

DEPARTMENT OF THE INTERIOR**Fish and Wildlife Service****50 CFR Part 17****RIN 1018-AU45****Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for *Astragalus ampullarioides* (Shivwits milk-vetch) and *Astragalus holmgreniorum* (Holmgren 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 two endangered plants, *Astragalus ampullarioides* (Shivwits milk-vetch) and *Astragalus holmgreniorum* (Holmgren milk-vetch) under the Endangered Species Act of 1973, as amended (Act). In total, approximately 6,289 acres (ac) (2,545 hectares (ha)) fall within the boundaries of the critical habitat designation for *A. holmgreniorum* in Mohave County, Arizona, and Washington County, Utah, and approximately 2,181 ac (883 ha) fall within the boundaries of the critical habitat designation for *A. ampullarioides* in Washington County, Utah.

DATES: This rule becomes effective on January 26, 2007.

ADDRESSES: Comments and materials received, as well as supporting documentation used in the preparation of this final rule, are available for public inspection, by appointment, during normal business hours, at the Utah Fish and Wildlife Office, 2369 West Orton Circle, Suite 50, West Valley City, Utah 84119 (801-975-3330). The final rule, economic analysis, and map are also available via the Internet at <http://mountain-prairie.fws.gov/species/plants/milkvetch/index.htm>.

FOR FURTHER INFORMATION CONTACT: Larry Crist, Field Supervisor, Utah Fish and Wildlife Office (see **ADDRESSES**), telephone 801-975-3330.

SUPPLEMENTARY INFORMATION:**Role of Critical Habitat in Actual Practice of Administering and Implementing the Endangered Species Act (16 U.S.C. 1531 et seq.)**

Attention to and protection of habitat is paramount to successful conservation actions. However, the role that designation of critical habitat plays in protecting habitat of listed species is often misunderstood. As discussed in more detail below in the discussion of

exclusions under section 4(b)(2) of the Act, there are significant limitations on the regulatory effect of critical habitat designation under section 7(a)(2) of the Act. In brief, (1) Designation provides additional protection to habitat only where there is a Federal nexus; (2) the protection is relevant only when, in the absence of designation, destruction or adverse modification of the critical habitat would in fact take place (in other words, other statutory or regulatory protections, policies, or other factors relevant to agency decision-making would not prevent destruction or adverse modification); and (3) designation of critical habitat triggers the prohibition of destruction or adverse modification of that habitat, but it does not require specific actions to restore or improve habitat.

Currently, only 475 species, or 36 percent of the 1,310 listed species in the United States under the jurisdiction of the Service, have designated critical habitat. We address the habitat needs of all 1,310 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, the section 10 incidental take permit process, and cooperative, nonregulatory efforts with private landowners. The Service believes that it is these measures that may make the difference between extinction and survival for many species.

In considering exclusions of areas originally proposed for designation, we evaluated the benefits of designation in light of *Gifford Pinchot Task Force v. U.S. Fish and Wildlife Service*. In that case, the Ninth Circuit invalidated the Service's regulation defining "destruction or adverse modification of critical habitat." In response, on December 9, 2004, the Director issued guidance to be considered in making section 7 adverse modification determinations. This critical habitat designation does not use the invalidated regulation in our consideration of the benefits of including areas in this final designation. The Service will carefully manage future consultations that analyze impacts to designated critical habitat, particularly those that appear to be resulting in an adverse modification determination. Such consultations will be reviewed by the Regional Office prior to finalizing to ensure that an adequate analysis has been conducted that is informed by the Director's guidance.

On the other hand, to the extent that designation of critical habitat provides protection, that protection can come at significant social and economic cost. In

addition, the mere administrative process of designating of critical habitat is expensive, time-consuming, and controversial. The current statutory framework of critical habitat, combined with past judicial interpretations of the statute, make critical habitat the subject of excessive litigation. As a result, critical habitat designations are driven by litigation and courts rather than biology, and made at a time and under a timeframe that limits our ability to obtain and evaluate the scientific and other information required to make the designation most meaningful.

In light of these circumstances, the Service believes 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.

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 the Service 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 the Service with little ability to prioritize its 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, the Service's 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 the Service with limited ability to provide for 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, and is very expensive, thus diverting resources from conservation actions that may provide

relatively more benefit to imperiled 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 (NEPA) (42 U.S.C. 4321 *et seq.*). These costs, which are not required for many other conservation actions, directly reduce the funds available for direct and tangible conservation actions.

Background

Our intent is to discuss only topics directly relevant to the designation of critical habitat in this final rule. For more information on *Astragalus holmgreniorum* and *A. ampullarioides*, refer to the final listing rule published in the **Federal Register** (66 FR 49560, September 28, 2001) and the proposed critical habitat rule published in the **Federal Register** (71 FR 15966, March 29, 2006).

Previous Federal Actions

On March 29, 2006, we published a proposed rule to designate critical habitat for *Astragalus holmgreniorum* and *A. ampullarioides* (71 FR 15966). The public comment period was open for 60 days until May 30, 2006. On September 26, 2006, we published a revised proposed rule in the **Federal Register**, and issued a press release that announced the reopening of the public comment period on the proposed rule, and the availability of the draft economic analysis, draft environmental assessment, and revisions to proposed critical habitat boundaries for *A. holmgreniorum* and *A. ampullarioides* (71 FR 56085). The comment period was open for an additional 30 days until October 26, 2006.

Concurrently, we have been working on the recovery plan for these two plant species. We published a notice of availability, and request for comments, for the draft recovery plan for *Astragalus holmgreniorum* and *A. ampullarioides* on August 1, 2006 (71 FR 57557). On September 29, 2006, we announced the availability of the final recovery plan (71 FR 57557).

Summary of Comments and Recommendations

We requested written comments from the public on the proposed designation of critical habitat for *Astragalus holmgreniorum* and *A. ampullarioides* in the proposed rule published on March 29, 2006 (71 FR 15966). We also

contacted appropriate Federal, State, and local agencies; tribes; scientific organizations; and other interested parties and invited them to comment on the proposed rule.

We received 17 written comments on the proposal published on March 29, 2006 (71 FR 15966). These included responses from five peer reviewers, three Federal agencies, and nine organizations or individuals. During the comment period on the revised proposed rule (71 FR 56085) that opened on September 26, 2006, and closed on October 26, 2006, we received two comments pertaining to the revised proposed rule, draft economic analysis, draft environmental assessment, and revisions to proposed critical habitat boundaries. Including all comments received during both comment periods, 10 commenters supported the designation of critical habitat for *Astragalus holmgreniorum* and *A. ampullarioides*, and 1 opposed the designation. However, some of the supporting commenters disagreed with specific portions of the proposed designation, such as the acreage or delineation of individual critical habitat units. Eight letters included comments or information, but did not express support or opposition to the proposed critical habitat designation. Comments received were grouped into several general issues specifically relating to the proposed critical habitat designation for *A. holmgreniorum* and *A. ampullarioides* and 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 independent opinions on the proposed critical habitat designation for *Astragalus holmgreniorum* and *A. ampullarioides* from eight knowledgeable individuals who have expertise with the species, the geographic region where the species occurs, and conservation biology principles. We received comments from five of the peer reviewers. The peer reviewers generally concurred with our methods and conclusions and provided additional information, clarifications, and suggestions to improve this final critical habitat designation.

We reviewed all comments received from the peer reviewers and the public for substantive issues and new information regarding critical habitat, and associated draft economic analysis, for *Astragalus holmgreniorum* and *A. ampullarioides*. Substantive comments

received have been addressed below, or incorporated into this final rule as appropriate.

Peer Review Comments

Comment 1: One peer reviewer noted that the level of detail included in the rule for the two species was inconsistent, and that exotic species were not addressed for *Astragalus holmgreniorum*.

Response: We examined the Background section of the proposed rule to designate critical habitat (71 FR 15966) and found that information was presented in equivalent amounts for both species, which included population size, structure, and habitat characteristics. However, information on exotic species associated with *Astragalus holmgreniorum* was inadvertently left out. Exotic species associated with Holmgren milk-vetch are *Bromus rubens* (red brome), *Erodium cicutarium* (storksbill), *Malcolmia africana* (African mustard), and *Bromus tectorum* (cheatgrass) (Van Buren and Harper 2003a, p. 240). The threat of invasive weeds is addressed in the Special Management Considerations or Protections section of this rule.

Comment 2: One peer reviewer (and several public commenters) questioned why we did not include the known occurrence of *Astragalus holmgreniorum* found north of Atkinville Wash and west of I-15, near the I-15 interchange with the proposed southern corridor, and presented information on the size and characteristics of the population that the peer reviewer thought supported its inclusion in critical habitat.

Response: We did not include this area (which is north of the State Line Subunit 1a) because a natural wash separates it from other populations and much of the surrounding area, it lacks the Primary Constituent Elements (PCEs) due to differing soil type, and because of high human impacts due to concentrated off-road vehicle (ORV) use. Adjacent housing development to the west and south, and I-15 to the east, further compromise its ability to be self-sustaining. Critical habitat contributes to the overall conservation of listed species, but it is not the intent of the Act to designate critical habitat for every population or occurrence of a listed species. Critical habitat designations do not signal that habitat outside the designation is unimportant or may not contribute to recovery.

Comment 3: One peer reviewer expressed concern that the proposed critical habitat did not adequately address ground-nesting pollinators and expressed an opinion that preserving

pollinator nesting sites, or areas where bees are known to nest, was important in the designation of critical habitat.

Response: Our designation of critical habitat for *Astragalus holmgreniorum* and *A. ampullarioides* is based solely on their conservation needs. This rule does not designate critical habitat for pollinator species. However, pollinators are one of the PCEs necessary for the conservation of the two plant species, and the critical habitat unit boundaries were drawn to include sufficient acreage to accommodate habitat for pollinators. Thus, we expect the designation to afford protection to ground-nesting pollinators in proximity to the *A. holmgreniorum* and *A. ampullarioides* populations included in this final designation. We include additional information on pollinators in the Special Management Considerations and Protections (Special Management) section of this rule.

Comment 4: One peer reviewer inquired about the impact of cattle on ground-nesting bees.

Response: We have no information in our files quantifying or qualifying the impact of cattle to ground-nesting bees. However, some aspects of livestock grazing, such as soil compaction and reduction of flowering vegetation, could be a concern for ground-nesting bees. These activities similarly may limit the full and natural development of *Astragalus holmgreniorum* and *A. ampullarioides* and were considered under the Special Management section of the proposed rule (71 FR 15974–15976, March 29, 2006).

Comment 5: One peer reviewer stated that the use of the National Vegetation Classification System (NVCS) does not sufficiently identify habitat types for *Astragalus holmgreniorum*.

Response: The NVCS is a systematic approach to classifying a continuum of natural vegetation nationwide. We included this information in the proposed designation because it allows land managers to assess the appropriate vegetation layer for *Astragalus holmgreniorum* on a Geological Information System and eliminate areas where the species is unlikely to reside. However, we did not rely on this information to define PCEs.

Comment 6: One peer reviewer stated that Subunit 1a includes lands that are not occupied or are of marginal quality for *Astragalus holmgreniorum*.

Response: All lands proposed for critical habitat are occupied, including Subunit 1a. Lands within Subunit 1a contain the PCEs for *Astragalus holmgreniorum*, and the plants occur in a patchy distribution throughout the unit. Therefore, we are including the

entire subunit in this final critical habitat designation, as directed under 50 CFR 424.12(d).

Comment 7: One peer reviewer disagreed with the statement pertaining to Unit 1a that the I-15 right-of-way may allow pollinator flow between sites situated west and east of the highway, and pointed out that, although pollinators may travel between sites west and east of I-15, it seems likely that collisions with vehicles may be a serious drain on pollinator resources. The peer reviewer asked us to contact Dr. Tepedino, a bee biologist, about the ability of pollinators to successfully navigate I-15.

Response: Although pollinators are likely to be killed by vehicles, neither we nor bee biologist Dr. Tepedino are aware of any information or ability to quantify pollinator mortality from vehicle collisions, except that mortality is likely to increase with the velocity of the vehicles.

Comment 8: One peer reviewer recommended that we reduce the size of the Zion National Park Unit (Unit 5 for *Astragalus ampullarioides*) to only include the immediate area bordering the Chinle Trail at the south end of the occurrence where horses and hikers may trample plants and create erosion, because other areas within the unit were not subject to threats.

Response: When determining which areas to include as critical habitat, we consider habitats that include the physical and biological features essential to the conservation of the species and that require special management considerations or protection. We have determined that the north end of the Zion Unit requires protection from many of the types of impacts that are affecting the south end of the unit, such as invasive nonnative weeds (71 FR 15980–15981, March 29, 2006).

Comment 9: One peer reviewer responded to our request for comments concerning the inclusion of occupied habitat for the milk-vetches found in intervening areas of I-15 (i.e., between the northbound and southbound lanes, and within the highway right-of-way but outside the highway prism). The peer reviewer stated that the inclusion of occupied sites for *Astragalus ampullarioides* within the I-15 median is valuable because they are a significant part of the population, they are healthy, and management would not interfere with established protocols for highway management.

Response: We included the I-15 site identified by the peer reviewer in this final designation. Also, in the Criteria to Identify Critical Habitat section, we

provide additional information on the areas included in the designation to guide highway management.

Comment 10: One peer reviewer stated that protecting and preserving habitat on private and State lands enhances property values.

Response: We are unable to confirm that critical habitat designation enhances property values on private and State land, but we do know that property values have been enhanced adjacent to other open space in the county, e.g., Red Cliffs Desert Reserve. Our critical habitat designation is based solely on the provisions of section 4 of the Act; neither enhancing property values nor protecting open space is a basis for designating critical habitat.

Comment 11: One peer reviewer suggested that we increase the size of our critical habitat units to create a buffer from the effects of development on adjacent lands and recreational use of these areas.

Response: We share the concern about the effects of development and unregulated recreational use on critical habitat and addressed both impacts in the Special Management section of the proposed rule (71 FR 15974–15976, March 24, 2006). We are designating the critical habitat units at a scale to maintain the populations and primary constituent elements essential to the conservation of the species per section 3(5)(A) of the Act and regulations at 50 CFR 424.12.

Comment 12: One peer reviewer stated that future management of the habitat currently administered by Arizona and Utah State Lands Departments will be critical for the survival of *Astragalus holmgreniorum*.

Response: All lands included in the critical habitat designation are important to the conservation of *Astragalus holmgreniorum* and *A. ampullarioides*.

Comment 13: One peer reviewer questioned how Subunit 2b for *Astragalus holmgreniorum* will be conserved under section 7 of the Act given the statement in the proposed rule that the Bureau of Land Management (BLM) is currently working with Santa Clara City to sell this land for development purposes.

Response: Under section 7(a)(2) of the Act, all Federal agencies are required to ensure that any action they fund, authorize, or carry out is not likely to destroy or adversely modify critical habitat. Thus, BLM must ensure that its actions do not adversely modify or destroy critical habitat contained in Subunit 2b. The key factor related to the adverse modification determination is whether, with implementation of the

proposed Federal action, the affected critical habitat would remain functional (or retain the current ability for the PCEs to function) to serve the intended conservation role for the species (Jones 2004). We understand that BLM is working on alternatives for retaining ownership of the South Hills population of *Astragalus holmgreniorum* (Douglas 2006).

Comment 14: In response to our statement, on pages 15968 and 15970 of the proposed rule, that “species may move from one area to another over time,” one peer reviewer noted that known populations of *Astragalus holmgreniorum* occur in the same locations observed decades ago. Movements are more accurately described as a shift in population density in areas where suitable habitat occurs. In regard to *A. holmgreniorum*, if there are no major changes in hydrological patterns, one would not expect much movement of the population.

Response: Populations of *Astragalus holmgreniorum* are being monitored in the same areas where they were observed decades ago, and this information is considered in this final rule. Although the establishment of new occupied areas may be rare, and the migration of seeds is likely to be localized, a new and independent establishment could result from arrival of a single seed (Epling and Lewis 1952, p. 264).

Public Comments

We received 12 public comments in response to our request for additional information in the proposed designation of critical habitat for *Astragalus holmgreniorum* and *A. ampullarioides* (71 FR 15966, March 29, 2006). Responses that contained new, updated, or additional information were considered in this final rule. We consolidated the comments into several categories. Some public comments were addressed in the previous section’s peer reviewer comments.

Comments Related to Adequacy of Units Proposed

Comment 15: One commenter stated that the critical habitat designation is inadequate because it is only established where the plants currently exist. Suitable habitat encompasses the larger landscape. The critical habitat designation fails in its purpose of facilitating recovery because it does not protect this larger area or provide connectivity between populations.

Response: Critical habitat contributes to the overall conservation of listed species, but it is not the intent of the Act

to designate critical habitat for every population or occurrence of a listed species. In the Criteria Used to Identify Critical Habitat section of the proposed and final critical habitat rules, we describe the parameters used for delineating areas that contain the physical and biological features essential to the conservation of *Astragalus holmgreniorum* and *A. ampullarioides*, as required by the definition of critical habitat when considering areas occupied at the time of listing. We recognize that surveys to confirm the presence of *A. holmgreniorum* and *A. ampullarioides* populations have not occurred everywhere throughout the species’ range. However, we determined that occupied areas containing the features essential to the conservation of these species support the majority of known locations (see the Criteria Used to Identify Critical Habitat section below). As a result of our methods, we found that the additional areas suggested by commenters were not essential to the conservation of *A. holmgreniorum* and *A. ampullarioides*.

We also considered landscape issues when designing units to provide continuous habitat for reproduction, germination, seed dispersal, and pollination. Many units or subunits were designated by combining known occurrences and providing connectivity.

Comment 16: One commenter noted that designating critical habitat that is separate, isolated, and fragmented will foment the eventual extinction of these populations.

Response: The best available scientific information (71 FR 15966, March 29, 2006) does not support this concern. We have designated critical habitat for *Astragalus holmgreniorum* and *A. ampullarioides* in accordance with the Act. We have determined that the areas included in the designation are essential to the conservation of the two species. Many natural features separating the units, such as watersheds, land formations, and soil types, are unable to support the species.

Comments on Size and Areas To Be Included or Excluded

Comment 17: Several commenters recommended that units that were close to each other be combined to provide connectivity for gene flow. Others provided reasons for designating larger areas, such as edge effects, current fragmentation, anticipated future fragmentation, chemical herbicide use, range of pollinator flights, invasive species, ORV trails, and recreational use. One commenter suggested that additional critical habitat for *Astragalus*

holmgreniorum should be provided in Arizona to help offset all of the impacts that are occurring in Utah.

Response: In delineating critical habitat, we considered hydrology for seed dispersal, soils for suitable habitat, elevation changes, and relief to determine range and amount of suitable habitat. We also considered existing natural and human-caused barriers to dispersal. As indicated in the process described in the proposal (also see Criteria Used to Identify Critical Habitat below), we have defined milk-vetch recovery populations in a manner that is consistent with the Act and our regulations at 50 CFR 424.12. The milk-vetch populations may appear close together on the maps, but in most cases known sites are separated by 1 mile (mi) (1.6 kilometers (km)) or more, which greatly decreases the expectation of frequent inter-site pollination. Critical habitat is designated in both Arizona and Utah due to occupied habitat containing the appropriate PCEs.

Comment 18: Several commenters supported intervening lands of I-15 being designated for *Astragalus holmgreniorum* and *A. ampullarioides*.

Response: Intervening lands of I-15 are designated in this final rule. Additional information was incorporated into the Criteria to Identify Critical Habitat section below.

Comment 19: One commenter recommended that we adjust the western boundary of Unit 1 for *Astragalus ampullarioides* to eliminate the inclusion of an existing mining operation.

Response: The mining operation is outside both the proposed and final critical habitat boundaries.

Comment 20: One commenter recommended that we adjust the southeast corner of Unit 4a for *Astragalus ampullarioides* to include only the west side of Harrisburg Ridge, because the east side is not part of the watershed.

Response: We did not exclude the east side of Harrisburg Ridge. The critical habitat designation includes areas outside the watershed that are necessary (e.g., they provide adequate supply of pollinators) to support the reproductive success of *Astragalus ampullarioides*.

Comment 21: BLM recommended an adjustment of *Astragalus holmgreniorum* Units 2a (Stucki Springs), and 2b (South Hills) to better reflect occurrence and habitat based on 2006 surveys.

Response: We announced these proposed changes in our revised proposed rule and requested public comment on them (71 FR 56085,

September 26, 2006). The changes are incorporated into this final rule.

Comment 22: One commenter recommended that we remove private lands or isolated Federal lands from *Astragalus holmgreniorum* Subunit 2b and Unit 3, and *A. ampullarioides* Unit 3, in order to designate only areas of private and State lands that have some potential to transfer to BLM ownership, or some other means of preservation. Another commenter expressed that land ownership should not be a consideration of determining critical habitat, and included a rationale based on lack of economic impacts on private lands.

