



# Federal Register

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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; Designation of Critical Habitat for  
*Astragalus lentiginosus* var. *piscinensis*  
(Fish Slough Milk-Vetch); Final Rule**

**DEPARTMENT OF THE INTERIOR****Fish and Wildlife Service****50 CFR Part 17**

RIN 1018-AJ09

**Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for *Astragalus lentiginosus* var. *piscinensis* (Fish Slough Milk-Vetch)****AGENCY:** Fish and Wildlife Service, Interior.**ACTION:** Final rule.

**SUMMARY:** We, the U.S. Fish and Wildlife Service (Service), are designating critical habitat for the federally threatened *Astragalus lentiginosus* var. *piscinensis* (Fish Slough milk-vetch) pursuant to the Endangered Species Act of 1973, as amended (Act). In total, approximately 8,007 acres (ac) (3,240 hectares (ha)) fall within the boundary of the critical habitat designation. The critical habitat is located in Mono and Inyo Counties, California.

**DATES:** This rule becomes effective on July 11, 2005.

**ADDRESSES:** All comments and materials received during the comment periods, and supporting documentation used in preparation of the proposed and final rules, will be available for public inspection, by appointment, during normal business hours at the Ventura Fish and Wildlife Office, 2493 Portola Road, Suite B, Ventura, CA 93003 (telephone number 805/644-1766). The final rule, economic analysis, and map will also be available via the Internet at <http://ventura.fws.gov/>.

**FOR FURTHER INFORMATION CONTACT:** Field Supervisor, Ventura Fish and Wildlife Office, 2493 Portola Road, Suite B, Ventura, CA 93003 (telephone 805/644-1766; facsimile 805/644-3958).

**SUPPLEMENTARY INFORMATION****Designation of Critical Habitat Provides Little Additional Protection to Species**

In the 30 years of implementing the Act (16 U.S.C. 1531 *et seq.*), we have found that the designation of statutory critical habitat provides little additional protection to most listed species, while consuming significant amounts of available conservation resources. Our present system for designating critical habitat has evolved since its original statutory prescription into a process that provides little real conservation benefit, is driven by litigation and the courts rather than biology, limits our ability to fully evaluate the science involved, consumes enormous agency resources,

and imposes huge social and economic costs. We believe that additional agency discretion would allow our focus to return to those actions that provide the greatest benefit to the species most in need of protection.

*Role of Critical Habitat in Actual Practice of Administering and Implementing the Act*

While attention to, and protection of, habitat is paramount to successful conservation actions, we have consistently found that, in most circumstances, the designation of critical habitat is of little additional value for most listed species, yet it consumes large amounts of conservation resources. Sidle (1987) stated, "Because the ESA can protect species with and without critical habitat designation, critical habitat designation may be redundant to the other consultation requirements of section 7." Currently, only 473 species or 37 percent of the 1,264 listed species in the U.S. under the jurisdiction of the Service have designated critical habitat.

We address the habitat needs of all 1,264 listed species through conservation mechanisms such as listing, section 7 consultations, the section 4 recovery planning process, the section 9 protective prohibitions of unauthorized take, section 6 funding to the States, and the section 10 incidental take permit process. We believe that it is these measures that may make the difference between extinction and survival for many species.

We note, however, that two courts found our definition of adverse modification to be invalid (March 15, 2001, decision of the U.S. Court of Appeals for the Fifth Circuit, *Sierra Club v. U.S. Fish and Wildlife Service et al.*, F.3d 434, and the August 6, 2004, Ninth Circuit judicial opinion, *Gifford Pinchot Task Force v. U.S. Fish and Wildlife Service*). In response to these decisions, we are reviewing the regulatory definition of adverse modification in relation to the conservation of the species.

*Procedural and Resource Difficulties in Designating Critical Habitat*

We have been inundated with lawsuits for our failure to designate critical habitat, and we face a growing number of lawsuits challenging critical habitat determinations once they are made. These lawsuits have subjected us to an ever-increasing series of court orders and court-approved settlement agreements, compliance with which now consumes nearly the entire listing program budget. This leaves us with little ability to prioritize our activities to

direct scarce listing resources to the listing program actions with the most biologically urgent species conservation needs.

The consequence of the critical habitat litigation activity is that limited listing funds are used to defend active lawsuits, to respond to Notices of Intent to sue relative to critical habitat, and to comply with the growing number of adverse court orders. As a result, listing petition responses, our own proposals to list critically imperiled species, and final listing determinations on existing proposals are all significantly delayed.

The accelerated schedules of court ordered designations have left us with almost no ability to provide for adequate public participation or to ensure a defect-free rulemaking process before making decisions on listing and critical habitat proposals due to the risks associated with noncompliance with judicially-imposed deadlines. This, in turn, fosters a second round of litigation in which those who fear adverse impacts from critical habitat designations challenge those designations. The cycle of litigation appears endless, is very expensive, and in the final analysis, provides little additional protection to listed species.

The costs resulting from the designation include legal costs, the cost of preparation and publication of the designation, the analysis of the economic effects, and the cost of requesting and responding to public comment, and in some cases the costs of compliance with the National Environmental Policy Act of 1969 (NEPA). None of these costs result in any benefit to the species that is not already afforded by the protections of the Act enumerated earlier, and they directly reduce the funds available for direct and tangible conservation actions.

**Background**

Our intent is to discuss only those topics directly relevant to the final designation of critical habitat in this rule. For more information on *Astragalus lentiginosus* var. *piscinensis*, refer to the final listing rule for the taxon that was published in the **Federal Register** on October 6, 1998 (63 FR 53596), or the proposed designation of critical habitat for the taxon published on June 4, 2004 (69 FR 31552).

In the proposed critical habitat designation, we stated that it was unlikely that *Astragalus lentiginosus* var. *piscinensis* was present on a privately owned parcel in Township 6, South Range 33 East, section 18 and did not propose designating the parcel as critical habitat. However, we have determined that 8 individuals of the

listed plant taxon were present on or immediately adjacent to this parcel in 1992, and 1 individual was present in 2000. For more information, see the "Criteria Used to Identify Critical Habitat" section of this final rule.

Also, after the proposed rule was published, we received several documents that pertain to the Five Bridges Aggregate Pit that is operated by the Desert Aggregates company, and these documents are described in the "Summary of Changes" section of this final rule.

#### Previous Federal Action

On June 4, 2004, we published a proposed rule to designate approximately 8,490 ac (3,435 ha) of land in Mono and Inyo Counties, California, as critical habitat for *Astragalus lentiginosus* var. *piscinensis* (69 FR 31552). In the proposed rule, we included a detailed summary of the previous Federal actions completed prior to publication of the proposal. The comment period associated with the proposed rule closed on August 3, 2004. On December 28, 2004, we published a notice of availability of the draft economic analysis (DEA) for the designation of critical habitat for *A. l.* var. *piscinensis*, and reopened the comment period for the proposed rule and DEA (69 FR 77703). This second comment period closed on January 27, 2005.

#### Summary of Comments and Recommendations

We requested written comments from the public on the proposed designation of critical habitat for *Astragalus lentiginosus* var. *piscinensis* in the proposed rule published on June 4, 2004 (69 FR 31552). We also contacted appropriate Federal, State, and local agencies, one Tribe, scientific organizations, and other interested parties and invited them to comment on the proposed rule. During the comment period that opened on June 4, 2004, and closed on August 3, 2004, we received 11 comment letters directly addressing the proposed critical habitat designation: 5 from peer reviewers, 2 from environmental groups, 4 from companies or individuals, and none from local, State, or Federal agencies or Tribes.

During the comment period that opened on December 28, 2004, and closed on January 27, 2005, we received four comment letters addressing the proposed critical habitat designation and the DEA. Of these latter comments, one was from a peer reviewer, one was from an environmental group, and two were from a company or individual.

None were from local, State, or Federal agencies, or Tribes. For those letters received during both comment periods, five commenters supported the designation of critical habitat for *A. l.* var. *piscinensis* and one opposed the designation. Seven entities responded with comments or information, but did not express support or opposition to the proposed critical habitat designation. Comments received during both comment periods are addressed in the following summary and incorporated into the final rule as appropriate. We did not receive any requests for a public hearing.

#### Peer Review

In accordance with our policy published on July 1, 1994 (59 FR 34270), we solicited expert opinions from nine knowledgeable individuals with scientific expertise that included familiarity with *Astragalus lentiginosus* var. *piscinensis* or the habitat the taxon requires, the geographic region in which the taxon occurs, and conservation biology principles. We received responses from six peer reviewers. The peer reviewers generally concurred with our methods and conclusions and provided additional information, clarifications, and suggestions to improve the final critical habitat rule.

We reviewed all comments received from the peer reviewers and the public for substantive issues and new information regarding critical habitat for the *Astragalus lentiginosus* var. *piscinensis*, and incorporated them into the final rule as appropriate.

#### Peer Review Comments

##### Issue 1: Hydrology

*Comment 1:* One peer reviewer noted that changes in aquifer conditions have the potential to adversely affect the quality of habitat upon which the endemic plant and animal species depend in Fish Slough. Another peer reviewer noted that many of the threats affecting *Astragalus lentiginosus* var. *piscinensis* habitat have also caused the extinction, or decreases in the abundance and distribution, of several other species occupying springs in the southwestern United States.

*Our Response:* We recognize that the threats affecting or potentially affecting *Astragalus lentiginosus* var. *piscinensis* include many of the same factors that have caused the extinction or reduction in the distribution and abundance of other species that occupy riparian and wetland habitats in the southwestern United States. We agree that changes in hydrologic conditions have the potential to affect the quality of the alkaline

habitat that *A. l.* var. *piscinensis* depends upon. We have, therefore, included a primary constituent element (PCE) in this final rule that reflects the hydrologic conditions needed by the species to provide suitable periods of soil moisture and chemistry for *A. l.* var. *piscinensis* germination, growth, reproduction, and dispersal.

*Comment 2:* Two peer reviewers expressed concerns that ground water pumping activities outside, or near the boundary of, the proposed critical habitat unit may adversely affect the water table or spring discharge in Fish Slough, and therefore, affect the quality of habitat in Fish Slough.

*Our Response:* We agree that ground water pumping activities could potentially affect the character of wetland or riparian habitat in Fish Slough. A portion of the Five Bridges Aggregate Pit was included in the southern portion of the proposed critical habitat unit. The expansion of the pit will occur in multiple phases and include ground disturbance and the pumping of ground water (Secor International Incorporated and Lilburn Corporation 2004). One documented occurrence (California Natural Diversity Data Base 2004) of *Astragalus lentiginosus* var. *piscinensis* occurs within 1,600 to 4,600 feet (ft) (488 to 1,402 meters (m)) of phase 1 of the planned expansion project. If the pumping activities alter the soil moisture and chemistry of the area where *A. l.* var. *piscinensis* occurs, then germination, growth, reproduction, and dispersal of the species could be adversely affected. Our concern regarding the pumping activity is highlighted by the fact that meadows depending on ground water exist in, and immediately adjacent to, phases 1 and 2 of the proposed mine expansion. Past pumping activity has been identified as a factor affecting the soil moisture and plant communities in these habitats (Secor International Incorporated and Lilburn Corporation 2004). We will periodically review monitoring data to determine if ground water pumping is affecting the local water table.

*Comment 3:* One peer reviewer noted it can be difficult to attribute the current hydrologic conditions in a given area to specific anthropogenic activities, climate, or other environmental factors because they may occur during different time frames. Another reviewer noted it is not possible, at the present time, to specifically identify the factor(s) that are responsible for the decline in the spring discharge in the Fish Slough area that has occurred since the early 1920s.

*Our Response:* We agree that some factors influencing the habitats or

species in Fish Slough have occurred on a short-term temporal scale, while other factors have occurred over a longer period of time. We also agree it is sometimes difficult to attribute specific activities or factors to particular changes in the hydrologic conditions at Fish Slough. We did not attempt to attribute the decline in spring discharge in Fish Slough to specific activities or factors. We believe a combination of activities or factors, including anthropogenic activities, climate, and environmental factors, are likely to affect the hydrology of Fish Slough and the alkaline habitat occupied by *Astragalus lentiginosus* var. *piscinensis*. We fully support activities that are designed to, and result in, collection of additional data that can be used to understand the hydrologic and geologic features that promote the creation and maintenance of alkaline habitat upon which *A. l.* var. *piscinensis* depends. Such data will create a greater opportunity to proactively manage the critical habitat unit described in this final rule, and thereby manage for the conservation of *A. l.* var. *piscinensis*.

*Comment 4:* One peer reviewer noted that the proposed rule appeared to have contradictory text when it suggested *Astragalus lentiginosus* var. *piscinensis* was adversely affected by reduced water availability (that may be associated with ground water pumping activities in areas adjacent to Fish Slough), and by an overabundance of water (resulting from storage of water behind a berm near Fish Slough Lake).

*Our Response:* Activities affecting the amount, distribution, and character of alkaline habitat that *Astragalus lentiginosus* var. *piscinensis* depends upon have the potential to affect the taxon. Some land management activities in Fish Slough have created increased levels of soil moisture in particular areas, and this species cannot tolerate excessive levels of inundation. In other instances, reductions in the amount of water discharging from springs have likely reduced the acreage or affected the chemistry of alkaline habitat that historically occurred in Fish Slough. Both of these changes have likely affected *A. l.* var. *piscinensis* because there may be less habitat for the taxon to occupy, or the chemistry of that habitat may no longer be optimum for it. *Astragalus lentiginosus* var. *piscinensis* occupies a relatively narrow ecological niche, and the taxon can be adversely affected by either too much or too little water.

*Comment 5:* One peer reviewer suggested that the findings described in a report prepared by MHA Environmental Consulting, Inc. (MHA 2001) should be described in greater

detail in the final rule. These findings suggest that ground water levels and spring discharges could decline in Fish Slough as a result of particular pumping activities outside the critical habitat unit.

*Our Response:* MHA (2001) provided a preliminary hydrologic model that described the groundwater flow system in the Tri-Valley area. The Tri-Valley area includes Benton, Hammil, and Chalfant Valleys, which are located 2 to 30 miles (mi) (5 to 48 kilometers (km)) east and northeast of Fish Slough. Intensive ground water pumping activities in the Hammil-Chalfant Valley area have occurred, and water levels have declined over the last 10 to 20 years, suggesting that pumping activities are depleting the amount of groundwater underneath the wells. Because the surface elevation decreases from Benton Valley in the north to Chalfant Valley in the south, and because Fish Slough is lower in elevation than all three of these valleys, groundwater tends to move in a southerly or southwesterly direction toward Fish Slough or toward Chalfant Valley east of Fish Slough. Therefore, there may be a potential for water diversion activities in Chalfant and Hammil Valleys to adversely affect the amount of water that discharges from springs in Fish Slough (MHA 2001). Alternatively, it may also be possible that pumping activities in these two valleys affect the hydrostatic pressure within the local aquifer and thereby influence the water table in Fish Slough.

