical habitat designation will be an obstacle to development and impose restrictions on their use of their property. In some cases, members of the public may believe critical habitat designation to be an attempt on the part of the government to confiscate their private property. Unfortunately, inaccurate and misleading statements reported through widely popular medium available worldwide, are the types of misinformation can and have led private landowners to believe that critical habitat designations prohibit them from making use of their private land when, in fact, they face potential constraints only if they need a Federal permit or receive Federal funding to conduct specific activities on their lands. These types of misunderstandings, and the fear and mistrust they create among potentially affected landowners, make it very difficult for the Service to cultivate meaningful working relationships with such landowners and to encourage voluntary participation in species conservation and recovery activities. Without the participation of landowners in the recovery process, the Service will find it very difficult to recover species that occur on non-Federal lands.

A designation of critical habitat on private lands could actually encourage habitat destruction by private landowners to rid themselves of the perceived endangered species problem. Listed plants have limited protection under the Act, particularly on private lands. Section 9(a)(2) of the Act, implemented by regulations at 50 CFR section 17.61 (endangered plants) and 50 CFR 17.71 (threatened plants) prohibits—(1) removal and reduction of listed plant species to possession from areas under Federal jurisdiction, or their malicious damage or destruction on areas under Federal jurisdiction; or (2) removal, cutting, digging up, or damaging or destroying any such species in knowing violation of any State law or regulation including state criminal trespass laws. Generally, on private lands, collection of, or

vandalism to, listed plants must occur in violation of State law to be a violation of section 9. The Service is not aware of any state law in California that generally regulates or prohibits the destruction or removal of federally listed plants on private lands. Vandalism is a potential threat to the five taxa listed in this rule. In the general area where the plants addressed in this rule are found, a development and construction company was documented to have deliberately bulldozed known federally listed plant locations at a work site. (T. Thomas, Service). The designation of critical habitat requires the publication of precise habitat descriptions and mapped locations of the species in the **Federal Register**, increasing the likelihood of collection and vandalism, including potential search and removal activities at specific sites.

The Service acknowledges that in some situations critical habitat designation may provide some value to the species by notifying the public about areas important for species' conservation and calling attention to those areas in special need of protection. However, when this limited benefit is weighed against the potential threat of collection and vandalism associated with the designation of critical habitat, the Service concludes that the possible detriment to the species from a critical habitat designation outweighs the possible conservation benefit of such designation and that such designation is therefore not prudent. The information and notification process can more effectively be accomplished by working directly with landowners and communities during the recovery planning process and by the section 7 consultation and coordination process when a Federal nexus exists. The use of these existing processes will provide the same level of conservation benefit to the species that the designation of critical habitat would, but without the confusion and misunderstandings associated with critical habitat designation.

For similar reasons, the Service also concludes that there would be no additional benefits to the species covered in this rule beyond the benefits conferred by listing from a designation of critical habitat on Federal lands. In the case of each of these plant species, the existing occurrences of the species are known by the BLM and DOD; and any action that would result in adverse modification of critical habitat would almost certainly result in likely jeopardy to the species, so that a designation of critical habitat on Federal lands would not confer any additional benefit on the species. On the other hand a designation of critical habitat could increase the threats to these species from vandalism and collection similar to the threats identified in response to listing a species (Oberbauer 1992, Beauchamp *in litt.* 1997). Simply listing a species can precipitate commercial or scientific interest, both legal and illegal, which can threaten the species through unauthorized and uncontrolled collection for both commercial and scientific purposes. The listing of species as endangered or threatened publicizes a species' rarity and may make the species more susceptible to collection by researchers or curiosity seekers (Mariah Steenson pers. comm. 1997, M.Bosch, U.S. Forest Service *in litt.* 1997). For example, the Service has documented an incident where, following the publication of critical habitat designation in the **Federal Register**, unidentified persons visited a Forest Service wilderness area where listed plants were located and asked directions to the location of the plants in question. Several plants were later found to be missing from the Service study plots (Nora Murdock, Service, pers. comm. 1998).