Response: All the lands proposed for critical habitat contain the features essential for the conservation of *Astragalus holmgreniorum* and *A. ampullarioides* regardless of ownership. In our final designation, we considered economic factors for both public and private lands. We determined that economic costs did not outweigh the benefits of designation for any of the proposed lands. However, we did exclude lands of the Shivwits Band of Paiute Indians (Tribe) based on a conservation agreement with the Tribe (see the Relationship of Critical Habitat to Tribal Lands section below).

Comments Providing Recommendations on Pollinators

Comment 23: One commenter recommended larger unit sizes to conserve the most effective pollinators, which the commenter stated are the medium- to large-sized pollinators.

Response: Our goal for the critical habitat designation is to include sufficient pollinator habitat and sufficient pollinator populations for the reproduction of *Astragalus holmgreniorum* and *A. ampullarioides*. We based our minimum unit size on the typical homing distance of the smallest pollinators 1,312 feet (ft) (400 meters (m)). A radius of 1,312 ft (400 m) encompasses 124 ac (50 ha), and ensures that pollinators have sufficient land to establish nesting sites, access floral resources, and provide pollinating services. We expect that the designated critical habitat units will provide a species-rich bee community for small, medium, and large pollinators. We find no supporting information indicating that a larger area is likely to improve pollinator services, because smaller pollinators are unlikely to travel much farther, and many medium and large pollinators can easily cover this distance.

Comment 24: In the judgment of one commenter, adequate pollinator habitat exists adjacent to Unit 3 for *Astragalus*

ampullarioides because areas of native vegetation remain within the Coral Canyon Development.

Response: A golf course containing approximately 80 ac (32 ha) of grass turf interspersed with natural rock outcroppings exists to the west of Unit 3. This area is not sufficient to provide pollinator resources for the unit because the habitat does not contain a diverse natural flora capable of supporting an abundant pollinator population.

Comments Related to Tribal Issues

Comment 25: One commenter stated that *Astragalus ampullarioides* occurrences found on land under the sovereignty of the Tribe should be protected and managed by the Tribe without Federal designation of critical habitat.

Response: We agree that the Tribe is most able to manage and protect *Astragalus ampullarioides* on their lands that are held in trust by the United States. Fish, wildlife, and other natural resources on Tribal lands are better managed under Tribal authorities, policies, and programs than through Federal regulation wherever possible and practicable. We worked with Tribal leadership to create a sound management plan. On September 18, 2006, Tribal Chairman Glenn Rogers signed the Shivwits Band of Paiutes Management Plan for *Astragalus ampullarioides*. This management plan provides greater protection than critical habitat designation could provide. Therefore, this unit was excluded from final critical habitat (see the Government-to-Government Relationship with Tribes and 4(b)(2) Exclusions sections below).

Comment 26: One commenter indicated that we should provide an environmental assessment and economic impact analysis on the proposed designation of critical habitat on Tribal lands.

Response: We announced the availability of the draft economic analysis and draft environmental assessment for the proposed designation of critical habitat in the **Federal Register** (71 FR 56085, September 26, 2006) that included a description of the environmental and economic impacts of the designation on Tribal lands.

Comment 27: One commenter indicated that Units 1 and 2, containing lands managed by BLM and the Tribe, should be combined into one larger unit because they are reasonably close.

Response: Unit 2 is on Tribal land managed by the Tribe, who now have a management plan to ensure that the conservation of *Astragalus ampullarioides* can be achieved without

the designation of critical habitat on Tribal lands. We are excluding Unit 2 from the final critical habitat designation (see the 4(b)(2) Exclusions section below).

Comments Providing Additional Scientific Information

Comment 28: The U.S. Geological Survey (USGS) indicated that their recent research on *Astragalus ampullarioides* occupancy determined that the species also is affiliated with the Dinosaur Canyon Member of the Moenave, but could not confirm an affiliation with the Shinarump Member of the Chinle. All locations contain clay-rich soil.

Response: We have included this information into this final rule.

Comment 29: One commenter stated that new information concerning the preferred soils of *Astragalus ampullarioides* (described in comment 29 above) expands the concept of potential habitat. The commenter suggested that new surveys beyond the geographic scope of currently known habitat are necessary and may have implications for the specific PCEs for *A. ampullarioides*.

Response: We agree that the additional information on soils conducive to *Astragalus ampullarioides* survival will be useful for recognizing potential habitat and conducting surveys. However, we must base our critical habitat designation on the best available scientific data at the time of designation. Our final critical habitat designation is based on the protection of the features essential to the conservation of the known, existing populations of *A. holmgreniorum* and *A. ampullarioides*. We have incorporated this new information into the description of the PCEs (see Primary Constituent Elements section below).

Comment 30: One commenter noted that herbivory is not mentioned in the discussion of PCEs for *Astragalus ampullarioides* despite its potential effects on reproductive output and long-term viability of the species, and the commenter provided information on reduction in fruit production by small mammals at one site.

Response: Herbivory can impact *Astragalus ampullarioides* reproduction. The specific information provided by the commenter is considered in the Special Management section of this rule. However, we did not include a discussion on herbivory in our determination of the PCEs because herbivory is not relevant to our determination of the physical and biological features essential to the conservation of this species.

Comment 31: One commenter noted that the proposed rule refers to "USGS soil descriptions," but that these descriptions were more likely produced by U.S. Department of Agriculture (USDA) Soil Conservation Service or USDA Natural Resources Conservation Service (NRCS).

Response: In Washington County, Utah, the soil descriptions used originated in the Soil Survey of Washington County Utah (USDA Soil Conservation Service *et al.* 1977, pp. 7–10, 12–13, 20–22, 30–31, 34, 44, 48, 124–129). In Mohave County, Arizona, information originated from Soil Survey of Shiwits Area, Arizona, Part of Mohave County (USDA NRCS *et al.* 2000, pp. 1–15, 65–68, 73–74, 113–114). This information is corrected in this final rule.

Comment 32: One commenter indicated that the proposed rule discussed livestock grazing within Subunit 4b for *Astragalus ampullarioides*. However, livestock have been removed from this area.

Response: We have updated our information.

Comment 33: One commenter indicated that a population of *Astragalus ampullarioides* may exist to the south of Subunit 4b and should be surveyed to determine if it should be included in the critical habitat designation.

Response: We have no further information regarding an area outside of Subunit 4b with existing *Astragalus ampullarioides*, and have made no boundary changes.

Comment 34: One commenter noted that the proposed rule did not discuss that Unit 3 for *Astragalus holmgreniorum* is within a regional shooting range.

Response: We have added this information to the final rule (see Critical Habitat Designation section).

Comments on Development, Recovery, and Other Issues

Comment 35: One commenter thought that it may be too late to adequately protect the species because extensive development has occurred since listing.

Response: We agree that the species is threatened by development. In addition to this critical habitat designation, the Act provides conservation mechanisms including the section 4 recovery planning process, section 6 funding to the States, section 7 consultations, and the section 9 protective prohibitions of unauthorized take and cooperative programs with private and public landholders and Tribes. A recovery plan was completed for these species on September 29, 2006 (71 FR 57557).

Comment 36: One commenter stated that various Federal, State, and local agencies and government representatives with roles in Washington County have been complicit in the demise of these plants. Priority is given to the desert tortoise and the protection of these lands at the expense of the plants.

Response: We have no evidence supporting this comment. In many cases, such as within the recovery planning process for *Astragalus holmgreniorum* and *A. ampullarioides*, various Federal, State, and local agencies and government representatives with roles in Washington County are working together to protect lands containing rare plants, as well as other listed species, such as desert tortoise.

Comment 37: One commenter stated that no viable plan exists to protect these species outside of the designated habitat.

Response: We announced a final recovery plan for *Astragalus holmgreniorum* and *A. ampullarioides* (71 FR 57557, September 29, 2006). The recovery plan should result in protecting and enhancing current habitat; ensuring the habitat base for each recovery population is large enough to allow for natural population dynamics, population expansion where needed, the continued presence of pollinators, and sufficient connectivity to allow for gene flow within and among populations; achieving permanent land protection for at least four recovery populations of both *A. holmgreniorum* and *A. ampullarioides*; developing site-specific conservation agreements for all recovery populations and their habitat to protect the milk-vetches within existing State laws; prohibiting the use of pesticides or herbicides detrimental to either of the milk-vetches or their pollinators within the vicinity of all recovery populations; and collecting and storing seeds for all extant populations.

Comment 38: One commenter stated that, although considerable study of the populations has taken place, no significant recovery actions have followed, and the recovery plans have not been implemented.

Response: Both of these species were listed on September 28, 2001 (71 FR 15966), and are in the early phases of the recovery process. On September 29, 2006, we announced a final recovery plan for *Astragalus holmgreniorum* and *A. ampullarioides* (71 FR 57557). Significant conservation efforts that are underway for *A. holmgreniorum* and *A. ampullarioides* are discussed on pages

37–40 of the recovery plan (Service 2006).

Comment 39: One commenter stated that responsible Federal agencies and elected officials have failed to protect these species as required by the Act.

Response: We are unaware of any failure under the Act to protect these species. No detailed information was provided by the commenter to support this claim.

Comment 40: One commenter suggested that the critical habitat designation process could be improved by soliciting suggestions prior to publishing a proposal.

Response: We have responsibility under the Act for designating critical habitat. An important facet of this responsibility is to provide opportunity for exchange of knowledge and participation. Two public comment periods were provided to facilitate communication, collect best available information, and address concerns of other agencies and stakeholders.

Comment 41: One commenter suggested that the critical habitat designation process should be fully integrated with recovery plan preparation.

Response: Our recovery plan for the milk-vetches (Service 2006) targets the same areas for recovery that we proposed for critical habitat. Special Management Considerations or Protections that are discussed within the proposed critical habitat rule (71 FR 15966, March 29, 2006) address the same threats discussed in the recovery plan (Service 2006). We are working with other partners to address threats and population needs to reach recovery.

Comment 42: The Washington County Growth and Conservation Act, as currently proposed by Senator Robert Bennett, may have serious implications for the future of the *Astragalus holmgreniorum* and *A. ampullarioides*.

Response: Congressional activities are not evaluated in the designation of critical habitat, and, therefore, this comment is outside the scope of this designation.

Comment 43: Many commented that our discussion of the value of designating critical habitat, and the procedural and resource difficulties involved, was inappropriate and should be addressed in a different forum, not in the news release for a critical habitat rule.

Response: As discussed in the Designation of Critical Habitat Provides Little Additional Protection to Species, Role of Critical Habitat in Actual Practice of Administering and Implementing the Act, and Procedural and Resource Difficulties in Designating

Critical Habitat sections of this and other critical habitat designations, we believe that, in most cases, other conservation mechanisms provide greater incentives and conservation benefits than the designation of critical habitat. Other mechanisms include the section 4 recovery planning process, section 6 funding to the States, section 7 consultations, the section 9 protective prohibitions of unauthorized take, the section 10 incidental take permit process, and cooperative programs with private and public landholders and Tribal nations.

Comment 44: No action has ever been taken to list the native bee, *Peridita meconis*, or determine its status.

Response: This action is to designate critical habitat for *Astragalus holmgreniorum* and *A. ampullarioides*. The status of *Peridita meconis* is outside the scope of this action.

Comments Related to the Draft Economic Analysis

Comment 45: Two commenters stated that the St. George area is one of the fastest growing metropolitan areas in the United States, and that its growth rate may increase. The commenters felt that, considering the rapid population growth, the critical habitat determination would provide open space relief and an economic amenity value. The commenters believe that the critical habitat determination may provide a future eco-tourism industry, and a “population safety buffer” benefit for the airport.

Response: Section 4.1 of the Draft Economic Analysis acknowledged that Washington County is one of the fastest growing counties in the United States. However, section 4.1 also highlights that the County believes the population increase will not cause overcrowding because more than 75 percent of the land in the County is managed by the Federal government (*i.e.*, BLM, U.S. Forest Service, and National Park Service) and is not expected to be developed. The Draft Economic Analysis does not forecast precluding development within the boundaries of the proposed critical habitat determination. Residential, commercial, and industrial development is expected to occur; thus the proposed critical habitat determination that occurs on non-Federal land is not expected to provide a “population safety buffer” benefit for the new regional airport located approximately 3 mi (4.8 km) east of Subunit 1c. No data are available to describe or forecast how many people currently visit the area to allow for the measurement of the impact of critical

habitat determination on the future eco-tourism industry.

Comment 46: One commenter thought that the draft economic analysis did not consider the effect of the new regional airport.

Response: The proposed location of the new regional airport is approximately 3 mi (4.8 km) east of Subunit 1c for *Astragalus holmgreniorum*. While airport-related species conservation activities are not expected during construction and operation of the airport, the Draft Economic Analysis included consideration of the County growth forecast and general plan, which reflect the effects of a new regional airport; therefore, the economic analysis captures any economic impacts related to population growth resulting from the new regional airport.

Comments From States

Comments were received from the Arizona State Land Department (ASLD), Arizona Department of Transportation, and Arizona Game and Fish regarding the proposal to designate critical habitat for the *Astragalus holmgreniorum*, and are addressed below.

Comments on Areas in the Median of Interstate-15

Comment 47: One commenter pointed out that the proposed rule indicated that critical habitat would not include existing manmade structures (such as roads) that lack PCEs, or the land on which such structures are located. The commenter thought that manmade structures, such as cut slopes and fill slopes, as well as regularly graded areas along the I-15 right-of-way, should be excluded, or that areas of inclusion along I-15 should be better defined.

Response: Where we have specific information on areas within the designation that do not contain the PCEs, we have not included them in the final rule (see Summary of Changes). The existence of manmade structures are excluded by text in the rule clarifying that these areas do not contain the PCEs and are not included as critical habitat (see Criteria to Identify Critical Habitat).

Comment 48: The proposed rule states that the long-term conservation of *Astragalus holmgreniorum* and *A. ampullarioides* is, in part, dependent on the ability to keep critical habitat free from major ground-disturbing activities. While best management practices can and likely will be developed in coordination with the Service, it is unlikely that the I-15 right-of-way can be kept free from ground-disturbing activities, such as road maintenance,

vehicle collisions, or motorists pulling off the roadway.

Response: The areas we are designating as critical habitat provide some or all of the habitat components essential for the conservation of *Astragalus holmgreniorum* and *A. ampullarioides*. Best management practices are likely to reduce ground-disturbing activities, and are evaluated during section 7 consultations on projects with a Federal nexus, *e.g.*, actions related to the Federal Highway Administration.

Comment 49: One commenter stated that designation of critical habitat within the I-15 right-of-way would not provide any additional benefits because projects typically receive funding from the Federal Highway Administration and are already subject to section 7 consultation.

Response: Jeopardy and adverse modification analyses differ under section 7 of the Act and may result in differing determinations depending on the specific action at issue. The jeopardy analysis usually addresses the survival and recovery needs of a species in a qualitative fashion. Generally, if a proposed Federal action is incompatible with the viability of a population(s) essential to recovery, a jeopardy finding is considered to be warranted because of the relationship of essential populations to the survival and recovery of the species as a whole. Adverse modification analyses are conducted using an analytical framework described in the Director's December 9, 2004, memorandum. The key factor related to the adverse modification determination is whether, with implementation of the proposed Federal action, the affected critical habitat would remain functional (or retain the current ability for the PCEs to be functionally established) in serving the intended conservation role for the species. Activities that may destroy or adversely modify critical habitat also may jeopardize the continued existence of the species. Additionally, not all actions that occur in critical habitat will be subject to section 7 of the Act, because they may not be Federal actions.

Comment 50: The ASLD commented that Subunits 1a and 1b for *Astragalus holmgreniorum*, which are under its management, are slated for commercial and mixed residential uses. While they are not opposed to the designation, they have concerns regarding the development potential of the lands due to the designation.

Our Response: All the lands proposed for critical habitat contain the features essential for the conservation of *Astragalus holmgreniorum* and *A. ampullarioides*.

ampullarioides regardless of ownership. In our final designation, we considered economic factors for both public and private lands. We determined that economic costs did not outweigh the benefits of designation for any of the proposed lands. However, we did exclude Tribal lands based on a conservation agreement with the Tribe. Further, critical habitat designation for plants does not necessarily affect state or private lands, unless there is a Federal nexus, such as when Federal funds are involved.

Summary of Changes From Proposed Rule

In developing the final critical habitat designation for *Astragalus holmgreniorum* and *A. ampullarioides*, we reviewed the comments received on our proposed rule, draft economic analysis, and draft environmental assessment, and conducted further evaluation of lands included in the proposal. Based on our review, we changed our proposed designation as follows:

(1) We adjusted the critical habitat boundaries of *Astragalus holmgreniorum* Subunits 2a and 2b to better capture existing occupied habitat that contains the PCEs, based on biological information received during the public comment period. This resulted in the addition of 26 ac (9 ha) in Subunit 2a, and the loss of 18 ac (6 ha) in Subunit 2b (see the revised proposed rule published on September 26, 2006, at 71 FR 56085).

(2) We adjusted the boundaries of Subunits 1a and 1c for *Astragalus holmgreniorum* so that they do not contain areas without the PCEs or areas that do not meet the designation criteria (are essential to the continued conservation of the species and require special management consideration or protection). This resulted in the removal of 191 ac (78 ha) and 2 ac (1 ha) respectively.

(3) Under section 4(b)(2) of the Act, we excluded Unit 2 for *Astragalus ampullarioides*. On September 18, 2006, Glenn Rogers, Band Chairman, signed the Shivwits Band of Paiutes Management Plan for *A. ampullarioides*. This management plan provides greater protection than critical habitat designation could provide. Because the management plan ensures that the conservation of *A. ampullarioides* can be achieved without the designation of critical habitat on Tribal lands, we are excluding Unit 2 from the final critical habitat designation (see 4(b)(2) Exclusions section below). This exclusion amounts to a reduction of 240

ac (97 ha) in the total critical habitat designation for *A. ampullarioides*.

(4) We modified the descriptions of the PCEs for clarity; however, the substance of the PCEs has not changed.

Critical Habitat

Critical habitat is defined in section 3 of the Act as (i) The specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) Essential to the conservation of the species and (II) that may require special management considerations or protection; and (ii) specific areas outside the geographical area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species. Conservation, as defined under section 3 of the Act, means to use and the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to the Act are no longer necessary. Such methods and procedures include, but are not limited to, all activities associated with scientific resources management such as research, census, law enforcement, habitat acquisition and maintenance, propagation, live trapping, and transplantation, and, in the extraordinary case where population pressures within a given ecosystem cannot be otherwise relieved, may include regulated taking.

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. Section 7 is a purely protective measure and does not require implementation of restoration, recovery, or enhancement measures.

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 using the best scientific data available, habitat areas that provide essential life cycle needs of the species

(i.e., areas on which are found the PCEs, as defined at 50 CFR 424.12(b)).

Habitat occupied at the time of listing 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 also may be excluded from critical habitat pursuant to section 4(b)(2).) Accordingly, when the best available scientific data do not demonstrate that the conservation needs of the species require additional areas, we will not designate critical habitat in areas outside the geographical area occupied by the species at the time of listing. However, an area currently occupied by the species but was not known to be occupied at the time of listing will likely, but not always, be essential to the conservation of the species and, therefore, typically included in the critical habitat designation.

The Service's 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 the associated Information Quality Guidelines issued by the Service, provide criteria, establish procedures, and provide guidance to ensure that decisions made by the Service represent the best scientific data available. They require Service biologists to the extent consistent with the Act and with the use of the best scientific 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 the associated Information Quality Guidelines issued by the Service.

Section 4 of the Act requires that we designate critical habitat on the basis of the best scientific data available. 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 recovery 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 recovery.

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, habitat conservation plans, or other species conservation planning efforts if new information available to these planning efforts calls for a different outcome.

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 designate as critical habitat, we consider physical and biological features (PCEs) that are essential to the conservation of the species, that are within areas occupied by the species at the time of listing, and that may require special management considerations and 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.

The specific PCEs required for *Astragalus holmgreniorum* and *A. ampullarioides* are derived from the biological needs of these milk-vetches as described in the proposed critical habitat designation (71 FR 15966; March 29, 2006).

Primary Constituent Elements for *Astragalus holmgreniorum*

Based on our current knowledge of the life history, biology, and ecology of the species and the requirements of the habitat to sustain the essential life history functions of the species, the primary constituent elements for *Astragalus holmgreniorum* are:

(1) Appropriate geological layers or soils that support individual *Astragalus holmgreniorum* plants. *A. holmgreniorum* is found on the Virgin Limestone member, middle red member, and upper red member of the Moenkopi Formation and the Petrified Forest member of the Chinle Formation (Harper and VanBuren 1997; Hughes 2005). Associated soils are defined by USDA *et al.* (1977 and 2000) as Badland; Badland, very steep; Eroded land-Shale complex, warm; Hobog-rock land association; Isom cobbley sandy loam; Ruesh very gravelly fine sandy loam; Gypill Hobog complex, 6 to 35 percent slopes; Gypill very cobbly sandy loam, 15 to 40 percent slopes; and Hobog-Grapevine complex, 2 to 35 percent slopes. These soils are generally found at elevations from 2,430 to 3,000 ft (756 to 914 m), support associated native plant species, and have a low presence or lack of *Larrea tridentata* (creosote bush).

