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50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Designation of Critical
Habitat for the New Mexico Meadow Jumping Mouse; Final Rule

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

[Docket No. FWS-R2-ES-2013-0014;4500030114]

RIN 1018-AZ32

Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the New Mexico Meadow Jumping Mouse**AGENCY:** Fish and Wildlife Service, Interior.**ACTION:** Final rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), designate critical habitat for the New Mexico meadow jumping mouse (*Zapus hudsonius luteus*) under the Endangered Species Act of 1973, as amended (Act). In total, we designate an area of approximately 5,657 hectares (13,973 acres) along 272.4 kilometers (169.3 miles) of flowing streams, ditches, and canals as critical habitat in eight units within Colfax, Mora, Otero, Sandoval, and Socorro Counties in New Mexico; Las Animas, Archuleta, and La Plata Counties in Colorado; and Greenlee and Apache Counties in Arizona. The effect of this rule is to designate critical habitat for the New Mexico meadow jumping mouse under the Act.

DATES: This rule is effective on April 15, 2016.

ADDRESSES: This final rule is available on the Internet at <http://www.fws.gov/southwest/es/NewMexico/index.cfm> and at <http://www.regulations.gov> under Docket No. FWS-R2-ES-2013-0014. Comments and materials we received, as well as some supporting documentation used in preparing this final rule, are available for public inspection at <http://www.regulations.gov>. All of the comments, materials, and documentation that we considered in this rulemaking are available by appointment, during normal business hours, at the U.S. Fish and Wildlife Service, New Mexico Ecological Services Field Office, 2105 Osuna NE., Albuquerque, NM 87113; telephone 505-346-2525; or facsimile 505-346-2542.

The coordinates or plot points or both from which the critical habitat maps are generated are included in the administrative record for this rulemaking and are available at <http://www.fws.gov/southwest/es/NewMexico/>, at <http://www.regulations.gov> under Docket No. FWS-R2-ES-2013-0014, and at the

New Mexico Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**). Any additional tools or supporting information that we may develop for this rulemaking will also be available at the Fish and Wildlife Service Web site and Field Office set out above, and may also be included at <http://www.regulations.gov>.

FOR FURTHER INFORMATION CONTACT: Wally “J” Murphy, Field Supervisor, U.S. Fish and Wildlife Service, New Mexico Ecological Services Field Office, 2105 Osuna NE., Albuquerque, NM 87113; by telephone 505-346-2525; or by facsimile 505-346-2542. Persons who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 800-877-8339.

SUPPLEMENTARY INFORMATION:**Executive Summary**

Why we need to publish a rule. This document is a final rule to designate critical habitat for the endangered New Mexico meadow jumping mouse. Under the Act, any species that is determined to be an endangered or threatened species requires critical habitat to be designated, to the maximum extent prudent and determinable. Designations and revisions of critical habitat can only be completed by issuing a rule.

The basis for our action. On June 20, 2013 (78 FR 37363), we proposed to list the New Mexico meadow jumping mouse (jumping mouse) under the Act as an endangered species; that same day, we also proposed to designate critical habitat for the jumping mouse (78 FR 37328). Subsequently, we listed the jumping mouse as an endangered species (79 FR 33119; June 10, 2014). This is a final rule to designate critical habitat for the jumping mouse. Section 4(b)(2) of the Act states that the Secretary shall designate critical habitat 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.

This final rule will designate critical habitat for the endangered New Mexico meadow jumping mouse. The critical habitat areas we are designating in this rule constitute our current best assessment of the areas that meet the definition of critical habitat for the jumping mouse. We are designating as critical habitat for the subspecies approximately 5,657 hectares (13,973 acres) along 272.4 kilometers (169.3 miles) of flowing streams, ditches, and canals as critical habitat in eight units within Colfax, Mora, Otero, Sandoval,

and Socorro Counties in New Mexico; Las Animas, Archuleta, and La Plata Counties in Colorado; and Greenlee and Apache Counties in Arizona.

We have prepared economic and environmental analyses of the designation of critical habitat. In order to consider economic impacts, we prepared an analysis of the economic impacts of the critical habitat designation and related factors. We also prepared an environmental analysis of the designation of critical habitat in order to evaluate whether there would be any significant environmental impacts as a result of the critical habitat designation. We announced the availability of the draft economic analysis and the draft environmental assessment in the **Federal Register** on April 8, 2014 (79 FR 19307), allowing the public to provide comments on our analyses. We have incorporated the comments and have completed the final economic analysis and final environmental analysis for this final designation.

Peer review and public comment. We sought comments from four independent specialists to ensure that our designation is based on scientifically sound data and analyses. We obtained opinions from three individuals with scientific expertise to review our technical assumptions and analysis, and to determine whether or not we had used the best available scientific information. Two of these peer reviewers supported the redundancy of habitat proposed for designation, but were concerned about the viability of existing jumping mouse populations, the short length of some units proposed for designation, and potential for the subspecies' recovery. These peer reviewers provided additional information, clarifications, and suggestions to improve this final rule. Information we received from peer review is incorporated into this final designation. We also considered all comments and information we received from the public during our two open comment periods, which were open for a total of 90 days. We also held four public information meetings with interested stakeholders.

Previous Federal Actions

Previous Federal actions for the jumping mouse are described in the Previous Federal Actions section of the final listing rule published on June 10, 2014 (79 FR 33119). We published a notice of availability of the draft economic analysis and the draft environmental assessment in the **Federal Register** on April 8, 2014 (79 FR 19307), allowing the public to provide

comments on our analyses. Details regarding the comment periods on the proposed rulemaking are provided below.

It is our intent to discuss below only those topics directly relevant to the designation of critical habitat for the jumping mouse. For a thorough assessment of the subspecies' biology and natural history, including limiting factors and subspecies resource needs, please refer to the Final New Mexico Meadow Jumping Mouse Species Status Assessment Report (SSA Report; Service 2014, entire), available online at <http://www.regulations.gov> under Docket No. FWS-R2-ES-2013-0023 and the final listing rule published on June 10, 2014 (79 FR 33119).