*Astragalus lentiginosus* var. *piscinensis* occupies alkaline soils that form as a result of spring discharge in Fish Slough. If groundwater pumping activities east or northeast of Fish Slough affect spring discharge or the hydrostatic pressure in Fish Slough, there may be a potential that the soil moisture or chemistry conditions in habitat where *A. l.* var. *piscinensis* occurs could be altered. If these changes were to occur, plant reproduction or persistence could be adversely affected.

#### Issue 2: Grazing

*Comment 6:* One peer reviewer stated that controlling livestock grazing in upland areas is necessary to minimize the trampling of potential food resources that may be used by native bee species. The reviewer also stated that grazing in habitat used by bee species should not occur before, during, or after the period when host plants bloom.

*Our Response:* We would agree with the peer reviewer that grazing could affect the habitat used by insect species that pollinate *Astragalus lentiginosus*

var. *piscinensis*, but that would depend on the number of cattle involved. The Los Angeles Department of Water and Power (LADWP) has issued a lease to one individual that intermittently turns out a limited number of cattle and horses in Fish Slough on some of the lands that agency owns. The number of cattle, and length of time they are authorized to be in Fish Slough, has been reduced in recent years in an effort to reduce the potential that *A. l.* var. *piscinensis* is trampled or its habitat adversely affected. At the present level of grazing within the area designated for *A. l.* var. *piscinensis*, any impacts to pollinators would likely be minor. We have also encouraged LADWP to complete a management plan for the grazing allotment that would provide specific prescriptions that describe how grazing-related effects to *A. l.* var. *piscinensis* and associated habitat could be minimized.

*Comment 7:* One peer reviewer asked if we had used statistical tests to determine if there was a significant difference in the abundance of *Astragalus lentiginosus* var. *piscinensis* in grazed and ungrazed plots.

*Our Response:* We have not employed statistical methods to determine if the abundance of *Astragalus lentiginosus* var. *piscinensis* in grazed and ungrazed plots is significantly different. This type of analysis is beyond the scope of this rule making in that it does not identify or evaluate areas to be considered as critical habitat for *A. l.* var. *piscinensis*.

#### Issue 3: Delineation of the Proposed Unit Boundary

*Comment 8:* One peer reviewer suggested that the proposed critical habitat boundary may be too small to ensure the conservation of *Astragalus lentiginosus* var. *piscinensis* because the source areas that are likely to provide the water that discharges in Fish Slough are outside the critical habitat unit. Another reviewer felt that delineating a larger critical habitat unit to include the aquifer contributing to the springs and near-surface ground water in Fish Slough was not warranted at this time. This reviewer stated that insufficient information is available to identify the precise location of the source(s) of the water that promote the presence of the alkaline habitat upon which *A. l.* var. *piscinensis* depends.

*Our Response:* We considered delineating a critical habitat unit boundary that includes the source areas that provide water to Fish Slough such as: (1) Casa Diablo Mountain area northwest of Fish Slough; (2) the nearby Tri-Valley east and northeast of Fish Slough; or (3) a combination of these

two areas (Bureau of Land Management (BLM) 1984; MHA 2001). We determined that information on the location of the source(s) of the water that sustain the alkaline habitat upon which *Astragalus lentiginosus* var. *piscinensis* depends is not available at the present time. As a result, we did not include the above mentioned areas in the critical habitat unit. We encourage local land managers and entities with expertise in hydrology to collect additional data that would more precisely determine the location of the source(s) of the water that discharge in Fish Slough and sustain *A. l.* var. *piscinensis* habitat. We believe this information is necessary to proactively manage this listed plant for its conservation.

*Comment 9:* One peer reviewer questioned why the area south of the McNally Canals was included in the proposed critical habitat unit when the proposed rule stated this area contained little suitable habitat for *Astragalus lentiginosus* var. *piscinensis*. The individual also recommended that we specifically refer to a particular McNally Canal (north vs. south) when referring to the drainage canal network.

*Our Response:* We recognize there are two artificial ditches in the southern portion of the proposed critical habitat unit, the North and South McNally Canals, and have provided text in this final rule that specifically refers by name to one or both of the canals. We have reviewed recent information that suggests that habitat quality in this area has been degraded by past pumping and water spreading activities, grazing, or agricultural activities (Pavlik 1998, 1999; The Twining Laboratories and ESR, Inc. 2004). We have determined that the area south of the southern McNally Canal is unoccupied and is not essential for the conservation of *Astragalus lentiginosus* var. *piscinensis*. We have, therefore, not included the area south of the southern McNally Canal in the designated critical habitat unit (see Summary of Changes from the Proposed Rule section).

Even though the mine expansion area, south of the southern McNally Canal, is not essential to the conservation of the taxon, we note that ground water pumping in the area where future mining activities are scheduled to occur is likely to create a cone of depression for ground water (Secor International Incorporated and Lilburn Corporation 2004). If such an effect occurs, we are concerned that the pumping may affect the PCEs (e.g., alkaline soils, plant communities, and hydrologic conditions) in the portion of the

designated critical habitat unit directly adjacent to the mine expansion area.

*Comment 10:* One peer reviewer believes our rationale for including a 3,281 ft (1,000 m) wide upland area around the habitat occupied by *Astragalus lentiginosus* var. *piscinensis* requires additional support because we based it on a study done in Germany. The reviewer stated that the study results may not be applicable to Fish Slough because the two areas have different habitats, climate, and host plant composition.

*Our Response:* When we delineated the perimeter of the proposed critical habitat unit, we assessed the significance of the information collected by Steffan-Dewenter and Tschardtke (2000) in Germany. We were influenced by their findings that showed that alteration and fragmentation of habitat used by pollinator species can lead to reduced levels of plant pollination. After we published the proposed rule in the **Federal Register**, another journal article was published that stated "pollination services provided by native bee communities in California strongly depended on the proportion of natural upland habitat within 1–2.5 km of the farm site" (Kremen *et al.* 2004). We conclude that alteration and fragmentation of habitat used by bee species is also likely to result in reduced levels of pollination in *Astragalus lentiginosus* var. *piscinensis*. This is because a reduction in the number of pollinators in an area is likely to reduce the number of bees that could potentially be available to pollinate *A. l.* var. *piscinensis*.

In the proposed rule, we noted that successful reproduction for *Astragalus lentiginosus* var. *piscinensis* requires bee pollination. The specific bee species that pollinate the plant have not been identified, but at a minimum, include bumblebees (*Bombus* sp.) in the family Apidae (Mazer and Travers 1992). Bumblebees may forage many kilometers from a colony (Heinrich 1979), and the distance they will fly to forage is not unique. European honeybees (*Aphis mellifer*) are also known to have an ability to forage a similar distance (Beekman and Ratnieks 2000). We have, therefore, been conservative in defining a 3,281 ft (1,000 m) wide boundary around the habitat occupied by *A. l.* var. *piscinensis*.

The conservation of this upland area in Fish Slough is essential to ensure that alteration and fragmentation of habitat used by pollinator species does not occur, so that adequate levels of *Astragalus lentiginosus* var. *piscinensis* pollination and seed formation can

continue. We also note that none of the agencies owning land within the critical habitat unit have expressed any concern regarding the 3,281 ft (1,000 m) wide upland area around the alkaline habitat occurring in the critical habitat unit.

*Comment 11:* One peer reviewer recommended that the unit boundary be redrawn to reflect local topographic differences, *i.e.*, expand its boundary to the west, and narrow it to the east. This recommendation was based on the assumption that bee pollinators are less likely to fly up steep slopes, and the watershed to the west of where *Astragalus lentiginosus* var. *piscinensis* occurrences is larger. Therefore, it is likely to have a greater influence on the surface hydrology that may affect the plant's alkaline habitat.

*Our Response:* The final rule designating critical habitat for *Astragalus lentiginosus* var. *piscinensis* has retained a unit boundary that has a symmetrical shape because we are not aware of data suggesting that likely *A. l.* var. *piscinensis* pollinators would be unable to fly up the relatively short (280 ft (85 m) high) ridge east of where the plant occurs. We agree that surface topography is less steep west of where *A. l.* var. *piscinensis* occurs, and there is a larger topographic area in this direction that could potentially affect the surface water hydrology of Fish Slough. The available hydrologic data do not suggest that surface water inflows or human activities within the 1.5 mi (2.4 km) distance referred to in the peer reviewer's comment letter affect the character of the alkaline habitat occupied by the plant species. Therefore, we are not able to identify the benefit that might be associated with shifting the unit boundary to the west, and have retained the original configuration of the unit boundary in the final rule.

#### Issue 4: Miscellaneous Topics

*Comment 12:* One peer reviewer suggested that new studies should be completed to identify the taxonomic identity and habitat requirements of the insects that pollinate *Astragalus lentiginosus* var. *piscinensis*. Habitat essential to conserve *A. l.* var. *piscinensis* could then be defined more precisely. Another reviewer advocated new studies that could provide a greater understanding of the hydrology of the Fish Slough area.

*Our Response:* We welcome any additional data to characterize the hydrology that affects Fish Slough and the ecology of the insect species that pollinate *Astragalus lentiginosus* var. *piscinensis*. However, we cannot delay our decision to allow for the

development of additional data, and have used the best available scientific data in our critical habitat designation.

*Comment 13:* A peer reviewer suggested we should have organized particular portions of the proposed rule in a different manner than was presented. The reviewer also suggested we conduct additional statistical analyses to identify and determine the significance of particular relationships between species abundance and environmental factors, or trends in plant numbers. He questioned why we summarized data on population trends for *Astragalus lentiginosus* var. *piscinensis* in 5-year increments (*i.e.*, 1991–1996 and 1997–2002), and asked if the overall trend in the available population data was consistent with trends in particular plots that have been monitored.

*Our Response:* The format and organization of the proposed rule followed the procedural guidance for the preparation of rules established by the Service and the **Federal Register**. We appreciate the peer reviewer's suggestions, and will consider his comments as new rules are developed in the future.

We agree it would be beneficial to conduct additional statistical analyses to identify and determine the significance of particular relationships between species abundance and environmental factors, or trends in plant numbers. These types of analyses are routinely done during a status review for a listed species but are not commonly done during a rule making process for critical habitat. In this case, the additional analysis suggested would not help identify areas for the critical habitat designation. To provide readers with an indication of how the abundance of *Astragalus lentiginosus* var. *piscinensis* has changed over time, and because data were available for a 12-year period, we chose to summarize population trend data for *A. l.* var. *piscinensis* in two time periods of equal duration, *i.e.*, 1991–1996 and 1997–2002.

*Comment 14:* One peer reviewer suggested that, instead of providing personal communications between Service staff and other individuals, we should provide information contained within peer-reviewed journals.

*Our Response:* We agree with the standard practice of providing information that is contained within published documents when these are available. Some of the information described in the proposed rule, *e.g.*, population survey data that were collected by staff from the BLM or LADWP, was cited as a personal

communication because this information only exists in tabular form in agency files and does not exist as a publication or formal report. The Act requires that we use the best available scientific data, but does not require that we only use data in published documents. Also, our Policy on Information Standards Under the Endangered Species Act, published in the **Federal Register** on July 1, 1994 (59 FR 34271), section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (P.L. 106–554; H.R. 5658) and our associated Information Quality Guidelines, provide criteria, establish procedures, and provide guidance to ensure that our decisions represent the best scientific and commercial data available.

*Comment 15:* Two peer reviewers supported our inclusion of upland areas outside of, but adjacent to, where *Astragalus lentiginosus* var. *piscinensis* occurs as these areas are likely to be used by insect species that pollinate it. One peer reviewer suggested that the PCE involving upland areas be modified to provide a stronger emphasis on the need to proactively manage pollinator species, surface water hydrology, and nonnative plant species by including an upland buffer.

*Our Response:* We agree that the upland areas likely contain the burrows and cover sites that are used by the insect species that pollinate *Astragalus lentiginosus* var. *piscinensis*, and are essential for the conservation of this species. Although we agree with the peer reviewer's suggestion that multiple factors in the upland portion of the designated critical habitat unit require special management, we did not designate the upland area as a buffer. The upland area has one or more of the PCE's for *Astragalus lentiginosus* var. *piscinensis* and is essential to the conservation of the species.

#### Public Comments

We reviewed all comments received from the public for substantive issues and new information regarding critical habitat for the *Astragalus lentiginosus* var. *piscinensis*, addressed them in the following summary, and incorporated them into the final rule as appropriate.

#### Issue 1: Biological Justification and Methodology

*Comment 16:* One commenter disagreed with a suggestion in the proposed rule that water diversion activities have taken place at the Five Bridges Aggregate Pit. The commenter instead characterized the groundwater table as high in this area, and the mine

is required to pump water from the current operating pit, but this water is pumped into on-site recharge basins. Therefore, the ground water is recharged, not diverted. The same commenter also inferred that the Service assumed that mining company staff did the pumping, and the commenter stated that staff from the LADWP did the pumping.

*Our Response:* We continue to believe that groundwater in the vicinity of the mining activities has been diverted because ground water has been moved from one location to another. Our statement is based on the fact that water was pumped from sumps that were constructed near the pits where gravel was mined, and then conveyed to another location that was several hundred to a few thousand meters from the location where water was collected. It is possible that the diverted water is recharged at the point where it is released after it is diverted.

We do not state in the proposed rule which entity conducted the water diversion activities that adversely affected riparian vegetation down-gradient of the mine. We only stated that pumping took place and riparian vegetation was adversely affected.

*Comment 17:* One commenter requested that the critical habitat boundary be delineated to include the entire historic range of *Astragalus lentiginosus* var. *piscinensis*.

*Our Response:* The critical habitat unit delineated in this final rule includes all of the known locations that were occupied by *Astragalus lentiginosus* var. *piscinensis* at the time of listing.

*Comment 18:* One commenter requested we extend the deadline for submitting comments.

*Our Response:* Our first comment period was open for 60 days, from June 4, 2004, until August 3, 2004. We reopened the comment period on December 28, 2004, for an additional 30 days when we published a notice of availability of the DEA for the designation of critical habitat for *Astragalus lentiginosus* var. *piscinensis* (69 FR 77703). This gave the public an opportunity to review and comment on the DEA and proposed rule concurrently. This second comment period closed on January 27, 2005. Unfortunately, our ability to accept comments and work with stakeholders regarding the critical habitat designation for *A. l.* var. *piscinensis* is limited by a deadline imposed by a court order.

*Comment 19:* One commenter noted that the long-term effect of designating critical habitat was beneficial, particularly because a large portion of

the local economy in the Fish Slough area relies on biological resources and scenery that attracts tourists to the area.

*Our Response:* We recognize that one of the predominate sources of income for businesses in the town of Bishop and the Owens Valley area is derived from outdoor recreational activities and ecotourism. We note that the protection of *Astragalus lentiginosus* var.