(2) Topographic features/relief (mesas, ridge remnants, alluvial fans, and fan terraces, their summits and backslopes, and gently rolling to steep swales) and the drainage areas along formation edges with little to moderate slope (0 to 20 percent).

These topographic features/relief contribute to the soil substrate and vegetative community, natural weathering and erosion, and the natural surface and subsurface structure that provides minimally-altered or unaltered hydrological conditions (e.g., seasonally available moisture from surface or subsurface runoff) on which *Astragalus holmgreniorum* depends.

(3) The presence of insect visitors or pollinators, such as *Anthophora captognatha*, *A. dammersi*, *A. porterae*, *Anthophora* spp., *Eucera quadricincta*, *Bombus morrisonis*, *Hoplitis grinnelli*, *Osmia clarescens*, *O. marginata*, *O. titus*, *O. clavescens*, and two types of *Dialictus* sp.

Primary Constituent Elements for *Astragalus ampullarioides*

Based on our current knowledge of the life history, biology, and ecology of the species, the primary constituent elements for *Astragalus ampullarioides* are:

(1) Outcroppings of soft clay soil, often purple-hued, within the Chinle Formation and the Dinosaur Canyon

Member of the Moenave Formation, at elevations from 3,018 to 4,367 ft (920 to 1,330 m).

Plant species that are characteristically found on these clay soils within the Chinle Formation and can indicate the presence of this PCE were included in the Background section of the proposed critical habitat designation (71 FR 15966; March 29, 2006).

(2) Topographic features/relief, including alluvial fans and fan terraces, and gently rolling to steep swales, with little to moderate slope (3 to 24 percent), that are often markedly dissected by water flow pathways from seasonal precipitation.

Associated topographic features/relief contribute to the soil substrate and vegetative community described above, natural weathering and erosion, and the natural surface and subsurface structure that provides minimally altered or unaltered hydrological conditions (e.g., seasonally available moisture from surface or subsurface runoff) on which *Astragalus ampullarioides* depends.

(3) The presence of insect visitors or pollinators, such as *Anthophora captognatha*, *A. dammersi*, *A. porterae*, *Anthophora* spp., *Eucera quadricincta*, *Bombus morrisonis*, *Hoplitis grinnelli*, *Osmia clarescens*, *O. marginata*, *O. titus*, *O. clavescens*, and two types of *Dialictus* sp.

This designation is designed for the conservation of PCEs necessary to support the life history functions that were the basis for the proposal. Because not all life history functions require all the PCEs, not all critical habitat will contain all the PCEs. For more information regarding the PCEs essential to the conservation of *Astragalus holmgreniorum* and *A. ampullarioides*, see the proposal to designate critical habitat (71 FR 15966; March 29, 2006).

Criteria Used To Identify Critical Habitat

As required by section 4(b)(1)(A) of the Act, we use the best scientific data in determining areas that contain the features essential to the conservation of *Astragalus holmgreniorum* and *A. ampullarioides*. We reviewed available information that pertains to habitat requirements of these species. We reviewed the overall approach to conservation of both milk-vetches undertaken by local, State, and Federal agencies since their listing, and the recovery plan for the *A. holmgreniorum* and *A. ampullarioides* (2006).

We reviewed the available information pertaining to the historic and current distributions, life histories, habitats, and threats to these milk-

vetches. We obtained records of distribution for the milk-vetches from BLM Arizona Strip Field Office (BLM AZ); BLM St. George Field Office (BLM UT); Shivwits Band of Paiutes, Utah School and Institutional Trust Lands Administration (SITLA); Zion National Park; and Utah Valley State College (VanBuren, unpublished GIS data). We also reviewed data included in reports submitted during the section 7 consultation process; and published and unpublished documentation from our files. This information included BLM hand-mapped polygons that outlined occupied or potentially occupied habitats in Arizona and Utah, primarily developed prior to the species' listing (66 FR 49560, September 28, 2001).

For some sites, recent (2003 to 2005) survey information was available and evaluated to identify known plant locations (provided by Zion National Park, BLM UT, BLM AZ, SITLA, and Van Buren). Although occupied sites may gradually change, recent survey results confirm that plant distribution is similar to known distributions at the time of listing (66 FR 49560, September 28, 2001). We designated no areas outside the geographical area presently occupied by the species.

Our approach to delineating critical habitat units was applied in the following manner:

(1) We overlaid plant locations into a GIS database. This provided us with the ability to examine slope, aspect, elevation, vegetation community, and topographic features, such as drainages. Datapoints were used to determine the elevation ranges for both species. We found no correlation between aspect and occurrence location for either species. Some affiliation with slope for both species was evident; however, statistical correlation was not conclusive.

To better understand the landscape, we also examined soil series layers, aerial photography, and hardcopy geologic maps. We specifically focused our analysis on soil types and topographic features necessary to maintain slope and natural drainage for *Astragalus holmgreniorum* and *A. ampullarioides* populations. We were unable to find GIS layers pertaining to geologic survey. For this we visually compared known sites to hard-copy geologic maps. Since the maps were of insufficient resolution to further evaluate the purplish red clay soil found in small outcroppings within the Chinle and Moenave Formation, aerial photography was employed at times to further our understanding of these areas. We verified that *A. ampullarioides* is associated with the Petrified Forest

member of the Chinle, and Dinosaur Canyon member of the Moenave Formation. We verified that *A. holmgreniorum* is associated with the Virgin Limestone member, upper red member of the Moenkopi Formation, Chinle Shale, and Shinumo Conglomerate member of the Chinle Formation (Harper and Van Buren 1997), and also may be affiliated with the middle red member of the Moenkopi Formation (Hughes 2006).

For both *Astragalus holmgreniorum* and *A. ampullarioides*, we reviewed soil survey layers. No two sites of *A. ampullarioides* contained the same type of soil description (USDA *et al.* 1979). From this, we determined that the clay outcroppings, associated with the Petrified Forest member of the Chinle and Dinosaur Canyon member of the Moenave Formation on which *A. ampullarioides* is found, may not be large enough to be labeled under the USDA soil series. In Utah, *A. holmgreniorum* individuals are associated with Badland; Badland, very steep (84 percent); Hobog-Rock land association (9 percent); and Isom cobbly sand loam, 3–30 percent slope (5 percent) (USDA *et al.* 1977, pp. 7–10, 12–13, 20–22, 30–31, 34, 44, 48, 124–129). Although we lacked the same degree of information in Arizona, we found that documented sites appeared to be related to Ruesch very gravelly fine sandy loam, 3–20 percent slopes; Gypill-Hobog complex, 6–35 percent slopes; Gypill very cobbly sandy loam, 15–40 percent slopes; and Hobog-Grapevine complex, 2–35 percent slopes (as defined in USDA *et al.* 2000, pp. 1–15, 65–68, 73–74, 113–114).

(2) When appropriate, we used geographic features (*e.g.*, ridge lines, valleys, streams, elevation) or manmade features (*e.g.*, roads) that created an obvious boundary to delineate a unit area boundary. In some cases, we were unable to provide obvious boundaries, so unit boundaries were drawn to encompass PCEs on the basis of the best available information.

(3) We drew critical habitat boundaries that captured the locations, soils, and slopes elucidated under (1) above while considering the boundaries identified in (2) above. We described and mapped critical habitat designations using Universal Transverse Mercator (UTM) North American Datum 83 (NAD 83) coordinates.

(4) When the resulting units were smaller than 124 ac (50 ha), we increased the unit size to 124 ac (50 ha) by using the average travel distance for pollinators of *Astragalus holmgreniorum* and *A. ampullarioides*. We believe that this increase in unit size

is essential to ensure sufficient pollinator populations for the reproduction of *Astragalus holmgreniorum* and *A. ampullarioides*. Specifically, where necessary, units or subunits were enlarged to 124 ac (50 ha) by including habitat within a 1,312 ft (400 m) radius of the known plant locations within the unit. This step applied to Subunits 2b and 3 for *A. holmgreniorum*, and Units 1, 2, 3, and Subunit 4a for *A. ampullarioides*. Unit 3 for *A. ampullarioides* is bordered by development on its western edge; therefore, we did not incorporate 1,312 ft (400 m) on its western edge.

This critical habitat designation includes representatives of all known populations of *Astragalus holmgreniorum* and *A. ampullarioides*, and habitats that possess the physical and biological features essential to the conservation of the species and require special management considerations or protection. Application of these criteria (1) Protects habitat that contains the PCEs in areas where *A. holmgreniorum* and *A. ampullarioides* are known to occur; (2) maintains the current ecological distribution to preserve genetic variation within the range of *A. holmgreniorum* and *A. ampullarioides* to minimize the effects of local extinction; (3) minimizes fragmentation by establishing contiguous occurrences and maintaining existing connectivity; (4) includes sufficient pollinator habitat; and (5) protects the seed bank to ensure long-term persistence of the species.

Much of the survey and field data on which this designation is based represent observed individuals during one point in time. Due to annual population fluctuations associated with varying local environmental factors (*e.g.*, precipitation, seed germination), it is likely that individual plants and occurrences exist but were not identified in recent surveys (Van Buren and Harper 2003b; 66 FR 49560, September 28, 2001). Identification of these areas as critical habitat ensures maintenance of connectivity between currently known occupied habitats over the long term. Gene flow is also maintained by securing sufficient area for pollinator habitats and travel corridors.

These habitats also ensure protection of seed banks, seed dispersal, and pollinator services that are essential for long-term persistence of *Astragalus holmgreniorum* and *A. ampullarioides* (Van Buren 2005; Tepedino 2005). These seeds represent genetic information of past parents and their retention affects fitness and demography and reduces the expected inbreeding coefficient (McCue and Holtsford 1998).

Seed banks also ensure population persistence in periods of drought or other stressful environmental conditions (Van Buren 2005). The surrounding plant community provides the floral resources and habitat necessary to maintain pollinators and potential seed dispersers (e.g., birds, small mammals). Land within this designation supports the PCEs for the species that are necessary for the growth, reproduction, and establishment of *A. holmgreniorum* and *A. ampullarioides*.

When determining critical habitat boundaries, we made an effort to avoid developed areas such as buildings, paved areas, boat ramps and other structures that lack PCEs for *Astragalus holmgreniorum* and *A. ampullarioides*. Manmade features within the boundaries of the mapped unit, such as buildings, roads, parking lots, and other paved areas, do not contain any of the PCEs for *A. holmgreniorum* and *A. ampullarioides*. The road prism for I-15, which includes the asphalt road, designated emergency pull-outs or safety turn-a-rounds, and surfaces that do not contain natural soils (such as gravel edges) or native vegetation are not included within critical habitat. However, the scale of maps prepared for publication within the Code of Federal Regulations may not reflect the exclusion of such developed areas. Any such structures and the land under them inadvertently left inside critical habitat boundaries shown on the maps of this rule have been excluded by text and are not designated as critical habitat. Therefore, Federal actions limited to these areas would not trigger section 7 consultations, unless they affect the species or PCEs in adjacent critical habitat.

We are designating critical habitat on lands that we have determined are occupied at the time of listing and contain sufficient PCEs to support life history functions essential for the conservation of the species.

Three units for *Astragalus holmgreniorum*, including five subunits, are designated based on PCEs being present that support *A. holmgreniorum* life processes. For *A. ampullarioides*, four units, including two subunits, are designated based on PCEs being present that support *A. ampullarioides* life processes. Most units contain all PCEs; however, some segments contain only a portion of the PCEs necessary to support *A. holmgreniorum*'s and *A. ampullarioides*'s particular use of that habitat. A brief discussion of each area designated as critical habitat is provided in the Critical Habitat Designation section below.

Special Management Considerations or Protections

When designating the three critical habitat units, including Subunits 1a, 1b, 1c, 2a, and 2b, for *Astragalus holmgreniorum*, and the four critical habitat units, including Subunits 4a and 4b, for *A. ampullarioides*, we assessed whether the areas determined to be occupied at the time of listing and containing the primary constituent elements may require special management considerations or protections. As discussed in more detail in the proposed critical habitat designation (71 FR 15966, September 26, 2006) and in the unit and subunit descriptions below, we found that the features essential to the conservation of *A. holmgreniorum* and *A. ampullarioides*, in all areas we are

designating, may require special management considerations and protections, including measures necessary to alleviate the effects of urban development, retaining plants and their habitat on Federal lands, fencing small populations, removing or limiting access routes, ensuring vehicles and pedestrians stay on designated routes, reducing land use practices that disturb the hydrologic regime, minimizing the effects of grazing and recreation use, managing invasive nonnative plant species, evaluating revegetation and restoration with native plant species, developing adequate fire management buffers for these plant species and their habitat, and educating fire management staff on the location of the plants. Additionally these areas may require special management considerations and protections for ground-nesting and local pollinator communities.

Critical Habitat Designation

Astragalus holmgreniorum

We are designating three units, including five subunits, as critical habitat for the *Astragalus holmgreniorum*. The critical habitat areas described below constitute our best assessment at this time of areas determined to be occupied at the time of listing, that contain the primary constituent elements essential for the conservation of the species, and that may require special management or protection. We determined that no additional areas were essential to the conservation of *A. holmgreniorum*. The units and subunits designated as critical habitat are listed in Table 1 and occupied areas are displayed in Table 2.

TABLE 1.—CRITICAL HABITAT UNITS DESIGNATED FOR ASTRAGALUS HOLMGRENIORUM

Unit or subunit name	BLM AZ Federal	BLM UT Federal	Arizona state lands	Utah state lands	County land	Private lands	Totals
Occupied Acres (Hectares)							
Unit 1—Utah-Arizona Border:							
1a State Line	362 (146)	1,767 (715)	934 (378)	752 (304)	.....	21 (9)	3,836 (1,552)
1b Gardner Well .....	.....	.....	564 (228)	.....	.....	.....	564 (228)
1c Central Valley .....	.....	.....	.....	1,144 (463)	.....	2 (1)	1,146 (464)
Unit 2—Santa Clara:							
2a Stucki Spring .....	.....	438 (177)	.....	.....	.....	.....	438 (177)
2b South Hills .....	.....	124 (50)	.....	.....	.....	5 (2)	129 (52)
Unit 3—Purgatory Flat .....	.....	118 (48)	.....	.....	22 (9)	36 (15)	176 (72)
Totals	362 (146)	2,447 (990)	1,498 (606)	1,896 (767)	22 (9)	64 (27)	6,289 (2,545)

TABLE 2.—OCCUPANCY OF CRITICAL HABITAT UNITS DESIGNATED FOR THE ASTRAGALUS HOLMGRENIORUM

Unit or subunit name	Occupied at time of listing?	Occupied currently?	Acres (Hectares)
Unit 1—Utah Arizona Border: 1a State Line	yes	yes	3,836 (1,552)

TABLE 2.—OCCUPANCY OF CRITICAL HABITAT UNITS DESIGNATED FOR THE *ASTRAGALUS HOLMGRENIORUM*—Continued

Unit or subunit name	Occupied at time of listing?	Occupied currently?	Acres (Hectares)
1b Gardner Well	yes	yes	564 (228)
1c Central Valley	yes	yes	1,146 (464)
Unit 2—Santa Clara:			
2a Stucki Spring	yes	yes	438 (177)
2b South Hills	yes	yes	129 (52)
Unit 3—Purgatory Flat	yes	yes	176 (72)
Total .....	.....	.....	6,289 (2,545)

We present brief descriptions of all units, and reasons why they meet the definition of critical habitat for *Astragalus holmgreniorum*, below.

Unit 1—Utah-Arizona Border

This unit consists of approximately 5,546 ac (2,244 ha) divided into three subunits: State Line, Gardner Well, and Central Valley. This unit contains PCEs and is important to the conservation of *Astragalus holmgreniorum* because it is one of only three populations of the plant and is the largest population of the species.

Subunit 1a—State Line

This subunit, known to be occupied at the time of listing, consists of 3,836 ac (1,552 ha), with 9 percent managed by BLM AZ, 44 percent managed by BLM UT, 23 percent managed by ASLD, 19 percent managed by SITLA, and 5 percent private land or land ownership unknown. Subunit 1a is located east and west of I-15 as this highway crosses the State line of Arizona and Utah, and is bounded by the Atkinville Wash and Virgin River to the north. Documents pertaining to occupancy, soil type, and land formations were evaluated to determine unit boundaries.

Administrative lines were used for boundaries on the west and east sides of the unit, and soil type, land features, and straight connecting lines were used for northern and southern boundaries of the unit.

Recent surveys on lands managed by SITLA (Van Buren 2004, p. 3) and BLM UT (Van Buren 2005) west and east of I-15 confirmed occupancy of *Astragalus holmgreniorum* individuals, and BLM AZ (Hughes 2005) verified *A. holmgreniorum* in several locations on BLM and ASLD lands. Suitable habitat conditions supporting the identified PCEs occur throughout the area. Land between sections 31, 32, and 8 contains known PCEs for *A. holmgreniorum*; however, information is incomplete on intervening occupancy.

Subunit 1a has features that are essential to the conservation of the species, and it supports the highest number of individuals documented to

date (Service 2006) within a continuous geographic area, fragmented only by I-15. *Astragalus holmgreniorum* also occupies land found between the northbound and southbound lanes of I-15. This intervening area within the highway right-of-way may allow pollinator flow between sites situated west and east of the highway (Douglas 2005). As a large population, subunit 1a retains importance as representative of the species' potential range of genetic diversity. Species surveys documented a high number of seedlings (Van Buren 2004, p. 2; 2005, p. 16), which indicates that this subunit supports a large seed bank. This information indicates a viable seed bank, the protection of which enhances the genetic diversity and boosts the likely persistence of the species (Van Buren 2003, p. 6). Seed bank protection is necessary for long-term species persistence (McCue and Holtsford 1998, p. 35).

Special management considerations may be required to control invasive plant species, to control habitat degradation due to activities that lead to erosion, to maintain the identified vegetation types, and to maintain pollinator habitat essential to the conservation of the species. The BLM AZ and BLM UT do not currently have a management plan specific to *Astragalus holmgreniorum*; however, the agency worked in partnership with the Service on a recovery plan for the species (71 FR 57557, September 29, 2006). The BLM UT states that the timing of cattle grazing has been adjusted to avoid the flowering period for the species (Douglas 2004). Additionally SITLA is signatory to a Letter of Intent intended to place roughly 175 ac (71 ha) of land occupied by *A. holmgreniorum* into long-term conservation (SITLA et al. 2005, pp. 3–4).

Subunit 1b—Gardner Well

Subunit 1b consists of 564 ac (228 ha), entirely managed by ASLD. This subunit is found in Arizona, south of the Arizona-Utah State border, 2 mi (3.2 km) east of I-15. Reconnaissance maps

dating to the early 1990s and herbarium information for *Astragalus holmgreniorum* indicate plant occupancy on ASLD lands. The acreage proposed within this subunit was further refined based on known plant locations, geologic maps, and occurrence of PCEs, including soil types.

This subunit is determined to be critical habitat because it contains features essential to the conservation of *Astragalus holmgreniorum*, is occupied by the species, and represents the southeastern-most site in Arizona within the primary population, as discussed in the final listing rule (66 FR 49560, September 28, 2001). Yearly monitoring indicates a relatively high density of *A. holmgreniorum* (Van Buren and Harper 2004a, p. 6). In 2005, the Gardner Well monitoring site contained an estimated 150 plants, all seedlings (Van Buren 2005). The abundance of seedlings indicates a persistent seed bank that is considered important for genetic diversity and local survivorship (McCue and Holtsford 1998, pp. 34–35; Van Buren 2003, p. 6; Van Buren 2005). This subunit also is historically significant because it includes the type locality (the location of the specimen from which the original species' description was made) for the species.

Special management may be required to minimize disturbance to the surface structure within this subunit, to control invasive species, to maintain the identified vegetation types, and to maintain pollinator habitat essential to the conservation of the species. Currently, no management plan has been developed for these lands.

Subunit 1c—Central Valley

Subunit 1c consists of 1,146 ac (464 ha), entirely managed by SITLA. This subunit is found north of the Arizona-Utah State border, west of a geological feature called White Dome, and east of I-15. This subunit is determined to be critical habitat because it contains features essential to conservation of *Astragalus holmgreniorum*, it is

occupied by the species, and contains a large, densely occupied portion of the primary population described in the final listing rule (66 FR 49560; September 28, 2001). This subunit contains the second largest continuous land base for *A. holmgreniorum* and the second largest number of individuals counted to date (Van Buren 2003, p. 5).