Summary of Comments and Recommendations

We requested written comments from the public on the proposed designation of critical habitat for the jumping mouse during two comment periods. The first comment period associated with the publication of the proposed rule (78 FR 37328) opened on June 20, 2013, and closed on August 19, 2013. A legal notice inviting general public comment was published in the Albuquerque Journal on June 27, 2013. We did not receive any requests for a public hearing within 45 days after the date of the proposed rule being published in the **Federal Register**.

We also requested comments on the proposed critical habitat designation and associated draft economic analysis and draft environmental assessment during a comment period that opened April 8, 2014, and closed on May 8, 2014 (79 FR 19307). We contacted appropriate Federal and State agencies, tribes, scientific experts and organizations, and other interested parties and invited them to comment on the proposed rule and associated draft economic analysis and draft environmental assessment. On August 15, 2013, we also held an informational meeting in Durango, Colorado, after receiving requests from interested parties. Similarly, we held informational meetings in Cañon, New Mexico, on April 24, 2014; Durango, Colorado on April 28, 2014; and Alamogordo, New Mexico, on May 28, 2014.

During the two open comment periods, we received 63 comment letters addressing the proposed critical habitat designation, the draft economic analysis, or the draft environmental assessment. Comments we received are grouped into general issues specifically relating to the proposed critical habitat designation for the jumping mouse. All

substantive information provided during both comment periods has either been incorporated directly into this final designation or the SSA Report, or is addressed below.

Peer Review Comments

In accordance with our peer review policy published on July 1, 1994 (59 FR 34270), we solicited expert opinion from four knowledgeable individuals with scientific expertise and familiarity with the subspecies, the geographic region in which the subspecies occurs, and conservation biology principles. We received responses from three of the four peer reviewers on the proposed designation of critical habitat. We reviewed all comments we received from the peer reviewers for substantive issues and new information regarding critical habitat for the jumping mouse. These peer reviewers provided additional information, clarifications, and suggestions to improve this final rule.

(1) *Comment:* The Service should consider expanding the proposed critical habitat to provide reaches of critical habitat that are at least 25 kilometers (km) (15.5 miles (mi)) in length. A minimum length of 9 km (6 mi) of critical habitat may not be adequate to support a resilient population because many threats (e.g., wildfire, drought, and recreation) are likely to impact entire sections of stream. The average length of proposed critical habitat units was 12.2 km (7.6 mi) (range of 3.7 to 23.3 km; 2.3 to 14.5 mi). Small reaches (i.e., <25 km (15.5 mi)) may not provide resiliency. Notably, the failure of surveys in 2013 to verify persistence of the jumping mouse at Bosque del Apache National Wildlife Refuge (NWR), one of the largest areas proposed as critical habitat (21.1 km (13.1 mi)), suggests that critical habitat units at the upper end of the length designation used by the Service are not large enough to prevent extinction. Consequently, it is likely that all units should be greater than 25 km (15.5 mi) to provide for resiliency. Other public commenters suggested we shorten or exclude areas of the proposed critical habitat units.

Our Response: In considering the best available data regarding the area needed for maintaining resilient populations of adequate size with the ability to endure adverse events (such as floods or wildfire), we estimate that resilient populations of jumping mice need connected areas of suitable habitat in the range of at least 27.5 to 73.2 hectares (ha) (68 to 181 acres (ac)), along 9 to 24 km (5.6 to 15 mi) of flowing streams, ditches, or canals. The minimum area

needed is given as a range due to the uncertainty of an absolute minimum and because local conditions within drainages will vary.

In our proposed critical habitat designation and this final designation, we selected upstream and downstream boundaries that would avoid including highly degraded areas that are not likely restorable, areas that were permanently dewatered or permanently developed (i.e., natural vegetation removed), or areas in which suitable habitat no longer existed and was not likely to be restored. Consequently, many areas upstream or downstream of designated critical habitat are currently unoccupied and unusable by the jumping mouse because they lack continuous areas of suitable habitat. Although these degraded or dewatered areas may include historic jumping mouse capture locations, they do not meet the definition of critical habitat under the Act (16 U.S.C. 1531 *et seq.*) because they were neither occupied at the time of listing nor are they considered essential to the conservation of the subspecies.

Consequently, we continue to conclude that current jumping mouse populations need connected areas of suitable habitat along at least 9 to 24 km (5.6 to 15 mi) of continuous suitable habitat to support viable populations of jumping mice with a high likelihood of long-term persistence. This distribution and amount of suitable habitat would allow for multiple subpopulations of jumping mice to exist along drainages and would provide for sources of recolonization if some areas where extirpated due to disturbances.

We incorporated the best scientific and commercial information available into this final rule, including information regarding all locations where the jumping mouse has been trapped since 2005, and other areas outside of the geographic area occupied by the subspecies. For example, the jumping mouse is not extirpated from the Bosque del Apache NWR; they were detected during surveys in 2014 (Frey 2013, entire; Service 2013, entire; 2013a, entire; 2013b, entire; Service 2014a, entire). In the SSA Report, we found that conservation of the jumping mouse should preferentially focus on restoration of habitats adjacent to occupied areas to expand all remaining populations (Malaney *et al.* 2012, p. 10). If, in the future, we find that restoration of primary constituent elements, particularly seasonally perennial water, is successful, further revision of critical habitat may be appropriate.

In addition, we recognize that critical habitat designated at a particular point in time may not include all of the

habitat areas that we may later determine are necessary for the recovery of the subspecies. The designation of critical habitat is only one component of recovery for a species. For these reasons, a critical habitat designation does not signal that habitat outside the designated area is unimportant or may not be needed for recovery of the subspecies; to meet the requirements of the Act, the Service determined areas that were occupied by the subspecies at the time of listing that contained the physical and biological features essential to the conservation of the jumping mouse and unoccupied areas that are essential for its conservation.

(2) *Comment:* Unit 1 (Sugarite Canyon) should be expanded to include the entire watershed of Chicorica Creek.

