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Wednesday  
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**Part II**

**Department of the  
Interior**

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**Fish and Wildlife Service**

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**50 CFR Part 17**

**Endangered and Threatened Wildlife and  
Plants; Listing *Helianthus paradoxus*  
(Pecos Sunflower), Devils River Minnow  
and *Astragalus desereticus* (Deseret milk-  
vetch) as Threatened; Final Rules**

## DEPARTMENT OF THE INTERIOR

## Fish and Wildlife Service

## 50 CFR Part 17

RIN 1018-AE88

**Endangered and Threatened Wildlife and Plants; Determination of Threatened Status for the Plant *Helianthus paradoxus* (Pecos Sunflower)**

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Final rule.

**SUMMARY:** We, the Fish and Wildlife Service (Service) determine *Helianthus paradoxus* (Pecos or puzzle sunflower) to be a threatened species under the authority of the Endangered Species Act of 1973, as amended (Act). This species is dependent on desert wetlands for its survival. It is known from 22 sites in Cibola, Valencia, Guadalupe, and Chaves counties, New Mexico, and from 3 sites in Pecos and Reeves counties, Texas. Threats to this species include drying of wetlands from groundwater depletion, alteration of wetlands (e.g. wetland fills, draining, impoundment construction), competition from non-native plant species, excessive livestock grazing, mowing, and highway maintenance. This rule implements the Federal protection and recovery programs of the Act for this plant.

**DATES:** This rule is effective November 19, 1999.

**ADDRESSES:** The complete file for this rule is available for public inspection, by appointment, during normal business hours at the U.S. Fish and Wildlife Service, New Mexico Ecological Services Field Office, 2105 Osuna Road, NE, Albuquerque, New Mexico 87113.

**FOR FURTHER INFORMATION CONTACT:** Charlie McDonald, Botanist, at the above address (telephone 505-346-2525 ext. 112; facsimile 505-346-2542).

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

Dr. S.W. Woodhouse, physician and naturalist, was the first person to collect Pecos sunflower on August 26, 1851, while on the Sitgreaves expedition to explore the Zuni River and the Lower Colorado. The location was given as "Nay Camp, Rio Laguna" (Sitgreaves 1853). The collection site is probably located somewhere near the Rio Laguna (now called the Rio San Jose) between Laguna Pueblo and Bluewater in Cibola County, New Mexico. Dr. John Torrey, a botanical expert at the New York Botanical Garden, identified this

specimen as *Helianthus petiolaris* (prairie sunflower) (Sitgreaves 1853). It was not until 1958 that Dr. Charles Heiser named *Helianthus paradoxus* as a new species citing two known specimens, the type specimen collected September 11, 1947, by H.R. Reed west of Fort Stockton in Pecos County, Texas, and the Woodhouse specimen collected in New Mexico (Heiser 1958).

Heiser's (1965) hybridization studies helped resolve doubts about the validity of Pecos sunflower as a true species. Prior to Heiser's studies there was some speculation the plant was a hybrid between *Helianthus annuus* (common sunflower) and the prairie sunflower. Heiser's studies demonstrated that Pecos sunflower is a fertile plant that breeds true. Heiser was able to produce hybrids between Pecos sunflower and both common sunflower and prairie sunflower, but these hybrids were of low fertility. These results support the validity of Pecos sunflower as a true species. In 1990, Rieseberg *et al.* published the results of molecular tests on the hypothesized hybrid origin of Pecos sunflower, using electrophoresis to test enzymes and restriction-fragment analysis to test ribosomal and chloroplast DNA. This work identified Pecos sunflower as a true species of ancient hybrid origin with the most likely hybrid parents being common sunflower and prairie sunflower.

Pecos sunflower is an annual member of the sunflower family (Asteraceae). It grows 1.3–2.0 meters (m) (4.25–6.5 feet (ft)) tall and is branched at the top. The leaves are opposite on the lower part of the stem and alternate at the top. The leaves are lance-shaped with three prominent veins, and up to 17.5 centimeters (cm) (6.9 inches (in)) long by 8.5 cm (3.3 in) wide. The stem and leaf surfaces have a few short stiff hairs. The flower heads are 5.0–7.0 cm (2.0–2.8 in) in diameter with bright yellow rays. Flowering is from September to November. Pecos sunflower looks much like the common sunflower seen along roadsides throughout the west, but differs from common sunflower in having narrower leaves, fewer hairs on the stems and leaves, slightly smaller flower heads, and flowers later.

Pecos sunflower grows in permanently saturated soils. Areas with these conditions are most commonly desert wetlands (ciénegas) associated with springs, but may also include stream and lake margins. When plants grow around lakes, the lakes are usually impounded natural ciénega habitats. Plants commonly associated with Pecos sunflower include *Limonium limbatum* (Transpecos sealavender), *Samolus cuneatus* (limewater brookweed),

*Flaveria chloraefolia*, *Scirpus olneyi* (Olney bulrush), *Phragmites australis* (common reed), *Distichlis* sp. (saltgrass), *Sporobolus airoides* (alkali sacaton), *Muhlenbergia asperifolia* (alkali muhly), *Juncus mexicanus* (Mexican rush), *Suaeda calceoliformis* (Pursh seepweed), and *Tamarix* spp. (saltcedar) (Poole 1992, Sivinski 1995). All of these species are good indicators of saline soils. Van Auken and Bush (1995) did studies that show Pecos sunflower grows in saline soils, but seeds germinate and establish best when high water tables reduce salinities near the soil's surface.

Until 1990, Pecos sunflower was known from only three extant sites. Two sites were in Pecos County, Texas, and one site was in Chaves County, New Mexico (Seiler *et al.* 1981). Searches of suitable habitats in Pecos, Reeves, and Culbertson counties, Texas, during 1991 failed to locate any new Texas sites (Poole 1992). However, searches in New Mexico from 1991 through 1994 located a significant number of new sites (Sivinski 1995). In Texas one new site was reported in 1998 (Kargas 1998).