Because public lands such as BLM lands are open for public use, this threat exists whenever maps of listed plant locations are made known to the public, as required for critical habitat designation. Critical habitat designation also makes plant species more vulnerable to vandals who would destroy occurrences of plants and other protected species in order to avoid perceived or potential land management conflicts. The potential threat of vandalism and collection would likely be exacerbated by publication of descriptions and maps of critical habitat in the **Federal Register**. The Service concludes that the absence of any additional conservation benefit from a designation of critical habitat for the plant species covered by the rule known to occur on Federal lands, and the likely detriment from such designation resulting from increased threats of collection and vandalism renders a designation of critical habitat for the plants not prudent.

The Service has weighed the lack of overall benefits of critical habitat designation beyond that provided by listing species as threatened or endangered along with the benefits of public notification against the detrimental effects of the negative public response and misunderstanding of what critical habitat designation means and the increased threats of illegal collection and vandalism, and has concluded that critical habitat designation is not prudent for *Astragalus jaegerianus*, *A. lentiginosus* var. *coachellae*, *A. lentiginosus* var. *piscinensis*, *A. magdalenae* var. *peirsonii*, and *A. tricarinatus*. More specific details why designation of critical habitat is not prudent for each of these species is addressed in the following discussion.

Astragalus jaegerianus

Astragalus jaegerianus occurs on lands managed by the BLM and the DOD. Because so few plants are known to occur, it is likely that any activity that would be considered an adverse modification of critical habitat would also likely jeopardize the continued existence of the species; thus, a critical habitat designation would provide no advantage or additional conservation benefit in this instance. However, *A. jaegerianus* occurs in desert shrublands that appear no different from surrounding, unoccupied habitat. There is no easily observable difference in dominant vegetation type, landform, soil, or hydrologic characteristics, to distinguish occupied habitat of *A. jaegerianus* from surrounding unoccupied or unsuitable habitat. For this reason, the designation of critical habitat could potentially benefit this species by formally delineating for the Federal agencies those areas occupied by the species or that the Service deems critical to its survival and recovery, thus ensuring that consultation will take place when a federally authorized activity (such as military maneuvers or mining) occurs in critical habitat. While this small benefit may exist, it is offset by the potential negative effects of designating critical habitat. Known populations of *A. jaegerianus* total only a few hundred plants. A critical habitat map that delineated occupied habitat areas would increase the potential for overcollecting by amateur and unethical professional botanists, especially since one of the populations is easily accessible from a road. Increases in collection of rare plant species following publications discussing the species' rarity have been documented (Gary Wallace, Service, pers. comm. 1997; Nora Murdock, Service, pers. comm. 1998). The threat of vandalism on Federal lands exists for this species.

The Service finds that critical habitat designation would provide little conservation benefit over that provided by listing where this species occurs. Federal agencies where the species occurs on their lands are aware of its presence and status. Critical habitat designation on these lands would not necessarily change the way those lands are managed or require that specific management actions take place. All

activities that may affect the species on these Federal lands would be subject to section 7 consultation. The Service believes that the conservation of this species on Federal lands can best be addressed by working directly with the agencies during the recovery planning process and the interagency coordination and consultation processes of section 7 for those activities with Federal agency involvement. In conclusion, the Service has weighed the general lack of benefit beyond that provided by listing as endangered against the detrimental effects of the increased threat of vandalism and the potential for misunderstandings by the public about the effects of critical habitat designation on Federal lands, and concludes that critical habitat is not prudent for *Astragalus jaegerianus.*