Our Response: The entire watershed of Chicorica Creek does not meet the definition of critical habitat for this subspecies because the entire watershed was neither occupied at the time of listing nor is it essential to the conservation of the subspecies. Under the first part of the Act's definition of critical habitat, areas within the geographical area occupied by the species at the time it was listed are included in a critical habitat designation if they contain physical or biological features (1) which are essential to the conservation of the species and (2) which may require special management considerations or protection. We are designating as critical habitat all areas where the jumping mouse is known to occur. Under the second part of the Act's definition of critical habitat, we can designate critical habitat in areas outside the geographical area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

We are designating 13.0 km (8.1 mi) in the unit, which is within the range of at least 27.5 to 73.2 ha (68 to 181 ac), along 9 to 24 km (5.6 to 15 mi) of flowing streams, ditches, or canals needed for resilient populations of jumping mice (see our response to Comment 1, above). This provides the needed size and connectivity of suitable habitat of the jumping mouse in Sugarite Canyon for population redundancy and resiliency. The areas upstream and downstream of the 13.0 km (8.1 mi) in the unit do not contain suitable habitat, nor are these areas restorable. They are highly degraded areas that lack dense herbaceous vegetation, and are not likely to be restored to suitable habitat (see our response to Comment 1, above).

(3) *Comment:* Unit 2 (Coyote Creek) should include the Mora River because there are two historic locations.

Our Response: The Mora River does not meet the definition of critical habitat for this subspecies because it was neither occupied at the time of listing nor is it essential to the conservation of the subspecies (see our response to Comment 2, above). No recent surveys (*i.e.*, post 2005) have been conducted in the Mora River area (Frey 2008c, p. 37); therefore, the best available scientific and commercial data, the survey data from post 2005, indicate the Mora River is unoccupied.

We are designating 11.8 km (7.4 mi) in Unit 2 to provide the needed size and connectivity of suitable habitat of the jumping mouse within Coyote Creek for population redundancy and resiliency. This size is within the range of at least 27.5 to 73.2 ha (68 to 181 ac), along 9 to 24 km (5.6 to 15 mi) of flowing streams, ditches, or canals, needed for resilient populations of jumping mice (see our response to Comment 1, above). We did not propose or include the Mora River as critical habitat because it is not perennial and does not contain suitable habitat between Guadalupita (a site along Coyote Creek within Unit 2) and the historic collection site on the Mora River (*i.e.*, sewage pond) (Frey 2008c, p. 37). The area is not essential to the conservation of the subspecies because it no longer contains perennial water and is therefore unsuitable and not restorable.

(4) *Comment:* Subunit 3A (San Antonio Creek, in Unit 3—Jemez Mountains) should be expanded to include Redondo Creek and San Antonio Creek on the Valles Caldera National Preserve because there is a historical location on the preserve and potentially suitable habitat in the vicinity of the junction of these two creeks.

Our Response: Redondo Creek and San Antonio Creek on the Valles Caldera National Preserve do not meet the definition of critical habitat for this subspecies because the areas were neither occupied at the time of listing nor are the areas essential to the conservation of the subspecies. They are highly degraded areas that lack dense herbaceous vegetation, and are not likely to be restored to suitable habitat (see our response to Comment 1, above). Although Frey (2005a, p. 6) reported a jumping mouse historical record from the base of Redondo Peak in a beaver pond, possibly in the vicinity of Redondo Creek, the record was based on a personal communication of W. Whitford in the 1970s, and there is no verifiable specimen with a specific

capture location. The presence of beavers creates diverse wetland communities that support the dense riparian herbaceous vegetation utilized by jumping mice (see section 5.1.6 of the SSA Report (Service 2014)). There are no longer any established beaver populations within the Valles Caldera National Preserve to maintain suitable habitat. In recent surveys, no jumping mice have been captured on the Valles Caldera National Preserve (VCNP 2012, pp. 20–21), such that the best available scientific and commercial information indicates the area is unoccupied.

We are designating critical habitat within Subunit 3A starting from the northern part of San Antonio Creek where it exits the boundary of the Valles Caldera National Preserve and follows the creek 11.5 km (7.1 mi) where it meets private land immediately downstream of the San Antonio Campground, which would provide the needed size and connectivity of suitable habitat of the jumping mouse in the Jemez Mountains and provide population redundancy and resiliency. This size is within the range of at least 27.5 to 73.2 ha (68 to 181 ac), along 9 to 24 km (5.6 to 15 mi) of flowing streams, ditches, or canals needed for resilient populations of jumping mice (see our response to Comment 1, above).

(5) *Comment:* Subunit 3B (Rio Cebolla, in Unit 3—Jemez Mountains) should be expanded to include additional U.S. Forest Service (Forest Service) lands within Lake Fork Canyon, a major tributary to the Rio Cebolla and the area upstream of Hay Canyon to Forest Road 257.

Our Response: We did not expand the designation to include the tributary in Lake Fork Canyon or the area upstream of Hay Canyon because these areas were neither occupied at the time of listing nor are the areas essential to the conservation of the subspecies. In 2005, two jumping mice were captured at the confluence of Lake Fork Canyon and the Rio Cebolla within the livestock and vehicle enclosure that contained well-developed riparian habitat dominated by sedges, diverse forbs, grasses, and a small patch of alder (Frey 2005a, p. 27). However, no jumping mice were captured further upstream along the tributary of Lake Fork Canyon and the area did not contain perennial water or suitable habitat. Without suitable habitat and a capture record post 2005, the area is not considered occupied at the time of listing. Water is intermittent through the Lake Fork Canyon, and riparian areas are isolated (Frey 2007b, p. 12). They are highly degraded areas that lack dense herbaceous vegetation, and are not likely to be restored to

suitable habitat (see our response to Comment 1, above). Without perennial water in this stretch, suitable habitat is unlikely to be restored because the dense vegetation needed by the subspecies will not be supported without sufficient water. Therefore, the area is not considered essential to the conservation of the subspecies.

The area upstream of Hay Canyon, including McKinney Pond, contains poorly developed riparian habitat that is currently unsuitable for the jumping mouse (Frey 2007b, pp. 9–10). Additionally, deer mice (*Peromyscus maniculatus*) dominated the small mammal community, suggesting a disturbed or degraded riparian system (Frey 2007b, pp. 9–10). Further, there are no historic capture locations in the area upstream of Hay Canyon. These additional areas are outside the historical range of the subspecies. The areas we have identified as critical habitat, if restored and occupied, are sufficient to support conservation; therefore, designating areas outside of the historical range is not necessary.