*piscinensis* and its habitat is beneficial for a variety of reasons, including the conservation of biological resources, an environment that people use and enjoy, and a local growing economy.

*Comment 20:* A commenter that operates a grazing lease in Fish Slough suggested that cattle grazing activities are compatible with stable populations of *Astragalus lentiginosus* var. *piscinensis*, based on the number of plants that were observed in “zones” surveyed in 1992 (Novak 1992), and again in 2000.

*Our Response:* To show how the number of *Astragalus lentiginosus* var. *piscinensis* plants has varied through time, we presented data that were collected in monitoring plots on LADWP-owned land, as compared to the number of individuals within particular zones. We believe the plot data provide a more precise and robust assessment of how plant numbers have changed over time because the plots are sampled on an annual basis. These plots are designed to quantify the number of individuals in a repeatable manner and in well-defined, discrete areas.

When data collected from one grazed plot are compared between 1991–1996 and 1997–2002, these data suggest that the abundance of *Astragalus lentiginosus* var. *piscinensis* within this plot increased. During this same period, the number of *A. l.* var. *piscinensis* individuals decreased in two other plots where grazing occurred, and in two plots where grazing did not occur. We, therefore, believe the plot data do not provide definitive proof that grazing activities are compatible with stable populations of *A. l.* var. *piscinensis*. Within the zones referred to in the comment letter, the number of *A. l.* var. *piscinensis* individuals in the ungrazed zones has decreased in three zones and increased in one zone.

*Comment 21:* One commenter suggested that the Fish Slough Area of Critical Environmental Concern (ACEC) should be replaced with an area that is managed under a habitat conservation plan (HCP).

*Our Response:* HCPs cannot serve as a viable substitute for an ACEC because they exist for different reasons and are meant to serve different functions. An ACEC is a special land use classification

that is designated by the BLM on lands they manage. HCPs, developed within the context of the Endangered Species Act, are documents that are completed when a non-Federal entity anticipates that incidental take of a listed animal species is likely to occur as a result of a project they propose. Because *Astragalus lentiginosus* var. *piscinensis* is a listed plant taxon, and the LADWP and California Department of Fish and Game (CDFG) have not determined their activities in Fish Slough are likely to result in the take of a listed animal, e.g., Owens pupfish (*Cyprinodon radiosus*), the development of a HCP is not warranted or appropriate at this time.

*Comment 22:* A commenter noted that the proposed rule did not attempt to summarize all of the demographic data for all of the monitoring plots that occur on land owned by BLM and LADWP, creating a bias because some data are presented in the proposed rule and some are not.

*Our Response:* Rules in the **Federal Register** that propose critical habitat are not intended to serve as a mechanism for reviewing all of the demographic data that may pertain to a species (e.g., the number of adult and juveniles that may be present at select locations across a species’ range). We believe such a synthesis is more appropriate in a document that would evaluate the taxon’s status, or that the demographic data be used to develop strategies that are designed to provide alternative management scenarios that will benefit the species. The process for designating critical habitat for listed species focuses on identifying those habitat-related features that are essential for the species’ conservation, and we used the data that were appropriate to this task.

*Comment 23:* One commenter suggests cattle grazing is repeatedly and wrongfully referred to as a factor that adversely affects *Astragalus lentiginosus* var. *piscinensis*.

*Our Response:* The proposed rule does not suggest that all cattle grazing, no matter how light or intense, would adversely affect *Astragalus lentiginosus* var. *piscinensis*. Moderate to intense levels of livestock grazing have been documented to adversely affect at least one other *Astragalus* taxon in southern California (e.g., *Astragalus monoensis* (Sugden 1985)), and we believe it is likely that *A. l.* var. *piscinensis* would be adversely affected if moderate to large numbers of cattle were allowed to graze in Fish Slough. Such adverse effects would arise if listed plants were eaten by cattle, habitat used by pollinator species were trampled or crushed, or the amount of habitat that could be occupied by *A. l.* var.

*piscinensis* was reduced. We have not discounted the possibility, however, that light levels of cattle grazing may be benign.

*Comment 24:* A commenter suggested that the designation of critical habitat for *Astragalus lentiginosus* var. *piscinensis* implies that we are disproportionately preoccupied with the management of a single taxon.

*Our Response:* Though this critical habitat designation process is limited to a single taxon, we agree that the management objectives for Fish Slough should consider all of the plant and animal communities in this area. We continue to support this general principle as it is described in the Owens Basin Wetland and Aquatic Species Recovery Plan, Inyo and Mono Counties, California (Service 1998). The recovery plan suggests a conservation area management plan for Fish Slough should be completed. We believe the development of such a plan would maximize the opportunity to manage all of the resources in Fish Slough in a more productive manner. Thus far, we have not developed a plan with the BLM or CDFG due to a lack of funds.

*Comment 25:* A commenter noted that the proposed rule emphasized the need to “ensure an adequate supply of pollinators.” They asked how many pollinators are required to sustain *Astragalus lentiginosus* var. *piscinensis*, what the distribution of these insects needed to be, and what the requirements of these insects were.

*Our Response:* Quantitative data that specifically pertain to the items listed by the commenter are not available for the species that pollinate *Astragalus lentiginosus* var. *piscinensis*. Such data are rarely available, and we have used the best available scientific data in our critical habitat designation. We believe the references cited in the rules proposing and designating critical habitat for *A. l.* var. *piscinensis* are directly applicable to the taxon and the needs of its pollinators, and provide a solid foundation for identifying the geographic boundary and PCEs that relate to the critical habitat unit.

*Comment 26:* A commenter suggested that additional information was needed to more effectively manage *Astragalus lentiginosus* var. *piscinensis* and its habitat to understand how herbivory by native animals and water tables affected the taxon. They also thought it was important to identify the factors that caused the mortality, or affected the recruitment of, juvenile *A. l.* var. *piscinensis* individuals.

*Our Response:* We agree that acquisition of such data would be extremely useful, and improve the



ability of land managers to conserve the listed plant taxon. We believe, however, that processes that historically occurred, e.g., water table fluctuations that may result from earthquakes, or herbivory by native animals, are normal and should continue, and that management of the Fish Slough area should focus on the restoration of natural ecosystem processes and functions.

#### Issue 2: Legal and Procedural

*Comment 27:* A commenter challenged statements in the proposed rule that the designation of critical habitat is of little additional value for most listed species.

*Our Response:* Although the designation of critical habitat does not, in and of itself, restrict human activities within an area or mandate any specific management or conservation actions, it does help focus Federal, Tribal, State, and private conservation and management efforts in such areas. A critical habitat designation benefits species conservation primarily by identifying important areas and describing the features within those areas that are essential to conservation of the species, thereby alerting public and private entities to the areas' importance. In addition, designating critical habitat may also provide some educational or informational benefits.

#### Issue 3: Economic Issues

*Comment 28:* One commenter noted that many of the conservation efforts quantified in the DEA benefit multiple species, as well as unique alkaline meadows and significant scenic and cultural values. They stated it is not appropriate to allocate the total cost of conserving all of these biological resources to *Astragalus lentiginosus* var. *piscinensis*. Costs of consultations and conservation measures should be prorated by species that benefit from the critical habitat designation and other conservation actions.

*Our Response:* To the extent possible, the economic analysis distinguishes costs related specifically to *Astragalus lentiginosus* var. *piscinensis* conservation where multiple species are subject of a single conservation effort or section 7 consultation. In the case that another species clearly drives a project modification or conservation effort, the associated costs are appropriately not attributed to *A. l. var. piscinensis*.

In the case of administrative consultation costs, the DEA applies a standard cost model used to estimate a range of administrative costs of consultation (see Exhibit 4-1 in the DEA). These costs are considered representative of the potential range of

costs typically experienced for a consultation regarding a single species. That is, the cost model assumes that consultations involving more than one species typically involve higher administrative costs. Accordingly, although consultations described in the DEA may involve multiple species, the administrative costs as estimated by applying this cost model are considered to be predictive of those costs due specifically to the designation of critical habitat for *Astragalus lentiginosus* var. *piscinensis*.

*Comment 29:* One commenter felt that including the cost of managing the Fish Slough ACEC in the DEA overstates costs associated with critical habitat designation for *Astragalus lentiginosus* var. *piscinensis*. Every direct cost of managing the ACEC, except the propagation of *A. l. var. piscinensis*, benefits a number of species and should therefore not be considered critical habitat designation costs.

*Our Response:* As mentioned above, for each consultation and conservation effort, the DEA attempts to identify costs specifically related to *Astragalus lentiginosus* var. *piscinensis*. In some instances, however, it is not possible to determine the relative contribution of the multiple causative factors to the implementation of a conservation effort. For example, management of the Fish Slough ACEC by the BLM, including posting signage to mark the presence of sensitive species, and prescribed burns to control vegetation, is undertaken to benefit all Fish Slough resources, including *A. l. var. piscinensis*. In these instances, the DEA presents the full cost of the conservation effort. Importantly, however, the DEA only includes the costs of these efforts within the proposed critical habitat designation for *A. l. var. piscinensis*. That is, it is assumed that ACEC management efforts outside of the proposed critical habitat designation are not undertaken to benefit *A. l. var. piscinensis*, and are therefore not included in the DEA.

*Comment 30:* Another commenter stated that the DEA should include a rigorous analysis of the continued status of the Fish Slough as an ACEC. This commenter stated that the *Astragalus lentiginosus* var. *piscinensis* critical habitat designation constitutes a shift to a single species management objective rather than a multi-species management plan, and the designation will only increase the administrative and management burden of the ACEC area.

*Our Response:* The DEA quantifies economic effects of the critical habitat designation for *Astragalus lentiginosus* var. *piscinensis*, along with the economic effects of protective measures

taken as a result of the listing of *A. l. var. piscinensis* or other Federal, State, and local laws that aid habitat conservation in the areas proposed for critical habitat. This information is intended to assist the Secretary in determining whether the benefits of excluding particular areas from the designation outweigh the benefits of including those areas. It is, therefore, beyond the scope of the DEA to include an analysis of the benefit of preserving the Fish Slough region as an ACEC managed by the BLM.

*Comment 31:* A commenter stated that a cumulative economic analysis should be developed to reflect the potential that critical habitat could be proposed or designated for the other 22 species identified in the Owens Basin recovery plan; i.e., the DEA should include evaluation of cumulative impacts of additional designations.

*Our Response:* The Act does not require us to conduct assessments to quantify the cumulative cost of designating critical habitat in one general area. Also, we do not believe it is reasonable to calculate the potential cost of designating critical habitat for 22 species identified in the recovery plan because almost all of these species have not been listed as threatened or endangered, and we only designate critical habitat for listed species. Furthermore, for the three species that are listed and covered under the Owens Basin recovery plan, only one other species besides *Astragalus lentiginosus* var. *piscinensis* has designated critical habitat, i.e., the Owens tui chub (*Gila bicolor snyderi*) (August 5, 1985, 50 FR 31592), and there are no current plans to propose critical habitat for the Owens pupfish (*Cyprinodon radiosus*) as it was listed in 1967, which is before critical habitat amendments were added to the Act (August 5, 1985, 50 FR 31592). The southwestern willow flycatcher (*Empidonax traillii extimus*) does occur in Owens Valley, and critical habitat for the taxon has been proposed (October 12, 2004, 69 FR 60705); an economic analysis will be prepared in conjunction with this listing process, and an estimate of the cost associated with the proposed critical habitat will be prepared. Also, we have already considered the costs of conducting other management activities; see Comment 29.

*Comment 32:* Another commenter states the DEA failed to provide a balanced assessment of economic benefits and costs in relation to the proposed critical habitat designation.

*Our Response:* Section 4(b)(2) of the Act requires the Secretary to designate critical habitat based on the best scientific data available, after taking into



consideration the economic impact, and any other relevant impact, of specifying any particular area as critical habitat. Our approach for estimating economic impacts includes both economic efficiency and distributional effects. The measurement of economic efficiency is based on the concept of opportunity costs, which are the value of goods and services foregone in order to comply with the effects of the designation (e.g., lost economic opportunity associated with restrictions on land use). Where data are available, the economic analyses do attempt to measure the net economic impact. For example, if the fencing of *Astragalus lentiginosus* var. *piscinensis* habitat to restrict motor vehicles results in an increase in the number of individuals visiting the site for wildlife viewing, then the analysis would attempt to net out the positive, offsetting economic impacts associated with their visits (e.g., impacts that would be associated with an increase in tourism spending). However, while this scenario remains a possibility, no data was found that would allow for the measurement of such an impact, nor was such information submitted during the public comment period.

Most of the other benefit categories submitted by the commenter reflect broader social values, which are not the same as economic impacts. While the Secretary must consider economic and other relevant impacts as part of the final decision-making process under section 4(b)(2) of the Act, the Act explicitly states that it is the government's policy to conserve all threatened and endangered species and the ecosystems upon which they depend. Thus, we believe that explicit consideration of broader social values for the species and its habitat, beyond the more traditionally defined economic impacts, is not necessary as Congress has already clarified the social importance. As a practical matter, we note the difficulty in being able to develop credible estimates of such values as they are not readily observed through typical market transactions. In sum, we believe that society places the utmost value on conserving any and all threatened and endangered species and the habitats upon which they depend, and thus the required considerations under section 4(b)(2) of the Act occur in light of this basic premise.

*Comment 33:* One commenter stated that indirect costs associated with reductions in grazing opportunity should not be included in the DEA. The reductions in grazing, along with installation and maintenance of the grazing enclosure in Fish Slough, have already been instituted and are therefore

not affected by critical habitat designation. The commenter further notes that these conservation efforts are independent landowner decisions and not a mandate under the Act and should, therefore, not be considered in the DEA. The cost of this conservation effort should not be included as a post-designation cost.

*Our Response:* The DEA assesses not only the direct economic effects of the critical habitat designation, but also the economic effects of protective measures taken as a result of the listing of *Astragalus lentiginosus* var. *piscinensis* or other Federal, State, and local laws that also aid habitat conservation in the areas proposed for critical habitat designation. The reductions in grazing were a result of conversations regarding management of the Fish Slough between the lessee of the grazing lands, LADWP (the landowner), and the other managing agencies of the Fish Slough (BLM and CDFG). This reduction in grazing activity was undertaken to benefit the multiple resources of the Fish Slough, including *A. l.* var. *piscinensis*, and is therefore included in the DEA.

*Comment 34:* The DEA seems to imply that the LADWP will bear all the costs of maintaining the 80-ac (32-ha) grazing enclosure. The lessee has been responsible for much of the costs of maintenance, materials, and labor. The following components should be added to pre-designation impacts: Fencing of the LADWP lease in cooperation with the lessee, with materials furnished by LADWP; and the lessee's cost of the installment of approximately 3.5 mi (5.6 km) of perimeter and cross fencing between 1990 and 1994 for better livestock control and vegetation management.