Astragalus lentiginosus var. *coachellae*

Astragalus lentiginosus var. *coachellae* is currently known from fewer than 25 occurrences in the Coachella Valley. About 75 to 80 percent of the known occurrences of *Astragalus lentiginosus* var. *coachellae* are located on private lands. The primary threat to *A. lentiginosus* var. *coachellae* is habitat destruction due to the extensive urban development occurring in the Coachella Valley. Urbanization destroys populations by direct conversion of the land on which they occur and by altering or reducing the source and transport of blow sands that maintain the sand habitats of the Coachella Valley. As discussed above, widespread misunderstanding exists in the public sector about the regulatory effect of a designation of critical habitat. On these lands, a designation of critical habitat could lead to increased vandalism; and because plants on private lands have few protections under section 9 of the Act, acts of take or vandalism would be difficult to prosecute. Where the taxon does occur on Federal lands or where Federal involvement may occur on non-Federal lands, actions that could adversely affect this taxon would be subject to consultation under section 7 of the Act. In some cases, delineating areas as critical habitat may provide a benefit to the taxon by increasing awareness of its location and by triggering additional consultations under section 7 that otherwise might not occur if the Federal agencies are unaware of population locations. The locations of *A. lentiginosus* var. *coachellae* on Federal land are being tracked and additional surveys are being conducted as part of the planning process for the Coachella Valley Multispecies Habitat Conservation Plan. Due to this active planning effort, a designation of critical habitat would not provide any benefit through increased awareness or through consultation with the Service. The Service determines that designation of critical habitat for this taxon will provide it no additional conservation benefits beyond those provided by its listing, and that the designation could lead to acts of collection or vandalism. Therefore, the risks associated with a designation of critical habitat outweigh the possible benefits of designating critical habitat. Designation of critical habitat is, therefore, not prudent.

Astragalus lentiginosus var. *piscinensis*

Astragalus lentiginosus var. *piscinensis* is restricted to a 6-mile stretch of alkali flat habitat and the transition zones to alkali scrub paralleling Fish Slough, in Inyo and Mono Counties, California. These habitat types form a ring around the seasonally and permanently flooded wetland areas of the slough itself. Over 60 percent of this population is located in the northern portion of the slough on land owned by the LADWP and approximately 35 percent of known *A. lentiginosus* var. *piscinensis* plants grow in the central zone of the slough on lands owned and managed by both BLM and LADWP. About 5 percent are in scattered patches downstream as far as McNally Canal, but Fish Slough is narrow at its southern end, with little suitable habitat (P. Novak, *in litt.* 1992; W. Ferren, *in litt.* 1992).

The alkali flat and alkali scrub habitat in the Fish Slough ecosystem were well-mapped by 1991 (Ferren 1991a) and the distribution of *Astragalus lentiginosus* var. *piscinensis* was mapped by BLM and LADWP in 1992, during surveys in which all potential habitat was searched. The habitat types in which *A. lentiginosus* var. *piscinensis* grows are visually different in dominant species than the surrounding upland habitat and are limited in extent. The lands on which *A. lentiginosus* var. *piscinensis* occurs receive specific management consideration due to its inclusion in an ACEC. The entire range of this taxon is encompassed within the Fish Slough ACEC under multi-agency management that includes BLM and the LADWP and this, combined with its proximity to a BLM Resource Area office, have provided *A. lentiginosus* var. *piscinensis* substantial recognition by BLM staff. As a result of this taxon occurring partially on lands managed by the BLM, section 7 consultations are probable. Because the habitat of this taxon is distinctive and the Fish Slough area is a management area of specific concern to the BLM, a designation of critical habitat would not provide *A. lentiginosus* var. *piscinensis* any additional recognition, or increased protection through consultation, beyond that provided by its listing. In 1991, LADWP constructed a 32 ha (80 ac) cattle exclosure at the northern end of the slough. In 1992, over 95 percent of the *A. lentiginosus* var. *piscinensis* plants in the northern zone were within the exclosure. Other than the area encompassed by the exclosure in the north end of Fish Slough, lands under LADWP management that support this taxon are grazed (Paula Hubbard, LADWP, pers. comm. 1996). Grazing is not permitted in the habitat of *A. lentiginosus* var. *piscinensis* on lands managed by BLM, in the central zone of the slough. The Service recognizes the efforts of the LADWP to protect *A. lentiginosus* var. *piscinensis* from the direct effects of trampling in the north region of the Slough by constructing a fenced exclosure and commends the efforts of the BLM and LADWP to monitor the status of the plant. Critical habitat designation on these lands would not change the way those lands are managed or require that specific management actions take place. Because this taxon is very narrowly distributed, any activity that would be significant enough to be considered an adverse modification of critical habitat would also likely jeopardize the continued existence of the species. For these reasons, the Service determines that designation of critical habitat for this taxon is not prudent because it would provide no additional benefit to the species beyond that conferred by listing.