We are designating critical habitat within Subunit 3B starting from an old beaver dam about 0.6 km (0.4 mi) north of Hay Canyon, and following the creek about 20.7 km (12.9 mi) downstream where it meets the Rio de las Vacas, which would provide the needed size and connectivity of suitable habitat of the jumping mouse in the Jemez Mountains and provide population redundancy and resiliency. This subunit contains all of the current and historic locations for the jumping mouse along the Rio Cebolla (Frey 2005a, entire; 2007b, entire). Without suitable habitat and without post-2005 survey records we consider the areas above Hay Canyon and along Lake Fork Canyon to be unoccupied. Further, these areas are not considered essential to the conservation of the subspecies for the reasons stated above. The size of the subunit is within the range of at least 27.5 to 73.2 ha (68 to 181 ac), along 9 to 24 km (5.6 to 15 mi) of flowing streams, ditches, or canals needed for resilient populations of jumping mice (see our response to Comment 1, above).

(6) *Comment:* Subunit 3C (Rio de las Vacas, in Unit 3—Jemez Mountains) should be expanded to include the Rito Peñas Negras, a major tributary to the Rio de las Vacas, because there are at least three historical jumping mouse locations in the area.

Our Response: We did not expand the designation to include the Rito Peñas Negras because the area was neither occupied at the time of listing nor is it essential to the conservation of the species. This area contains poorly

developed riparian habitat that is unsuitable for the jumping mouse and is not likely restorable (Frey 2005a, pp. 29–30). Without suitable habitat and without post-2005 survey records we consider this area unoccupied. Further, without restorable habitat the area is not considered essential to the conservation of the subspecies. The area lacks dense herbaceous vegetation, and is not likely to be restored to suitable habitat (see our response to Comment 1, above). In this subunit, we are designating 454 ha (1,122 ac) along 23.3 km (14.5 mi) of restorable habitat that would provide the needed size and connectivity of suitable habitat for the jumping mouse in the Jemez Mountains and support population redundancy and resiliency. This size is within the range of at least 27.5 to 73.2 ha (68 to 181 ac), along 9 to 24 km (5.6 to 15 mi) of flowing streams, ditches, or canals needed for resilient populations of jumping mice (see our response to Comment 1, above).

(7) *Comment:* Unit 3 (Jemez Mountains) should be expanded to include a new subunit in Virgin Canyon, a major tributary to the Rio Guadalupe, because there is a historic (1989) jumping mouse location in the area.

Our Response: We did not expand the designation to include the Virgin Canyon because the area was neither occupied at the time of listing nor is it essential to the conservation of the subspecies. Although Frey (2005a, pp. 6, 25–26) reported a jumping mouse historical record from the Virgin Canyon, the specific capture location is unknown and could have been anywhere from the drainage. The area was surveyed in 2005, and no jumping mice were captured, and there are no current records indicating the subspecies is present (Frey 2005a, pp. 13, 24–25). Consequently, the area is not considered occupied at the time of listing. In 2005, there was little to no suitable riparian habitat or wet meadows along the creek (Frey 2005a, p. 25), and the area is not likely restorable. The area lacks dense herbaceous vegetation, and is not likely to be restored to suitable habitat (see our response to Comment 1, above). Consequently, the area is not considered essential to the conservation of the subspecies.

(8) *Comment:* A new unit should be added for the 1932 capture records from Tularosa Creek near Mescalero, Otero County, New Mexico.

Our Response: We did not expand the designation to include Tularosa Creek because the area was neither occupied at the time of listing nor is it essential to the conservation of the subspecies.

Frey (2008c, p. 35) reported a historic record from 1932 along Tularosa Creek. In 2006, Frey (2008c, p. 35) indicated that the general area of the 1932 capture locations of the jumping mouse along Tularosa Creek may have potentially suitable habitat. However, since then, the stream, marshes, and wet meadows have dried (Sivinski 2012, pp. 18–21) and the area is dominated by invasive plants (Sivinski 1996, p. 3; 2009a, p. 2). Without suitable habitat and a capture record post 2005, the area is not considered occupied at the time of listing. Suitable habitat is unlikely to be restored because without perennial water in this stretch the area will not support the dense vegetation needed by the subspecies. The area lacks dense herbaceous vegetation, and is not likely to be restored to suitable habitat (see our response to Comment 1, above). Therefore, the area is not essential to the conservation of the subspecies.

(9) *Comment:* In 2013, water flowed downstream of the Lincoln National Forest Boundary of Subunit 4A (Silver Springs, in Unit 4—Sacramento Mountains); therefore, the subunit should be expanded downstream at least 1.9 km (1.2 mi) to include this potential and recoverable habitat on the Mescalero Apache Reservation.

Our Response: We did not expand the designation to include any lands on the Mescalero Apache Reservation because the area was neither occupied at the time of listing nor is it essential to the conservation of the subspecies. There are no records of jumping mouse from post 2005. The flow downstream of the Lincoln National Forest boundary is variable, with water flowing onto the Mescalero Apache Reservation some years and remaining dry other years (Frey 2005a, p. 31). Moreover, the stream channel downstream of the boundary is incised, and suitable jumping mouse habitat no longer exists. Without perennial water flow, the area frequently dries and will not support the dense vegetation needed by the subspecies, and it is not likely to be restored. The area lacks dense herbaceous vegetation, and is not likely to be restored to suitable habitat (see our response to Comment 1, above).

(10) *Comment:* Subunit 4B (Upper Peñasco, in Unit 4—Sacramento Mountains) should be expanded to include about 4.0 km (2.5 mi) of Water Canyon upstream from the confluence with the Rio Peñasco. This stretch of stream had water present during 2013. There is also restorable habitat above Forest Road 164 that should be included as critical habitat.

Our Response: We are designating 136 ha (335 ac) along 6.4 km (4.0 mi) of

restorable habitat. Subunit 4B begins at the junction of Forest Service Road 164 and New Mexico Highway 6563 and follows the Rio Peñasco drainage downstream (or above Forest Service Road 164) to about 2.4 km (1.5 mi) below Bluff Spring at the boundary of private and Forest Service lands. Therefore, the subunit already includes the restorable habitat above Forest Road 164.