*Our Response:* As detailed in sections 4.1.2 and 4.2.2 of the DEA, impacts to livestock grazing activities are expected to be incurred by both the LADWP for fencing and fence maintenance, and the lessee for precluding particular acres of lands from grazing activities. In the case that the lessee provides the labor to maintain the enclosure, costs to the lessee associated with *Astragalus lentiginosus* var. *piscinensis* conservation efforts is underestimated. The DEA, however, only quantifies impacts of *A. l.* var. *piscinensis* conservation efforts occurring from the time of the species' listing in 1998 through 20 years from the final critical habitat designation in 2005. Impacts incurred by the lessee between 1990 and 1994 are, therefore, not included in the DEA.

*Comment 35:* A commenter stated that, following construction of the

grazing enclosure, the lessee found it necessary to develop a whole ranch vegetation management plan to match vegetation requirements with the health requirements of the livestock. This effort cost \$15,000 to \$20,000 in consultant fees and meetings. In addition, the lessee had to lease additional facilities to ship, receive, and handle livestock during the period when *Astragalus lentiginosus* var. *piscinensis* flowers. These increased production costs for the ranch operation should also be included in the analysis.

*Our Response:* Lone Tree Cattle Company was contacted following the public comment period for the DEA to discuss expected increased production costs as a result of *Astragalus lentiginosus* var. *piscinensis* conservation efforts on its grazing lease. As a result of this communication, the revised economic analysis includes additional economic impacts to Lone Tree Cattle Company. An additional \$15,000 to \$20,000 is added to the assessment of pre-designation costs to account for the development of a vegetation management plan. The costs of implementing the vegetation management are speculative at this time as the plan has not yet been adopted, and BLM review of the plan is the subject of a future hearing by the Department of the Interior (DOI)'s Office of Hearing and Appeals. Additionally, the grazing lessee acquired an additional lease specifically to avoid grazing on the Fish Slough ACEC during periods when *A. l.* var. *piscinensis* blooms. This resulted in increased costs to the grazing operation of \$7,600 to \$11,000 for purchase of materials for fencing and corral construction, and \$500 per year for the cost of the additional lease. Potential labor costs of construction and maintenance of fencing and corrals on the new lease is unknown, but are also expected to increase costs to the lessee's grazing operation (Ken Zimmerman, Lone Tree Cattle Company, pers. comm. 2005).

*Comment 36:* Section 3.2.2 of the DEA should caveat that restrictions on grazing in Fish Slough are pending a hearing with the DOI, Office of Hearing and Appeals, to address the appropriateness of the increased permit restrictions. Further, the lessee is currently grazing 60 head of cattle, not 40, as stated in the DEA.

*Our Response:* The revised economic analysis will reflect the information in the comment letter. The DEA estimates the value per acre of lost grazing land based on the economically viable utilization of these lands. That is, the number of head of cattle currently grazed is divided by the total acreage

available for grazing and multiplied by the value per head of cattle to determine the value per acre of grazing land. This is then applied to the 80 ac (32 ha) of land lost to grazing due to the construction of the cattle enclosure to protect *Astragalus lentiginosus* var. *piscinensis*. The DEA incorrectly stated that the lessee grazed 40 head instead of the current 60 head. This changes the economically viable number of head per acre from 0.02 to 0.03. Therefore, the lost head per year on the 80 ac (32 ha) of land lost to grazing increases from 1.6 to 2.4 head. Applying the value per head of cattle of \$1,114, as discussed in section 4.1.2 of the DEA, this correction results in a change of annual losses to the lessee of \$2,760, as opposed to the \$1,780 previously reported in the DEA.

*Comment 37:* The Five Bridges Aggregate Pit is located in the southern portion of Fish Slough and is subject to active mining operations. Plans to expand the pit have resulted in a requirement to conduct groundwater monitoring activities. The monitoring activities will be completed, regardless of the proximity of the pit to the critical habitat designation. A commenter suggested that because the groundwater monitoring will benefit a number of species, the costs of the monitoring activities should be accordingly prorated. Additionally, a reduction in groundwater levels will affect the production of downstream mining activities and downstream water extraction; costs should also be prorated to account for these human benefits.

*Our Response:* Our major concern regarding the potential affect of the mining activity and a proposed expansion of the pit on *Astragalus lentiginosus* var. *piscinensis* was the affect of future mining on groundwater levels within Fish Slough. Establishment of a groundwater monitoring system using existing and new wells was undertaken, in part, to ensure sensitive species, including *A. l.* var. *piscinensis*, would not be subject to fluctuating groundwater levels.

The DEA acknowledges that multiple factors contribute to the need for mitigation of groundwater effects of the mine operations, including California Environmental Quality Act (CEQA) compliance, California Surface Mining and Reclamation Act compliance, and general consideration of the Fish Slough ACEC. The DEA considers not only the direct economic effects of the critical habitat designation, but also the economic effects of protective measures taken as a result of the listing of *Astragalus lentiginosus* var. *piscinensis* or other Federal, State, and local laws that aid habitat conservation in the areas

proposed for critical habitat designation. The costs of groundwater monitoring are accordingly included in the DEA, with the recognition that this conservation effort would likely be undertaken absent consideration for the *A. l.* var. *piscinensis* and its habitat. Of note, however, the final rule excludes from critical habitat designation the area of the Five Bridges Aggregate Pit proposed for designation because this area is not occupied by *A. l.* var. *piscinensis* and is not considered essential to the conservation of the taxon.

*Comment 38:* One commenter requested that the data used for calculation of costs should be included in the DEA so that the methods can be evaluated.

*Our Response:* The source of each economic impact as described in the DEA is cited within the text or as a footnote to the text. In general, costs of conservation efforts were gathered by using budgetary information from participating agencies, by consulting market data, and by extrapolating from the costs of similar past activities. Standard methods for inflating past costs and discounting future costs were employed in order to compare economic impacts occurring in different time periods.

*Comment 39:* A commenter stated that the use of the term "volunteer routes" in the DEA is inappropriate, and highlighted that these routes are illegal and are an increasing problem in the area. The comment offered that these routes should be identified as "illegal routes" throughout the DEA.

*Our Response:* The BLM uses the term "volunteer routes" to describe those routes created through the use of illegal motorized off-highway vehicles (OHV) off of designated routes. The DEA acknowledges the illegality of this activity but uses the term for consistency in describing BLM management of the region.

*Comment 40:* One commenter stated that the DEA should highlight that the LADWP is a municipality with fee title to the lands in which agricultural and ranch leases are administered. This should be made clear, as the public often believes LADWP lands to be public lands.

*Our Response:* The revised economic analysis will clarify this point.

*Comment 41:* A commenter stated that he spent a number of hours searching for accreditations and references of Industrial Economics, Inc., the group that prepared the DEA for the Service, but was unable to establish its credentials.

*Our Response:* Industrial Economics, Incorporated (IEC), founded in 1981, is

an 80-person economic and policy consultancy that provides analytic services to government decision-makers and regulators, trade associations, private entities, and international organizations. IEC has prepared economic analyses of critical habitat designations for more than 60 species. Particular to this analysis, IEC has expertise in analyses of the regional and national economic effects of environmental regulation, including significant experience analyzing issues related to water use and management, grazing, and wildlife management in the western United States.

*Comment 42:* One commenter stated it is not appropriate to include "pre-designation" cost estimates as part of the economic analysis associated with the critical habitat designation, because these costs are associated with the listing of *Astragalus lentiginosus* var. *piscinensis*, and not with the critical habitat designation process for the species.

*Our Response:* The primary purpose of the economic analysis is to estimate the potential economic impacts associated with the designation of critical habitat for *Astragalus lentiginosus* var. *piscinensis*. The Act defines critical habitat to mean those specific areas that are essential to the conservation of the species, and defines conservation to mean the use of all methods and procedures necessary to bring any endangered species or threatened species to the point at which the measures of the Act are no longer necessary. Thus, we interpret that the economic analysis should include all of the economic impacts associated with the conservation of the species, which may include some of the effects associated with listing because the species was listed prior to the proposed designation of critical habitat. We note that the Act generally requires critical habitat to be designated at the time of listing, and had we conducted an economic analysis at that time, the impacts associated with listing would not be readily distinguishable from those associated with critical habitat designation.

The DEA discusses other relevant regulations and protection efforts for other listed species that included *Astragalus lentiginosus* var. *piscinensis* and its habitat. In general, the analysis errs conservatively in order to make certain that economic effects have not been missed. It treats as "co-extensive" other Federal and State requirements that may result in overlapping protection measures (e.g., CEQA) for *A. l.* var. *piscinensis*. In some cases, however, non-habitat-related regulations

will limit land uses activities within critical habitat in ways that will directly or indirectly benefit *A. l. var. piscinensis* or its habitat (*e.g.*, local zoning ordinances). These impacts were not considered to be “co-extensive” with *A. l. var. piscinensis* listing or designation for two reasons. First, such impacts would occur even if *A. l. var. piscinensis* was not listed. Second, we must be able to differentiate economic impacts solely associated with the conservation of *A. l. var. piscinensis* and its habitat in order to understand whether the benefit of excluding any particular area from *A. l. var. piscinensis* critical habitat outweighs the benefit of including the area.

*Comment 43:* A commenter requested that the DEA be reissued and amended to include cost estimates that reflect the economic value of biological attributes that may be beneficial, *i.e.*, nitrogen fixation services. The commenter stated that while it may not be possible to calculate a precise economic value for ecosystem functions such as nitrogen fixation, ecosystem functions and services should at least be mentioned as a benefit of species conservation.

*Our Response:* We recognize that the various functions of an ecosystem have value, but we are unable to put an economic value on such biological attributes. We believe that the benefits of proposed critical habitat are best expressed in biological terms that can be weighed against the expected costs impacts of the rulemaking. We must remember that the critical habitat economic analysis helps the Secretary decide whether to exclude areas, and whether the benefits of exclusion outweigh the benefits of inclusion. So, we are looking at the burden on the public of the regulation, and whether any areas have a disproportionate burden. We balance these burdens against the benefits of including that area—including the benefits of the area to the species and the benefits of the species’ existence and conservation. We do this in the section 4(b)(2) discussion in our rules.

*Comments From States*

Section 4(i) of the Act states, “the Secretary shall submit to the State agency a written justification for her failure to adopt regulation consistent with the agency’s comments or petition.” We did not receive any comments from CDFG or any other State agency. Therefore, we have not developed a written justification that pertains to section 4(i) of the Act.

### Summary of Changes From the Proposed Rule

One area that was included in the proposed rule for *Astragalus lentiginosus var. piscinensis* was not included in the final critical habitat designation. This area consists of the 483 ac (195 ha) area south of the southern McNally Canal; this land is not privately owned, and instead belongs to the LADWP. After we published the proposed rule, we acquired a variety of documents that pertain to the Five Bridges Aggregate Pit (mistakenly called the “Desert Aggregate Mine” in the proposed rule), which is operated by the Desert Aggregates company in the 483 ac (195 ha) parcel. The County of Inyo issued a Draft and Final Environmental Impact Report in April and July, 2004, respectively, in response to a proposal by Desert Aggregates to expand mining operations (Secor International Incorporated and Lilburn Corporation 2004; Lilburn Corporation 2004). In 2004, the County of Inyo issued a conditional use permit that authorizes various activities associated with the mine expansion. The expansion of the mine will include new ground-disturbing activities in areas that have not been previously mined, and dewatering activities that facilitate extraction of sand and gravel deposits (Secor International Incorporated and Lilburn Corporation 2004).

Dewatering activities at the mine historically have been done by constructing a perimeter ditch adjacent to a pit to be excavated, constructing a sump to collect water from the perimeter ditch, and pumping groundwater from the ditch or sump as the local water table intersected the ditch or sump. In the past, the water pumped from the sump was discharged into a ditch that is immediately north of, and parallel to, the Owens River. Desert Aggregates estimates that ground water extraction rates during previous mining activities ranged from approximately 80,000 to 500,000 gallons per day (302,832 to 1,892,705 liters per day) (Secor International Incorporated and Lilburn Corporation 2004). Future dewatering activities at the mine will be similar to those done in the past, except that water pumped from sumps will be directed to recharge basins that will be constructed during different phases of the mine expansion project. The recharge basins will be located at various locations on the mine property.

Habitat surveys that were carried out in conjunction with the aforementioned environmental impact reports provide documentation on the character of habitat within the 483-ac (195-ha) parcel

south of the southern McNally Canal. Future mining activities within the parcel are likely to result in the elimination of up to 48-ac (19-ha) of alkaline meadow habitat (Secor International Incorporated and Lilburn Corporation 2004). The habitat surveys indicate that *Astragalus lentiginosus var. piscinensis* does not occur in this alkaline meadow habitat, these meadows are drier than other meadows that are occupied by *A. l. var. piscinensis*, and habitat quality within the remaining portion of the 483-ac (195-ha) parcel has been degraded by historical pumping and water spreading practices, livestock grazing, or agricultural activities (Pavlik 1998, 1999; The Twining Laboratories and ESR Inc. 2004).

The 483-ac (195-ha) parcel south of the southern McNally Canal lacks three of the four PCEs that are used to identify critical habitat, *e.g.*, the arid nature of the soils throughout the parcel suggests the groundwater table is more than 19 to 60 in (48 to 152 cm) below the land surface (PCE 1), the plant associations that co-occur with *Astragalus lentiginosus var. piscinensis* are absent (PCE 2), and the available documentation suggest that the hydrologic conditions that provide suitable periods of soil moisture and chemistry for *A. l. var. piscinensis* germination, growth, reproduction, and dispersal do not exist (PCE 4). *Astragalus lentiginosus var. piscinensis* does not occupy the 483-ac (195-ha) parcel, and the habitat in this area is highly degraded by a number of previous land management activities. These factors, in combination, have led us to conclude that the 483-ac (195-ha) parcel south of the southern McNally Canal is not essential to the conservation of *A. l. var. piscinensis*, and it is therefore not included in this final critical habitat designation.

### Critical Habitat

Critical habitat is defined in section 3 of the Act as—(i) The specific areas within the geographic 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 geographic 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 that are necessary to bring an endangered or a threatened species to the point at which

listing under the Act is no longer necessary.

Critical habitat receives protection under section 7 of the Act through the prohibition against destruction or adverse modification of critical habitat with regard to actions carried out, funded, or authorized by a Federal agency. Section 7 requires consultation on Federal actions that are likely to result in the destruction or adverse modification of critical habitat. The designation of critical habitat does not affect land ownership or establish a refuge, wilderness, reserve, preserve, or other conservation area. Such designation does not allow government or public access to private lands.