Astragalus magdalenae var. *peirsonii*

BLM manages all of the Algodones Dunes, the location of the only confirmed extant populations of *Astragalus magdalenae* var. *peirsonii* in the United States. Given the sensitivity of the sand dune habitat of this species to physical disturbance and the limited distribution and reliance of *A. magdalenae* var. *peirsonii* to a specific habitat type, the biological threshold for ''jeopardy'' and ''destruction or adverse modification'' is essentially identical. That is, any action that would impact the habitat of this species to the degree of causing destruction or adverse modification (i.e., appreciably diminishing the value of the area for both the survival and recovery of the species) would also jeopardize the continued existence of the species (i.e., reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species).

Approximately 180 sq mi of the Algodones Dunes are open to OHV access and 30 sq mi of dunes are ''closed'' to OHV use. The Service's review of aerial photography of Algodones Dunes indicates that the most intensive OHV use and the resulting destruction of plant habitat occurs in about 1/3 of the open area. Given the public's misperception about critical habitat and greater access to the dunes by OHV users (see Factor A of the ''summary of factors Affecting the Species'' section of this rule), it seems likely that a designation of critical habitat could lead to acts of vandalism. The Service believes that if critical habitat is designated for *Astragalus magdalenae* var. *peirsonii*, in any portion of the dune system, such action may provoke deliberate incidents of vandalism by OHV users. The public's misperception that critical habitat essentially limits or nullifies use of public lands may serve to encourage acts of vandalism. The threat of vandalism on Federal lands exists for this species.

The Service finds that critical habitat designation would provide little conservation benefit over that provided by listing where this species occurs. The Service acknowledges that critical habitat designation, in some situations, may provide limited additional benefit to a species by identifying areas important for the conservation of the species and calling attention to those areas in special need of protection. The BLM is already aware of the presence of *Astragalus magdalenae* var. *peirsonii* and its status. Critical habitat designation on these lands would not necessarily change the way those lands are managed or require that specific management actions take place. All activities that may affect the species on these Federal lands would be subject to section 7 consultation. Thus, with the listing of *A. magdalenae* var. *peirsonii*, activities occurring on all lands under Federal jurisdiction or ownership that may adversely affect *A. magdalenae* var. *peirsonii* would prompt the same standard for consultation pursuant to section 7(a)(2) of the Act and the implementing regulations pertaining thereto regardless of whether critical habitat has been designated. The Service believes that the conservation of this species on Federal lands can best be addressed by working directly with the BLM during the recovery planning process and the interagency coordination and consultation processes of section 7. In conclusion, the Service has weighed the general lack of conservation benefit of designating critical habitat beyond that provided by listing against the detrimental effects of the increased threat of vandalism and the potential for misunderstandings of critical habitat by the public, and concludes that critical habitat is not prudent for *A. magdalenae* var. *peirsonnii*.

Astragalus tricarinatus

As of January 1997, *Astragalus tricarinatus* is known to be extant along approximately 2 to 3 km (1 to 2 mi) of Big Morongo Canyon and its tributary canyons. Collections of this taxon exist from three other canyons within its range, however at two sites, only a single plant was found. At Big Morongo Canyon, this taxon is found on lands managed by the BLM and included within a preserve. Any Federal action that occurs in the wash habitat of this species will require consultation with the Service through the section 7 guidelines. Because *A. tricarinatus* occurs in only a few locations, any Federal action significant enough to be considered adverse modification of critical habitat would also likely jeopardize the continued existence of this species, thus there is no additional conservation benefit to designating critical habitat. The habitat map that would be required for designation of critical habitat would delineate occupied habitat areas, and would increase the potential for overcollecting by amateur and unethical professional botanists, especially since one of the populations is easily accessible from a road. Increases in collection of rare plant species following publication of articles discussing their rarity has been documented in the past (Gary Wallace, Service, pers. comm. 1997). The Service determines that the negative effects of designating critical habitat outweigh any potential benefits of its designation. For these reasons, the Service determines that designation of critical habitat for this taxon is not prudent because it would provide no additional benefit to the species beyond that conferred by its listing, and the designation of critical habitat would increase the potential for acts of vandalism due to the public's misperceptions about critical habitat. Therefore, designation of critical habitat for *A. tricarinatus* is not prudent.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain activities. Recognition through listing 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 States and requires that recovery actions be carried out for all listed species. The protection required of Federal agencies and the prohibitions against certain activities involving listed plants are discussed, in part, below.