We did not expand the designation to include Water Canyon, however, because it was neither occupied at the time of listing nor is it considered essential to the conservation of the subspecies. The water in these additional areas is variable, flowing some years and dry other years (Frey 2005a, p. 33). Moreover, suitable jumping mouse habitat no longer exists and is not likely to be restored because the area frequently dries and will not support the dense vegetation needed by the subspecies. The area lacks dense herbaceous vegetation, and is not likely to be restored to suitable habitat (see our response to Comment 1, above).

(11) *Comment:* Subunit 4D (Wills Canyon, in Unit 4—Sacramento Mountains) should be expanded to include the tributary in Hubbell Canyon. Extending the subunit to the Rio Peñasco could provide important connectivity with Subunit 4C (Middle Peñasco, in Unit 4—Sacramento Mountains).

Our Response: We did not expand the designation to include Hubble Canyon or the additional areas downstream of Subunit 4D because they were neither occupied at the time of listing nor are they essential to the conservation of the subspecies. Although it is possible that the jumping mouse historically existed in Hubble Canyon, there are no historic records and recent surveys did not detect the subspecies (Forest Service 2012h, p. 2). The area downstream of Subunit 4D to the confluence of the Rio Peñasco was not included because the stream channel is eroded, riparian habitat is poorly developed, and water is intermittent (Frey 2005a, p. 34). Since the area frequently dries, it is not likely to be restored because it will not support the dense vegetation needed by the subspecies. The area lacks dense herbaceous vegetation, and is not likely to be restored to suitable habitat (see our response to Comment 1, above).

(12) *Comment:* Subunit 4E (Agua Chiquita Canyon, in Unit 4—Sacramento Mountains) should be expanded to include additional areas downstream to the Town of Weed, including the tributaries in Hay and Spring Canyons.

Our Response: We did not expand the designation to include Hay or Spring Canyons or the additional area downstream of Subunit 4E to Weed because they were neither occupied at the time of listing nor are they essential to the conservation of the subspecies. The area downstream of Subunit 4E to Weed was not included because riparian habitat is nearly absent and the water is intermittent (Frey 2005a, pp. 35–36). In Hay Canyon, there is little to no riparian habitat. In Spring Canyon the streambed is dry and eroded with no riparian vegetation in one historic capture location. In another historic location within Spring Canyon, water only flowed for about 0.16 km (0.1 mi) before ceasing, and riparian habitat was only a narrow strip 2.5 to 3 meters (m) (8.2 to 9.8 feet (ft)) wide (Frey 2005a, p. 35). Since these areas frequently go dry, they will not support the dense vegetation needed by the subspecies and are therefore not likely to be restored. The area lacks dense herbaceous vegetation, and is not likely to be restored to suitable habitat (see our response to Comment 1, above). Further, recent surveys in Hay and Spring Canyons did not detect the subspecies (Frey 2005a, pp. 35–36).

(13) *Comment:* Unit 5 (White Mountains) should be expanded to include a new subunit for the North Fork of the White River on Fort Apache Reservation based on historical records from at least two locations.

Our Response: We did not include a new subunit for the North Fork of the White River because the area was neither occupied at the time of listing nor is it essential to the conservation of the subspecies. The most recent records are from 1933 and 1967 (Frey 2011; Appendix 1). We do not have recent survey information indicating the area is occupied, nor do we have recent habitat information to demonstrate that the area could support suitable habitat for the jumping mouse. The area lacks dense herbaceous vegetation, and is not likely to be restored to suitable habitat (see our response to Comment 1, above). In Unit 5, we are designating 478 ha (1,181 ac) along 22.6 km (14.0 mi) of stream, which exceeds the range of at least 27.5 to 73.2 ha (68 to 181 ac), along 9 to 24 km (5.6 to 15 mi) of flowing streams, ditches, or canals needed for resilient populations of jumping mice (see our response to Comment 1, above).

(14) *Comment:* Subunit 5A (Little Colorado, in Unit 5—White Mountains) should be expanded to include Lee Valley Creek above the Lee Valley Reservoir and the wilderness area in the headwaters of both forks of the Little Colorado River.

Our Response: We did not expand the designation to include Lee Valley Reservoir or the additional areas in the headwaters of both forks of the Little Colorado River because these areas were neither occupied at the time of listing nor are they essential to the conservation of the subspecies. The areas are not essential to the conservation of the subspecies because Lee Valley Reservoir does not contain suitable habitat and the reservoir would be an impediment to movements between Lee Valley Creek and the Little Colorado River. In 1981, when the subspecies was last detected, the habitat along Lee Valley Creek contained tall grass meadow with willows growing along a small stream, but the current habitat is composed of shrubs that are very sparse and mostly decadent or dead, with no live willows recorded (Frey 2011, p. 88). The area lacks dense herbaceous vegetation, and is not likely to be restored to suitable habitat (see our response to Comment 1, above). Recent surveys in these areas did not detect the subspecies (Frey 2011, pp. 25, 88; Underwood 2007, entire). We are designating 22.6 km (14.0 mi) of restorable habitat, which would provide the needed size and connectivity of suitable habitat of the jumping mouse along the Little Colorado River and provide population redundancy and resiliency. This size is within the range of at least 27.5 to 73.2 ha (68 to 181 ac), along 9 to 24 km (5.6 to 15 mi) of flowing streams, ditches, or canals needed for resilient populations of jumping mice (see our response to Comment 1, above).

(15) *Comment:* Subunit 5B (Nutrioso, in Unit 5—White Mountains) should be expanded to include additional areas downstream into New Mexico to the Luna Valley, including the tributaries within Stone Creek and Trout Creek watersheds.

Our Response: We did not expand the designation to include additional areas downstream into New Mexico, including the tributaries within Stone and Trout Creek watersheds because they were neither occupied at the time of listing nor are they essential to the conservation of the subspecies. Although it is possible that the subspecies could occur in the watershed, there are no confirmed reports of the jumping mouse in the Luna Valley; consequently, the area is considered unoccupied. These additional areas are outside the historical range of the subspecies. The areas we are identifying as critical habitat, if restored and occupied, are sufficient to support conservation.

(16) *Comment:* Subunits 5D, 5E, and 5F (East Fork Black, West Fork Black, and Boggy and Centerfire, in Unit 5—White Mountains) should be expanded to include additional areas downstream of each subunit until they join together. In the headwaters of Subunit 5E, additional habitat should include the West Fork of the Black River, Thompson Creek, and Burro Creek.