Approximately 99.8 percent of plants identified in the 2003 surveys were seedlings (Van Buren 2003, p. 6). The high number of seedlings and near lack of reproductive adults indicates a historic seed bank (Van Buren and Harper 2004a, pp. 3–4). Protection of known seed banks is essential for long-term survival of the species. The retention of these seeds can have a dramatic effect on demography and reduce the expected inbreeding coefficient (McCue and Holtsford 1998, p. 34). Seed banks also ensure population persistence during periods of changing environmental conditions (Facelli, Chesson, and Barnes 2005, pp. 3001–3003).

Plants within this subunit are threatened by urban development. Special management may be required to minimize disturbance to the surface and subsurface structure within this subunit, and to maintain the identified soil and vegetation types. No management plan currently exists. A Letter of Intent signed by SITLA indicates a willingness to develop a management plan for this species on a limited portion of their property; however, SITLA plans to develop a master planned community in the area (SITLA *et al.* 2005, pp. 5–6).

Unit 2—Santa Clara Unit

Unit 2 comprises 567 ac (229 ha) divided into two subunits: Stucki Spring and South Hills. Unit 2 contains the PCEs, and is also important to conserving genetic diversity of the taxon because plants in this area contain a unique genetic marker not present in the other two populations (Stubben 1997, p. 46). Therefore, the two subunits in the Santa Clara Unit are needed to conserve genetic variation held within the gene pool for this taxon (Van Buren 2005). Additionally, this unit represents one of only three known populations of the species.

Subunit 2a—Stucki Spring

Subunit 2a consists of 438 ac (177 ha) managed by BLM UT. This unit is found west of Box Canyon, in an area before Box Canyon Wash narrows, and near Stucki Spring. *Astragalus holmgreniorum* was known to occupy this subunit at the time of listing (66 FR 49560; September 28, 2001). In 2005,

individuals were confirmed in a roadside visit (Van Buren 2005).

This subunit is determined to be critical habitat because it contains features essential to conservation of *Astragalus holmgreniorum*, is occupied by the species, supports genetic diversity, and provides connectivity between Subunits 1a (State Line) and 1c (Central Valley) to the south, and Subunit 2b (South Hills) to the north. The land within this unit supports the PCEs for the species that are necessary for the growth, reproduction, and establishment of *Astragalus holmgreniorum*.

Special management may be required in this subunit to minimize habitat fragmentation, to minimize disturbance to the surface and subsurface structure due to recreation or other activities, and to maintain the identified soil and vegetation types. Plants within this subunit are currently threatened by unmanaged ORV use. Additionally, BLM is considering selling adjacent areas for urban development; we anticipate that the proximity of the development would result in an indirect effect to *Astragalus holmgreniorum*. BLM UT does not currently have a management plan specific to *A. holmgreniorum*, but the agency worked with us to develop a recovery plan for this species (71 FR 57557, September 29, 2006). The objective of the Santa Clara River Reserve Recreation and Open Space Management Plan is development of user-specific trails and areas of activities to reduce the effects of unregulated and potentially damaging activities on habitat components, including plants (USDI 2005, p. 10). However, specific details regarding facility locations, impacts, and conservation measures have not been identified.

Subunit 2b—South Hills

Subunit 2b consists of approximately 129 ac (52 ha), with 97 percent managed by BLM UT and 3 percent private lands (or land ownership unknown). This subunit was known to be occupied at the time of listing (66 FR 49560; September 28, 2001). A 2005 survey of the area documented a healthy number of plants in this subunit (Van Buren 2005).

This subunit is determined to be critical habitat because it contains features essential to conservation of *Astragalus holmgreniorum*, is occupied by the species, supports genetic diversity, and represents the northcentral-most occupied site of the species. The land within this subunit supports the PCEs necessary for the

growth, reproduction, and establishment of *A. holmgreniorum*.

Special management may be required to minimize urban encroachment, maintain land in Federal ownership, reduce disturbance to the surface and subsurface structure, control invasive species, maintain the identified vegetation types, and maintain pollinator habitat essential to the conservation of the species. Plants within this subunit are threatened by urban development, land trades, and recreation. Public land sales are authorized for eligible parcels under the Federal Land Transaction Facilitation Act of 2000 (Crisp 2004). BLM is working with the city of Santa Clara and the local community to sell approximately 1,400 ac (567 ha) in the Santa Clara area. This proposed sale is believed to contain all *Astragalus holmgreniorum* individuals in this subunit. The intent of the local community would be to develop the land for residential housing.

Unit 3—Purgatory Flat

Unit 3 consists of approximately 176 ac (72 ha) of land; 68 percent is managed by BLM UT, and 32 percent is under private ownership or county ownership. Part of the critical habitat contains lands within a regional shooting range. The final listing rule (66 FR 49561, September 28, 2001) indicated that there were 30 to 300 plants at this location. More recent site visits confirm the presence of individual plants (Barnes 2005; Van Buren 2005); however, a census was not conducted.

Purgatory Flat is determined to be critical habitat because it contains features essential to conservation of *Astragalus holmgreniorum*, is occupied by the species, and represents the northeastern-most occupied site and third known population. This unit is the farthest from all other critical habitat units. Distant populations are often the most active regions of speciation and may be important for protecting genetic diversity (Lesica and Allendorf 1995, p. 756). The land within this unit supports the PCEs that are necessary for the growth, reproduction, and establishment of *A. holmgreniorum*.

Special management may be required to minimize disturbance to the surface structure within this subunit, control invasive species, maintain the identified vegetation types, and maintain pollinator habitat essential to the conservation of the species.

Astragalus ampullarioides

We are designating four units, including two subunits, as critical habitat for *Astragalus ampullarioides*.

The critical habitat areas described below constitute our best assessment at this time of areas determined to be occupied at the time of listing, that contain the primary constituent elements essential for conservation of the species, and that may require special

management, and additional areas found to be essential to the conservation of *A. ampullarioides*.

Table 3 summarizes areas that meet the definition of critical habitat for *Astragalus ampullarioides* but are excluded from critical habitat under

section 4(b)(2) of the Act (discussed below). Table 4 provides the approximate area designated as critical habitat for *A. ampullarioides* by land ownership. Table 5 indicates current occupancy.

TABLE 3.—AREAS DETERMINED TO MEET DEFINITION OF CRITICAL HABITAT FOR ASTRAGALUS AMPULLARIOIDES (DEFINITIONAL AREA) BUT THAT ARE EXCLUDED UNDER SECTION 4(b)(2)

Unit	Definitional area acres (Hectares)	Excluded area acres (Hectares)	Total Acres (Hectares)
Unit 2—Shivwits	240 (97)	240 (97)	240 (97)

TABLE 4.—CRITICAL HABITAT UNITS DESIGNATED FOR ASTRAGALUS AMPULLARIOIDES

Unit or Subunit name	BLM-UT Federal	NPS Federal	Tribal lands Shivwits Band of Pauite	Utah State lands	Private lands	Totals
Occupied Acres (Hectares)						
Unit 1—Pahcoon Spring Wash	134 (54)	.....	.....	76 (31)	1 (.4)	134 (54)
Unit 3—Coral Canyon	10 (4)	.....	.....	.....	.....	87 (35)
Unit 4—Harrisburg Junction .....	.....	.....	.....	.....	.....	.....
4a—Harrisburg Bench & Cottonwood	260 (105)	.....	.....	.....	37 (15)	297 (120)
4b—Silver Reef	415 (168)	.....	.....	.....	47 (19)	462 (187)
Unit 5—Zion .....	.....	1,201 (486)	.....	.....	.....	1,201 (486)
Totals	819 (331)	1,201 (486)	.....	76 (31)	85 (34)	2,181 (883)

TABLE 5.—OCCUPANCY OF CRITICAL HABITAT UNITS DESIGNATED FOR ASTRAGALUS AMPULLARIOIDES

Unit or Subunit name	Occupied at time of listing?	Occupied currently?	Acres (hectares)
Unit 1—Pahcoon Spring Wash	yes	yes	134 (54)
Unit 3—Coral Canyon	yes	yes	87 (35)
Unit 4—Harrisburg Junction	yes	yes .....	.....
4a—Harrisburg Bench & Cottonwood	yes	yes	297 (120)
4b—Silver Reef	yes	yes	462 (187)
Unit 5—Zion	yes	yes	1,201 (486)
Totals .....	.....	.....	2,181 (883)

We present brief descriptions of all units, and reasons why they meet the definition of critical habitat for the *Astragalus ampullarioides* below.

Unit 1—Pahcoon Spring Wash

This unit includes 134 ac (54 ha), all on BLM UT lands adjacent to the Shivwits Indian Reservation. *Astragalus ampullarioides* was known to occupy this area at the time of listing. This population occurs in a small area where the density of *A. ampullarioides* is high (Van Buren and Harper 2004b, p. 3). In 2005, this population was estimated to contain approximately 300 to 350 individuals (Van Buren 2005). Unit 1 is determined to be critical habitat because it contains features essential to conservation of *A. ampullarioides*, is occupied by the species, and represents the northwestern-most occurrence of the

species. Resources within this unit support the identified PCEs associated with outcroppings of the Chinle Formation.

Special management may be required to minimize disturbance to the surface and subsurface structure within this unit, to control invasive species, to maintain the identified vegetation types, and to maintain pollinator habitat essential to the conservation of the species. Cattle grazing activities are present within this unit. The Chinle soils are soft and easily susceptible to erosion. A cost-share agreement between BLM UT and The Nature Conservancy (TNC) provides funding for signs and protective fencing; contracting for the fence is in process. As a part of the agreement, BLM UT and TNC will compare past plant survey data with population surveys to be completed in

2007 and 2009 to evaluate the effectiveness of the fence in eliminating habitat degradation.

Unit 3—Coral Canyon

This unit, known to be occupied at the time of listing, is located adjacent to a golf course near Harrisburg Junction, and was estimated to contain 100 individuals in 2005 (Van Buren 2005). Land ownership for the 87 ac (35 ha) is 87 percent SITLA, 12 percent BLM UT, and 1 percent private. We included occupied habitats and adjacent areas of suitable soils and vegetation to allow for maintenance of the seed bank, seed dispersal, and pollinator services.

This unit is determined to be critical habitat because it contains features essential to conservation of the taxon, is occupied by the taxon, is centrally located and may provide connectivity

between populations, and contains a persistent occupied site of *Astragalus ampullarioides*.

Plants within this subunit face threats from urban development. Special management may be required to minimize disturbance to the surface and subsurface structure within this subunit, maintain the identified soil and vegetation types, and control invasive weeds.

Unit 4—Harrisburg Junction

In 2001, the final listing rule (66 FR 49560; September 28, 2001) referred to a population near Harrisburg Junction that contained four separate sites. Unit 4 is comprised of two subunits encompassing 759 ac (307 ha) that are spatially separated based on geography (Harrisburg Bench/Cottonwood and Silver Reef). Each of these subunits contains two of the plant occurrence sites that were known to be occupied at the time of the final listing rule (66 FR 49560; September 28, 2001). In 1999, the 4 sites contained approximately 300 plants (England 1999; Utah Natural Heritage Program 1999; Van Buren 2000).

In the area of Harrisburg Junction, *Astragalus ampullarioides* populations or subpopulations are restricted to outcroppings of the Chinle soil. Each area may be relatively self-sustaining; however, their long-term persistence and stability relies on a balance of site extinctions and colonization of suitable, unoccupied outcroppings through dispersal events (Hanski 1985, p. 341; Olivieri *et al.* 1990, pp. 207–209; Hastings and Harrison 1994, pp. 175–176, 180).

Subunit 4a—Harrisburg Bench and Cottonwood

This 297-ac (120-ha) subunit is 88 percent BLM land and 12 percent private land. Approximately 100 individual plants were located in this subunit during 2005 surveys (Van Buren 2005). This subunit contains PCEs necessary to support *Astragalus ampullarioides* growth, reproduction, and establishment. Land found between the northbound and southbound lanes of I-15 contains an occupied site. This intervening area within the highway right-of-way may allow pollinator flow between occupied sites (Douglas 2005). Habitat areas between known occupied sites are included in the critical habitat designation to support pollinators and seed dispersal between sites. Pollinator habitat and seed dispersal are considered important for the species' long-term survival (Steffan-Dewenter and Tscharntke 1999, pp. 437–438; Steffan-Dewenter 2003, pp. 1039–1040;

Greenleaf 2005, pp. 72–74; Van Buren and Harper 2003a, p. 242).

This subunit is determined to be critical habitat because it contains features essential to conservation of *Astragalus ampullarioides*, is occupied by the species, and contains a persistent occupied site for *A. ampullarioides* that is centrally located and may provide connectivity between other units.

At the Harrisburg site, *Bromus tectorum* (cheatgrass) is a closely associated species (Van Buren 2005, p. 14). Part of this unit, east of I-15, burned during a wildfire in 2005; however, no suppression occurred in areas of occupied habitat. The status of seeds within the seed bank is unknown. Also unknown, but likely, is that most of the above-ground stems and foliage died back at the time of the fire (Van Buren 2005, p. 14). Revisits in 2006 indicated that *Astragalus ampullarioides* occupies the site and was not adversely affected by the fire (Van Buren 2006).

Plants within this subunit may be threatened by urban development, recreation, and invasive plant species. Special management may be required to control invasive plant species, minimize disturbance to the surface and subsurface structure, and maintain the identified soil and vegetation types. BLM UT and TNC have entered into a cost-share agreement to provide signs and protective fencing to minimize human use at one occupied area within this subunit.

Subunit 4b—Silver Reef

The 462 ac (187 ha) in this subunit are composed of 90 percent BLM lands and 10 percent private lands. *Astragalus ampullarioides* individuals are found along intermittent outcroppings of the Chinle Formation. Approximately 150 individuals were identified in a partial survey in 2005 (Van Buren 2005). This subunit is determined to be critical habitat because it contains features essential to conservation of *A. ampullarioides*, is occupied by the species, contains a thriving population, and maintains a prevalence of soil substrate necessary for future expansion to maintain metapopulation dynamics.

Special management may be required to minimize recreational use and disturbance to the soil surface and subsurface structure, control invasive plant species and domestic animals, maintain the identified vegetation types, and maintain pollinator habitat essential to the conservation of the species. Quantitative information on impacts from cattle grazing or recreational use is unknown. One occupied area within this subunit is under a cost-share

agreement for protective fencing, which is to begin in the near future.

Monitoring will be used to evaluate the effectiveness of the fences in eliminating habitat degradation from cattle and recreational use. Additional areas in this subunit remain unfenced, and special management may still be necessary to reduce impacts to habitat.

Unit 5—Zion

The 1,201 ac (486 ha) in Unit 5 occur entirely on lands managed by Zion National Park. The population consisted of approximately 300 to 500 individuals in 2000 (66 FR 49560; September 28, 2001). More recent surveys document almost 4,200 individuals in the unit (Miller 2006).

This unit is determined to be critical habitat because it contains features essential to conservation of *Astragalus ampullarioides*, is occupied by the species, is one of five known populations, represents the northeastern-most range of the species, and contains the largest known population of the species. The land within this unit supports the PCEs necessary for growth, reproduction, and establishment.

Special management is necessary in this unit to minimize recreation disturbance to the soil surface and subsurface structure, control invasive weedy species, maintain the identified vegetation types, and maintain pollinator habitat essential to the conservation of the species. Recreational use of Zion National Park and disturbance from park visitors and horses may affect *Astragalus ampullarioides*. An established hiking and horse trail that is used infrequently from November through April occurs near populations of *Astragalus ampullarioides*.

Plants and habitat within this unit also are threatened by invasive nonnative plants, including *Moluccella laevis* (bells of Ireland), an introduced species not found at other sites. Although this unit is in a sparsely vegetated habitat that in the past did not carry fire, the invasions of exotic grasses are creating more continuous fuels. No management plan exists specific to *Astragalus ampullarioides* in Zion National Park; however, the current Zion National Park Fire Management Plan includes restrictions on fire management within a 0.75-mi (1.2-km) buffer zone of the area where *A. ampullarioides* is found. Zion National Park worked with us to complete a recovery plan for the species (71 FR 57557, September 29, 2006), and is partnering with the USGS to investigate

biotic soil conditions and invasive weed interactions with *A. ampullarioides*.

Effects of Critical Habitat Designation

Section 7 Consultation

Section 7 of the Act requires Federal agencies, including the Service, to ensure that actions they fund, authorize, or carry out are not likely to destroy or adversely modify critical habitat. In our regulations at 50 CFR 402.02, we define destruction or adverse modification as “a direct or indirect alteration that appreciably diminishes the value of critical habitat for both the survival and recovery of a listed species. Such alterations include, but are not limited to, alterations adversely modifying any of those physical or biological features that were the basis for determining the habitat to be critical.” However, recent decisions by the 5th and 9th Circuit Court of Appeals have invalidated this definition. Pursuant to current national policy and the statutory provisions of the Act, destruction or adverse modification is determined on the basis of whether, with implementation of the proposed Federal action, the affected critical habitat would remain functional (or retain the current ability for the primary constituent elements to be functionally established) to serve the intended conservation role for the species.

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. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402.

Section 7(a)(4) of the Act requires Federal agencies to confer with us on any action that is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed critical habitat. This is a procedural requirement only. However, once proposed species becomes listed, or proposed critical habitat is designated as final, the full prohibitions of section 7(a)(2) apply to any Federal action. The primary utility of the conference procedures is to maximize the opportunity for a Federal agency to adequately consider proposed species and critical habitat and avoid potential delays in implementing their proposed action as a result of the section 7(a)(2) compliance process, should those species be listed or the critical habitat designated.

Under conference procedures, the Service may provide advisory conservation recommendations to assist the agency in eliminating conflicts that may be caused by the proposed action. The Service may conduct either informal or formal conferences. Informal conferences are typically used if the proposed action is not likely to have any adverse effects to the proposed species or proposed critical habitat. Formal conferences are typically used when the Federal agency or the Service believes the proposed action is likely to cause adverse effects to proposed species or critical habitat, inclusive of those that may cause jeopardy or adverse modification.

The results of an informal conference are typically transmitted in a conference report; the results of a formal conference are typically transmitted in a conference opinion. Conference opinions on proposed critical habitat are typically prepared according to 50 CFR 402.14, as if the proposed critical habitat were designated. We may adopt the conference opinion 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)). As noted above, any conservation recommendations in a conference report or opinion are strictly advisory.

When a species is listed or critical habitat is designated, section 7(a)(2) of the Act 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. As a result of this consultation, compliance with the requirements of section 7(a)(2) will be documented through the Service's issuance of (1) A concurrence letter for Federal actions that may affect, but are not likely to adversely affect, listed species or critical habitat; or (2) a biological opinion for Federal actions that may affect, but are likely to adversely affect, listed species or critical habitat.

When we issue a biological opinion concluding that a project is likely to result in jeopardy to a listed species or 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 jeopardy to the listed species or 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 reinitiate consultation on previously reviewed actions in instances where a new species is listed or critical habitat is subsequently designated that may be affected 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 reinitiation of consultation with us on actions for which formal consultation has been completed, if those actions may affect subsequently listed species or designated critical habitat or adversely modify or destroy proposed critical habitat.

Federal activities that may affect the *Astragalus holmgreniorum* and *A. ampullarioides* or their designated critical habitat will require section 7 consultation under the Act. Activities on State, Tribal, local, or private lands requiring a Federal permit (such as a permit from the U.S. Army Corps of Engineers under section 404 of the Clean Water Act or a permit under section 10(a)(1)(B) of the Act from the Service) or involving some other Federal action (such as funding from Federal Highway Administration, Federal Aviation Administration, or Federal Emergency Management Agency) also will be subject to the section 7 consultation process. Federal actions not affecting listed species or critical habitat, and actions on State, Tribal, local, or private lands that are not federally funded, authorized, or permitted, do not require section 7 consultations.

Application of the Jeopardy and Adverse Modification Standards for Actions Involving Effects to *Astragalus holmgreniorum* and *A. ampullarioides* and Their Critical Habitat

Jeopardy Standard

Following designation of critical habitat, the Service will apply an analytical framework for *Astragalus*

holmgreniorum and *A. ampullarioides* jeopardy analyses that relies heavily on the importance of core area populations to the survival and recovery of the species. The section 7(a)(2) analysis is focused not only on these populations but also on the habitat conditions necessary to support them.

The jeopardy analysis usually expresses the survival and recovery needs of *Astragalus holmgreniorum* and *A. ampullarioides* in a qualitative fashion without making distinctions between what is necessary for survival and what is necessary for recovery. Generally, if a proposed Federal action is incompatible with the viability of the affected core area population(s), inclusive of associated habitat conditions, a jeopardy finding is considered to be warranted, because of the relationship of each core area population to the survival and recovery of the species as a whole.

Adverse Modification Standard

The analytical framework described in the Director's December 9, 2004, memorandum will be used to complete section 7(a)(2) analyses for Federal actions affecting *Astragalus holmgreniorum* and *A. ampullarioides* critical habitat. The key factor related to the adverse modification determination is whether, with implementation of the proposed Federal action, the affected critical habitat would remain functional (or retain the current ability for the primary constituent elements to be functionally established) to serve the intended conservation role for the species. Generally, the conservation role of *A. holmgreniorum* and *A. ampullarioides* critical habitat units is to support viable core area populations.