To be included in a critical habitat designation, the habitat within the area occupied by the species must first have features that are "essential to the conservation of the species." Critical habitat designations identify, to the extent known and using the best scientific and commercial data available, habitat areas that provide essential life cycle needs of the species (*i.e.*, areas on which are found the primary constituent elements (PCEs), as defined at 50 CFR 424.12(b)).

Occupied habitat may be included in critical habitat only if the essential features thereon may require special management or protection. Thus, we do not include areas where existing management is sufficient to conserve the species. As discussed below, such areas may also be excluded from critical habitat pursuant to section 4(b)(2).

Our regulations state that, "The Secretary shall designate as critical habitat areas outside the geographical area presently occupied by a species only when a designation limited to its present range would be inadequate to ensure the conservation of the species" (50 CFR 424.12(e)). Accordingly, when the best available scientific and commercial data do not demonstrate that the conservation needs of the species so require, we will not designate critical habitat in areas outside the geographic area occupied by the species.

Our Policy on Information Standards Under the Endangered Species Act, published in the **Federal Register** on July 1, 1994 (59 FR 34271), and section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Pub. L. 106–554; H.R. 5658) and our associated Information Quality Guidelines, provide criteria, establish procedures, and provide guidance to ensure that our decisions represent the best scientific and commercial data available. They require Service biologists, to the extent consistent with the Act and with the use

of the best scientific and commercial data available, to use primary and original sources of information as the basis for recommendations to designate critical habitat. When determining which areas are critical habitat, a primary source of information is generally the listing package for the species. Additional information sources include the recovery plan for the species, articles in peer-reviewed journals, conservation plans developed by States and counties, scientific status surveys and studies, biological assessments, or other unpublished materials and expert opinion or personal knowledge. All information is used in accordance with the provisions of section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Pub. L. 106–554; H.R. 5658) and our associated Information Quality Guidelines.

Section 4 of the Act requires that we designate critical habitat on the basis of what we know at the time of designation. Habitat is often dynamic, and species may move from one area to another over time. Furthermore, we recognize that designation of critical habitat may not include all of the habitat areas that may eventually be determined to be necessary for the conservation of the species. For these reasons, critical habitat designations do not signal that habitat outside the designation is unimportant or may not be required for the conservation of the species.

Areas that support populations, but are outside the critical habitat designation, will continue to be subject to conservation actions implemented under section 7(a)(1) of the Act and to the regulatory protections afforded by the section 7(a)(2) jeopardy standard, as determined on the basis of the best available information at the time of the action. Federally funded or permitted projects affecting listed species outside their designated critical habitat areas may still result in jeopardy findings in some cases. Similarly, critical habitat designations made on the basis of the best available information at the time of designation will not control the direction and substance of future recovery plans, HCPs, or other species conservation planning efforts if new information available to these planning efforts calls for a different outcome.

#### Methods

As required by section 4(b)(2) of the Act, we used the best scientific and commercial information available in determining areas that are essential to the conservation of *Astragalus lentiginosus* var. *piscinensis*. This

included information from our own documents on this plant and related taxa, and documentation provided by staff from BLM and LADWP. We considered information contained within BLM (1984); Odion *et al.* (1991); Ferren (1991a); Mazer and Travers (1992); Danskin (1998); and MHA (2001), in addition to other peer-reviewed journal articles, book excerpts, and unpublished biological documents regarding *A. l.* var. *piscinensis*, similar species, and more generalized issues of conservation biology. We also conducted two site visits to Fish Slough. We met and routinely corresponded with staff from the BLM, LADWP, and CDFG to solicit their views on various management aspects involving *A. l.* var. *piscinensis*. We also participated in several discussions with botanical and hydrologic experts familiar with Fish Slough, and factors that are likely to affect the habitat that *A. l.* var. *piscinensis* occupies.

#### Primary Constituent Elements

In accordance with section 3(5)(A)(i) of the Act and regulations at 50 CFR 424.12, in determining which areas to propose as critical habitat, we are required to base critical habitat determinations on the best scientific and commercial data available and to consider those physical and biological features (PCEs) that are essential to the conservation of the species, and that may require special management considerations or protection. These include, but are not limited to: space for individual and population growth and for normal behavior; food, water, air, light, minerals, or other nutritional or physiological requirements; cover or shelter; sites for breeding, reproduction, and rearing (or development) of offspring; and habitats that are protected from disturbance or are representative of the historic geographical and ecological distributions of a species.

All areas designated as critical habitat for *Astragalus lentiginosus* var. *piscinensis* are within the species' historical range and contain one or more of the biological and physical features (PCEs) identified as essential for the conservation of the species. The PCEs essential to the conservation of *A. l.* var. *piscinensis* habitat are based on specific components that are described below.

#### Space for Individual and Population Growth and for Normal Behavior

The alkaline flats where *Astragalus lentiginosus* var. *piscinensis* occurs are typically dominated by a *Spartina*—*Sporobolus* (cordgrass—dropseed) plant association. *Astragalus lentiginosus* var. *piscinensis* may also occur where a

sparse amount of *Chrysothamnus albidus* (rabbit-brush) exists in the transition zone between *Spartina-Sporobolus* and *Chrysothamnus albidus-Distichlis* (rabbit-brush-saltgrass) plant associations. Sawyer and Keeler-Wolf (1995) classify the alkaline habitats where *A. l.* var. *piscinensis* occurs as a cordgrass series or saltgrass series. *Astragalus lentiginosus* var. *piscinensis* is frequently sympatric with *Ivesia kingii* (alkali ivesia). The higher elevation areas where *A. l.* var. *piscinensis* is absent consist of dry shadscale scrub communities that are dominated by various species of *Atriplex* spp. (saltbush).

#### Food, Water, Air, Light, Minerals or Other Nutritional or Physiological Requirements

The presence of water is essential to the development and maintenance of alkaline soils and habitat upon which *Astragalus lentiginosus* var. *piscinensis* depends. The alkaline soils in Fish Slough where alkali flat, alkali scrub, and meadow habitats occur are generally classified as aquatic torriorthents-aquent complex with 0 to 2 percent slope. These alkaline soils develop as mineral-rich, shallow ground water rises under capillary action to the surface by the high evaporation rates which prevail in the Fish Slough area. As this water evaporates at the soil surface, its solute load precipitates, creating a veneer of white salts and minerals. The alkaline habitat that *A. l.* var. *piscinensis* occupies is likely to have a water table that fluctuates between 19 to 60 inches (in) (48 to 152 centimeters (cm)) below the land surface (Odion *et al.* 1991). In areas where water tables are more than 6.6 ft (2.0 m) deep, capillary action is insufficient to promote and maintain the development of alkaline soils (Odion *et al.* 1991). A comparison of the distribution of alkaline habitat that exists in Fish Slough today with aerial photographs taken in 1950 suggests the geographic extent of alkaline habitat in Fish Slough has decreased over time (Anne Halford, BLM, pers. comm. 2004).

Between May 1999 and October 2001, a variety of *in situ* and experimental studies were conducted to evaluate the relationship between photosynthetic rates, growth rates, fecundity, and survivorship of *Astragalus lentiginosus* var. *piscinensis* as depth to a water table varied (Murray and Sala 2003). Data from these studies suggest that elevated water tables are likely to adversely affect these variables if local water tables are less than 13.8 to 15.7 in (35 to 40 cm) below the land surface. Therefore, water tables that rise too close to the land

surface and the root zone of *A. l.* var. *piscinensis* may be detrimental to individual plants that are subjected to saturated soils for a prolonged period of time.

Fish Slough is a wetland in an otherwise arid landscape. The average annual rainfall in the town of Bishop is 5.0 in (12.7 cm). The average annual evapo-transpiration rates in alkaline meadows or alkaline scrub habitats in the greater Owens Valley area, which are most similar to the habitat type occupied by *Astragalus lentiginosus* var. *piscinensis*, range between 18.5 to 40.5 in (47.0 to 102.9 cm) and 15.2 to 23.6 in (38.6 to 59.9 cm), respectively (Danskin 1998). Because the low annual rainfall and high annual evapo-transpiration rates in the Bishop area create an arid environment, it is essential that a substantial and sustained amount of surface and groundwater exists to maintain the wetland and riparian habitats that are present in Fish Slough.

The sources of water that discharge from springs in Fish Slough have not yet been conclusively identified. Available data indicate that Fish Slough water is derived from the Casa Diablo Mountain area (BLM 1984; MHA 2001), the Tri-Valley area, or a combination of the two areas (MHA 2001). The Casa Diablo Mountain area reaches a maximum elevation of 7,913 ft (2,412 m) and is located 9.5 mi (15.3 km) northwest of Fish Slough. The area between Fish Slough and Casa Diablo Mountain is locally referred to as the Volcanic Tableland. The geology of the Volcanic Tableland predominantly consists of the Bishop Tuff, which has a welded ash and tuff surface veneer. Underneath the surface veneer, a thicker, more permeable layer is present in the Volcanic Tableland. The lower unit of the tuff is extensively fractured and faulted, and some areas are more permeable than windblown sand (Department of Water Resources 1964). These fractures act as conduits that convey groundwater from higher elevation areas with greater levels of precipitation to the lower elevation Fish Slough area where low amounts of precipitation predominate.

The Tri-Valley area is bounded on the east by the White Mountains, which reach an elevation of up to 14,245 ft (4,342 m), and to the west by a ridge that separates it from Fish Slough. This ridge is less than 280 ft (85 m) higher than the valley floor. The high elevation of the White Mountains promotes the precipitation deposition. This water then percolates into alluvial fans at the base of the mountains, and ultimately enters the coarse alluvium that is

present on the floors of Benton, Hammil, and Chalfant Valleys. Because the surface elevation decreases from Benton Valley in the north to Chalfant Valley in the south, and because Fish Slough is lower in elevation than all three of these valleys, groundwater tends to move in a southerly or southwesterly direction toward Fish Slough or toward Chalfant Valley east of Fish Slough. A number of fault lines are present in the Fish Slough and Volcanic Tableland area (MHA 2001), and these features likely affect the presence, distribution, and volume of groundwater present in the local area (Andy Zdon, TEAM Engineering and Management, Inc., pers. comm. 2004).

Distribution of many alkaline-tolerant plant species is largely determined by a combination of environmental factors, predominantly soil moisture and salinity. These two factors in combination may affect the physiology of adult and immature plants, seed germination, and seedling survival. Mazer and Travers (1992) suggest that seed germination and successful establishment of *Astragalus lentiginosus* var. *piscinensis* seedlings are infrequent events, and that sufficient rainfall is necessary to promote seed germination and survivorship of young plants. The suite of environmental factors that determine where *A. l.* var. *piscinensis* occurs is also likely to determine the composition of the broader plant community of which *A. l.* var. *piscinensis* is a part. Changes in soil moisture and salinity are likely to influence not only the abundance and presence of *A. l.* var. *piscinensis* but also to affect the persistence and character of the *Spartina-Sporobolus* plant association in which *A. l.* var. *piscinensis* occurs.

#### Sites for Breeding, Reproduction, and Rearing (or Development) of Offspring

Mazer and Travers (1992), in examining the pollination ecology of *Astragalus lentiginosus* var. *piscinensis*, found that *A. l.* var. *piscinensis* is dependent on insects for flower pollination and fertilization, and the taxon is not capable of producing fruits in the absence of pollinators. Thus, the presence of pollinator populations is essential to the conservation of the species. Bumblebees in the family Apidae were observed to pollinate *A. l.* var. *piscinensis* flowers on three occasions. Bees in the family Megachilidae are also believed to be important pollinator insects for *A. brauntonii* (Fotheringham and Keeley 1998), and various bee taxa in this family may occur in and adjacent to Fish Slough. Unless a specific endemic

bee species is responsible for flower pollination, it is possible that multiple bee species pollinate the flowers of *A.I. var. piscinensis* (Terry Griswold, Utah State University, pers. comm. 2003).

Bumblebees usually nest in abandoned rodent burrows or bird nests (Thorp *et al.* 1983), and bees in the family Megachilidae also nest in underground rodent burrows or in dry woody material. The alkaline nature of the habitat occupied by *Astragalus lentiginosus* var. *piscinensis* makes it unlikely that burrowing rodents are present in such areas, and therefore it is unlikely that these pollinators live there. We believe insect pollinators are more likely to nest in upland habitats adjacent to alkaline areas because nesting and cover sites for various species of mice, kangaroo rats, and pocket mice are more likely to be common there (T. Griswold, pers. comm. 2003), and these plants are likely pollinated by bees in the surrounding uplands. Thus, we have determined that inclusion of currently unoccupied upland habitat within 3,280 ft (1,000 m) of the alkaline habitat occupied by *A.I. var. piscinensis* that provides nesting and cover sites for pollinators is essential to the conservation of *A.I. var. piscinensis*.

Studies to quantify the distance that bees will fly to pollinate their host plants are limited in number, but the few that exist show that some bees will routinely fly 328 to 984 ft (100 to 300 m) to pollinate plants. Studies by Steffan-Dewenter and Tschardt (2000) have demonstrated that it is possible for bees to fly at least 3,280 ft (1,000 m) to pollinate flowers, and at least one study suggests that bumblebees may forage many kilometers from a colony (Heinrich 1979).

There are a few studies that provide insight into how alterations to habitat used by bees may affect the host plants they visit. Studies by Steffan-Dewenter and Tschardt (2000) indicate that if pollinator habitat within 3,280 ft (1,000 m) of some host plants is eliminated, seed set of some plant species may be decreased by as much as 50 percent. One study that was done in California noted that "pollination services provided by native bee communities in California strongly depended on the proportion of natural upland habitat within 1–2.5 km of the farm site" (Kremen *et al.* 2004). Additional studies also suggest that the degradation of habitat used by pollinator species is likely to adversely affect the abundance of the species they pollinate (Jennersten 1988; Rathcke and Jules 1993).

The area we are designating as critical habitat provides some or all of the

habitat components and the physical and hydrologic attributes that are essential for the conservation of *Astragalus lentiginosus* var. *piscinensis*. Based on the best available information at this time, the PCEs for *A.I. var. piscinensis* include, but are not limited to:

(1) Alkaline soils that occur in areas with little or no slope, and which overlay a groundwater table that is 19 to 60 in (48 to 152 cm) below the land surface;

(2) Plant associations dominated by *Spartina-Sporobolis*, or where a sparse amount of *Chrysothamnus albidus* occurs in the transition zone between *Spartina-Sporobolis* and *Chrysothamnus albidus-Distichlis* plant associations;

(3) The presence of pollinator populations for *Astragalus lentiginosus* var. *piscinensis*; and

(4) Hydrologic conditions that provide suitable periods of soil moisture and chemistry for *Astragalus lentiginosus* var. *piscinensis* germination, growth, reproduction, and dispersal.

All of the PCEs outlined above do not have to occur simultaneously within the unit to constitute critical habitat for *Astragalus lentiginosus* var. *piscinensis*. We determined these PCEs based on the best available scientific and commercial information, including professional studies and reports that pertain to its habitat and ecology, and the hydrological conditions that are relevant to the quality of habitat in Fish Slough.