Our Response: We did not expand the designation to include additional areas downstream in Subunits 5D, 5E, and 5F, nor into the headwaters of Subunit 5E, because they were neither occupied at the time of listing nor are they essential to the conservation of the subspecies. Recent surveys in two small tributaries to Burro Creek did not detect the subspecies, and it is not historically known from this area (Frey 2011, p. 104). Moreover, Burro Creek is not essential to the conservation of the subspecies because the creek has a relatively high gradient with rocky substrate, which is not suitable habitat for the jumping mouse (Frey 2011, p. 104). All of the historical locations on the West Fork of the Black River are within the designated critical habitat (Morrison 1991, pp. 5, 10; Frey 2011, p. 104); there are no recent or historic surveys indicating the subspecies' presence downstream of the area designated as critical habitat. Therefore, the area is considered unoccupied and outside the historical range of the subspecies. The areas we have identified as critical habitat, if restored and occupied, would be sufficient to support conservation.

The subspecies is not known historically from Thompson Creek or the headwaters of Subunit 5E. The areas we have identified as critical habitat, if restored and occupied, would likely be sufficient to support conservation; therefore, we do not consider areas outside the historical range as essential to the conservation of the subspecies. Finally, the precise capture locations of two historic records on the East Fork Black River and on the lower Black River could not be determined (Frey 2011, p. 23). Consequently, these areas are not considered occupied or essential for jumping mouse conservation.

(17) *Comment:* Subunit 5G (Corduroy, in Unit 5—White Mountains) should be expanded to include the entire Fish Creek drainage to the Black River.

Our Response: We did not expand the designation in Subunit 5G to include the additional areas in the Fish Creek drainage because the areas were neither occupied at the time of listing nor are they essential to the conservation of the subspecies. Recent surveys did not detect the subspecies, and the

subspecies is not known historically from Fish Creek (Morrison 1991, p. 12; Frey 2011, pp. 87, 89). The additional areas are neither occupied at the time of listing nor are they considered essential to the conservation of the subspecies because they are outside the historical range of the subspecies. The areas we have identified as critical habitat, if restored and occupied, would be sufficient to support conservation.

(18) *Comment:* Subunit 5H (Campbell Blue, in Unit 5—White Mountains) should be expanded to include additional areas upstream to the junction of Castle Creek, which is a tributary to Campbell Blue, and downstream into New Mexico, including the Blue River drainage.

Our Response: We did not expand the designation in Subunit 5H to include additional areas upstream of Castle Creek or downstream into New Mexico including the Blue River drainage because these areas were neither occupied at the time of listing nor are these areas essential to the conservation of the subspecies. Recent surveys did not detect the subspecies (Morrison 1991, p. 12; Frey 2011, pp. 87, 89) from these areas. The precise capture location of a historical record on lowermost Campbell Blue Creek could not be determined (Frey 2011, p. 101). The subspecies is not known historically from Castle Creek. There are no confirmed reports of the jumping mouse near the Blue River drainage in New Mexico (Frey 2007, p. 2). Consequently, these areas are not considered occupied. Potentially suitable habitat on lower Campbell Blue Creek was restricted to very small, isolated areas away from the creek. The main channel of Campbell Blue Creek is rocky and devoid of riparian vegetation (Frey 2011, p. 101), and likely not restorable. Finally, no suitable habitat was found downstream of the Turkey Creek confluence along either Campbell Blue or the Blue River (Frey 2011, p. 101). These areas are not essential to the conservation of the subspecies and are outside the historical range of the subspecies. The areas we have identified as critical habitat, if restored and occupied, would be sufficient to support conservation.

(19) *Comment:* Unit 5 (White Mountains) should be expanded to include a new subunit for Beaver Creek, including its tributary Hannagan Creek.

Our Response: We did not expand the designation in Unit 5 to include a new subunit for Beaver Creek, including Hannagan Creek, because it was neither occupied at the time of listing nor is it essential to the conservation of the subspecies. The historical location is from 1932 and 1933, there is no suitable

habitat further downstream along upper Beaver Creek, and water in the higher reaches of Hannagan Creek is intermittent (Frey 2011, p. 105). Since Hannagan Creek is intermittent in areas and frequently dries, and because the stream has a relatively high gradient, it is not likely to be restored because it will not support the dense vegetation needed by the subspecies.

(20) *Comment:* Unit 6 (proposed as Middle Rio Grande, but renamed Bosque del Apache NWR in this final rule) should be expanded to include a new subunit for Bernardo and La Joya Wildlife Areas along the Rio Grande in New Mexico.

Our Response: We did not expand the designation in Unit 6 to include a new subunit for Bernardo and La Joya Wildlife Areas because they were neither occupied at the time of listing nor are they essential to the conservation of the subspecies. Although it is possible that the jumping mouse historically existed in these areas along the Rio Grande, there are no historical records for these areas. Further, recent surveys at Casa Colorado Waterfowl Area, the one historical location in the general vicinity of the Bernardo and La Joya Wildlife Areas along the Rio Grande, did not detect the subspecies (Morrison 1988, pp. 16–21; Frey 2012e, p. 1). These additional areas are not essential to the conservation of the subspecies because they are outside the historical range of the subspecies. The areas within the historical range of the jumping mouse that we have identified as critical habitat, if restored and occupied, would be sufficient to support conservation.

(21) *Comment:* Subunit 6C (proposed as Bosque del Apache NWR in Unit 6—Middle Rio Grande, but renamed Unit 6—Bosque del Apache NWR in this final rule) should be expanded to include all of the refuge management units known to have been used by the jumping mouse.