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 species.

Activities that may destroy or adversely modify critical habitat are those that alter the PCEs to an extent that the conservation value of critical habitat for the *Astragalus holmgreniorum* and *A. ampullarioides* is appreciably reduced. Activities that, when carried out, funded, or authorized by a Federal agency, may affect critical habitat and therefore result in consultation for the *A. holmgreniorum* and *A. ampullarioides* include, but are not limited to:

(1) Activities that have the potential to degrade or destroy *Astragalus holmgreniorum* and *A. ampullarioides* and their PCEs, including ORV use, heavy recreational use, residential or commercial development, road development, intensive livestock grazing, and herbicide use;

(2) Alteration of existing hydrology by redirection of sheet flow from areas adjacent to formation skirts or hillsides, e.g., clearing upslope from *Astragalus holmgreniorum* and *A. ampullarioides*;

(3) Compaction of the soil through the establishment of trails and roads;

(4) Activities that foster the introduction of nonnative vegetation, particularly noxious weeds, or create conditions that encourage the growth of nonnatives, e.g., supplemental feeding of livestock, ORV use that causes ground disturbance, road construction, creation and maintenance of utility corridors, seeding with nonnatives, and other activities that cause soil disturbance;

(5) Activities that directly or indirectly result in increased erosion, decreased soil stability, and changes in vegetation communities, e.g., placing off-road trailheads along critical habitat, which may lead to congregation of recreational users in a sensitive location; and

(6) Sale or exchange of lands by a Federal agency to an entity that intends to develop them or implement activities that would degrade or destroy the PCEs.

We consider all of the units designated as critical habitat to contain features essential to the conservation of *Astragalus holmgreniorum* and *A. ampullarioides*. All units are within the geographic range of the species, all were occupied by the species at the time of listing (based on observations made within the last 5 years), and all are likely to be used by *A. holmgreniorum* and *A. ampullarioides*. Federal agencies already consult with us on activities in areas currently occupied by *A. holmgreniorum* and *A. ampullarioides* to ensure that their actions do not jeopardize the continued existence of *A. holmgreniorum* and *A. ampullarioides*.

Exclusions Under Section 4(b)(2) of the Act

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. The Secretary may exclude an area from critical habitat if [s]he determines that the benefits of such exclusion outweigh

the benefits of specifying such area as part of the critical habitat, unless [s]he determines, based on the best scientific data available, that the failure to designate such area as critical habitat will result in the extinction of the species. In making that determination, the Secretary is afforded broad discretion and the Congressional record is clear that in making a determination under section 4(b)(2) the Secretary has discretion as to which factors and how much weight will be given to any factor.

Under section 4(b)(2), in considering whether to exclude a particular area from the designation, we must identify the benefits of including the area in the designation, identify the benefits of excluding the area from the designation, and determine whether the benefits of exclusion outweigh the benefits of inclusion. If an exclusion is contemplated, then we must determine whether excluding the area would result in the extinction of the species. In the following sections, we address a number of general issues that are relevant to the exclusions we considered. The information provided in the next several sections applies to all the discussions below concerning the benefits of inclusion and exclusion of critical habitat.

After consideration under section 4(b)(2) of the Act, the following lands have been excluded from the designation of critical habitat for the *Astragalus ampullarioides*. A detailed analysis of our exclusion of these lands under section 4(b)(2) of the Act by critical habitat unit is provided in the paragraphs that follow.

General Principles of Section 7 Consultations Used in the 4(b)(2) Balancing Process

The most direct, and potentially largest, regulatory benefit of critical habitat is that federally authorized, funded, or carried out activities require consultation under section 7 of the Act to ensure that these actions are not likely to destroy or adversely modify critical habitat. There are two limitations to this regulatory effect. First, it only applies where there is a Federal action; if there is no Federal action, designation itself does not restrict actions that destroy or adversely modify critical habitat. Second, it only limits destruction or adverse modification. By its nature, the prohibition on adverse modification is designed to ensure those areas that contain the physical and biological features essential to the conservation of the species or unoccupied areas that are essential to the conservation of the species are not eroded. Critical habitat

designation alone, however, does not require specific steps toward recovery.

Once consultation under section 7 of the Act is triggered, the process may conclude informally when the Service concurs in writing that the proposed Federal action is not likely to adversely affect the listed species or its critical habitat. However, if the Service determines through informal consultation that adverse impacts are likely to occur, then formal consultation would be initiated. Formal consultation concludes with a biological opinion issued by the Service on whether the proposed Federal action is likely to jeopardize the continued existence of a listed species or result in destruction or adverse modification of critical habitat, with separate analyses being made under both the jeopardy and the adverse modification standards. For critical habitat, a biological opinion that concludes in a determination of no destruction or adverse modification may contain discretionary conservation recommendations to minimize adverse effects to primary constituent elements, but it would not contain any mandatory reasonable and prudent measures or terms and conditions. Reasonable and prudent alternatives to the proposed Federal action would only be issued when the biological opinion results in a jeopardy or adverse modification conclusion.

We also note that for 30 years prior to the Ninth Circuit Court's decision in *Gifford Pinchot*, the Service equated the jeopardy standard with the standard for destruction or adverse modification of critical habitat. The Court ruled that the Service could no longer equate the two standards and that adverse modification evaluations require consideration of impacts on the recovery of species. Thus, under the *Gifford Pinchot* decision, critical habitat designations may provide greater benefits to the recovery of a species. However, we believe the conservation achieved through implementing habitat conservation plans (HCPs) or other habitat management plans is typically greater than would be achieved through multiple site-by-site, project-by-project, section 7 consultations involving consideration of critical habitat. Management plans commit resources to implement long-term management and protection to particular habitat for at least one and possibly other listed or sensitive species. Section 7 consultations only commit Federal agencies to prevent adverse modification to critical habitat caused by the particular project, and they are not committed to provide conservation or long-term benefits to areas not

affected by the proposed project. Thus, any HCP or management plan which considers enhancement or recovery as the management standard will always provide as much or more benefit than a consultation for critical habitat designation conducted under the standards required by the Ninth Circuit in the *Gifford Pinchot* decision.

Educational Benefits of Critical Habitat

A benefit of including lands in critical habitat is that the designation of critical habitat serves to educate landowners, State and local governments, Tribes, and the public regarding the potential conservation value of an area. This helps focus and promote conservation efforts by other parties by clearly delineating areas of high conservation value for *Astragalus holmgreniorum* and *A. ampullarioides*. In general, the educational benefit of a critical habitat designation always exists, although in some cases it may be redundant with other educational effects. For example, HCPs have significant public input and may largely duplicate the educational benefit of a critical habitat designation. This benefit is closely related to a second, more indirect benefit: that designation of critical habitat would inform State agencies and local governments about areas that could be conserved under State laws or local ordinances.

Tribal Lands

Tribal lands of the Shivwits Band of Paiute Indians (Band) were proposed for designation, and included 240 ac (97 ha) of Unit 2 for *Astragalus ampullarioides*. We received comments from the Band requesting assistance in understanding the designation of their lands as critical habitat and in creating a management plan. The Shivwits Band of Paiutes Management Plan for *Astragalus ampullarioides* was signed by Chairman Glenn Rogers on September 18, 2006.

Benefits of Inclusion

Designation of Unit 2 would benefit *Astragalus ampullarioides* because it contains the PCEs and is the type locality for the species. The site provides the common name for this taxon, Shivwits milk-vetch. It has a low amount of human use, contains features essential to conservation of *A. ampullarioides*, is occupied by the species, and is one of five known populations.

As described above, designation of critical habitat can generally result in educational benefits. However, we believe that there would be little additional informational benefit gained from designating Shivwits Tribal lands

because the Band is already aware of the species presence and takes pride in this species as a namesake plant. We believe that the informational benefits are already provided because the Band is knowledgeable about the species location and has provided protection through fencing of occupied habitat (G. Rogers 2006). In addition, since lands excluded are Tribal lands, they are unlikely to be managed under State laws or local ordinances.

Since the listing of *Astragalus ampullarioides*, only one Section 7 consultation has occurred on tribal lands in an area containing the species, *and no projects are expected to occur within the foreseeable future. Therefore, we would not expect any additional benefits from the inclusion of this habitat. In addition, the Band has developed a management plan for this species that will be implemented for all future projects regardless of whether or not a federal nexus exists.*

Benefits of Exclusion

In accordance with Secretarial Order 3206, "American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act" (June 5, 1997); the President's memorandum of April 29, 1994, "Government-to-Government Relations with Native American Tribal Governments" (59 FR 22951, May 4, 1994); Executive Order 13175 "Consultation and Coordination with Indian Tribal Governments;" and the relevant provision of the Departmental Manual of the Department of the Interior (512 DM 2), we believe that fish, wildlife, and other natural resources on Tribal lands are better managed under Tribal authorities, policies, and programs than through Federal regulation wherever possible and practicable. Additionally, critical habitat designation may be viewed by Tribes and members of Bands as an unwanted intrusion into Tribal self governance, thus compromising the government-to-government relationship essential to achieving our mutual goals of managing for healthy ecosystems upon which the viability of threatened and endangered species populations depend.

At the time of the proposal, the Shivwits Band of Paiute Indians was already providing protective management for the majority of individual plants on their lands. Additionally, they were interested in creating a management plan that would address threats specific to *Astragalus ampullarioides* on their lands. The Band, with the assistance of the Service and Bureau of Indian Affairs, developed a set of conservation and educational

actions that are the basis for exclusion from critical habitat of lands governed by the Band. These actions include, but are not limited to: identification, protection, and retention of occupied habitat; management of livestock activities, invasive weeds, and fire; protection of vegetation communities and ecosystems, which includes native plants and pollinators; restriction of motorized vehicles in occupied areas; participation in recovery efforts and research; and development of educational materials. We believe the management plan provides greater protection than critical habitat designation would provide, and have a reasonable expectation that it will be implemented because it was developed by the Band, with the assistance of the Service and Bureau of Indian Affairs.

The Band has developed a management plan for this species in response to the proposed designation for the purpose of maintaining management and conservation authority and thus having the critical habitat designation removed. Therefore, the inclusion of this land is likely to damage inter-governmental relationships and result in poorer conservation if we designated critical habitat without the implementation of this management plan.

Since the listing of *Astragalus ampullarioides*, only one Section 7 consultation has occurred on tribal lands in an area containing *A. ampullarioides* and no projects are expected to occur within the foreseeable future. Even though the expectation of future Section 7 consultation is low, this management plan provides recommended measures for best management practices to avoid and minimize impacts to *A. ampullarioides* and surrounding habitat within a half mile (approximately 2,624 ft or 800m) of known sites. This area is twice the distance of the 1,312 ft (400 m) radius of the known plant locations used in proposing designated critical habitat for the protection of PCEs and as such is expected to provide greater continuous land protection. Additionally any new sites found on tribal lands will be afforded the same management practices.

Benefits of Exclusion Outweigh Benefits of Inclusion

The benefits of inclusion occur in Section 7 consultations, which may commit Federal agencies to prevent adverse modification to critical habitat caused by the particular project. However, very few Section 7 consultations have occurred in the past and are anticipated for this area. The

outweighing benefits of the Shivwits management plan are that it provides conservation and management with and without a federal nexus. Under a Section 7 consultation, no commitment exists to provide conservation or long-term benefits to areas not affected by the proposed project, whereas the Shivwits management plan of this species is expected to provide conservation and long-term management of a larger area, prior to Section 7 consultation, than the proposed critical habitat designation and, if sites are found, these sites will carry the same measure of conservation and protection. Inclusion of current occupied sites into the designated habitat on tribal lands will provide no future benefits to new sites, if any should exist.

Critical habitat can also have valuable educational benefits in some cases (see above). The educational benefit of inclusion or exclusion of the critical habitat designation on tribal lands is duplicated with the Shivwits management plan, due to the participation of the Band, BIA, and the Service. Other benefits such as those gained by informed State agencies and local governments are unlikely to increase or provide conservation on tribal lands. As the Band is already educated, currently conserving the species on their lands, and has included educational component to their management plan, we see no educational benefits to the inclusion of Tribal land in the final critical habitat rule.

We believe that conservation of *Astragalus ampullarioides* will be achieved by the Shivwits management due to their display of proactive conservation. Given the importance of the Band's management plan to the current and future conservation of *A. ampullarioides* and our government-to-government relationship with them, the benefit of excluding these lands outweighs the benefit of including them in critical habitat. Therefore, Tribal lands have not been designated as critical habitat under section 4(b)(2) of the Act.

Exclusion Will Not Result in Extinction of the Species

Exclusion of this 140ac (97 ha) of Tribal lands will not result in extinction of *Astragalus ampullarioides* because these lands will be conserved and managed for the benefit of this species pursuant to the approved Shivwits Band of Paiutes Management Plan for *Astragalus ampullarioides*. The jeopardy standard of section 7 and routine implementation of habitat protection through the section 7 process

also provide assurances that the species will not go extinct.

We anticipate no impact to national security, partnerships, or habitat conservation plans from this critical habitat designation. Based on the best available information including the prepared economic analysis, we believe that all final designated units contain the features that are essential for the conservation of this species. Our economic analysis indicates an overall low cost resulting from the designation. Therefore, we have found no other 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 *Astragalus holmgreniorum* and *A. ampullarioides* based on economic impacts. As such, we have considered but not excluded any lands from this designation based on the potential impacts from economic factors.

Other areas no longer contained in the final designation of critical habitat no longer meet the definition of critical habitat. We made an effort to avoid developed areas such as buildings, paved areas, boat ramps and other structures that lack PCEs for *Astragalus holmgreniorum* and *A. ampullarioides*. This resulted in the reduction of designated land for *A. holmgreniorum* in Subunit 1a from the proposed 4,027ac (1,630ha) to 3,836ac (1,552ha) and in Subunit 1c from 1,148ac (466ha) to 1,146ac (464ha).

Economic Analysis

Section 4(b)(2) of the Act requires us to designate critical habitat on the basis of the best scientific 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. We published a notice of availability and request for public comments for the draft analysis on September 26, 2006 (71 FR 56085). We accepted comments on the draft analysis until October 26, 2006.

The primary purpose of the economic analysis was to estimate the potential economic impacts associated with the designation of critical habitat for *Astragalus holmgreniorum* and *A.*

ampullarioides. 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 co-extensive 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 estimates potential costs attributed to listing and critical habitat designation ranging between \$9.3 and \$14.7 million, in undiscounted 2006 dollars, over a 20-year period from 2006 to 2025. In discounted terms, potential post-designation economic costs are estimated between \$9.0 and \$13.6 million (using a 3 percent discount rate) or between \$8.7 and \$12.7 million (using a 7 percent discount rate).

Our economic analysis of the proposed critical habitat designation evaluated the potential economic effects on small business entities and small governments resulting from conservation actions related to the listing of these species and proposed designation of their critical habitat. The activities affected by *Astragalus holmgreniorum* and *A. ampullarioides* conservation efforts may include land development, transportation and utility operations, and conservation on public and Tribal lands. More than 98 percent of the prospective economic costs (based on upper-bound future undiscounted cost figures) associated with conservation activities for these species are expected to be borne by Federal agencies (primarily BLM) and State departments of transportation. Impacts to land development (e.g., BLM

land disposal) and transportation and utilities operations (e.g., Western and Southern Corridor projects) are not expected to affect small entities.

A copy of the final economic analysis with supporting documents is included in our administrative record and may be obtained by contacting the Service (see **ADDRESSES** section) or for downloading from the Internet at <http://mountain-prairie.fws.gov/species/plants/milkvetch/index.htm>.

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 for 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 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 an area as critical habitat, unless we determine, based on the best scientific 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. The 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. The 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 holmgreniorum* and *A. ampullarioides*. Federal agencies also must consult with us if their activities may affect critical habitat. Therefore, designation of critical habitat could result in an additional economic impact on small entities due to the requirement to reinitiate consultation for ongoing Federal activities.

In our economic analysis of the critical habitat designation, we evaluated the potential economic effects on small business entities and small governments resulting from conservation actions related to the listing of these species and proposed designation of their critical habitat. The activities affected by *Astragalus holmgreniorum* or *A. ampullarioides* may include land development, transportation and utility operations, and conservation on public and Tribal lands. The economic analysis identifies potential costs estimated to range between \$9.3 and \$14.7 million, in undiscounted 2006 dollars, over a 20-year period from 2006 to 2025. In discounted terms, potential post-designation economic costs are estimated to range between \$9.0 and \$13.6 million (using a 3 percent discount rate) or between \$8.7 and \$12.7 million (using a 7 percent discount rate).

More than 98 percent of the prospective economic costs (based on upper-bound future undiscounted cost figures) associated with conservation activities for *Astragalus holmgreniorum* and *A. ampullarioides* are expected to be borne by Federal agencies (primarily BLM) and State departments of transportation. Thus, impacts to land development (*i.e.*, BLM land disposal) and transportation and utilities operations (*i.e.*, Western and Southern Corridor projects) are not expected to affect small entities. Therefore, we do not believe that the designation of critical habitat for the *A. holmgreniorum* and *A. ampullarioides* will result in disproportionate effect to small business entities. Please refer to our draft economic analysis for the proposed critical habitat designation for a more detailed discussion of potential economic impacts.

In general, two different mechanisms in section 7 consultations could lead to additional regulatory requirements for the approximately four small businesses, on average, that may be required to consult with us each year regarding their project's impact on *Astragalus holmgreniorum* and *A. ampullarioides* and their habitat. First,

if we conclude, in a biological opinion, that a proposed action is likely to jeopardize the continued existence of a species or adversely modify its critical habitat, we can offer "reasonable and prudent alternatives." Reasonable and prudent alternatives are alternative actions that can be implemented in a manner consistent with the scope of the Federal agency's legal authority and jurisdiction, that are economically and technologically feasible, and that would avoid jeopardizing the continued existence of listed species or result in adverse modification of critical habitat. A Federal agency and an applicant may elect to implement a reasonable and prudent alternative associated with a biological opinion that has found jeopardy or adverse modification of critical habitat. An agency or applicant could alternatively choose to seek an exemption from the requirements of the Act or proceed without implementing the reasonable and prudent alternative. However, unless an exemption were obtained, the Federal agency or applicant would be at risk of violating section 7(a)(2) of the Act if it chose to proceed without implementing the reasonable and prudent alternatives.

Second, if we find that a proposed action is not likely to jeopardize the continued existence of a listed animal or plant species, we may identify reasonable and prudent measures designed to minimize the amount or extent of take and require the Federal agency or applicant to implement such measures through non-discretionary terms and conditions. We also may identify discretionary conservation recommendations designed to minimize or avoid the adverse effects of a proposed action on listed species or critical habitat, help implement recovery plans, or to develop information that could contribute to the recovery of the species.

Based on our experience with consultations under section 7 of the Act for all listed species, virtually all projects, including those that, in their initial proposed form, would result in jeopardy or adverse modification determinations in section 7 consultations, can be implemented successfully with, at most, the adoption of reasonable and prudent alternatives. These measures, by definition, must be economically feasible and within the scope of authority of the Federal agency involved in the consultation. We can only describe the general kinds of actions that may be identified in future reasonable and prudent alternatives. These are based on our understanding of the needs of the species and the threats it faces, as described in the final listing

rule and this critical habitat designation. Within the final critical habitat units, the types of Federal actions or authorized activities that we have identified as potential concerns are:

(1) Regulation of activities affecting waters of the United States by the U.S. Army Corps of Engineers under section 404 of the Clean Water Act;

(2) Regulation of water flows, damming, diversion, and channelization implemented or licensed by Federal agencies;

(3) Regulation of timber harvest, grazing, mining, and recreation by the U.S. Forest Service and BLM;

(4) Road construction and maintenance, right-of-way designation, and regulation of agricultural activities;

(5) Hazard mitigation and post-disaster repairs funded by the Federal Emergency Management Agency; and

(6) Activities funded by the Environmental Protection Agency, U.S. Department of Energy, or any other Federal agency.

It is likely that a developer or other project proponent could modify a project or take measures to protect *Astragalus holmgreniorum* and *A. ampullarioides*. The kinds of actions that may be included if future reasonable and prudent alternatives become necessary include conservation set-asides, management of competing nonnative species, restoration of degraded habitat, and regular monitoring. These are based on our understanding of the needs of the species and the threats it faces, as described in the final listing rule (66 FR 49560, September 28, 2001) and proposed critical habitat designation (71 FR 15966, March 29, 2006). These measures are not likely to result in a significant economic impact to project proponents.

In summary, we have considered whether this would result in a significant economic effect on a substantial number of small entities. We have determined, for the above reasons and based on currently available information, that it is not likely to affect a substantial number of small entities. Federal involvement, and thus section 7 consultations, would be limited to a subset of the area designated. The most likely Federal involvement could include permits we may issue under section 10(a)(1)(B) of the Act, FHWA funding for road improvements, and regulation of grazing, mining, and recreation by the USFS and BLM. A regulatory flexibility analysis is not required.