Pecos sunflower is presently known from 25 sites that occur in 5 general areas. These areas are Pecos and Reeves counties, Texas, in the vicinity of Fort Stockton and Balmorhea; Chaves County, New Mexico, from Dexter to just north of Roswell; Guadalupe County, New Mexico, in the vicinity of Santa Rosa; Valencia County, New Mexico, along the lower part of the Rio San Jose; and Cibola County, New Mexico, in the vicinity of Grants. There are 3 sites in the Fort Stockton-Balmorhea area, 11 in the Dexter to Roswell area, 8 in the Santa Rosa area, 1 along the lower Rio San Jose, and 2 in the Grants area.

Most of the Pecos sunflower sites are limited to less than 2.0 hectares (ha) (5.0 acres (ac)) of wetland habitat with some being only a fraction of a hectare. Two sites, one near Fort Stockton and one near Roswell, are considerably more extensive. The number of plants per site varies from less than 100 to several hundred thousand for the 2 more extensive sites. Because Pecos sunflower is an annual, the number of plants per site can fluctuate greatly from year to year with changes in water conditions. Pecos sunflower is totally dependent on the persistence of its wetland habitat for even large populations will disappear if the wetland dries out.

Various Federal, State, Tribal, municipal, and private interests own and manage the Pecos sunflower sites. Managing Federal agencies include the Service, Bureau of Land Management,

and National Park Service. Plants are located on one New Mexico State park. Plants are located on municipal property within the cities of Roswell and Santa Rosa. The Laguna Indian Tribe owns and manages one site. Seven different private individuals or organizations own sites or parts of sites. Some plants grow on State or Federal highway rights-of-way.

Five sites are on property managed principally for wildlife and endangered species conservation. Two major sites are on Bitter Lake National Wildlife Refuge near Roswell, New Mexico. The refuge has a series of 6 spring-fed impoundments totaling about 300 ha (750 ac). These impoundments are managed with high water levels in winter followed by a spring and summer drawdown that simulates a natural water cycle. This regime provides abundant habitat for Pecos sunflower that grows in almost solid stands at the edge of some impoundments. There is a small site with less than 100 plants on Dexter National Fish Hatchery near Dexter, New Mexico. Plants first appeared here several years ago after saltcedar was removed to restore a wetland.

The Nature Conservancy of Texas owns and manages two sites, one near Fort Stockton, Texas, and the other near Balmorhea, Texas. Large desert springs are the principal features of both preserves. The spring near Fort Stockton harbors two species of endangered fish and three species of endemic snails, plus a large Pecos sunflower population that extends for about 1.2 kilometers (km) (0.75 miles (mi)) along the spring run. Two springs near Balmorhea, purchased in 1997, harbor a species of endangered fish and a population of several thousand Pecos sunflowers (Karges 1998).

The loss or alteration of wetland habitats is the main threat to Pecos sunflower. The lowering of water tables through aquifer withdrawals for irrigated agriculture; diversion of water from wetlands for irrigation, livestock, or other uses; wetland filling; and invasion of saltcedar and other non-native species continues to destroy or degrade desert wetlands. Mowing of some municipal properties and highway rights-of-way regularly destroys some plants. Livestock will eat Pecos sunflowers, particularly if other green forage is scarce. There was some unregulated commercial sale of Pecos sunflowers in the past and some plant collection for breeding programs to improve commercial sunflowers. Pecos sunflower will naturally hybridize with common sunflower. There is concern about the extent to which backcrosses

from hybrids could affect the genetic integrity of small Pecos sunflower populations.

#### Previous Federal Action

Federal government actions on Pecos sunflower began with section 12 of the Act, which directed the Secretary of the Smithsonian Institution to prepare a report on plants considered to be endangered, threatened, or extinct in the United States. The presentation of this report, designated as House Document No. 94-51, occurred on January 9, 1975. On July 1, 1975, we published a notice in the **Federal Register** (40 FR 27823) accepting the report as a petition within the context of section 4(c)(2) (now section 4(b)(3)(A)) of the Act and announcing our intent to review the status of the plants in the report. As a consequence of this review, we published a proposed rule in the **Federal Register** on June 16, 1976 (41 FR 24523), to designate approximately 1,700 vascular plants as endangered species. A final rule on the proposal had not been published in 1978 when new amendments to the Act required that all proposals over 2 years old be withdrawn with a 1-year grace period provided for proposals already over 2 years old. We published a **Federal Register** notice on December 10, 1979 (44 FR 70796), withdrawing the June 16, 1976, proposed rule in addition to four other previously expired proposals.

On December 15, 1980 (45 FR 82480), we published an updated notice of review of plants being considered for endangered or threatened designation. This notice included *Helianthus paradoxus* as a category 1 species, which are those species for which we had on file substantial information on biological vulnerability and threats to support proposals to designate them as endangered or threatened. We retained *Helianthus paradoxus* as a category 1 species in subsequent notice of review of plants published in the **Federal Register** on September 27, 1985 (50 FR 39526), February 21, 1990 (55 FR 6184), and September 30, 1993 (58 FR 51143). Beginning with our February 28, 1996, candidate notice of review (61 FR 7596), we discontinued the designation of multiple categories of candidates, and only those taxa meeting the definition of former category 1 candidates are now considered candidates for listing purposes. We retained *Helianthus paradoxus* as a candidate species in our September 19, 1997, candidate notice of review (62 FR 49398).

Section 4(b)(3)(B) of the Act requires the Secretary to make findings on pending petitions within 12 months of their receipt. Section 2(b)(1) of the 1982

amendments further requires that all petitions pending on October 13, 1982, be treated as though they were newly submitted on that date. This was the case for *Helianthus paradoxus* because of the acceptance of the 1975 Smithsonian report as a petition. On October 13, 1983, we made a petition finding that the listing of *Helianthus paradoxus* was warranted, but precluded by other pending listing actions, in accordance with section 4(b)(3)(B)(iii) of the Act. Notice of this finding was published on January 20, 1984 (49 FR 2485). A warranted but precluded finding requires that the petition be recycled pursuant to section 4(b)(3)(C)(i) of the Act. This finding was reviewed annually from 1984 through 1997. Publication of a proposed rule in the **Federal Register** on April 1, 1998 (63 FR 15808), to designate *Helianthus paradoxus* as a threatened species constituted the final 1-year finding for the petitioned action.

On June 15, 1998, we published a notice in the **Federal Register** (63 FR 32635) announcing the reopening the comment period and the location of public hearings on the proposal. We held public hearings on July 8, 9, and 13, 1998.