#### Criteria Used To Identify Critical Habitat

The criteria used to identify the critical habitat unit for *Astragalus lentiginosus* var. *piscinensis* include the known range of the taxon, the alkaline habitat where the taxon and its associated flora occur, the upland areas within 1,000 m (3,280 ft) of the alkaline soils that are occupied by the taxon, and the hydrologic features that are essential to promote the plant's survival and persistence.

A number of botanical surveys have been completed in most of the alkaline habitats in the greater Owens Valley area, and *Astragalus lentiginosus* var. *piscinensis* has not been found outside of Fish Slough (Paula Hubbard, LADWP, pers. comm. 2003). Considering this, we conclude that the geographic range of *A.I. var. piscinensis* is limited to those disjunct occurrences within a 6.0-mi (9.6-km) stretch of alkaline habitat that borders aquatic habitat in Fish Slough in Inyo and Mono Counties, California. Because the taxon occurs within a relatively limited area, and the alkaline habitat within the taxon's range forms a

relatively continuous feature in the landscape, we are designating a single critical habitat unit that is not separated into smaller, separate units. The critical habitat unit being designated for *A.I. var. piscinensis* includes virtually all of the locations where the taxon has been documented to occur.

With the exception of one small area described below, the entire geographic area that is or was known to be occupied by the *Astragalus lentiginosus* var. *piscinensis* is being designated as critical habitat because the taxon occupies a small geographic area, and that area is occupied by plants that are likely to function as one cohesive population. These areas are all considered essential to the conservation of the species, in accordance with section 3(5)(C) of the Act.

In the proposed critical habitat rule, we determined that one privately-owned, 49-acre (20-ha) parcel (which is different than the 48-ac (19-ha) alkaline meadow within the 483-ac (195-ha) parcel south of the southern McNally Canal) within the historic range of *Astragalus lentiginosus* var. *piscinensis* was not essential for its conservation. That parcel is in Township 6 South, Range 33 East, section 18 of U.S. Geological Survey quadrangle map titled "Fish Slough." In the proposed rule, we stated it was highly unlikely that this area was currently occupied by the taxon. After the proposed rule was published, we discovered that the area contained eight individuals in 1992, and one individual in 2000; these numbers represent less than one percent of the total number of *A.I. var. piscinensis* that were documented to occur in the 1992 and 2000 surveys that were done for the taxon. Because the 49-acre (20-ha) privately owned parcel contains less than 1 percent of the total number of *A.I. var. piscinensis* that are known to occur, it has little alkaline soil habitat, and the parcel is not a location where habitat enhancement activities are likely to occur within the foreseeable future, we continue to find that the parcel is not essential to conservation of the taxon and it is not included in the final critical habitat designation.

We are also not designating the area south of the southern McNally Canal, and which is owned by the LADWP, as critical habitat because *A.I. var. piscinensis* does not occupy it, the habitat is highly degraded and is not suitable for recolonization or restoration activities, and does not provide pollinator habitat that would contribute in any significant way to the conservation of nearby occurrences.

The critical habitat unit is designed to encompass a large enough area to

support existing ecological processes that may be essential to the conservation of *Astragalus lentiginosus* var.

*piscinensis*. Some upland areas adjacent to the alkaline habitat where *A. l.* var. *piscinensis* occurs could potentially be restored to create additional habitat for the taxon. Upland areas within 3,280 ft (1,000 m) of the alkaline habitat also provide nest sites and cover for pollinators, and are important to help minimize the potential of introducing new nonnative plant species that may adversely affect *A. l.* var. *piscinensis*, and to control nonnative plant species already present. Because these areas are essential for conservation of the species, we have included them in the designated critical habitat unit in accordance with section 3(5)(A)(ii) of the Act.

Determining the geographic boundary of the critical habitat unit for *Astragalus lentiginosus* var. *piscinensis* would be relatively straightforward if the unit boundary was based only on the presence of alkaline soils, the *Spartina-Sporobolis* plant association where *A. l.* var. *piscinensis* is found, and an upland zone inhabited by the plant's pollinators. We believe, however, that the long-term maintenance and conservation of *A. l.* var. *piscinensis* is ultimately dependent on the maintenance of the hydrologic system that promotes the development and persistence of the alkaline soils and plant communities that *A. l.* var. *piscinensis* is associated with. We believe that adverse changes in the hydrology of Fish Slough may reduce or eliminate those physical features essential for the species' conservation.

Delineating a critical habitat unit for *Astragalus lentiginosus* var. *piscinensis* that includes the hydrologic system that supports it poses a challenge because the source(s) of the water that issues from the springs in Fish Slough is not precisely known, and the location of the groundwater flow paths between these sources and the spring orifices in Fish Slough have not yet been determined. Our current understanding of how pumping activities in Chalfant and Hammil Valleys affects spring discharge rates or the local aquifer in Fish Slough is not sufficient to clearly illustrate these cause and effect relationships.

Because we believe the protection of the hydrologic conditions that supports the formation and maintenance of alkaline soils is essential to conserve occupied and suitable unoccupied habitat for *Astragalus lentiginosus* var. *piscinensis*, we have identified these hydrologic conditions as a PCE in the "Primary Constituent Element" section of this final rule.

When determining critical habitat boundaries, we made every effort to avoid the designation of developed areas such as buildings, paved areas, and other structures that lack PCEs for *Astragalus lentiginosus* var. *piscinensis*. Any such structures inadvertently left inside critical habitat boundaries are not considered part of the critical habitat unit. This also applies to the land on which such structures sit directly. Therefore, Federal actions limited to these areas would not trigger section 7 consultations, unless they affect the species and/or primary constituent elements in adjacent critical habitat.

A brief discussion of the area designated as critical habitat is provided in the unit description below. Additional detailed documentation concerning the essential nature of this area is contained in our supporting record for this rulemaking.

#### Special Management Considerations or Protections

When designating critical habitat, we assess whether the physical and biological features determined to be essential for conservation may require special management considerations or protection. As we undertake the process of designating critical habitat for a species, we first evaluate lands defined by those physical and biological features essential to the conservation of the species for inclusion in the designation pursuant to section 3(5)(A) of the Act. Secondly, we then evaluate lands defined by those features to assess whether they may require special management considerations or protection.

In 1982, BLM established the Fish Slough ACEC in an effort to provide protection for the federally endangered Owens pupfish, several rare plant taxa including *Astragalus lentiginosus* var. *piscinensis*, and the wetland and riparian habitats upon which these species depend. The Fish Slough ACEC has three zones (BLM 1984). The designated critical habitat unit is predominantly located within Zone 1 of the ACEC, includes a very small portion of Zone 2, and also extends slightly beyond the southern boundary of the ACEC. The land in Zone 1 is owned by BLM, CDFG, LADWP, and one private landowner. The portion of the designated critical habitat unit in Zone 2, or in the area immediately south of the ACEC, is owned by BLM or LADWP. A management plan for the ACEC was finalized in 1984, but the plan has not been revised since it was completed.

Previously identified threats to *Astragalus lentiginosus* var. *piscinensis* include the presence of roads, effects

related to the use of OHV, effects related to cattle grazing, and effects from herbivory by native vertebrates and insects (Service 1998). A potential threat to *A. l.* var. *piscinensis* not previously identified in other documents includes competition with, or displacement by, nonnative plant species (P. Hubbard, LADWP, pers. comm. 2003). The modification of wetland habitats that results from groundwater pumping or water diversion activities altering the surface and underground hydrology of Fish Slough is also a threat to the species (Service 1998).

The suite of threats affecting *Astragalus lentiginosus* var. *piscinensis* is complex. The establishment of the Fish Slough ACEC has helped provide some benefit for *A. l.* var. *piscinensis* by coordinating the activities of staff from BLM, LADWP, and CDFG on various land management challenges that exist in the local area. Because the long, narrow configuration of the slough is bounded by upland habitat, the amount of alkaline habitat that can be occupied by *A. l.* var. *piscinensis* is limited. Ferren (1991b) summarizes threats to botanical resources at Fish Slough, noting that those threats related to the enhancement of fisheries (construction of ponds, impoundments, roads, and ditches) may have had the greatest effect on the Fish Slough ecosystem because they modified the hydrological conditions that historically occurred in Fish Slough.

In the central portion of the slough, Fish Slough Lake appears to have expanded in size between 1944 and 1981. This increase may be due to natural geologic subsidence, the construction of Red Willow Dam, or the construction of water impoundments by beavers. The increase in aquatic habitat has likely resulted in the loss of alkaline habitat for *Astragalus lentiginosus* var. *piscinensis* as soils near the lake are now saturated for greater portions of the year (Ferren 1991c). Some earthquake events in Chalfant Valley appear to have resulted in decreases in spring discharge or changes in local water table levels (Brian Tillemans, LADWP, pers. comm. 2000), thereby making it more difficult to clearly understand the nature of the local aquifer. Modifications to the slough environment from changes in the local hydrology are not well understood or easily reversed. These factors, in combination with essential data gaps that include, but are not limited to, a more thorough understanding of the ecology and habitat requirements of the species, have made it difficult for local land managers to understand and reverse the decline in the number of *A. l.* var. *piscinensis* within the ACEC over



the past decade. A downward trend in the species' abundance during the past decade suggests that, despite the ongoing efforts by the relevant land management agencies, additional factors need to be addressed to reverse the decline in the status of *A. l. var. piscinensis*.

We believe that the designated critical habitat unit may require special management considerations to maintain the identified primary constituent elements. These include the potential need to respond to the following:

(1) Activities that have the potential to change the hydrology of Fish Slough and adversely affect the survivorship, seed germination, growth, or photosynthesis of *Astragalus lentiginosus* var. *piscinensis*, unless such activities are designed and have the effect of recreating the historic environmental conditions that existed in Fish Slough;

(2) Activities that have the potential to adversely affect the suitability of alkaline areas that could provide habitat for *Astragalus lentiginosus* var. *piscinensis* including, but not limited to, OHV use, levels of cattle grazing that

could result in increased soil compaction, road construction and maintenance activities, and water diversion activities;

(3) Activities that have the potential to modify the species composition, character, or persistence of the native plant associations that are associated with *Astragalus lentiginosus* var. *piscinensis*;

(4) Activities that could adversely affect the insect pollinators that inhabit the native upland desert scrub community that is adjacent to alkaline habitats in Fish Slough, including, but not limited to, livestock grazing at levels that would increase soil compaction, use of heavy-wheeled vehicles or OHVs (including motorcycles and all terrain vehicles), pesticide use, and incompatible recreational activities; and

(5) Management activities, particularly those that involve cattle grazing and road maintenance, which have the potential to introduce new nonnative plant species that may compete with or displace *Astragalus lentiginosus* var. *piscinensis*.

**Critical Habitat Designation**

We are designating one unit as critical habitat for the *Astragalus lentiginosus* var. *piscinensis*. The critical habitat area described below constitutes our best assessment at this time of the areas essential for the conservation of the *A. l. var. piscinensis* containing the essential physical and biological features that may require special management considerations or protection.

The single critical habitat unit for *Astragalus lentiginosus* var. *piscinensis* encompasses approximately 8,007 ac (3,240 ha). Within the designated unit, the city of Los Angeles owns four separate parcels that total 2,440 ac (987 ha). CDFG owns a single 166 ac (67 ha) parcel in the designated critical habitat unit. The remaining land within the unit is owned by BLM and comprises 5,401 ac (2,186 ha). The approximate size of the different land ownership areas within the designated critical habitat unit is shown in Table 1. Lands managed by BLM and LADWP comprise 68 and 30 percent of the total unit, respectively, with State lands comprising approximately 2 percent.

TABLE 1.—APPROXIMATE AREAS IN ACRES (AC) (HECTARES (HA)) OF DESIGNATED CRITICAL HABITAT FOR *Astragalus lentiginosus* VAR. *piscinensis* BY LAND OWNERSHIP

Critical habitat unit name	City of Los Angeles	State of California	Federal (BLM)	Total
Fish Slough unit .....	2,440 ac (987 ha)	166 ac (67 ha)	5,401 ac (2,185 ha)	8,007 ac (3,240 ha)

The land within the critical habitat unit contains at least ninety-nine percent of the known occurrences of *A. l. var. piscinensis*, and we consider these occurrences to be essential to the conservation of the listed taxon. The critical habitat unit also contains (1) the alkaline habitat occupied by this taxon, (2) the *Spartina-Sporobolus* plant association and *Chrysothamnus albidus* that is present in the transition zone between the *Spartina-Sporobolus* and *Chrysothamnus albidus*—*Distichlis* plant associations, and (3) some of the hydrologic features that we believe are necessary to promote the persistence and successful recruitment of the species. The critical habitat unit also includes unoccupied upland areas that provide cover sites for insect pollinators.

The unit boundary overlaps the boundary of Inyo and Mono Counties in California. The northernmost boundary of the designated Fish Slough critical habitat unit is located approximately 3,444 ft (1,050 m) north of Northeast Spring in the northern portion of Fish Slough. The southern boundary of the

designated critical habitat unit abuts, and is in direct contact with, the southern McNally Canal. The eastern and western boundaries of the unit are parallel to, overlap, or are adjacent to the eastern and western boundaries of Zone 1 of BLM's Fish Slough ACEC, respectively.

**Section 7 Consultation**

Section 7(a) of the Act requires Federal agencies, including the Service, 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 proposed or designated, and to ensure that actions they fund, authorize, or carry out are not likely to destroy or adversely modify critical habitat. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402. We are currently reviewing the regulatory definition of adverse modification in relation to the conservation of the species.

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. Conference reports provide conservation recommendations to assist the agency in eliminating conflicts that may be caused by the proposed action. We may issue a formal conference report if requested by a Federal agency. Formal conference reports on proposed critical habitat contain an opinion that is prepared according to 50 CFR 402.14, as if critical habitat were designated. We may adopt the formal conference report as the biological opinion when the critical habitat is designated, if no substantial new information or changes in the action alter the content of the opinion (see 50 CFR 402.10(d)). The conservation recommendations in a conference report are advisory.

If a species is listed or critical habitat is designated, 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 affect a listed species or its critical habitat, the responsible Federal agency (action agency) must enter into consultation with us. Through this consultation, the action agency ensures that their actions do not destroy or adversely modify critical habitat.

When we issue a biological opinion concluding that a project is likely to result in the destruction or adverse modification of critical habitat, we also provide reasonable and prudent alternatives to the project, if any are identifiable. "Reasonable and prudent alternatives" are defined at 50 CFR 402.02 as alternative actions identified during consultation that can be implemented in a manner consistent with the intended purpose of the action, that are consistent with the scope of the Federal agency's legal authority and jurisdiction, that are economically and technologically feasible, and that the Director believes would avoid destruction or adverse modification of critical habitat. Reasonable and prudent alternatives can vary from slight project modifications to extensive redesign or relocation of the project. Costs associated with implementing a reasonable and prudent alternative are similarly variable.