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 holmgreniorum* and *A. ampullarioides* 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, 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; AFDC 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 who receive Federal funding, assistance, permits or 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 on to 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. 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, 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 the Department of the Interior and Department of Commerce policy, we requested information from, and

coordinated development of, this final critical habitat designation with appropriate State resource agencies in Arizona and Utah. The designation of critical habitat in areas currently occupied by the *Astragalus holmgreniorum* and *A. ampullarioides* may impose nominal additional regulatory restrictions to those currently in place and, therefore, may have little incremental impact on State and local governments and their activities. The designation may have some benefit to these governments in that the areas that contain the features 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 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 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 holmgreniorum* and *A. ampullarioides*.

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 NEPA in connection with designating critical habitat under the Act. 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)]. However, when the range of the species includes States within the Tenth Circuit, such as that of *Astragalus holmgreniorum* and *A. ampullarioides*, pursuant to the Tenth Circuit ruling in *Catron County Board of Commissioners v. U.S. Fish and Wildlife Service*, 75 F. 3d 1429 (10th Cir. 1996), we conducted a NEPA analysis for this critical habitat designation, and we notified the public of the availability of the draft environmental assessment for the proposed rule on September 26, 2006 (71 FR 56085). The final environmental assessment and Finding of No Significant Impact is available upon request from the Field Supervisor, Utah Fish and Wildlife Office (see **ADDRESSES** section) or on our Web site at <http://mountain-prairie.fws.gov/species/plants/milkvetch/index.htm>.

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 the Department of Interior's manual at 512 DM 2, we readily acknowledge our responsibility to communicate meaningfully with recognized Federal Tribes on a government-to-government basis.

Tribal lands of the Shivwits Band of Paiute Indians (Tribe) included in the proposed designation included 240 ac (97 ha) of Unit 2 for *Astragalus ampullarioides*. The Shivwits Band of Paiutes Management Plan for *Astragalus ampullarioides* was signed by Chairman Glenn Rogers on September 18, 2006. We determined that the management plan, and the conservation actions it includes, provide greater protection than critical habitat designation would provide; therefore, this unit is excluded from critical habitat under section 4(b)(2) of the Act.

References Cited

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

Author(s)

The primary author of this package is Heather Barnes, Utah Fish and Wildlife Office, Salt Lake City, Utah.

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 set forth below:

PART 17—[AMENDED]

- 1. The authority citation for part 17 continues to read as follows:

Authority: 16 U.S.C. 1361–1407; 16 U.S.C. 1531–1544; 16 U.S.C. 4201–4245; Pub. L. 99–625, 100 Stat. 3500; unless otherwise noted.

- 2. In § 17.12(h), revise the entries for "*Astragalus ampullarioides*" and "*Astragalus holmgreniorum*" under "FLOWERING PLANTS" in the List of Threatened and Endangered 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 ampullarioides</i> .	Shivwits milk-vetch	U.S.A. (UT)	Fabaceae	E	711	17.96(a)
<i>Astragalus holmgreniorum</i> .	Holmgren milk-vetch	U.S.A. (UT, AZ)	Fabaceae	E	711	17.96(a)
*	*	*	*	*	*	*

- 3. Amend § 17.96(a), by adding entries for *Astragalus ampullarioides* (Shivwits milk-vetch) and *Astragalus holmgreniorum* (Holmgren milk-vetch) in alphabetical order under family Fabaceae to read as follows:

§ 17.96 Critical habitat—plants.

- (a) *Flowering plants.*

* * * * *

Family Fabaceae: *Astragalus ampullarioides* (Shivwits milk-vetch)

(1) Critical habitat units are depicted for Washington County, Utah, on the maps and as described below.

(2) Within these areas, the primary constituent elements of critical habitat for *Astragalus ampullarioides* are:

(i) Outcroppings of soft clay soil, which is often purplish red, within the Chinle Formation and the Dinosaur Canyon Member of the Moenave Formation, at elevations from 920 to 1,330 m (3,018 to 4,367 ft);

(ii) Topographic features/relief, including alluvial fans and fan terraces, and gently rolling to steep swales with little to moderate slope (3 to 24 percent), that are often markedly dissected by water flow pathways from seasonal precipitation; and

(iii) The presence of insect visitors or pollinators, such as *Anthophora captognatha*, *A. dammersi*, *A. porterae*, other *Anthophora* species, *Eucera quadricincta*, *Bombus morrissonis*, *Hoplitis grinnelli*, *Osmia clarescens*, *O.*

marginata, *O. titus*, *O. clavescens*, and two types of *Dialictus* species.

(3) Critical habitat does not include manmade structures existing on the effective date of this rule and not containing one or more of the primary constituent elements, such as buildings, aqueducts, airports, and roads, and the land on which such structures are located.

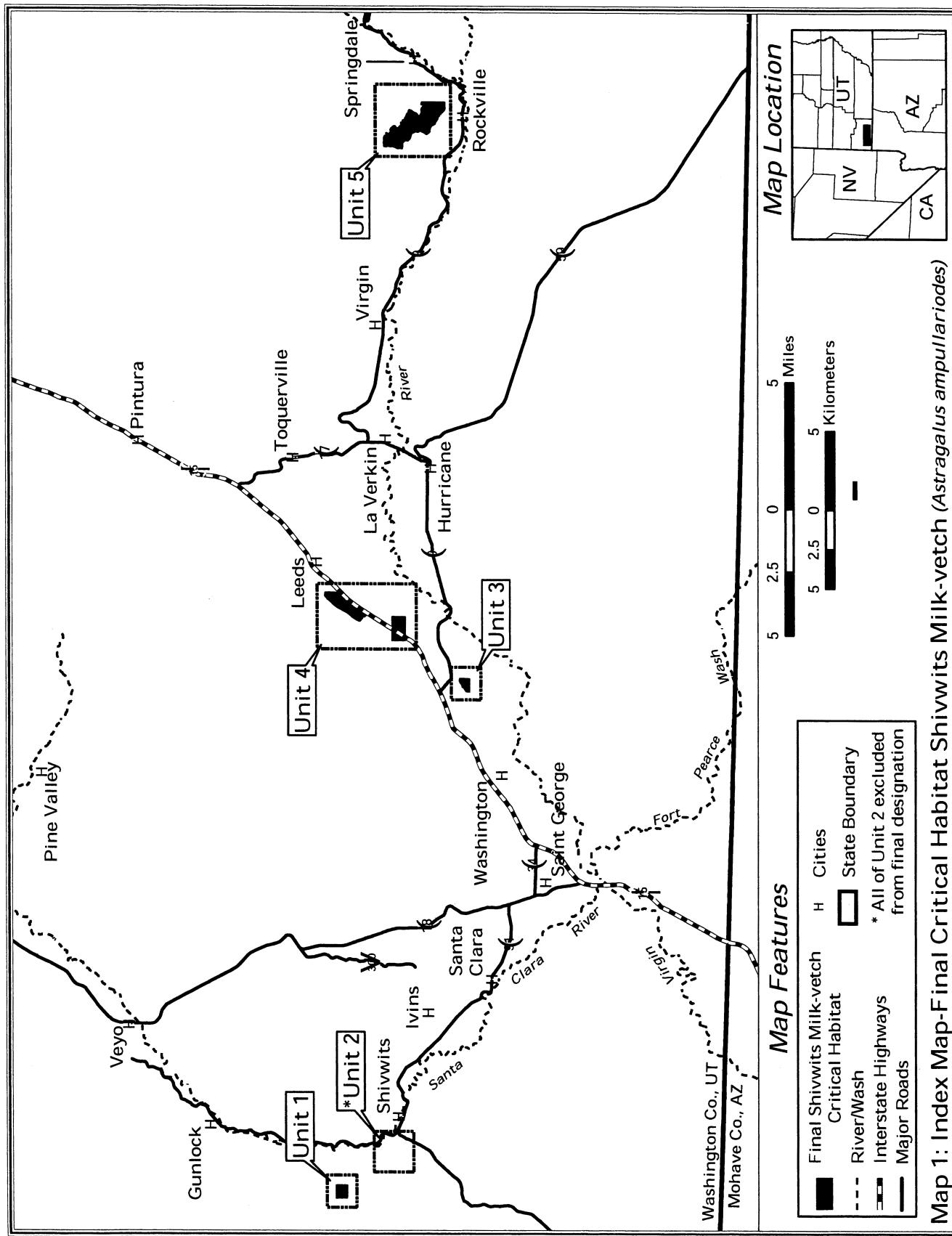
(4) Data layers defining map units were an electronic base map of USGS 7.5' quadrangles projected to the UTM coordinate system, Zone 12 NAD 83. Ancillary data used to help refine the unit boundaries included Digital Orthophoto Quadrangles (DOQs); National Agricultural Imagery Program (NAIP); cadastral land survey

(Township, Range, and Section); soils data; and the 1:24,000 Utah water courses data set. Critical habitat units

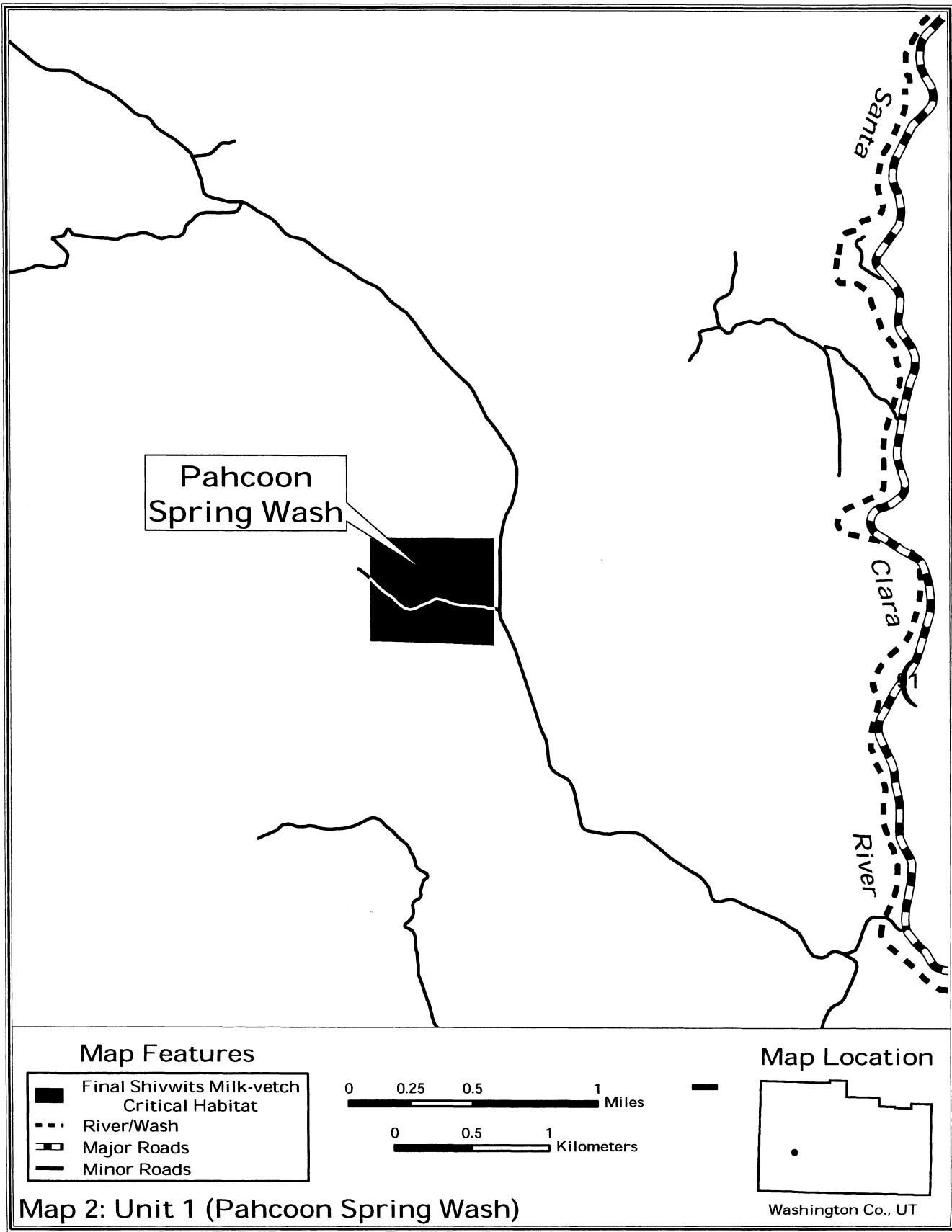
were delineated through heads-up digitizing in a Geographic Information System.

(5) Note: Index map (Map 1—*A. ampullarioides*) follows:

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(6) Unit 1—Pahcoo Spring Wash,
Washington County, Utah.
(i) Land bounded by the following
UTM Zone 12 NAD 83 coordinates
(meters E, meters N): 250963, 4122043;
250963, 4122040; 250559, 4122052;
250165, 4122063; 250165, 4122075;
250165, 4122352; 250165, 4122466;
250165, 4122731; 250176, 4122731;
250580, 4122731; 250965, 4122731;
250965, 4122442; 250965, 4122331;
250965, 4122107; 250963, 4122047;
250963, 4122043.
(ii) Note: Map of Unit 1 (Map 2—A.
ampullarioides) follows:
BILLING CODE 4310-55-P



(7) Unit 3—Coral Canyon, Washington County, Utah.

(i) Land bounded by the following UTM Zone 12 NAD 83 coordinates (meters E, meters N): 283348, 4114931; 283341, 4114729; 283341, 4114729; 283335, 4114525; 283335, 4114523; 283334, 4114481; 283329, 4114332; 283328, 4114322; 283139, 4114327; 283138, 4114327; 283129, 4114327; 282929, 4114333; 282929, 4114331; 282529, 4114339; 282533, 4114481; 282539, 4114493; 282547, 4114508; 282551, 4114511; 282560, 4114522; 282589, 4114545; 282595, 4114551; 282611, 4114559; 282622, 4114567; 282630, 4114573; 282640, 4114580; 282649, 4114587; 282658, 4114593; 282665, 4114594; 282674, 4114599; 282679, 4114605; 282680, 4114612; 282680, 4114617; 282680, 4114622; 282683, 4114624; 282700, 4114627; 282712, 4114631; 282724, 4114639; 282732, 4114646; 282743, 4114651; 282754, 4114659; 282764, 4114668; 282768, 4114679; 282776, 4114689; 282786, 4114697; 282797, 4114705; 282801, 4114711; 282805, 4114717; 282805, 4114717; 282808, 4114726; 282812, 4114736; 282814, 4114750; 282822, 4114760; 282828, 4114767; 282837, 4114767; 282846, 4114767; 282856, 4114763; 282862, 4114753; 282867, 4114741; 282877, 4114737; 282895, 4114740; 282905, 4114747; 282914, 4114759; 282921, 4114771; 282931, 4114782; 282932, 4114789; 282936, 4114796; 282943, 4114800; 282943, 4114800; 282959, 4114796; 282961, 4114796; 282967, 4114797; 282972, 4114803; 282975, 4114812; 282984, 4114820; 282992, 4114825; 282996, 4114827; 283013, 4114831; 283027, 4114839; 283030, 4114841; 283043, 4114849; 283060, 4114856; 283075, 4114862; 283082, 4114868; 283086, 4114880; 283090, 4114890; 283092, 4114901; 283097, 4114907; 283106, 4114918; 283115, 4114923; 283135, 4114927; 283154, 4114928; 283161, 4114922; 283179, 4114931; 283185, 4114936;

283186, 4114936; 283186, 4114936; 283348, 4114933; 283348, 4114931.

(8) Unit 4—Harrisburg Junction, Washington County, Utah.
(i) Unit 4 is divided into two subunits: 4a, Harrisburg Bench and Cottonwood, and 4b, Silver Reef.

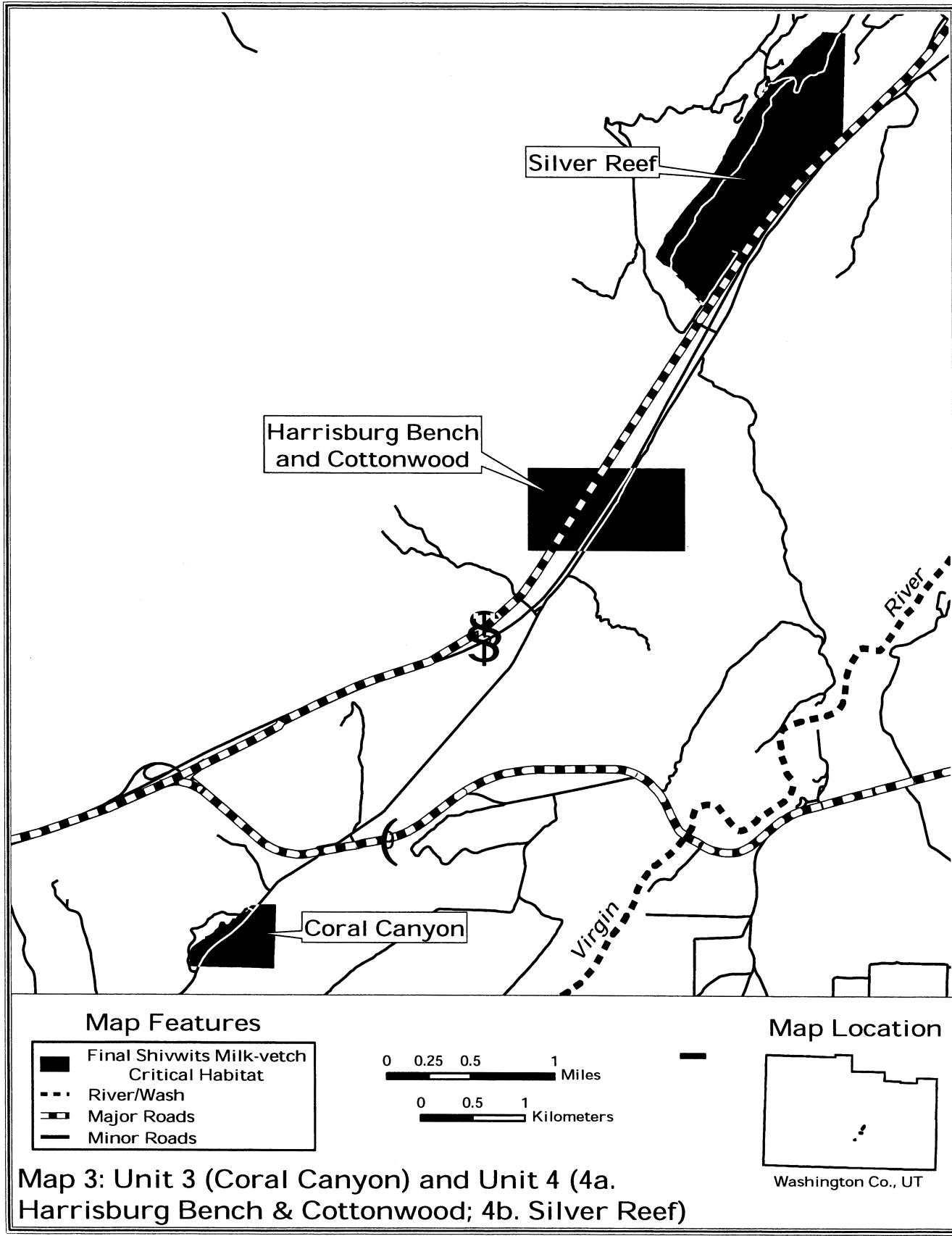
(ii) Unit 4a Harrisburg Bench and Cottonwood. Land bounded by the following UTM Zone 12 NAD 83 coordinates (meters E, meters N): 285767, 4118407; 285767, 4118468; 285767, 4118584; 285767, 4118777; 285767, 4118911; 285767, 4119177; 285833, 4119177; 286237, 4119177; 286419, 4119177; 286641, 4119177; 287098, 4119177; 287267, 4119177; 287267, 4118771; 287267, 4118377; 287074, 4118377; 286948, 4118377; 286948, 4118377; 286150, 4118377; 285767, 4118377; 285767, 4118407.