The processing of this final rule conforms with our Listing Priority Guidance for Fiscal Years 1998 and 1999, published on May 8, 1998 (63 FR 25502). The guidance clarifies the order in which we will process rulemakings giving highest priority (Tier 1) to processing emergency rules to add species to the Lists of Endangered and Threatened Wildlife and Plants (Lists); second priority (Tier 2) to processing final determinations on proposals to add species to the Lists, processing new listing proposals, processing administrative findings on petitions (to add species to the Lists, delist species, or reclassify listed species), and processing a limited number of proposed and final rules to delist or reclassify species; and third priority (Tier 3) to processing proposed and final rules designating critical habitat. Processing this final rule is a Tier 2 action.

#### Summary of Comments and Recommendations

In our April 1, 1998, proposed rule and associated notifications, we solicited interested parties to submit factual reports or information to contribute to the development of a final rule. In addition, contacts were made and we solicited comments from appropriate State and Federal agencies and representatives, Tribal governments, county governments,

municipal governments, scientific organizations, and other interested parties. We published legal notices soliciting comments in five newspapers—*Albuquerque Journal* on April 6, 1998, *Cibola County Beacon*, Grants, New Mexico, on April 8, 1998, *Santa Rosa News* on April 8, 1998, *Roswell Daily Record* on April 6, 1998, and *The Pioneer*, Fort Stockton, Texas, on April 8, 1998. In response to these notices we received several requests for a public hearing. On June 15, 1998 (63 FR 32635), we published a notice in the **Federal Register** announcing the dates and times for three scheduled public hearings, and notifying the public of the extension of the comment period until August 13, 1998. Newspaper notices announcing the public hearings and extended comment period appeared in the five newspapers listed above between June 24 and 26, 1998.

We received 14 written comments on the proposal. Seven commentors supported the proposed listing; these included two peer reviewers who also provided pertinent information included within this final rule, two State agencies, and three individuals. Seven commentors opposed the proposed listing; these included one State agency, one Indian Tribe, two private organizations, and three individuals.

We received requests to hold a public hearing requests from the New Mexico Farm and Livestock Bureau; New Mexico County Farm and Livestock Bureaus in Colfax, Cibola-McKinley, and Santa Fe counties; Production Credit Association of New Mexico; Texas and Southwestern Cattle Raisers Association; and Davis Mountains Trans-Pecos Heritage Association. We held hearings on the proposed rule on July 8, 9, and 13, 1998, at Fort Stockton, Texas; Roswell, New Mexico; and Grants, New Mexico at which a total of 34 people attended. Of the five oral statements presented at the hearings, one statement supported the listing, two opposed the listing, and two were neutral.

The following summary contains our response to the written comments we received during the comment period and to oral statements made during the public hearings. Comments on a similar topic are grouped by general issues.

**Issue 1:** Survey efforts were inadequate to find all Pecos sunflower populations. Because Pecos sunflower is a species of hybrid origin, survey efforts should encompass the entire range where the two parental species overlap, which includes the plains region from Canada to Mexico.

**Response:** The sunflowers are in a large genus with species distributed throughout North America. The taxonomy and distribution of these species has always attracted considerable interest, particularly the annual species most closely related to commercial sunflowers. Dr. Charles Heiser and his colleagues thoroughly investigated the annual sunflowers, examining thousands of specimens from 41 herbaria in the United States and Canada (Heiser *et al.* 1969). They found no specimens of Pecos sunflower other than those from near Fort Stockton, Texas, and the Rio San Jose in New Mexico. Other investigators such as Dr. Gerald Seiler of the U.S. Department of Agriculture, Dr. R.C. Jackson of Texas Tech University, and Dr. Loren Rieseberg of Indiana University studied sunflowers throughout North America for years without finding Pecos sunflower beyond its present known range. Our present knowledge of the distribution and abundance of Pecos sunflower relies, in part, on the work of these earlier investigators.

The Pecos sunflower is a large plant with bright yellow flowers that often grows in patches of thousands. Because its habitat is very specific and limited, it is unlikely that significant populations still remain unsurveyed after recent intensive efforts to survey for this species. However, even if other populations are found, they are likely to be subject to the same threats as the known populations.

**Issue 2:** Listing is unwarranted until a determination is made regarding the species' population ecology, pollinators, seed dispersers, seed viability, seed germination, and seed bank.

**Response:** While a comprehensive understanding of the life history and ecology of a species is useful when available, that level of knowledge is not required for listing. Listing a species as threatened or endangered is based on the five factors given in section 4(a)(1) of the Act. These factors and their application to Pecos sunflower are discussed in the "Summary of Factors Affecting the Species" section of this final rule.

**Issue 3:** Evidence indicates that Pecos sunflower has always been a rare species with numbers that fluctuate with yearly water conditions. There is no documentation that the species is either significantly increasing or declining in the region as a whole. Listing is unwarranted until a determination is made on the status of the species.

**Response:** Declines in rare plant species can be difficult to document when there are relatively few historical

collections and the localities provided with the specimens are imprecise. However, several of the specimens collected in Pecos County, Texas, strongly indicate Pecos sunflower once grew in places where it no longer occurs. The site 11 kilometers (or 7 miles (mi)) west of Fort Stockton where the type specimen (location of the population from which the plant was first described as a species) was collected in 1947 was reported to still have a remnant population in 1980 (Seiler *et al.* 1981), but since that time there are no reported findings of Pecos sunflowers. A specimen from "Fort Stockton" collected in 1943, is thought to be from around Comanche Springs, which is now dry and incapable of supporting Pecos sunflower. Although there is a reported collection from Escondido Creek occurring in the 1800s, the springs feeding this creek have been dry for many years, are no longer suitable habitat, and are no longer marked on topographic maps. One of the public hearing attendees who ranches in the Diamond Y area gave his recollection from 1949 of seeing a continuous stand of Pecos sunflowers along the then spring-fed draw (natural drainage basin) that runs into Diamond Y draw. The draw is now dry except for intermittent flows and Pecos sunflowers are absent.

These records and statements provide good evidence the distribution and abundance of Pecos sunflower has declined in West Texas with the loss of spring-fed wetlands. The collection record is inadequate to document similar declines in New Mexico, but they are likely due to the alteration and loss of wetlands.