Section 7(a) of the Act, 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 402. Section 7(a)(4) 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 subsequently listed, 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 a listed species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with the Service.

Four of the five taxa occur wholly or primarily on Federal lands managed by the BLM or the DOD. Three of the taxa occur partially or wholly within areas designated as ACECs, one species occurs within a wind energy development corridor, and one species occurs within a recreation area. BLM activities that could potentially affect these taxa and their habitats include review of mining operation plans and minerals leasing, geothermal energy leasing, permitting of grazing, alteration of dams and hydrologic conditions at Fish Slough, the permitting of pipeline maintenance, wind energy development and associated rights-of-way in the Coachella Valley, and the development of recreational facilities and improvement of access in the Imperial Dunes Recreation Area. The BLM is currently developing a Habitat Conservation Plan for the desert tortoise in the western Mojave Desert that includes the entire range of *Astragalus jaegerianus*. Specific actions have not been identified at this time. The DOD training activities conducted at the NTC at Fort Irwin could potentially affect *Astragalus jaegerianus*. Specific actions

on DOD lands have not been identified at this time.

The Act and its implementing regulations set forth a series of general prohibitions and exceptions that apply to all threatened and endangered plants. All prohibitions of section 9(a)(2) of the Act, implemented by 50 CFR 17.61 for endangered plants, and at 50 CFR 17.71 for threatened plants apply. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to import or export, transport in interstate or foreign commerce in the course of a commercial activity, sell or offer for sale in interstate or foreign commerce, remove and reduce to possession these species from areas under Federal jurisdiction. In addition, for plants listed as endangered, the Act prohibits the malicious damage or destruction on areas under Federal jurisdiction and the removal, cutting, digging up, or damaging or destroying of such plants in knowing violation of any State law or regulation, including State criminal trespass law. Section 4(d) of the Act allows for the provision of such protection to threatened species. This protection may apply to *Astragalus lentiginosus* var. *piscinensis* and *A. magdalenae* var. *peirsonii* in the future if regulations are promulgated. Seeds from cultivated specimens of threatened plant species are exempt from these prohibitions provided that their containers are marked ''Of Cultivated Origin.'' Certain exceptions apply to agents of the Service and State conservation agencies.

The Act and 50 CFR 17.62, 17.63, and 17.72 also provide for the issuance of permits to carry out otherwise prohibited activities involving endangered and threatened plant species under certain circumstances. Such permits are available for scientific purposes and to enhance the propagation or survival of the species. For threatened plants, permits also are available for botanical or horticultural exhibition, educational purposes or special purposes consistent with the purposes of the Act. It is anticipated that few trade permits would ever be sought or issued because these species are not common in cultivation or in the wild.

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 be likely to constitute a violation of section 9 of the Act. The intent of this policy is intended to increase public awareness of the effect of this listing on proposed and ongoing activities within the species' range. Four of the taxa in this rule are known to occur on lands under the jurisdiction of the BLM, with one also occurring on lands under the jurisdiction of the DOD. Collection, damage, or destruction of individuals of these species on Federal lands is prohibited, although in appropriate cases a Federal endangered species permit may be issued to allow collection. Such activities on non-Federal lands would constitute a violation of section 9 if conducted in knowing violation of California State law or regulations, including violation of State criminal trespass law. The Service believes that, based upon the best available information, the following actions will not result in a violation of section 9, provided these activities are carried out in accordance with existing regulations and permit requirements:

(1) Activities authorized, funded, or carried out by Federal agencies (e.g., grazing management, agricultural conversions, wetland and riparian habitat modification, flood and erosion control, residential development, recreational trail development, road construction, hazardous material containment and cleanup activities, prescribed burns, pesticide/herbicide application, pipelines or utility lines crossing suitable habitat,) when such activity is conducted in accordance with any reasonable and prudent measures given by the Service in a consultation conducted under section 7 of the Act;

(2) Casual, dispersed human activities on foot or horseback (e.g., bird watching, sightseeing, photography, camping, hiking);

(3) Activities on private lands that do not require Federal authorization and do not involve Federal funding, such as grazing management, agricultural conversions, flood and erosion control, residential development, road construction, and pesticide/herbicide application when consistent with label restrictions;

(4) Residential landscape maintenance, including the clearing of vegetation around one's personal residence as a fire break.

The Service believes that the following might potentially result in a violation of section 9; however, possible violations are not limited to these actions alone:

(1) Unauthorized collecting of the species on Federal lands;

(2) Application of pesticides/herbicides in violation of label restrictions;

(3) Interstate or foreign commerce and import/export without previously obtaining an appropriate permit.

Permits to conduct activities are available for purposes of scientific research and enhancement of propagation or survival of the species.

The Act and 50 CFR 17.62 and 17.63 for endangered plants and 17.72 for threatened plants provide for the issuance of permits to carry out otherwise prohibited activities involving endangered and threatened plants under certain circumstances. Such permits are available for scientific purposes and to enhance the propagation or survival of the species. For threatened plants, permits are also available for botanical or horticultural exhibition, educational purposes, or special purposes consistent with the purposes of the Act.

Questions regarding whether specific activities would constitute violations of section 9 should be directed to the Field Supervisor of the Service's Carlsbad Field Office (see **ADDRESSES** section). Requests for copies of the regulations concerning listed plants (50 CFR 17.61 and 17.71) and general inquiries regarding prohibitions and permits may be addressed to the U.S. Fish and Wildlife Service, Ecological Services, Endangered Species Permits, 911 N.E. 11th Avenue, Portland, Oregon, 97232–4181 (telephone 503/231–2063; facsimile 503/231–6243).

National Environmental Policy Act

The Fish and Wildlife Service has determined that Environmental 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).

Paperwork Reduction Act

This rule does not contain any information collection requirements for which the Office of Management and Budget (OMB) approval under the Paperwork reduction Act, 44 U.S.C. 3501 *et seq.* is required. An information collection related to the rule pertaining to permits for endangered and threatened species has OMB approval and is assigned clearance number 1018–0094. This rule does not alter that information collection requirement. For additional information concerning permits and associated requirements for threatened species, see 50 CFR 17.32.

References Cited

A complete list of all references cited herein is available upon request, from the Ventura Field Office (see **ADDRESSES** above).

Author. The primary author of this final rule is Diane Steeck, Ventura Field Office, U.S. Fish and Wildlife Service, 2493 Portola Road, Suite B, Ventura, California 93003 (805/644–1766).

List of Subjects in 50 CFR Part 17

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

Regulation Promulgation

Accordingly, the Service amends 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. Amend section 17.12(h) 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							
*	*	*	*	*	*		*
Astragalus jaegerianus.	Lane Mountain milk-vetch.	U.S.A. (CA)	Fabaceae	E	647	NA	NA
*	*	*	*	*	*		*
Astragalus lentiginous var. *coachellae.*	Coachella Valley milk-vetch.	U.S.A. (CA)	Fabaceae	E	647	NA	NA
*	*	*	*	*	*		*
Astragalus lentiginous var. *piscinensis.*	Fish Slough milk-vetch.	U.S.A. (CA)	Fabaceae	T	647	NA	NA
*	*	*	*	*	*		*
Astragalus magdalenae var. *peirsonii.*	Peirson's milk-vetch	U.S.A. (CA)	Fabaceae	T	647	NA	NA
*	*	*	*	*	*		*
Astragalus tricarinatus.	Triple-ribbed milk-vetch.	U.S.A. (CA)	Fabaceae	E	647	NA	NA

Dated: September 29, 1998.

Jamie Rappaport Clark,

Director, U.S. Fish and Wildlife Service.

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BILLING CODE 4310–55–P