(iii) Unit 4b—Silver Reef. Land bounded by the following UTM Zone 12 NAD 83 coordinates (meters E, meters N): 287073, 4121370; 287074, 4121376; 287074, 4121402; 287085, 4121418; 287093, 4121441; 287126, 4121474; 287152, 4121505; 287171, 4121542; 287187, 4121566; 287209, 4121591; 287226, 4121621; 287251, 4121651; 287273, 4121682; 287299, 4121713; 287324, 4121742; 287349, 4121773; 287375, 4121800; 287406, 4121836; 287448, 4121887; 287480, 4121919; 287514, 4121962; 287526, 4121985; 287552, 4122029; 287550, 4122030; 287560, 4122040; 287572, 4122052; 287587, 4122079; 287600, 4122106; 287618, 4122133; 287637, 4122165; 287643, 4122195; 287660, 4122216; 287676, 4122260; 287696, 4122297; 287711, 4122329; 287729, 4122354; 287752, 4122375; 287771, 4122405; 287782, 4122433; 287799, 4122474; 287840, 4122544; 287862, 4122588; 287886, 4122629; 287902, 4122644; 287918, 4122663; 287930, 4122682; 287942, 4122698; 287952, 4122710; 287962, 4122727; 287983, 4122757; 288026, 4122808; 288046, 4122837; 288063, 4122855; 288091, 4122887; 288115, 4122916; 288144, 4122939;

288169, 4122966; 288196, 4122989; 288225, 4123018; 288245, 4123040; 288270, 4123059; 288294, 4123079; 288311, 4123104; 288320, 4123126; 288337, 4123142; 288352, 4123154; 288369, 4123171; 288382, 4123179; 288395, 4123199; 288409, 4123223; 288428, 4123238; 288452, 4123249; 288461, 4123256; 288462, 4123255; 288480, 4123271; 288489, 4123286; 288500, 4123293; 288506, 4123303; 288521, 4123312; 288538, 4123330; 288562, 4123347; 288579, 4123361; 288589, 4123375; 288601, 4123392; 288815, 4123379; 288802, 4122943; 288787, 4122380; 288763, 4122359; 288718, 4122320; 288681, 4122286; 288661, 4122267; 288596, 4122213; 288536, 4122161; 288525, 4122149; 288449, 4122071; 288403, 4122026; 288368, 4121997; 288368, 4121992; 288367, 4121992; 288333, 4121955; 288302, 4121916; 288278, 4121891; 288268, 4121875; 288227, 4121827; 288198, 4121792; 288167, 4121757; 288139, 4121723; 288120, 4121697; 288089, 4121658; 288065, 4121628; 288012, 4121559; 287980, 4121512; 287955, 4121466; 287927, 4121426; 287875, 4121352; 287875, 4121352; 287747, 4121144; 287668, 4121023; 287557, 4120848; 287483, 4120730; 287443, 4120762; 287421, 4120790; 287397, 4120822; 287376, 4120836; 287353, 4120857; 287329, 4120875; 287309, 4120895; 287292, 4120917; 287290, 4120944; 287289, 4120970; 287281, 4120992; 287269, 4121010; 287246, 4121028; 287220, 4121039; 287195, 4121055; 287175, 4121069; 287157, 4121078; 287142, 4121100; 287135, 4121122; 287121, 4121134; 287086, 4121149; 287069, 4121153; 287050, 4121175; 287018, 4121205; 286995, 4121229; 287002, 4121239; 287012, 4121264; 287023, 4121292; 287038, 4121310; 287050, 4121326; 287058, 4121342; 287068, 4121359; 287073, 4121370.

(iv) Note: Map of Units 3 and 4 (Map 3—A. *ampullarioides*) follows:

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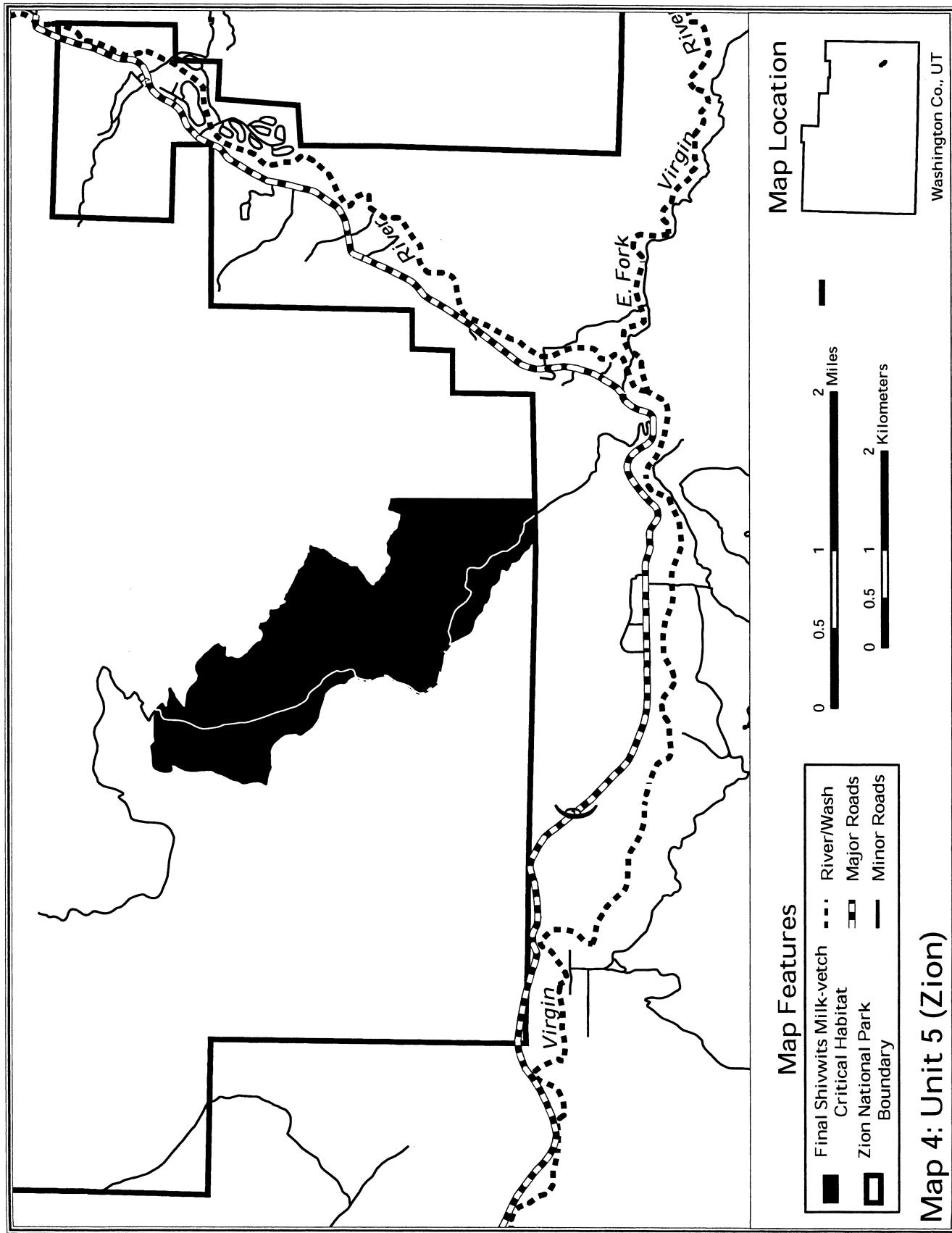
(9) Unit 5—Zion, Washington County, Utah.	319136, 4118223; 319168, 4118205; 319185, 4118207; 319203, 4118186; 319211, 4118178; 319233, 4118150; 319254, 4118143; 319275, 4118143; 319301, 4118129; 319320, 4118117; 319346, 4118108; 319365, 4118107; 319367, 4118093; 319380, 4118086; 319398, 4118089; 319406, 4118094; 319422, 4118093; 319441, 4118089; 319448, 4118084; 319441, 4118072; 319427, 4118055; 319424, 4118022; 319406, 4117985; 319399, 4117972; 319406, 4117963; 319412, 4117953; 319403, 4117944; 319398, 4117932; 319386, 4117914; 319377, 4117904; 319363, 4117889; 319354, 4117875; 319330, 4117859; 319322, 4117849; 319325, 4117831; 319313, 4117821; 319306, 4117804; 319297, 4117797; 319296, 4117786; 319287, 4117767; 319271, 4117740; 319266, 4117717; 319261, 4117708; 319242, 4117696; 319228, 4117677; 319230, 4117638; 319226, 4117613; 319191, 4117588; 319183, 4117582; 319136, 4117546; 319097, 4117525; 319077, 4117508; 319064, 4117496; 319046, 4117478; 319034, 4117459; 319032, 4117444; 319048, 4117432; 319064, 4117426; 319074, 4117414; 319083, 4117393; 319098, 4117380; 319111, 4117373; 319124, 4117366; 319140, 4117355; 319154, 4117338; 319169, 4117324; 319186, 4117322; 319192, 4117321; 319214, 4117321; 319235, 4117303; 319266, 4117283; 319311, 4117267; 319325, 4117267; 319349, 4117286; 319373, 4117310; 319403, 4117310; 319420, 4117305; 319444, 4117305; 319467, 4117312; 319488, 4117302; 319503, 4117290; 319528, 4117277; 319548, 4117272; 319559, 4117253; 319579, 4117241; 319588, 4117236; 319602, 4117219; 319616, 4117201; 319640, 4117194; 319676, 4117186; 319711, 4117175; 319744, 4117170; 319768, 4117167; 319779, 4117186; 319784, 4117212; 319792, 4117231; 319799, 4117239; 319803, 4117250; 319801, 4117269; 319811, 4117291; 319825, 4117295; 319853, 4117284; 319884, 4117276; 319924, 4117271; 319932, 4117194; 319932, 4115820; 319477, 4115828; 319472, 4115839; 319456, 4115857; 319430, 4115867; 319420, 4115875; 319400, 4115900; 319389, 4115914; 319375, 4115927; 319364, 4115937; 319335, 4115955; 319304, 4115970; 319283, 4116007; 319277, 4116039; 319270, 4116053; 319244, 4116059; 319204, 4116078; 319199, 4116088; 319196, 4116102; 319206, 4116133; 319200, 4116153; 319192, 4116158; 319161, 4116165; 319160, 4116165; 319145, 4116168; 319102, 4116170; 319070, 4116193; 319043, 4116229; 319038, 4116241; 319012, 4116257; 318992, 4116260;
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317133, 4119600; 317144, 4119616;
317154, 4119645; 317181, 4119668;
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317366, 4119689; 317395, 4119692;
317403, 4119684; 317424, 4119663.

(ii) Note: Map of Unit 5 (Map 4—A. *ampulliooides*) follows:

BILLING CODE 4310-55-P



* * * * *

Family Fabaceae: *Astragalus holmgreniorum* (Holmgren milk-vetch)

(1) Critical habitat units are depicted for Mohave County, Arizona, and Washington County, Utah, on the maps and as described below.

(2) Within these areas, the primary constituent elements of critical habitat for *Astragalus holmgreniorum* are:

(i) Appropriate geological layers or soils that support individual *Astragalus holmgreniorum* plants. These include the Virgin Limestone member, middle red member, and upper red member of the Moenkopi Formation, and the Petrified Forest member of the Chinle Formation. Associated soils are Badland; Badland, very steep; Eroded land-Shalet complex, warm; Hobog-rock land association; Isom cobbly sandy loam; Ruesh very gravelly fine sandy

loam; Gypill Hobog complex, 6 to 35 percent slopes; Gypill very cobbly sandy loam, 15 to 40 percent slopes; and Hobog-Grapevine complex, 2 to 35 percent slopes;

(ii) Topographic features/relief (mesas, ridge remnants, alluvial fans and fan terraces, their summits and backslopes, and gently rolling to steep swales) and the drainage areas along formation edges with little to moderate slope (0 to 20 percent); and

(iii) The presence of insect visitors or pollinators, such as *Anthophora captognatha*, *A. dammersi*, *A. porterae*, other *Anthophora* species, *Eucera quadricincta*, *Omia titus*, and two types of *Dialictus* species.

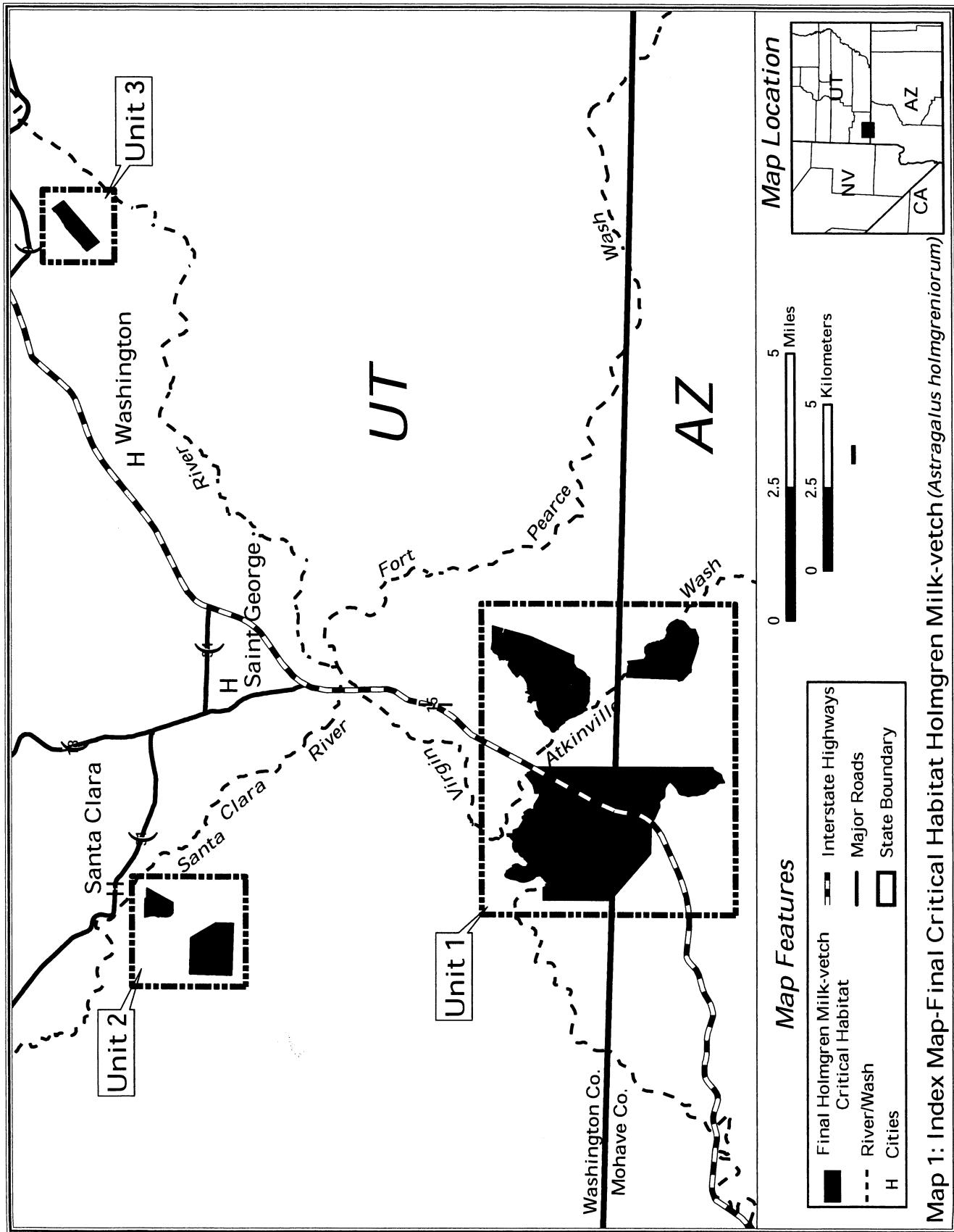
(3) Critical habitat does not include manmade structures existing on the effective date of this rule and not containing one or more of the primary

constituent elements, such as buildings, aqueducts, airports, and roads, and the land on which such structures are located.

(4) Data layers defining map units were an electronic base map of USGS 7.5' quadrangles projected to the UTM coordinate system, Zone 12 NAD 83. Ancillary data used to help refine the unit boundaries included Digital Orthophoto Quadrangles (DOQs); National Agricultural Imagery Program (NAIP); cadastral land survey (Township, Range, and Section); soils data; and the 1:24,000 Utah water courses data set. Critical habitat units were delineated through heads-up digitizing in a Geographic Information System.

(5) Note: Index map (Map 1—A. *holmgreniorum*) follows:

BILLING CODE 4310-55-P



Map 1: Index Map-Final Critical Habitat Holmgren Milk-vetch (*Astragalus holmgreniorum*)

(6) Unit 1—Utah-Arizona Border, Mohave County, Arizona, and Washington County, Utah. This unit consists of three subunits: State Line, Gardner Well, and Central Valley.

(i) Unit 1a—State Line, Washington County, Utah. Land bounded by the following UTM Zone 12 NAD 83 coordinates (meters E, meters N): 263931,4098206; 263933,4100207; 264297,4100206; 264324,4100152; 264361,4100090; 264389,4100059; 264420,4100041; 264445,4100041; 264486,4100066; 264528,4100107; 264560,4100151; 264578,4100184; 264588,4100206; 264599,4100221; 264614,4100232; 264631,4100246; 264647,4100256; 264657,4100269; 264663,4100289; 264669,4100308; 264663,4100349; 264653,4100399; 264639,4100426; 264620,4100454; 264601,4100482; 264579,4100527; 264568,4100555; 264563,4100578; 264555,4100596; 264540,4100617; 264530,4100643; 264509,4100682; 264486,4100742; 264483,4100793; 264481,4100853; 264483,4100885; 264494,4100904; 264505,4100920; 264518,4100937; 264524,4100963; 264537,4101013; 264553,4101091; 264563,4101143; 264565,4101160; 264574,4101176; 264581,4101197; 264594,4101236; 264603,4101265; 264616,4101294; 264636,4101316; 264655,4101327; 264685,4101328; 264713,4101321; 264745,4101296; 264792,4101262; 264831,4101225; 264867,4101180; 264895,4101133; 264906,4101094; 264909,4101006; 264910,4100916; 264917,4100838; 264918,4100770; 264926,4100713; 264935,4100694; 264947,4100670; 264959,4100658; 264977,4100648; 264998,4100642; 265010,4100638; 265032,4100630; 265061,4100626; 265092,4100626; 265118,4100629; 265151,4100647; 265170,4100667; 265187,4100692; 265205,4100736; 265221,4100782; 265228,4100802; 265243,4100832; 265261,4100861; 265292,4100894; 265337,4100917; 265385,4100947; 265434,4100981; 265464,4100994; 265509,4101009; 265550,4101020; 265562,4101023; 265609,4101039; 265657,4101057; 265679,4101062; 265703,4101072; 265716,4101084; 265731,4101105; 265747,4101116; 265762,4101126; 265769,4101131; 265778,4101141; 265797,4101160; 265818,4101168; 265834,4101180; 265837,4101186; 265835,4101202; 265841,4101223; 265846,4101236; 265845,4101253; 265850,4101262; 265861,4101261; 265871,4101258; 265889,4101257; 265919,4101271; 265921,4101273; 265916,4101084; 266032,4101081; 266085,4100924; 266312,4100788;

266347,4100773; 266380,4100795; 266392,4100805; 266402,4100815; 266442,4100812; 266466,4100750; 266484,4100740; 266506,4100739; 266547,4100754; 266557,4100762; 266572,4100761; 266656,4100635; 266665,4100590; 266650,4100540; 266658,4100460; 266749,4100469; 266793,4100460; 266812,4100450; 266877,4100411; 266973,4100352; 267038,4100312; 267070,4100300; 267083,4100299; 267136,4100300; 267163,4100310; 267156,4100330; 267145,4100361; 267143,4100385; 267145,4100423; 267153,4100456; 267168,4100452; 267195,4100451; 267221,4100452; 267262,4100461; 267379,4100492; 267432,4100512; 267626,4100667; 267673,4100704; 267697,4100726; 267705,4100713; 267722,4100666; 267724,4100661; 267744,4100607; 267775,4100561; 267814,4100526; 267826,4100519; 267842,4100508; 267855,4100499; 267906,4100469; 267917,4100463; 267932,4100459; 267933,4099673; 267934,4099506; 267934,4095144; 267912,4095140; 267892,4095136; 267870,4095127; 267837,4095084; 267820,4095058; 267798,4095019; 267776,4094979; 267756,4094951; 267736,4094923; 267722,4094903; 267681,4094881; 267640,4094875; 267614,4094871; 267519,4094815; 267492,4094810; 267486,4094849; 267482,4094879; 267480,4094892; 267477,4094916; 267474,4094940; 267470,4094952; 267463,4094969; 267455,4094989; 267448,4094998; 267435,4095013; 267425,4095026; 267404,4095040; 267389,4095051; 267374,4095063; 267363,4095073; 267351,4095083; 267337,4095095; 267324,4095120; 267310,4095149; 267308,4095176; 267305,4095199; 267301,4095220; 267298,4095240; 267280,4095257; 267266,4095272; 267253,4095284; 267230,4095307; 267219,4095318; 267202,4095340; 267185,4095360; 267169,4095383; 267160,4095397; 267151,4095419; 267143,4095436; 267140,4095468; 267138,4095492; 267131,4095517; 267125,4095541; 267114,4095575; 267100,4095615; 267094,4095640; 267094,4095679; 267095,4095714; 267097,4095762; 267099,4095790; 267091,4095805; 267079,4095831; 267073,4095855; 267070,4095877; 267072,4095903; 267087,4095935; 267099,4095962; 267101,4095985; 267104,4096007; 267106,4096030; 267113,4096063; 267119,4096088; 267123,4096109; 267148,4096146; 267160,4096155; 267177,4096168; 267199,4096177; 267217,4096185; 267263,4096207; 267300,4096219; 267327,4096243;