**Issue 4:** There is no data indicating that livestock grazing is contributing to the decline of this species. The population on private land at Diamond Y Spring is grazed showing Pecos sunflower can co-exist with grazing.

**Response:** In the proposed rule we identified livestock grazing as a threat to Pecos sunflower by stating, "Livestock will eat Pecos sunflowers, particularly when other green forage is scarce." In the only study of grazing effects on the species, Bush and Van Auken (1997) found no significant differences between plants inside and outside cattle enclosures during a 1-year study. However, they are also careful to note that "This experiment was completed during a relatively wet year, and perhaps there was enough forage available for the herbivores. In subsequent years during times of drought, we have observed severe herbivory of *H. paradoxus* and extreme differences in the stem length and

number of flowers (unpublished). Therefore, the effects of large grazers of *H. paradoxus* may be dependent on the availability of moisture and its effects on the grazers preferred forage plants." This agrees with our (the Service's) observations of grazing on Pecos sunflower. It is possible to have grazing at Pecos sunflower populations, as evidenced by the Diamond Y Spring site, but good grazing management is still needed to prevent or reduce damage to the populations.

*Issue 5:* In addition to grazing by livestock, consider the effects of predation from wildlife species and insects. Additional studies are needed to determine elk damage to riparian areas in New Mexico.

*Response:* Although we have not seen significant wildlife or insect predation on Pecos sunflower, such impacts are possible. Insects and their damage to maturing seeds can go undetected because the plants may otherwise appear perfectly normal. Elk in New Mexico usually occur at much higher elevations than the Pecos sunflower populations.

*Issue 6:* Pecos sunflower can survive periods of natural drought. Threats associated with problem years having little or no rainfall should be attributed to natural causes.

*Response:* We agree droughts occur naturally and contribute to poor growing conditions for Pecos sunflower during some years. We consider natural factors affecting the species under Factor E of the "Summary of Factors Affecting the Species" section of this final rule. The Act directs us to consider both natural factors and human-caused threats in determining whether a species is endangered or threatened.

*Issue 7:* The statement that Pecos sunflowers grow on the dams of man-made impoundments appears to contradict the statement that the species is dependent on wetlands.

*Response:* We acknowledge that the statement that Pecos sunflowers plants grow on dams does need some clarification. Plants found on dams grow in saturated soils either at the shoreline or where there is seepage through the dam. Pecos sunflowers do not grow on the dry upland portion of a dam.

*Issue 8:* The focus on the loss of natural wetlands appears misplaced, especially when one of the largest known populations occupies created wetlands at Bitter Lake National Wildlife Refuge.

*Response:* Our discussion emphasizes the loss of natural wetlands because these losses exceed the rate of wetland creation. The wetlands created at Bitter Lake National Wildlife Refuge simply

replace former natural spring-fed wetlands and still rely on those springs for water. There is a high probability that Pecos sunflowers grew around the springs before the refuge impoundments were built.

*Issue 9:* Hybridization is a natural event and should not be considered a threat.

*Response:* Hybridization between Pecos sunflower and common sunflower may not be a totally natural occurrence. Substantial increases in the habitat of common sunflower can result from human land disturbances and the construction of road ditches. These disturbances have made it possible for common sunflower to grow much closer to Pecos sunflower than was possible in the past. Because of concerns about hybridization, personnel from the Texas Parks and Wildlife Department have been removing common sunflowers from the road ditches near the Pecos sunflower population at Texas Highway 18 north of Fort Stockton. Even if such hybridization was completely natural, we still must consider the effects of Pecos sunflower potentially hybridizing with other species under Factor E of the "Summary of Factors Affecting the Species" section of this final rule.

*Issue 10:* Because listing may increase collecting and vandalism through heightened attention to the species and because Pecos sunflowers will not be protected from collecting or destruction on private lands, listing will increase risks to the species rather than reducing them.

*Response:* We believe the conservation measures for listed species described in the "Available Conservation Measures" section of this final rule greatly outweigh any risks associated with listing. We are also minimizing those potential risks through our "not prudent" finding for the designation of critical habitat (see discussion under Critical Habitat, below) and through outreach and education directed towards individual private landowners.

*Issue 11:* Listing is not warranted because other management and protection measures are already removing threats to the species including: protective management on The Nature Conservancy's preserves and Bitter Lake National Wildlife Refuge, the presence of several federally listed fish species at some sites that already serve to protect the essential habitat, protection in New Mexico through State listing, a management agreement between the Texas Department of Transportation and the Texas Parks and Wildlife Department for the population on Texas Highway 18, and various

Federal agency policies that protect candidate species.

*Response:* While these measures are important for conservation, the threats to the species have not been reduced or removed so that listing is no longer necessary. We find that enough Pecos sunflower populations lack sufficient protection to warrant listing the species as threatened.

*Issue 12:* There are many conservation measures for Pecos sunflower that can be implemented without the need for Federal listing and these measures would be more effective than the protections provided under the Act. These include: State listing in Texas under chapter 88 of the Texas Parks and Wildlife Code; funding to hire a botanist to do surveys, develop a conservation strategy, and work with local landowners; horticultural propagation of Pecos sunflowers for introduction into unoccupied suitable habitats; purchase of lands through the New Mexico Natural Lands Protection Act or the Federal Land and Water Conservation Fund; development of a regional water plan for West Texas through recently passed State legislation; and conservation in the Rio Puerco watershed in New Mexico through a recently funded multi-agency watershed initiative.

*Response:* We must base our listing determinations on current threats. For example, the general obligation bond to provide funding for the New Mexico Lands Protection Act was defeated in a recent general election leaving no funds for land acquisition. Listing the species as threatened and the subsequent drafting of a recovery plan will increase the likelihood that agencies, organizations, and individuals will be able to accomplish conservation measures for this species. We encourage further implementation of conservation measures for the Pecos sunflower, and we will consider delisting the species when it becomes sufficiently protected and recovered to ensure its continued survival.

*Issue 13:* Because of the many actions on Tribal lands that are authorized, funded, or carried out by the Bureau of Indian Affairs, listing this species will place the largest section 7 consultation burden on the Laguna Tribe. This is contrary to the intent of Secretarial Order 3206 and Executive Order 13084 that strive to ensure Indian Tribes do not bear a disproportionate burden for the conservation of listed species.