Our Response: We did not expand the designation in Bosque del Apache NWR to include all of the refuge management units known to have been used by the jumping mouse because they were neither occupied at the time of listing nor are they essential to the conservation of the subspecies. While these refuge management units outside of Bosque del Apache NWR are within the historical range of the subspecies, the best available scientific and commercial data do not indicate that they were occupied at the time of listing. The refuge management units outside of the designation do not have suitable habitat (Frey and Wright 2012, p. 23, Figure 6), and the habitat is not

restorable because seasonally perennial flowing water is lacking. The area lacks dense herbaceous vegetation, and is not likely to be restored to suitable habitat (see our response to Comment 1, above). We acknowledge that the area we are designating as Unit 6 in this final rule does not currently contain continuous suitable habitat, but that area generally has seasonally perennial flowing water with saturated soils (Frey and Wright 2012, entire) and, therefore, has a high potential of being restored to suitable habitat. We proposed and are designating 21.1 km (13.1 mi) in Bosque del Apache NWR as critical habitat in Unit 6, which would provide the needed size and connectivity of suitable habitat of the jumping mouse within Bosque del Apache NWR to support population redundancy and resiliency. This size is within the range of at least 27.5 to 73.2 ha (68 to 181 ac), along 9 to 24 km (5.6 to 15 mi) of flowing streams, ditches, or canals needed for resilient populations of jumping mice (see our response to Comment 1, above).

(22) *Comment:* Unit 8 (Sambrito Creek) should be expanded to include additional areas on the San Juan and Piedra Rivers between the Navajo Reservoir upstream to 2,316 m (7,600 ft) elevation, which is the upper elevation limit for the jumping mouse in the area.

Our Response: We did not expand the designation in Unit 8 to include additional areas on the San Juan and Piedra Rivers because they were neither occupied at the time of listing nor are they considered essential to the conservation of the subspecies. Seven of the eight historical locations (from 1960) are within the general area designated as critical habitat along Sambrito Creek (Frey 2008c, pp. 36, 42; 2011a, p. 4). The eighth location is about 4.0 km (1.25 mi) north of Unit 8, and there is no suitable or restorable habitat near this historical location. The area lacks dense herbaceous vegetation and is not likely to be restored to suitable habitat (see our response to Comment 1, above). There are no other historical collections of the jumping mouse within this geographic management area. We are designating 75 ha (184 ac) along 4.6 km (2.9 mi) of stream within Unit 8. This size is above the minimum of the range of at least 27.5 to 73.2 ha (68 to 181 ac), along 9 to 24 km (5.6 to 15 mi) of flowing streams, ditches, or canals needed for resilient populations of jumping mice (see our response to Comment 1, above).

(23) *Comment:* A new unit should be added for the upper Rio Grande based on the 1858 record from Fort Burgwyn, Taos County, and an 1894 record from

Santa Fe, Santa Fe County, both in New Mexico.

Our Response: We did not include a new unit because these areas were neither occupied at the time of listing nor are they essential to the conservation of the subspecies. Both records are over 100 years old, and neither includes a specific capture location. The specific location of the Santa Fe record is completely unknown and could have been anywhere near the City of Santa Fe (Frey 2006d, pp. 12–15; 2008c, p. 40). The Fort Burgwyn location may have been in the vicinity of the confluence of the Rio de la Olla and Rio Grande del Rancho, 14.6 km (9.0 mi) south of Taos, but this is not confirmed. Consequently, these areas were not considered occupied at the time of listing. When Frey (2006d, pp. 28–29, 73) surveyed in the vicinity of Fort Burgwyn, only western jumping mice (*Zapus princeps*) were captured, likely because there was little current suitable habitat for the jumping mouse. Additionally, deer mice dominated the small mammal community, suggesting a disturbed or degraded riparian system (where suitable habitat no longer exists and is not likely restorable) (Frey 2006, p. 29). Consequently, these areas are not essential for the conservation of the subspecies.

(24) *Comment:* There is concern about the exclusion under section 4(b)(2) of the Act of two Pueblos from the final designation because the jumping mouse has a history of occupancy on these lands. The sites proposed on the two Pueblos would be valuable within the context of the overall distribution-wide planning for the conservation of the jumping mouse. Therefore, the Service should work closely with these Pueblos on management plans that would benefit the jumping mouse and its habitat.

Our Response: 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 relevant provision of the Departmental Manual of the Department of the Interior (512 DM 2), we coordinate with federally recognized tribes on a government-to-government basis. The Pueblo of Isleta has developed and maintained a Riverine Management Plan that includes the jumping mouse and its habitat (Service 2005; 70 FR 60955, October 19, 2005; Pueblo of Isleta 2005, entire; 2014, entire). The Service has established conservation partnerships with Ohkay Owingeh and Pueblo of Isleta, and both pueblos have implemented conservation and recovery actions for the

improvement of riparian habitat and the jumping mouse. As analyzed in the *Tribal Lands—Exclusions Under Section 4(b)(2) of the Act* section, below, we have excluded both tribal areas from critical habitat based on our ongoing conservation partnerships where the benefits of exclusion from critical habitat outweigh the benefits of including an area within critical habitat.

(25) *Comment:* One of the peer reviewers indicated that the description of the primary constituent elements (PCEs) contains a small amount of outdated information. While the jumping mouse is often, but not always, associated with beaked sedge, willows, or alders, an association with reed canarygrass is unusual.

Our Response: Based on this updated information, we have revised the PCEs to remove reference to reed canarygrass (see *Primary Constituent Elements* section, below).

(26) *Comment:* The manner in which Frey (2011, p. 29) is cited in the proposed rule seems to indicate that the author recommended that stream lengths between 4.5 and 6.0 km (2.8 to 3.7 mi) would support a resilient population. The information on stream length was taken out of context.

Our Response: Frey (2011, p. 29) summarized characteristics of sites where the subspecies had been captured in the White Mountains, Arizona. We revised the SSA Report and this final rule to clarify that Frey (2011, p. 29) reported stream lengths containing at least 4.5 to 6 km (2.8 to 3.7 mi) of continuous, dense, riparian herbaceous vegetation (suitable habitat) would likely support populations of jumping mice with a high likelihood of long-term persistence.

(27) *Comment:* The determination that stream lengths should be at least twice as large as those reported by Frey (2011, p. 29) introduces a non-scientific basis for the designation of critical habitat.