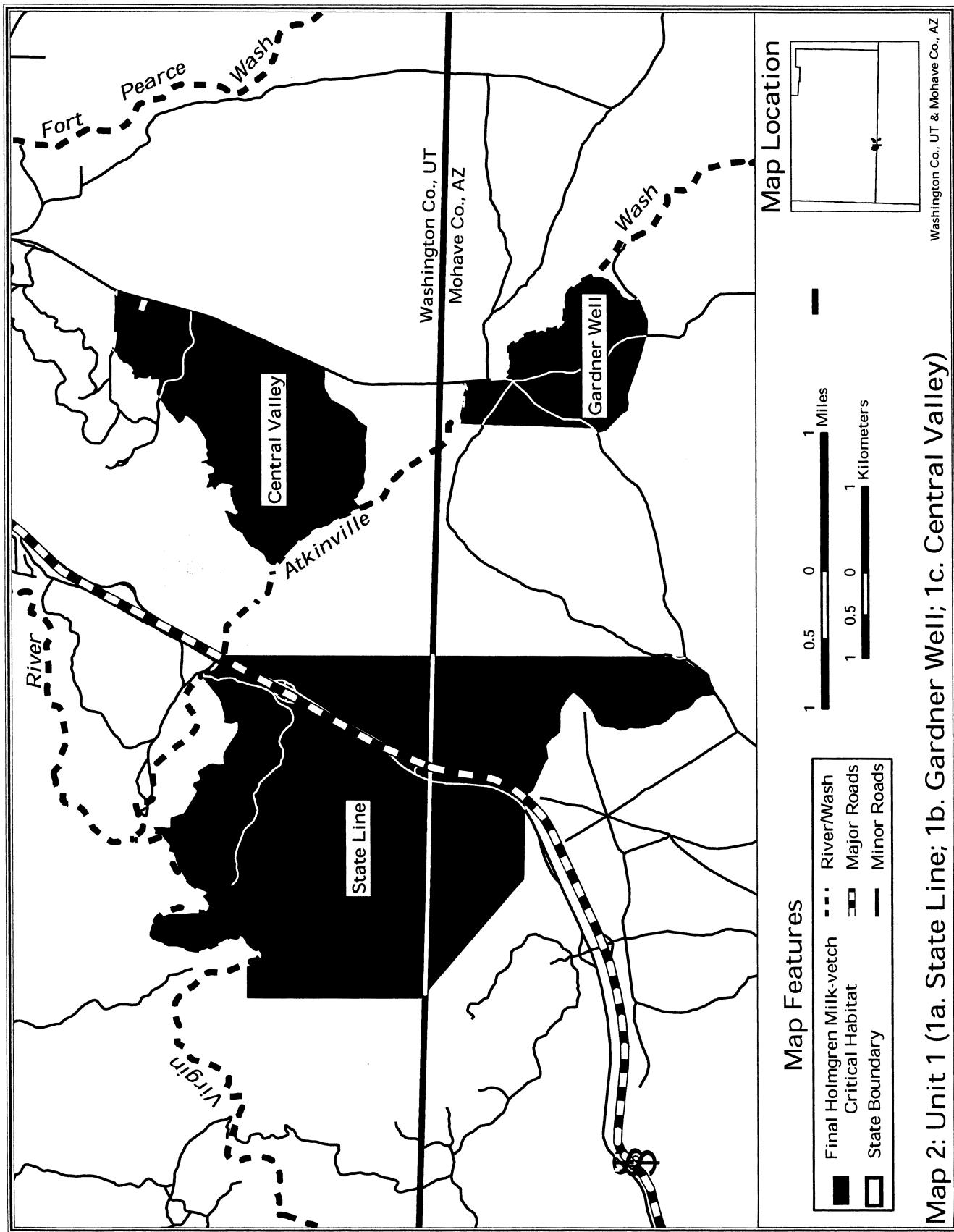
267349,4096264; 267379,4096289; 267407,4096313; 267425,4096330; 267454,4096362; 267473,4096383; 267496,4096415; 267509,4096435; 267502,4096450; 267490,4096461; 267479,4096471; 267470,4096480; 267454,4096493; 267434,4096509; 267411,4096525; 267390,4096536; 267371,4096546; 267340,4096566; 267315,4096583; 267300,4096584; 267280,4096587; 267256,4096590; 267246,4096591; 267234,4096593; 267214,4096592; 267171,4096591; 267142,4096590; 267097,4096592; 267052,4096595; 267037,4096610; 267007,4096638; 266973,4096692; 266897,4096752; 266896,4096752; 266895,4096753; 266855,4096750; 266800,4096744; 266744,4096736; 266729,4096740; 266703,4096758; 266682,4096769; 266359,4096909; 266306,4096995; 266037,4097000; 265906,4097003; 265325,4097015; 265139,4097174; 263931,4098206.

(ii) Unit 1b—Gardner Well, Washington County, Utah. Land bounded by the following UTM Zone 12 NAD 83 coordinates (meters E, meters N): 271132, 4097585; 271154, 4097406; 271173, 4097277; 271180, 4097203; 271233, 4097154; 271275, 4097136; 271324, 4097129; 271370, 4097147; 271416, 4097165; 271451, 4097161; 271493, 4097165; 271518, 4097154; 271539, 4097133; 271574, 4097094; 271606, 4097055; 271628, 4097040; 271645, 4097017; 271658, 4096995; 271664, 4096976; 271680, 4096960; 271693, 4096929; 271698, 4096899; 271700, 4096880; 271702, 4096849; 271710, 4096825; 271728, 4096800; 271730, 4096782; 271718, 4096747; 271711, 4096697; 271721, 4096652; 271748, 4096601; 271795, 4096549; 271831, 4096521; 271866, 4096521; 271885, 4096521; 271913, 4096509; 271946, 4096509; 271990, 4096511; 272026, 4096514; 272051, 4096521; 272101, 4096517; 272149, 4096496; 272194, 4096466; 272263, 4096388; 272301, 4096328; 272317, 4096291; 272341, 4096229; 272356, 4096176; 272356, 4096098; 272329, 4096025; 272288, 4095973; 272218, 4095916; 272194, 4095890; 272156, 4095871; 272123, 4095845; 272103, 4095805; 272089, 4095777; 272089, 4095743; 272099, 4095684; 271975, 4095633; 271847, 4095582; 271742, 4095579; 271672, 4095582; 271424, 4095648; 270979, 4095805; 270884, 4095787; 270808, 4095801; 270768, 4095867; 270702, 4095929; 270640, 4095987; 270574, 4096049; 270560, 4096104; 270545, 4096159; 270574, 4096184; 270603, 4096202; 270649, 4097638; 270652, 4097721; 270768, 4097702;

270830, 4097691; 270873, 4097691; 270906, 4097680; 270950, 4097680; 270975, 4097676; 271005, 4097654; 271019, 4097640; 271048, 4097651; 271089, 4097673; 271118, 4097676; 271132, 4097585.
 (iii) Unit 1c—Central Valley, Washington County, Utah. Land bounded by the following UTM Zone 12 NAD 83 coordinates (meters E, meters N): 268995,4099879; 268995,4099902; 269009,4099933; 269035,4099958; 269054,4099974; 269076,4099978; 269100,4099987; 269120,4100000; 269143,4100027; 269162,4100052; 269179,4100082; 269197,4100110; 269214,4100143; 269244,4100175; 269285,4100198; 269309,4100212; 269325,4100226; 269361,4100238; 269376,4100258; 269387,4100289; 269415,4100322; 269432,4100348; 269451,4100367; 269483,4100384; 269520,4100400; 269553,4100408; 269587,4100423; 269608,4100437; 269610,4100440; 269616,4100443; 269621,4100439; 269618,4100426; 269618,4100414; 269612,4100404; 269600,4100387; 269599,4100386; 269595,4100374; 269584,4100349; 269578,4100326; 269584,4100309; 269601,4100290; 269620,4100293; 269631,4100312; 269652,4100322; 269686,4100335; 269715,4100348; 269725,4100348; 269726,4100346; 269740,4100352; 269761,4100358; 269781,4100365; 269802,4100375; 269827,4100375; 269850,4100375; 269867,4100375; 269878,4100381; 269886,4100375; 269892,4100361; 269901,4100351; 269918,4100345; 269930,4100368; 269941,4100404; 269947,4100436; 269953,4100465; 269950,4100483; 269938,4100504; 269921,4100530; 269904,4100544; 269901,4100546; 269898,4100546; 269883,4100553; 269876,4100563; 269883,4100573; 269896,4100577; 269908,4100586; 269911,4100600; 269905,4100618; 269899,4100631; 269899,4100645; 269905,4100651; 269918,4100648; 269930,4100642; 269942,4100634; 269963,4100624; 269971,4100619; 269989,4100621; 270003,4100625; 270016,4100632; 270033,4100637; 270044,4100637; 270048,4100633; 270054,4100628; 270054,4100609; 270054,4100603; 270058,4100593; 270068,4100574; 270083,4100564; 270104,4100564; 270126,4100573; 270143,4100590; 270152,4100613; 270153,4100628; 270165,4100639; 270178,4100652; 270178,4100670; 270181,4100693; 270181,4100699; 270182,4100700; 270182,4100709; 270188,4100712; 270194,4100707; 270195,4100706; 270196,4100706; 270200,4100693; 270205,4100677; 270209,4100657; 270215,4100645; 270220,4100639; 270236,4100635; 270251,4100638; 270269,4100648; 270282,4100652; 270293,4100652; 270304,4100650; 270311,4100645; 270320,4100639; 270334,4100639; 270347,4100639; 270358,4100650; 270368,4100655; 270381,4100655; 270395,4100654; 270415,4100654; 270438,4100654; 270453,4100660; 270473,4100671; 270500,4100683; 270522,4100697; 270548,4100712; 270573,4100725; 270594,4100738; 270620,4100755; 270638,4100762; 270651,4100778; 270667,4100795; 270680,4100808; 270698,4100829; 270710,4100844; 270723,4100859; 270731,4100875; 270733,4100886; 270731,4100899; 270723,4100908; 270707,4100915; 270694,4100921; 270684,4100930; 270672,4100937; 270670,4100941; 270671,4100941; 270668,4100945; 270663,4100955; 270654,4100962; 270648,4100970; 270657,4100979; 270682,4101000; 270698,4101012; 270728,4101030; 270760,4101064; 270786,4101093; 270822,4101114; 270874,4101145; 270902,4101164; 270969,4101208; 270992,4101223; 271004,4101223; 271021,4101223; 271044,4101213; 271073,4101206; 271107,4101198; 271142,4101197; 271154,4101197; 271163,4101206; 271171,4101222; 271164,4101242; 271160,4101258; 271156,4101275; 271163,4101287; 271180,4101285; 271192,4101285; 271199,4101299; 271198,4101309; 271189,4101318; 271182,4101327; 271174,4101342; 271172,4101370; 271172,4101390; 271182,4101412; 271183,4101421; 271179,4101435; 271172,4101447; 271166,4101459; 271165,4101472; 271171,4101481; 271182,4101481; 271204,4101476; 271214,4101485; 271224,4101496; 271230,4101502; 271243,4101498; 271254,4101491; 271267,4101491; 271284,4101502; 271293,4101510; 271306,4101510; 271314,4101522; 271324,4101534; 271331,4101544; 271343,4101555; 271347,4101556; 271347,4101583; 271355,4101592; 271355,4101601; 271355,4101611; 271365,4101615; 271378,4101620; 271386,4101628; 271389,4101641; 271394,4101649; 271410,4101651; 271418,4101660; 271422,4101672; 271432,4101669; 271445,4101671; 271457,4101679; 271468,4101689; 271477,4101702; 271484,4101713; 271492,4101726; 271507,4101717; 271558,4101711; 271681,4101696; 271855,4101690; 272074,4101690; 272177,4101687; 272181,4101689; 272129,4101534; 272092,4101397; 271963,4101441; 271943,4101364; 272070,4101319; 272020,4101140; 271940,4100852; 271861,4100577; 271752,4100334; 271625,4100053; 271488,4099746; 271377,4099511; 271328,4099394; 271287,4099296; 271287,4099296; 271227,4099294; 271179,4099296; 271145,4099296; 271102,4099297; 271061,4099295; 271038,4099287; 271010,4099268; 270994,4099257; 270977,4099247; 270954,4099236; 270933,4099226; 270919,4099215; 270904,4099188; 270878,4099136; 270861,4099099; 270839,4099061; 270817,4099026; 270788,4098984; 270763,4098959; 270719,4098929; 270691,4098913; 270681,4098912; 270658,4098879; 270641,4098853; 270628,4098832; 270610,4098812; 270578,4098812; 270551,4098818; 270521,4098818; 270494,4098824; 270467,4098835; 270423,4098828; 270401,4098827; 270344,4098826; 270294,4098830; 270278,4098835; 270237,4098831; 270211,4098825; 270170,4098825; 270142,4098828; 270099,4098835; 270065,4098845; 270047,4098849; 270017,4098846; 269993,4098842; 269956,4098843; 269926,4098850; 269895,4098865; 269858,4098891; 269848,4098904; 269830,4098908; 269803,4098916; 269782,4098925; 269778,4098934; 269773,4098948; 269768,4098961; 269754,4098960; 269735,4098947; 269716,4098933; 269701,4098919; 269690,4098904; 269668,4098898; 269660,4098901; 269660,4098904; 269645,4098949; 269621,4098990; 269597,4099027; 269585,4099050; 269554,4099115; 269526,4099169; 269511,4099201; 269492,4099221; 269478,4099237; 269461,4099295; 269438,4099355; 269426,4099389; 269412,4099420; 269385,4099469; 269348,4099524; 269312,4099580; 269301,4099592; 269280,4099605; 269254,4099620; 269238,4099629; 269220,4099647; 269200,4099687; 269179,4099734; 269181,4099735; 269178,4099736; 269165,4099747; 269143,4099759; 269123,4099767; 269097,4099776; 269080,4099783; 269064,4099801; 269050,4099821; 269032,4099840; 269012,4099858; 269002,4099866; 268995,4099879.

(iv) Note: Map of Unit 1 (Map 2—*A. holmgreniorum*) follows:

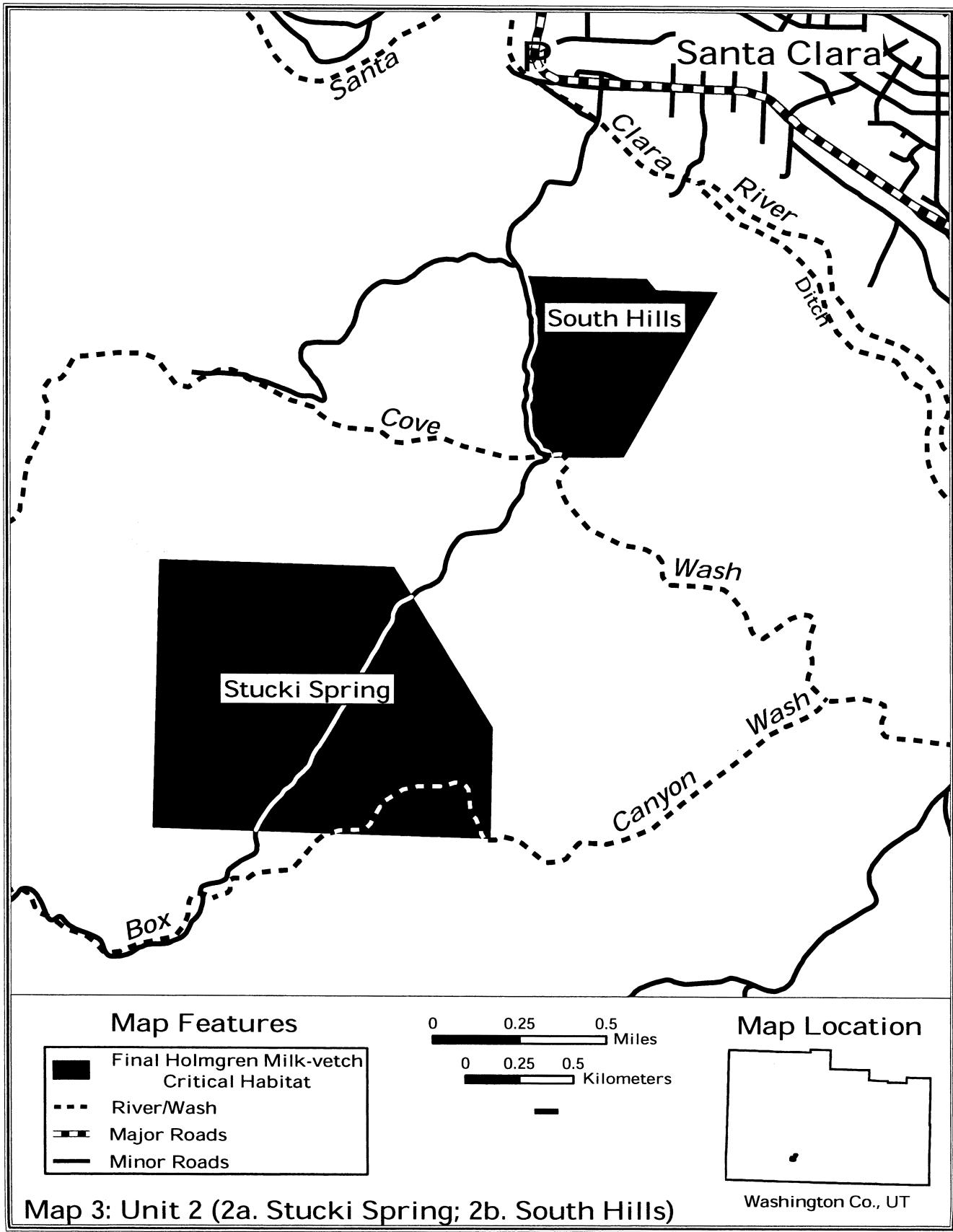
BILLING CODE 4310-55-P



(7) Unit 2—Santa Clara, Washington County, Utah. This unit consists of two subunits: Stucki Spring and South Hills.	263476,4111248; 263475,4111249; 263463,4111252; 263462,4111253; 263456,4111254; 263454,4111259; 263453,4111262; 263447,4111274; 263443,4111280; 263427,4111298; 263418,4111308; 263413,4111323; 263409,4111337; 263406,4111354; 263406,4111366; 263406,4111383; 263406,4111386; 263405,4111403; 263405,4111407; 263402,4111422; 263400,4111427; 263396,4111440; 263394,4111449; 263395,4111455; 263397,4111460; 263400,4111464; 263405,4111473; 263406,4111478; 263407,4111479; 263408,4111493; 263408,4111503; 263406,4111515; 263405,4111516; 263403,4111529; 263402,4111534; 263407,4111547; 263409,4111553; 263411,4111568; 263412,4111572; 263413,4111592; 263412,4111597; 263411,4111609;
(i) Unit 2a—Stucki Spring, Washington County, Utah. Land bounded by the following UTM Zone 12 NAD 83 coordinates (meters E, meters N): 261650,4109466; 261683,4110718; 262761,4110687; 263214,4109938; 263203,4109419; 261650,4109466.	(ii) Unit 2b—South Hills, Washington County, Utah. Land bounded by the following UTM Zone 12 NAD 83 coordinates (meters E, meters N): 263385,4112054; 263932,4112044; 263975,4111990; 264261,4111983; 263824,4111209; 263504,4111208; 263503,4111213; 263502,4111218; 263501,4111220; 263498,4111226; 263494,4111234; 263489,4111239; 263485,4111243; 263481,4111246;

(iii) Note: Map of Unit 2 (Map 3—A. *holmgreniorum*) follows:

BILLING CODE 4310-55-P



- (8) Unit 3—Purgatory Flat,
Washington County, Utah.
(i) Land bounded by the following
UTM Zone 12 NAD 83 coordinates
(meters E, meters N): 284276, 4114426;
284295, 4114449; 284375, 4114491;
284510, 4114595; 284590, 4114654;
284617, 4114709; 284659, 4114733; 284693, 4114759; 284933, 4114429;
284888, 4114391; 283702, 4113373;
283429, 4113736; 283481, 4113781;
283526, 4113829; 283547, 4113854;
283592, 4113874; 283640, 4113909;
283672, 4113940; 283737, 4113995;
283810, 4114065; 283841, 4114096;
283862, 4114110; 283886, 4114138; 283949, 4114190; 283987, 4114228;
284032, 4114262; 284060, 4114287;
284098, 4114325; 284139, 4114359;
284276, 4114426.
(ii) Note: Map of Unit 3 (Map 4—A.
holmgreniorum) follows:
BILLING CODE 4310-55-P