*Response:* Because only one of the 25 known sites for Pecos sunflower occurs on Tribal lands, we anticipate that most activities for the conservation of Pecos sunflower will be undertaken by other

agencies, organizations, and individuals. The one site on Tribal lands probably occupies only a few acres and is in a remote undeveloped part of the reservation. It is unlikely there will be many actions at this site that will require section 7 consultation. If consultation is needed, we will seek to find ways to both conserve the listed species and complete the action. Our hope is that we can help Pecos sunflower to recover through voluntary efforts and cooperation with other Federal agencies, States, local and Tribal governments and private landowners and conservation groups.

*Issue 14:* Listing Pecos sunflower will have negative economic impacts on the farmers, ranchers, and communities where it occurs.

*Response:* We believe the listing of the Pecos sunflower as threatened will not force private landowners to change any existing land practices. We anticipate that any economic impacts of listing will be minimal due to the small number of populations that are involved. The Act requires listing determinations to be made solely on the basis of the best available scientific and commercial information regarding the species' status without reference to possible economic or other impacts of the determination. Economic considerations may only be considered in the designation of critical habitat and in recovery planning and implementation.

*Issue 15:* Designation of critical habitat would help farmers and ranchers manage the species by showing them where it occurs.

*Response:* As with every Federal listing, we conduct intensive outreach to inform landowners if the species occurs on their land. We believe that information about the location of populations is best handled through direct contact with individual landowners. The reasons for our "not prudent" finding for the designation of critical habitat are given in the "Critical Habitat" section of this final rule.

### Summary of Factors Affecting the Species

Section 4 of the Act (16 U.S.C. 1531 *et seq.*) 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. We determine a species to be endangered or threatened due to one or more of the five factors described in section 4(a)(1). These factors and their application to *Helianthus paradoxus* Heiser (Pecos sunflower) are as follows:

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

Wetland habitats in the desert Southwest are both ecologically important and economically valuable. Wetlands cover only about 195,000 ha (482,000 ac) (0.6 percent) of New Mexico (Fretwell *et al.* 1996). This is a reduction of about 33 percent from the wetland acreage that existed 200 years ago (Dahl 1990). Wetlands in Texas cover 3,077,000 ha (7,600,000 ac), a decline of about 52 percent from the State's original wetland acreage (Dahl 1990). The loss of springs in western Texas may be a better indicator of wetland losses that affect Pecos sunflower than estimates for the State as a whole. Within the historical range of Pecos sunflower in Pecos and Reeves counties, only 13 of 61 (21 percent) springs remain flowing (Brune 1981 *in* Poole 1992).

The lowering of water tables due to groundwater withdrawals for irrigated agriculture, municipalities, and other uses has reduced available habitat for Pecos sunflower, particularly in Texas. Beginning around 1946, groundwater levels fell as much as 120 m (400 ft) in Pecos County and 150 m (500 ft) in Reeves County due to heavy pumping for irrigation. As a result, most of the springs in these counties have gone dry. Groundwater pumping has lessened in recent decades due to the higher cost of removing water from deeper aquifers in the ground, but rising water tables or resumption of spring flows are not expected (Brune 1981 *in* Poole 1992). Diamond Y Spring, which has a large Pecos Sunflower population, remains flowing largely because it comes from a saline strata unsuitable for agricultural or municipal uses.

Texas water law provides no protection for remaining springs. The law is based on the right of first capture that lets any water user pump as much groundwater as can be put to a beneficial use without regard to overall effects on the aquifer. Recently passed Texas legislation directs the development of regional water plans in the State, but it is too soon to know if this planning effort will have any beneficial effects for Pecos sunflower.

Groundwater pumping affected Pecos sunflower habitats in Chaves County, New Mexico, but water tables are now rising due to State-directed efforts at monitoring and conservation. These efforts are the result of a court ruling that requires New Mexico to deliver larger volumes of Pecos River water to Texas than in the past. There are presently no major groundwater

withdrawals taking place in the vicinity of the other Pecos sunflower sites in New Mexico.

The introduction of non-native species, particularly saltcedar, is a major factor in the loss and degradation of Southwestern wetlands. Several species of saltcedar were introduced into the United States for ornamental purposes as windbreaks, and as stream bank stabilization in the 1800s. Saltcedar and other non-native vegetation invaded many western riverine systems from the 1890s to the 1930s and increased rapidly from the 1930s to the 1950s, by which time they occupied most of the available and suitable habitat in New Mexico and western Texas (Horton 1977).

Saltcedar will out-compete and displace native wetland vegetation, including Pecos sunflower. At Dexter National Fish Hatchery, Pecos sunflower appeared for the first time in the summer of 1996 after saltcedar was removed to rehabilitate a wetland (Radke 1997). Saltcedar affects 2,000 ha (5,000 ac) at Bitter Lake National Wildlife Refuge where the most extensive Pecos sunflower population occurs (Service 1996). Although there have been many projects on refuges to remove saltcedar, these projects are labor intensive and reinvasion of saltcedar is a continuing problem.

We know that some wetlands where Pecos sunflower occurs have either been filled or impounded. Part of a wetland near Grants, New Mexico, was filled for real estate development along a major highway. The development predated knowledge that Pecos sunflower grows in the area, so it is unknown if any plants were actually destroyed. Present development in this area that could affect Pecos sunflower includes construction of a discount department store and other smaller shops, and reconstruction of a highway overpass.

Wetlands in Santa Rosa were lost many years ago to impoundment created for a fish hatchery that has since been abandoned. Pecos sunflowers grow in wet soils on some impoundment dams. Because the extent of this former wetland habitat is unknown, it is uncertain whether these impoundments have actually increased or decreased sunflower habitat.

Alteration of habitat is occurring by mowing on some highway rights-of-way and some municipal properties where Pecos sunflower occurs. In Santa Rosa, the weeds and some Pecos sunflowers are often mowed around some of the old fish hatchery ponds now used for recreational fishing. In another part of town an open boggy area is mowed when dry enough. In years when it is

too wet to mow, a stand of Pecos sunflowers develops. Mowing of highway rights-of-way in Santa Rosa and near Grants may be destroying some plants. In Texas, the only population in a highway right-of-way was fenced several years ago to protect it from mowing and other activities.