Regulations at 50 CFR 402.16 require Federal agencies to reinstate consultation on previously reviewed actions in instances where critical habitat is subsequently designated and the Federal agency has retained discretionary involvement or control over the action or such discretionary involvement or control is authorized by law. Consequently, some Federal agencies may request reinstatement of consultation or conference with us on actions for which formal consultation has been completed, if those actions may affect designated critical habitat or adversely modify or destroy proposed critical habitat.

Federal activities that may affect *Astragalus lentiginosus* var. *piscinensis* or its critical habitat will require section 7 consultation. Activities on private or State lands requiring a permit from a Federal agency, such as a permit from the U.S. Army Corps of Engineers (Corps) under section 404 of the Clean Water Act, a section 10(a)(1)(B) permit from the Service, or some other Federal action, including funding from Federal agencies (e.g., Federal Highway Administration or Natural Resources Conservation Service), will also be subject to the section 7 consultation process. Federal actions not affecting listed species or critical habitat and actions on non-Federal and private

lands that are not federally funded, authorized, or permitted do not require section 7 consultation.

Section 4(b)(8) of the Act requires us to briefly evaluate and describe in any proposed or final regulation that designates critical habitat those activities involving a Federal action that may destroy or adversely modify such habitat, or that may be affected by such designation. Activities that may destroy or adversely modify critical habitat may also jeopardize the continued existence of the *Astragalus lentiginosus* var.

*piscinensis*. Federal activities that, when carried out, may adversely affect critical habitat for the *A. l.* var. *piscinensis* include, but are not limited to:

(1) Activities that disturb or degrade the character of alkaline soils or hydrology necessary to support wetlands in Fish Slough;

(2) Activities that have the potential to introduce nonnative plant species to Fish Slough or promote the spread of nonnative plant species present in the local area.

(3) Activities that alter the character of the native plant associations that co-occur with *Astragalus lentiginosus* var. *piscinensis*;

(4) Activities that adversely affect insect pollinators that facilitate viable seed production in *Astragalus lentiginosus* var. *piscinensis*;

(5) Activities on Federal or private lands that require permits from Federal agencies or use Federal funding;

(6) Sale or exchange of lands by a Federal agency to a non-Federal entity; and

(7) Promulgation and implementation of a land use plan by a Federal agency, such as the BLM, which may alter management practices for critical habitat.

#### *Application of Section 3(5)(A) and 4(a)(3) and Exclusions Under Section 4(b)(2) of the Act*

Section 3(5)(A) of the Act defines critical habitat as the specific areas within the geographic area occupied by the species on which are found those physical and biological features (i) essential to the conservation of the species and (ii) which may require special management considerations or protection. Therefore, areas within the geographic area occupied by the species that do not contain the features essential for the conservation of the species are not, by definition, critical habitat. Similarly, areas within the geographic area occupied by the species containing features essential for the conservation of the species that do not require special management considerations or

protection also are not, by definition, critical habitat. To determine whether essential features within an area require special management, we determine if the essential features generally require special management to address applicable threats. If those features do not require special management, or if they do in general but not for the particular area in question because of the existence of an adequate management plan or for some other reason, then the area does not require special management.

We consider a current plan to provide adequate management or protection if it meets three criteria: (1) The plan is complete and provides a conservation benefit to the species (*i.e.*, the plan must maintain or provide for an increase in the species' population, or the enhancement or restoration of its habitat within the area covered by the plan); (2) the plan provides assurances that the conservation management strategies and actions will be implemented (*i.e.*, those responsible for implementing the plan are capable of accomplishing the objectives, and have an implementation schedule or adequate funding for implementing the management plan); and (3) the plan provides assurances that the conservation strategies and measures will be effective (*i.e.*, it identifies biological goals, has provisions for reporting progress, and is of a duration sufficient to implement the plan and achieve the plan's goals and objectives).

Further, section 4(b)(2) of the Act states that critical habitat shall be designated, and revised, on the basis of the best available scientific data after taking into consideration the economic impact, national security impact, and any other relevant impact of specifying any particular area as critical habitat. An area may be excluded from critical habitat if it is determined that the benefits of exclusion outweigh the benefits of specifying a particular area as critical habitat, unless the failure to designate such area as critical habitat will result in the extinction of the species.

In our critical habitat designations, we use both the provisions outlined in sections 3(5)(A) and 4(b)(2) of the Act to evaluate those specific areas that we are considering including in a proposal to designate critical habitat as well as for those areas that are formally proposed for designation as critical habitat. Lands we have found do not meet the definition of critical habitat under section 3(5)(A) or have excluded pursuant to section 4(b)(2) include those covered by the following types of plans if they provide assurances that the

conservation measures they outline will be implemented, effective, and cover the species: (1) Legally operative HCPs; (2) draft HCPs that have undergone public review and comment (*i.e.*, pending HCPs); (3) Tribal conservation plans; (4) State conservation plans; and (5) National Wildlife Refuge System Comprehensive Conservation Plans.

Pursuant to section 4(b)(2) of the Act, we must consider relevant impacts in addition to economic ones. We determined that the lands within the designation of critical habitat for *Astragalus lentiginosus* var. *piscinensis* are not owned or managed by the U.S. Department of Defense, there are currently no HCPs for *A. l.* var. *piscinensis*, and the designation does not include any Tribal lands or trust resources. In addition, there are no State conservation plans covering the plant. We anticipate no impact to national security, Tribal lands, partnerships, or HCPs from this critical habitat designation. Based on the best available information, including the prepared economic analysis, we believe that the critical habitat unit is essential for the conservation of this species. Our economic analysis indicates an overall low cost resulting from the designation. Therefore, we have found no areas for which the benefits of exclusion outweigh the benefits of inclusion, and so have not excluded any areas from this designation of critical habitat for *A. l.* var. *piscinensis* based on economic impacts. As such, we have considered but not excluded any lands from this designation based on any relevant impacts.

### Economic Analysis

Section 4(b)(2) of the Act requires us to designate critical habitat on the basis of the best scientific and commercial information available and to consider the economic and other relevant impacts of designating a particular area as critical habitat. We may exclude areas from critical habitat upon a determination that the benefits of such exclusions outweigh the benefits of specifying such areas as critical habitat. We cannot exclude such areas from critical habitat when such exclusion will result in the extinction of the species concerned.

Following the publication of the proposed critical habitat designation, we conducted an economic analysis to estimate the potential economic effect of the designation. The DEA was made available for public review on December 28, 2004 (69 FR 77703). We accepted comments on the DEA until January 27, 2005.

The primary purpose of the economic analysis is to estimate the potential economic impacts associated with the designation of critical habitat for *Astragalus lentiginosus* var. *piscinensis*. This information is intended to assist the Secretary in making decisions about whether the benefits of excluding particular areas from the designation outweigh the benefits of including those areas in the designation. This economic analysis considers the economic efficiency effects that may result from the designation, including habitat protections that may be coextensive with the listing of the species. It also addresses distribution of impacts, including an assessment of the potential effects on small entities and the energy industry. This information can be used by the Secretary to assess whether the effects of the designation might unduly burden a particular group or economic sector.

This analysis focuses on the direct and indirect costs of the rule. However, economic impacts to land use activities can exist in the absence of critical habitat. These impacts may result from, for example, local zoning laws, State and natural resource laws, and enforceable management plans and best management practices applied by other State and Federal agencies. Economic impacts that result from these types of protections are not included in the analysis as they are considered to be part of the regulatory and policy baseline.

The economic analysis addresses the effects of *Astragalus lentiginosus* var. *piscinensis* conservation efforts on activities occurring on lands proposed for designation. The analysis measures lost economic efficiency associated with indirect costs of reduced grazing opportunities, and direct costs of species and habitat conservation activities, monitoring and reporting on the status of water diversion activities associated with mining activities, cattle enclosure construction and maintenance costs, and the cost of signage for OHV routes of travel.

Estimated pre-designation costs (occurring from the time of the listing of *Astragalus lentiginosus* var. *piscinensis* to final designation of critical habitat, *i.e.*, 1998–2004) range from \$778,000 to \$845,000. Total post-designation costs are estimated to be approximately \$895,000, or \$45,000 on an annualized basis over the 20-year post-designation analysis period. Approximately 92 percent of the post-designation costs will be borne by BLM. These expenditures will involve resource management activities such as enforcement of OHV recreation

guidelines, habitat restoration activities, prescribed burns, public outreach, etc.

A copy of the final economic analysis with supporting documents are included in our administrative record and may be obtained by contacting the U.S. Fish and Wildlife Service, Branch of Endangered Species (see **ADDRESSES** section), or by downloading the document from the Internet at: <http://ventura.fws.gov/>.

### Clarity of the Rule

Executive Order 12866 requires each agency to write regulations and notices that are easy to understand. We invite your comments on how to make this final rule easier to understand, including answers to questions such as the following: (1) Are the requirements in the final rule clearly stated? (2) Does the final rule contain technical jargon that interferes with the clarity? (3) Does the format of the final rule (grouping and order of the sections, use of headings, paragraphing, and so forth) aid or reduce its clarity? (4) Is the description of the notice in the **SUPPLEMENTARY INFORMATION** section of the preamble helpful in understanding the final rule? (5) What else could we do to make this final rule easier to understand?

Send a copy of any comments on how we could make this final rule easier to understand to: Office of Regulatory Affairs, Department of the Interior, Room 7229, 1849 C Street, NW., Washington, DC 20240. You may e-mail your comments to this address: [Exsec@ios.doi.gov](mailto:Exsec@ios.doi.gov).

### Required Determinations

#### Regulatory Planning and Review

In accordance with Executive Order 12866, this document is a significant rule in that it may raise novel legal and policy issues, but will not have an annual effect on the economy of \$100 million or more or affect the economy in a material way. Due to the tight timeline for publication in the **Federal Register**, the Office of Management and Budget (OMB) has not formally reviewed this rule. As explained above, we prepared an economic analysis of this action. We used this analysis to meet the requirement of section 4(b)(2) of the Act to determine the economic consequences of designating the specific areas as critical habitat. We also used it to help determine whether to exclude any area from critical habitat, as provided for under section 4(b)(2), if we determine that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless we determine,

based on the best scientific and commercial data available, that the failure to designate such area as critical habitat will result in the extinction of the species.

*Regulatory Flexibility Act (5 U.S.C. 601 et seq.)*

Under the Regulatory Flexibility Act (RFA) (as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996), whenever an agency is required to publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effect of the rule on small entities (*i.e.*, small businesses, small organizations, and small government jurisdictions). However, no regulatory flexibility analysis is required if the head of an agency certifies the rule will not have a significant economic impact on a substantial number of small entities. SBREFA amended the RFA to require Federal agencies to provide a statement of factual basis for certifying that the rule will not have a significant economic impact on a substantial number of small entities. SBREFA also amended the RFA to require a certification statement.

Small entities include small organizations, such as independent nonprofit organizations; small governmental jurisdictions, including school boards and city and town governments that serve fewer than 50,000 residents; as well as small businesses. Small businesses include manufacturing and mining concerns with fewer than 500 employees, wholesale trade entities with fewer than 100 employees, retail and service businesses with less than \$5 million in annual sales, general and heavy construction businesses with less than \$27.5 million in annual business, special trade contractors doing less than \$11.5 million in annual business, and agricultural businesses with annual sales less than \$750,000. To determine if potential economic impacts to these small entities are significant, we consider the types of activities that might trigger regulatory impacts under this rule, as well as the types of project modifications that may result. In general, the term "significant economic impact" is meant to apply to a typical small business firm's business operations.

To determine if the rule could significantly affect a substantial number of small entities, we consider the number of small entities affected within particular types of economic activities (*e.g.*, housing development, grazing, oil

and gas production, timber harvesting). We apply the "substantial number" test individually to each industry to determine if certification is appropriate. However, the SBREFA does not explicitly define "substantial number" or "significant economic impact." Consequently, to assess whether a "substantial number" of small entities is affected by this designation, this analysis considers the relative number of small entities likely to be impacted in an area. In some circumstances, especially with critical habitat designations of limited extent, we may aggregate across all industries and consider whether the total number of small entities affected is substantial. In estimating the number of small entities potentially affected, we also consider whether their activities have any Federal involvement.

Designation of critical habitat only affects activities conducted, funded, or permitted by Federal agencies. Some kinds of activities are unlikely to have any Federal involvement and so will not be affected by critical habitat designation. In areas where the species is present, Federal agencies already are required to consult with us under Section 7 of the Act on activities they fund, permit, or implement that may affect *Astragalus lentiginosus* var. *piscinensis*. Federal agencies also must consult with us if their activities may affect critical habitat. Designation of critical habitat, therefore, could result in an additional economic impact on small entities due to the requirement to reinstate consultation for ongoing Federal activities.

The final economic analysis (May 2005) was based on acreages from the proposed rule and predicts potential costs of the proposed designation to several industry sectors (agricultural production, livestock grazing, recreation, commercial mining, groundwater exportation, and resource management activities in the ACEC where the species occurs). Based on this economic analysis, pre-designation costs range from \$778,000 to \$845,000. The majority of the pre-designation costs, 59 percent, are associated with resource management efforts within the Fish Slough ACEC, including modifications of impoundments and fish barriers, prescribed burning, invasive plant species control, and enforcement of OHV restrictions.

An addendum to the final economic analysis (memorandum dated May 26, 2005) provides information on the economic impacts of the final critical habitat as described in the final rule. Pre-designation costs remain unchanged from the final EA. Post-designation costs

are approximately \$895,000, or \$45,000 on an annualized basis over the 20-year post-designation analysis period. The following components comprise post-designation costs: (1) Direct annual costs of species and habitat conservation activities (\$41,000 per year, primarily borne by BLM); (2) Direct costs of cattle enclosure maintenance and constructions (\$500 per year, borne by LADWP); (3) Direct cost of additional lease and increased property taxes borne by grazing lessee (\$540 per year, borne by a private rancher); (4) Indirect costs of reduced grazing opportunities (\$2,670 per year, borne by a private rancher); and (5) Direct costs of signage for OHV routes of travel (\$500 per year, borne by BLM).

Of the forecast post-designation costs, 92 percent are associated with the implementation of projects specifically intended to benefit the species and habitat (prescribed burns, control of invasive plant species, plant propagation and out planting, and public outreach). Of the remaining 8 percent of post-designation costs, approximately 7 percent is associated with exclusion of cattle grazing activities, and 1 percent is associated with signage of open routes for OHV use. No impacts to small entities within the agricultural production industry are expected to result from this designation. Likewise, no impacts to small businesses that benefit from either recreational fishing or OHV recreation in Fish Slough are expected. Thus, the only anticipated costs to small entities are increased costs for one rancher. Based on these data, we have determined that this designation would not affect a substantial number of small entities. As such, we are certifying that this designation of critical habitat would not result in a significant economic impact on a substantial number of small entities.