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

Some commercial trade in Pecos sunflower has occurred in the past (Poole, Texas Parks and Wildlife Department, Austin, *in litt.* 1991). This trade was undertaken by an organization interested in preserving rare species of indigenous crop plants through their distribution and cultivation. There was also some collecting for crop breeding research (Seiler *et al.* 1981). With its tolerance for high salinity, Pecos sunflower is considered a good candidate for the introduction of salt tolerance into cultivated sunflowers. Some Pecos sunflower sites are both small and easily accessible. Repeated uncontrolled collecting may harm these sites.

#### *C. Disease or Predation*

Livestock eat Pecos sunflowers, particularly when other green forage is scarce. Livestock tend to pull off the flower heads. If an area is heavily grazed for several years in succession when plants are flowering, the soil seed bank may diminish and the population will eventually decline. There are several examples of Pecos sunflowers being absent from habitat that is heavily grazed, but growing in similar nearby habitat that is protected from grazing. In these instances, grazing is the most likely cause of the plant's absence from otherwise suitable habitat. There are also examples of Pecos sunflower populations persisting in areas grazed for many years. Apparently the type and intensity of grazing has much to do with the persistence of Pecos sunflower in these areas. There have been no observations of wildlife grazing or insect damage on Pecos sunflower.

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

Pecos sunflower is listed as a New Mexico State endangered plant species in NMNRD Rule 85-3 of the State Endangered Plant Species Act (9-10-10 NMSA). The scientific collection, commercial transport, and sale of Pecos sunflower is already regulated by NMSA. However, NMSA does not protect habitat on private land or require collecting permits for Federal employees working on lands within

their jurisdictions (Sivinski and Lightfoot 1995). The penalty for violating NMSA is a misdemeanor carrying a fine of not more than \$1,000 and/or incarceration for not more than 120 days; by comparison, the criminal penalty for violation of the Federal Act carries a fine of not more than \$50,000 and/or imprisonment for not more than 1 year, a much greater deterrent than that available under State law. In general, State listing fails to generate the level of recognition or promote the opportunities for conservation that result through Federal listing. Most importantly, NMSA lacks the interagency coordination and conservation requirements found in section 7 of the Federal Act. Pecos sunflower is not listed as an endangered, threatened, or as a protected plant under the Texas Endangered Plant Species Act.

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

Natural hybrids between Pecos sunflower and common sunflower can occur and are known from sites in both Texas and New Mexico. Habitat for common sunflower is increased by human activities and the two sunflowers may be in greater contact than in the past. Natural hybrids have low fertility, but are not completely sterile (Heiser 1965). A measure of isolation between the two species is provided by the different flowering times for Pecos sunflower and common sunflower. Hybrids are likely to be intermediate between the two species in flowering time and may serve as a bridge for gene flow between the species. Once a bridge is established, the genetic swamping of small Pecos sunflower populations could occur rapidly.

Natural droughts are common in the desert regions where Pecos sunflower occurs. These droughts combined with the effects of wetland alterations and losses could extirpate some small populations. The present distribution of Pecos sunflower coincides with areas having large reliable springs and this may in part be a response to the effects of natural droughts.

We have carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by this species in determining to issue this final rule. Based on this evaluation, our preferred action is to list Pecos sunflower as a threatened species. The drying of springs due to ground water pumping, the diversion of water for agriculture and other uses, the filling of wetlands, the degradation of wetlands from

intensive livestock grazing, and the invasion of saltcedar and other non-native plants into many wetlands has significantly reduced the habitat of this species. Most remaining populations are vulnerable because these and other activities continue to destroy habitat or keep it in a degraded condition. While not in immediate danger of extinction, the Pecos sunflower is likely to become an endangered species in the foreseeable future if present trends continue.

#### **Critical Habitat**

Section 3 of the Act defines critical habitat as—(i) The specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) that may require special management consideration or protection; and (ii) specific areas outside the geographical area occupied by a species at the time it is listed, upon a determination that such areas are essential for 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, we designate critical habitat at the time the species is determined to be endangered or threatened. We find that designation of critical habitat is not prudent for Pecos sunflower. Our regulations (50 CFR 424.12(a)(1)) state that designation of critical habitat is not prudent when one or both of the following situations exist—(1) The species is threatened by taking or other human activity, and identification of critical habitat can be expected to increase the degree of threat to the species, or (2) such designation of critical habitat would not be beneficial to the species.

Critical habitat designation for Pecos sunflower is not prudent for both of the above reasons. There has been some commercial trade in Pecos sunflower, which was due largely to its rarity (See Factor B of the "Summary of Factors Affecting the Species" section). There are several documented instances of other species of commercially valuable rare plants being collected when their localities became known. In 1995, at least 48 plants of the endangered *Pediocactus knowltonii* (Knowlton cactus) were taken from a monitoring plot at the species' only known locality (Sivinski, New Mexico Forestry

Division, Santa Fe, *in litt.* 1996). In the early 1990s, the rediscovery of *Salvia penstemonoides* (big red sage) in Texas led to the collection of thousands of seeds at the single rediscovery site (Poole, *in litt.* 1991).

Listing contributes to the risk of over collecting because the rarity of a plant is made known to far more people than were aware of it previously. Designating critical habitat, including the required disclosure of precise maps and descriptions of critical habitat, would further advertise the rarity of Pecos sunflower and provide a road map to occupied sites causing even greater threat to this plant from vandalism or unauthorized collection. Many of the Pecos sunflower sites are small, have few individuals, and are easily accessible. These sites would be particularly susceptible to indiscriminate collection if publication of critical habitat maps made their exact locations known.

Critical habitat designation, by definition, directly affects only Federal agency actions. Private interests own 13 of the 25 Pecos sunflower sites. For the most part, activities constituting threats to the species on these lands, including alterations of wetland hydrology, competition from non-native vegetation, grazing, and agricultural and urban development, are not subject to the Federal review process under section 7. Designation of critical habitat on private lands provides no benefit to the species when only non-Federal actions are involved.

Activities on Federal lands and some activities on private lands require Federal agencies to consult with us under section 7. There are few known sites for Pecos sunflower and habitat for the species is limited. Given these circumstances, any activity that would adversely modify designated critical habitat would likely also jeopardize the species' continued existence. Thus, in this case, the Federal agency prohibition against adverse modification of critical habitat would provide no additional benefit beyond the prohibition against jeopardizing the species.

Occupied habitat for Pecos sunflower occurs on a National Wildlife Refuge and a National Fish Hatchery, which we administer; a National Monument the National Park Service administers, and public lands the Bureau of Land Management administers. Because these occupied habitats are well known to these Federal land managers, no adverse modification of this habitat is likely to occur without consultation under section 7 of the Act. Because of the small size of the species' habitat, any adverse modification of the species'

critical habitat would also likely jeopardize the species' continued existence. Designation of critical habitat for Pecos sunflower on Federal lands, therefore, is not prudent because it would provide no additional benefit to the species beyond that conferred by listing.

#### Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain activities. Recognition through listing encourages and results in conservation actions by Federal, State, and private agencies, groups, and individuals. The elevated profile Federal listing affords enhances the likelihood that conservation activities will be undertaken. 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 requires Federal agencies to evaluate their actions with respect to species that are listed or proposed for listing as endangered or threatened and with respect to those species' designated or proposed critical habitat, if any. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402. Section 7(a)(4) of the Act requires Federal agencies to confer with us on any action that is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed critical habitat. If a species is listed subsequently, section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of such a species or to destroy or adversely modify its critical habitat.

If a Federal action may adversely affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with us. Federal agencies that manage occupied Pecos sunflower habitat are the ones most likely to have activities that involve section 7 consultation. These agencies are the Bureau of Land Management, National Park Service, and Fish and Wildlife Service. Other agencies with potential section 7 involvement include the U.S. Army Corps of Engineers through its permit authority under section 404 of the Clean

Water Act, the Natural Resources Conservation Service that provides private landowner planning and assistance for various soil and water conservation projects, the Federal Highway Administration for highway construction and maintenance projects that receive funding from the Department of Transportation, the Bureau of Indian Affairs that has trust responsibilities for certain activities on Indian lands, and various agencies of the Department of Housing and Urban Development that undertake homeowner mortgage insurance and community development programs.

We considered the potential impacts of designating Pecos sunflower as a threatened plant species in relation to the compliance of this action with Secretarial Order 3206. That order was issued to clarify the responsibilities of the component agencies, bureaus, and offices of the Department of the Interior and the Department of Commerce, when actions taken under authority of the Act and associated implementing regulations affect, or may affect, Indian lands, Tribal trust resources, or the exercise of American Indian Tribal rights. In keeping with the trust responsibility and government-to-government relationships, we recognize our responsibility to consult with affected Tribes and provide written notice to them as far in advance as practicable of conservation restrictions that we consider necessary to protect listed species.

Secretarial Order 3206 states that, "If a proposed conservation restriction is directed at a Tribal activity that could raise the potential issue of direct (directed) take under the Act, then meaningful government-to-government consultation shall occur, in order to strive to harmonize the Federal trust responsibility to Tribes, Tribal sovereignty and the statutory missions of the Department of Interior and Commerce." The term "take" as defined in the Act means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The Act has no prohibitions against take for listed plants; instead, regulations for threatened plants found at 50 CFR 17.71 prohibit their removal or reduction to possession from areas under Federal jurisdiction. For threatened plants, there are no prohibitions against their removal and reduction to possession from areas outside Federal jurisdiction or against their damage or destruction in any area when no removal and reduction to possession are involved. We know of no instance where Indian Tribal members collect (*i.e.* remove and



reduce to possession) Pecos sunflowers for cultural, spiritual, religious, or economic reasons. Therefore, we do not believe the prohibition against removal or reduction to possession from areas under Federal jurisdiction will affect Indian lands, Tribal trust resources, or the exercise of American Indian Tribal rights.

We met with representatives of the Laguna Tribe on March 12, 1998, prior to publication of the listing proposal to discuss our intention to propose Pecos sunflower for protection under the Act. We discussed with them range-wide threats to the species, conservation measures listing would initiate, prohibitions that would result from listing, Tribal activities that occur in the area where the sunflower grows on Tribal lands, and the role of Federal agencies (especially the BIA) in insuring that activities they authorize, fund, or carry out do not jeopardize the continued existence of listed species. We discussed the value of monitoring to assess conservation needs and indicated we would provide whatever assistance we could for monitoring and a conservation program on Tribal lands. Subsequently, we were contacted by a Tribal representative to provide whatever information we had concerning Pecos sunflower. We went through our files with the representative and supplied those documents thought useful to the Tribe. We kept the Tribe informed during the listing proposal process with notifications about proposal comment requests and public hearings.

A question was raised concerning the potential effect listing this plant might have on future Indian water rights claims. The Pecos sunflower on Tribal lands occurs at springs adjacent to the Rio San Jose. These springs, although near the river, are not dependent on it for their flows. If upstream water rights claims reduced flows in the Rio San Jose, the sunflower would likely be unaffected. The area where the springs occur is presently used for grazing. The Tribe indicates no planned land use changes that would create new demands on water from the springs. Finally, if any water use changes led to loss of the sunflower on Tribal lands it would not violate any of the limited prohibitions applicable to threatened plants given in section 9 of the Act or in 50 CFR 17.71. Water use changes occurring on non-Federal lands and having no Federal nexus would also not be subject to the requirements of section 7 of the Act. Given these conditions, we cannot foresee a circumstance where listing Pecos sunflower as a threatened plant would affect Indian water rights claims.

Listing Pecos sunflower will require us to development a recovery plan to help coordinate Federal, State, and private efforts to conserve this species. The plan will establish a framework for agencies to coordinate activities and cooperate in conservation efforts. The plan will set recovery priorities, estimate costs of various tasks, and describe site-specific management actions necessary to achieve conservation and survival of the species. Additionally, under section 6 of the Act, we will be able to grant funds to the states of New Mexico and Texas for management actions promoting the protection and recovery of Pecos sunflower.

Because many of the known Pecos sunflower sites are on private land, we will pursue conservation easements and conservation agreements with willing private landowners to help maintain and/or enhance habitat for the plant. Under a cooperative program between us and the State of New Mexico, contacts were made with all private landowners and the importance of Pecos sunflower and the consequences for the private landowner of having it listed under the Act explained. To date, no agreements are established but several landowners indicate a willingness to continue with discussions.