*Small Business Regulatory Enforcement Fairness Act (5 U.S.C 801 et seq.)*

Under SBREFA, this rule is not a major rule. Our detailed assessment of the economic effects of this designation is described in the economic analysis. Based on the effects identified in the economic analysis, we believe that this rule will not have an annual effect on the economy of \$100 million or more, will not cause a major increase in costs or prices for consumers, and will not have significant adverse effects on competition, employment, investment, productivity, innovation, or the ability of U.S.-based enterprises to compete with foreign-based enterprises. Refer to the final economic analysis for a

discussion of the effects of this determination.

#### *Executive Order 13211*

On May 18, 2001, the President issued Executive Order 13211 on regulations that significantly affect energy supply, distribution, and use. Executive Order 13211 requires agencies to prepare Statements of Energy Effects when undertaking certain actions. This final rule to designate critical habitat for *Astragalus lentiginosus* var. *piscinensis* is not expected to significantly affect energy supplies, distribution, or use. Therefore, this action is not a significant energy action and no Statement of Energy Effects is required.

#### **Unfunded Mandates Reform Act (2 U.S.C. 1501 et seq.)**

In accordance with the Unfunded Mandates Reform Act (2 U.S.C. 1501 et seq.), we make the following findings:

(a) This rule will not produce a Federal mandate. In general, a Federal mandate is a provision in legislation, statute, or regulation that would impose an enforceable duty upon State, local, or Tribal governments or the private sector and includes both "Federal intergovernmental mandates" and "Federal private sector mandates." These terms are defined in 2 U.S.C. 658(5)–(7). "Federal intergovernmental mandate" includes a regulation that "would impose an enforceable duty upon State, local, or tribal governments" with two exceptions. It excludes "a condition of Federal assistance." It also excludes "a duty arising from participation in a voluntary Federal program," unless the regulation "relates to a then-existing Federal program under which \$500,000,000 or more is provided annually to State, local, and tribal governments under entitlement authority," if the provision would "increase the stringency of conditions of assistance" or "place caps upon, or otherwise decrease, the Federal Government's responsibility to provide funding" and the State, local, or Tribal governments "lack authority" to adjust accordingly. At the time of enactment, these entitlement programs were: Medicaid; Aid to Families with Dependent Children work programs; Child Nutrition; Food Stamps; Social Services Block Grants; Vocational Rehabilitation State Grants; Foster Care, Adoption Assistance, and Independent Living; Family Support Welfare Services; and Child Support Enforcement. "Federal private sector mandate" includes a regulation that "would impose an enforceable duty upon the private sector, except (i) a condition of Federal assistance; or (ii) a

duty arising from participation in a voluntary Federal program."

The designation of critical habitat does not impose a legally binding duty on non-Federal government entities or private parties. Under the Act, the only regulatory effect is that Federal agencies must ensure that their actions do not destroy or adversely modify critical habitat under section 7. While non-Federal entities that receive Federal funding, assistance, or permits, or that otherwise require approval or authorization from a Federal agency for an action, may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency. Furthermore, to the extent that non-Federal entities are indirectly impacted because they receive Federal assistance or participate in a voluntary Federal aid program, the Unfunded Mandates Reform Act would not apply; nor would critical habitat shift the costs of the large entitlement programs listed above onto State governments.

(b) We do not believe that this rule will significantly or uniquely affect small governments because it will not produce a Federal mandate of \$100 million or greater in any year, that is, it is not a "significant regulatory action" under the Unfunded Mandates Reform Act. The designation of critical habitat imposes no obligations on State or local governments. As such, a Small Government Agency Plan is not required.

#### *Federalism*

In accordance with Executive Order 13132, the rule does not have significant Federalism effects. A Federalism assessment is not required. In keeping with DOI and Department of Commerce policy, we requested information from, and coordinated development of, this final critical habitat designation with appropriate State resource agencies in California. The designation of critical habitat in areas currently occupied by *Astragalus lentiginosus* var. *piscinensis* imposes no additional restrictions to those currently in place and, therefore, has little incremental impact on State and local governments and their activities. The designation may have some benefit to these governments in that the areas essential to the conservation of the species are more clearly defined, and the primary constituent elements of the habitat necessary to the conservation of the species are specifically identified. While making this definition and identification does not alter where and

what federally sponsored activities may occur, it may assist these local governments in long-range planning (rather than waiting for case-by-case section 7 consultations to occur).

#### *Civil Justice Reform*

In accordance with Executive Order 12988, the Office of the Solicitor has determined that the rule does not unduly burden the judicial system and that it meets the requirements of sections 3(a) and 3(b)(2) of the Order. We are designating critical habitat in accordance with the provisions of the Endangered Species Act. This final rule uses standard property descriptions and identifies the primary constituent elements within the designated areas to assist the public in understanding the habitat needs of the *Astragalus lentiginosus* var. *piscinensis*.

#### *Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.)*

This rule does not contain any new collections of information that require approval by OMB under the Paperwork Reduction Act. This rule will not impose recordkeeping or reporting requirements on State or local governments, individuals, businesses, or organizations. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

#### *National Environmental Policy Act*

It is our position that, outside the Tenth Circuit, we do not need to prepare environmental analyses as defined by the National Environmental Policy Act of 1969 in connection with designating critical habitat under 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). This assertion was upheld in the courts of the Ninth Circuit (*Douglas County v. Babbitt*, 48 F.3d 1495 (9th Cir. Ore. 1995), cert. denied 116 S. Ct. 698 (1996)).

#### *Government-to-Government Relationship With Tribes*

In accordance with the President's memorandum of April 29, 1994, "Government-to-Government Relations with Native American Tribal Governments" (59 FR 22951), Executive Order 13175, and DOI's manual at 512 DM 2, we readily acknowledge our responsibility to communicate meaningfully with recognized Federal Tribes on a government-to-government basis. We have determined that there are

no Tribal lands essential for the conservation of the *Astragalus lentiginosus* var. *piscinensis*. Therefore, we have not designated critical habitat for the *A. l.* var. *piscinensis* on Tribal lands.

**References Cited**

A complete list of all references cited in this rulemaking is available upon request from the Ventura Fish and Wildlife Office (see **ADDRESSES** section).

**Author(s)**

The authors of this package are staff from the Ventura Fish and Wildlife Office staff (see **ADDRESSES** section).

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

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

**Regulation Promulgation**

■ Accordingly, we amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as follows:

**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. In § 17.12(h), revise the entry for *Astragalus lentiginosus* var. *piscinensis* under “FLOWERING PLANTS” to read as follows:

**§ 17.12 Endangered and threatened plants.**

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

Species		Historic range	Family	Status	When listed	Critical habitat	Special rules
Scientific name	Common name						
FLOWERING PLANTS							
* <i>Astragalus lentiginosus</i> var. <i>piscinensis</i> .	* Fish Slough milk-vetch.	* U.S.A. (CA) .....	* Fabaceae .....	* T .....	* 647	* 17.96(a)	* NA
*	*	*	*	*	*	*	*

■ 3. In § 17.96, amend paragraph (a) by adding an entry for *Astragalus lentiginosus* var. *piscinensis* in alphabetical order under Family Fabaceae to read as follows:

**§ 17.96 Critical habitat—Plants.**

(a) *Flowering plants.*

\* \* \* \* \*

Family Fabaceae: *Astragalus lentiginosus* var. *piscinensis* (Fish Slough milk-vetch)

(1) The critical habitat unit is depicted for Inyo and Mono Counties, California, on the map below.

(2) The PCEs of critical habitat for *Astragalus lentiginosus* var. *piscinensis* consist of:

(i) Alkaline soils that occur in areas with little or no slope, and which overlay a groundwater table that is 19 to 60 in (48 to 152 cm) below the land surface;

(ii) Plant associations dominated by *Spartina-Sporobolis*, or where a sparse amount of *Chrysothamnus albidus* occurs in the transition zone between *Spartina-Sporobolis* and *Chrysothamnus albidus-Distichlis* plant associations;

(iii) The presence of pollinator populations for *Astragalus lentiginosus* var. *piscinensis*; and

(iv) Hydrologic conditions that provide suitable periods of soil moisture

and chemistry for *Astragalus lentiginosus* var. *piscinensis* germination, growth, reproduction, and dispersal.

(3) Critical habitat does not include the land upon which are found existing features and structures, such as buildings, roads, parking lots, and other paved surfaces, or areas not containing one or more of the primary constituent elements.

(4) Critical Habitat Map Unit.

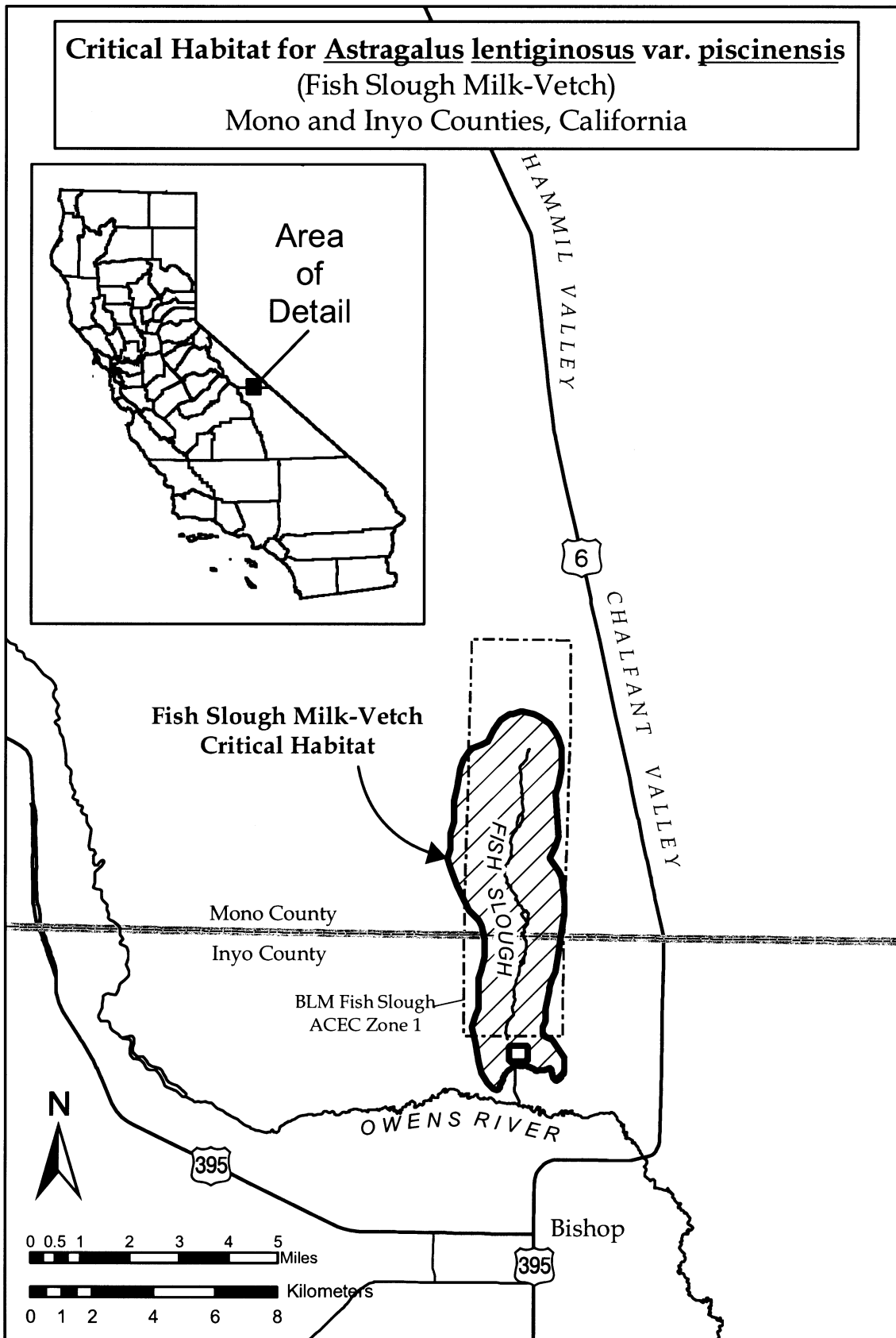
(i) Map Unit 1: Fish Slough unit, Inyo and Mono Counties, California. From USGS 1:24,000 quadrangle maps Chidago Canyon and Fish Slough, California. Lands bounded by the following UTM Zone 11, NAD 1927 coordinates (E, N): 373700, 4149500; 373800, 4149800; 373800, 4150300; 373900, 4150700; 373900, 4151400; 374000, 4151800; 374100, 4152400; 374200, 4152700; 374400, 4153000; 374500, 4153100; 374800, 4153200; 375000, 4153300; 375100, 4153500; 375200, 4153700; 375400, 4154000; 375700, 4154200; 375800, 4154200; 376100, 4154300; 376500, 4154200; 376700, 4154100; 377000, 4153900; 377200, 4153600; 377300, 4153400; 377400, 4153100; 377400, 4152400; 377300, 4151900; 377200, 4151600; 377300, 4150200; 377200, 4149900; 377100, 4149700; 377000, 4149500;

377300, 4149100; 377400, 4148900; 377500, 4148200; 377500, 4147700; 377400, 4147100; 377300, 4146400; 377200, 4145800; 377100, 4145600; 377000, 4145300; 377000, 4145200; 376900, 4144600; 376900, 4144300; 376900, 4144200; 376800, 4144000; 376800, 4143800; 376900, 4143700; 377100, 4143600; 377500, 4143000; 377500, 4142600; thence to 377466; 4142464, where the boundary intersects the south McNally Canal. Thence westerly along the south McNally Canal to 375331, 4141934; thence northwest and following coordinates: 375200, 4142000; 375000, 4142200; 374800, 4142500; 374700, 4142900; 374600, 4143500; 374500, 4144000; 374600, 4144400; 374700, 4144600; 374700, 4145600; 374800, 4145900; 374900, 4146300; 374900, 4146900; 374800, 4147300; 374700, 4147500; 374400, 4147800; 374000, 4148600; 373800, 4149200; and returning to 373700, 4149500.

(ii) Excluding land bounded by 375700, 4143400; 375700, 4142900; 376300, 4142900; and 376300, 4143400; and returning to 375700, 4143400.

(iii) **Note:** Map of the critical habitat unit follows.

**BILLING CODE 4310-55-P**





\* \* \* \* \*

Dated: June 1, 2005.

**Craig Manson,**

*Assistant Secretary for Fish and Wildlife and  
Parks.*

[FR Doc. 05-11315 Filed 6-8-05; 8:45 am]

**BILLING CODE 4310-55-C**