The Act and its implementing regulations found at 50 CFR 17.71 and 17.72 set forth a series of general prohibitions and exceptions that apply to all threatened plants. All trade prohibitions of Section 9(a)(2) of the Act, implemented by 50 CFR 17.71, 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 this species in interstate or foreign commerce, or to remove and reduce to possession the species from areas under Federal jurisdiction. Seeds from cultivated specimens of threatened plants are exempt from these prohibitions provided that their containers are marked "Of Cultivated Origin." Certain exceptions to the prohibitions apply to agents of the Service and State conservation agencies.

The Act and 50 CFR 17.72 also provide for the issuance of permits to carry out otherwise prohibited activities involving 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 are also available for botanical or horticultural exhibition, educational purposes, or

special purposes consistent with the purposes of the Act.

Pecos sunflower is uncommon both in cultivation or in the wild, and there was only limited commercial trade in the species. Therefore, it is anticipated few trade permits will ever be sought or issued. You should direct requests for copies of the regulations concerning the trade of listed plants and general inquiries regarding prohibitions and permits to the U.S. Fish and Wildlife Service (see ADDRESSES section). Information collections associated with these permits are approved under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.*, and assigned Office of Management and Budget clearance number 1018-0094. For additional information about these permits and associated requirements, see 50 CFR 17.72.

It is our policy (59 FR 34272; July 1, 1997) to identify to the maximum extent practicable at the time we list a species those activities that would or would not constitute a violation of the section 9 prohibitions of the Act. The intent of this policy is to increase public awareness of the effect of this listing on proposed and ongoing activities within the species' range. You may take the following actions, without violation of section 9, when carried out in accordance with existing regulations and permit requirements:

(1) Activities authorized, funded, or carried out by Federal agencies (e.g., wetland modification; the construction or maintenance of drainage ditches, construction of impoundments or other livestock watering facilities, power line construction, maintenance, and improvement; highway construction, maintenance, and improvement; mineral exploration and mining,) when such activity is conducted in accordance with any reasonable and prudent measures given by us according to section 7 of the Act. These activities may require Federal, State, and/or local approval under other laws or regulations.

(2) Normal agricultural practices, including mowing or clearing, and light to moderate livestock grazing, and pesticide and herbicide use, carried out in accordance with any existing regulations, permit and label requirements, and best management practices.

(3) Clearing a defensible space for fire protection and normal landscape activities around one's personal residence.

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

(1) Removal, cutting, digging up, damaging, or destroying threatened plants on non-Federal land if conducted in knowing violation of State law or regulation or in violation of State criminal trespass law.

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

(3) The unauthorized removal, reducing to possession or collection of this species from areas under Federal jurisdiction.

In appropriate cases, permits could be issued to allow collection for scientific or recovery purposes, for horticultural or botanical exhibition, for educational purposes, or for special purposes consistent with the purposes of the Act. You should direct questions regarding whether specific activities may constitute a violation of section 9 to the Field Supervisor of the New Mexico Ecological Services Field Office (see ADDRESSES section).

**National Environmental Policy Act**

We have 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. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244).

**Required Determinations**

This rule does not contain collections of information that require Office of Management and Budget approval under 44 U.S.C. 3501 *et seq.*

**References Cited**

A complete list of all references cited herein is available on request from the U.S. Fish and Wildlife Service, New Mexico Ecological Services Field Office (see ADDRESSES section).

Author: The primary author of this final rule is Charlie McDonald, New Mexico Ecological Services Field Office (see ADDRESSES section).

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

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

**Regulation Promulgation**

**PART 17—[AMENDED]**

Accordingly, the Service amends part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as follows:

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. In § 17.12(h) add the following to the List of Endangered and Threatened Plants in alphabetical order under FLOWERING PLANTS:

**§ 17.12 Endangered and threatened plants.**

\* \* \* \* \*  
(h) \* \* \*

Species		Historic range	Family	Status	When listed	Critical habitat	Special rules
Scientific name	Common name						
FLOWERING PLANTS							
* Helianthus paradoxus .....	* Pecos sunflower (=puzzle sunflower, paradox sunflower).	* U.S.A. (NM, TX) ...	* Asteraceae .....	T	* 667	NA	* NA
* .....	* .....	* .....	* .....		* .....		* .....

Dated: September 14, 1999.  
**John G. Rogers,**  
*Acting Director, Fish and Wildlife Service.*  
 [FR Doc. 99–27186 Filed 10–19–99; 8:45 am]  
 BILLING CODE 4310–55–P

**DEPARTMENT OF THE INTERIOR**

**Fish and Wildlife Service**

**50 CFR Part 17**

**RIN 1018–AE57**

**Endangered and Threatened Wildlife and Plants; Final Rule to List *Astragalus desereticus* (Deseret milk-vetch) as Threatened**

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Final rule.

**SUMMARY:** We, the U.S. Fish and Wildlife Service (Service), determine the plant species, *Astragalus desereticus* (Deseret milk-vetch), to be a threatened species under the authority of the

Endangered Species Act of 1973, as amended (Act). *Astragalus desereticus*, considered extinct until its rediscovery in 1981, exists in one small population in Utah County, Utah. Threats to the plant include residential development, highway widening, livestock grazing and trampling, and other impacts to its limited habitat. This plant receives no protection under State or local laws or regulations. This rule implements Federal protection provided by the Act for this plant.

**EFFECTIVE DATE:** November 19, 1999.

**ADDRESSES:** The complete file for this rule is available for public inspection, by appointment, during normal business hours at the Utah Ecological Services Field Office, U.S. Fish and Wildlife Service, Lincoln Plaza Suite 404, 145

East 1300 South, Salt Lake City, Utah 84115.

**FOR FURTHER INFORMATION CONTACT:** John L. England at the above address (telephone: 801/524–5001).

**SUPPLEMENTARY INFORMATION:**

**Background**

Marcus E. Jones collected a distinctive *Astragalus* from “below Indianola,” a town in Sanpete County, Utah, on June 2, 1893. This same plant was again collected by Ivar Tidestrom from “near Indianola” on June 17, 1909. Specimens from these two collections laid in obscurity in various herbaria until Rupert Barneby recognized their uniqueness and described them as *Astragalus desereticus* (Barneby 1964). Efforts to relocate the species’