Our Response: Stream length was not determined by doubling the lengths reported by Frey (2011, p. 29). In the SSA Report, we clarified our use of the best scientific and commercial information available for the jumping mouse (Frey 2011, p. 29) and for the Preble's meadow jumping mouse (*Zapus hudsonius preblei*) (Service 2003, pp. 24–25) to explain that the appropriate configuration of critical habitat is provided by protecting multiple local populations (also called subpopulations) throughout a minimum length of stream, ditch, or canal of 9 to 24 km (5.6 to 15 mi) including about 27.5 to 73.2 ha (68 to 181 ac) of suitable habitat. The minimum area needed is given as a range due to the uncertainty

of an absolute minimum and because local conditions within drainages vary (see our response to Comment 1, above). The Recovery Team for the Preble's meadow jumping mouse recommended that at least several medium-sized populations (at least 500 mice) should be protected with each population distributed along a 14- to 26-km (9- to 16-mi) network of connected streams whose hydrology supports riparian vegetation (Service 2003, p. 25). Frey (2011, p. 29) reported that stream lengths containing at least 4.5 to 6 km (2.8 to 3.7 mi) of continuous, dense, riparian herbaceous vegetation (suitable habitat) would likely support populations of jumping mice with a high likelihood of long-term persistence. Following severe wildfires, we found that, depending on fire intensity and the subsequent ash and debris flow within stream reaches, jumping mouse populations can be significantly affected and likely extirpated, even when 15 km (9 mi) of continuous suitable habitat existed prior to the wildfire (Sugarite Canyon; Frey 2006d, pp. 18–21; 2012b, p. 16; Frey and Kopp 2013, entire). After reviewing this information, we conclude that current jumping mouse populations need connected areas of suitable habitat along at least 9 to 24 km (5.6 to 15 mi) of nearly continuous suitable habitat to support populations of jumping mice with a high likelihood of long-term persistence from these types of stochastic and catastrophic events.

(28) *Comment:* The jumping mouse may have been extirpated from Bosque del Apache NWR since 2010, despite the fact that the refuge represents one of the largest protected patches of recently occupied habitat. From 2009–2010, the jumping mouse occupied a 2.7-km (1.7-mi) reach of the Riverside Canal, but the total length of potential habitat was about 10.5 km (6.5 mi). The failure to verify persistence of the subspecies in 2013 suggests that critical habitat units are not large enough.

Our Response: The jumping mouse is not extirpated from Bosque del Apache NWR. They were detected during surveys in 2014 (Frey 2013, entire; Service 2013, entire; 2013a, entire; 2013b, entire; Service 2014a, entire), which confirmed the persistence of the subspecies on Bosque del Apache NWR within the remaining habitat. We are designating 21.1 km (13.1 mi) within Bosque del Apache NWR, which would provide the needed size and connectivity of suitable habitat to increase the potential distribution of the jumping mouse and provide population redundancy and resiliency. We are designating this area because this area generally has perennial flowing water

with saturated soils (Frey and Wright 2012, entire) and a high potential of being restored to suitable habitat.

(29) *Comment:* We received comments pertaining to dispersal distances and the size of critical habitat units. One recommendation was that the Service should consider dispersal distances from studies on the Preble's meadow jumping mouse of up to 4.3 km (2.7 mi), whereas another suggestion found our characterization of dispersal distances and home range sizes of the jumping mouse appropriate. Several of the proposed critical habitat units are roughly the same size or smaller than 4.3 km (2.7 mi), suggesting that these units could consist of only a single subpopulation that would be exceptionally vulnerable to extinction.

Our Response: We did consider information on the natural history of Preble's meadow jumping mouse; however, as stated in the SSA Report, studies indicate that the jumping mouse does not appear to travel as great a distance as Preble's meadow jumping mouse. The maximum distance travelled between two successive points by all radio-collared jumping mice on Bosque del Apache NWR was 744 m (2,441 ft), but most regular daily and seasonal movements were less than 100 m (328 ft) (Frey and Wright 2012, pp. 16, 109; Figure 9). See section 2.6 "Movements and Home Range" in the SSA Report (Service, 2014) for additional information.

We reviewed the available natural history information and determined that there is not enough justification to modify our original critical habitat units, especially since our units were generally limited to presence of the primary constituent element of seasonally perennial water. Without water, the other PCEs would not be restored. After considering the variable quality of habitat in many areas outside of the proposed critical habitat, we determined that larger critical habitat units with more reaches of unsuitable or low-quality habitat would not provide additional benefit to the jumping mouse. Consequently, we continue to conclude that current jumping mouse populations need connected areas of suitable habitat along at least 9 to 24 km (5.6 to 15 mi) of continuous suitable habitat to support viable populations of jumping mice with a high likelihood of long-term persistence. Also, see our response to Comment 1, above.

(30) *Comment:* Habitat used by jumping mice is usually linear and very narrow, and must have appropriate vegetation structure, which makes the jumping mice especially vulnerable to habitat fragmentation. Moreover, the

jumping mouse has a large geographic range and exhibits natural history features that render jumping mice particularly vulnerable to extinction, including habitat specialization, low densities, and low fecundity. Despite these natural vulnerabilities, the total length of proposed critical habitat was only 310.5 km (192.9 mi). In comparison, spinedace (*Meda fulgida*) (1,013 km (630 mi)) and loach minnow (*Tiaroga cobitis*) (983 km (610 mi)) have two to three times more critical habitat than what is proposed for the jumping mouse, yet these fish have a much smaller natural distribution limited to the Gila River watershed. An approach for the jumping mouse based on a rationale similar to spinedace and loach minnow, which emphasized connectivity, would better provide for the conservation of the jumping mouse.

Our Response: The conservation needs of different species, including critical habitat designations, are developed independent of one another. The Act requires that we designate only specific areas within the geographical area occupied by the species, at the time it is listed, on which are found those physical or biological features essential to the conservation of the species and which may require special management considerations or protection. In addition, the Act requires that we determine whether specific areas outside the geographical area occupied by the species at the time it is listed are essential for the conservation of the species. We have identified those areas occupied at the time of listing that contain the PCEs essential for jumping mouse conservation. In addition, we have identified unoccupied areas, adjacent to these occupied areas, which are essential to the conservation of the subspecies. See our response to Comment 1, above, for additional information.

As stated in the SSA Report, habitat connectivity and patch sizes influence the suitability of habitat (Service 2014). However, in designating critical habitat, we selected upstream and downstream boundaries that would avoid including highly degraded areas that are not likely restorable, areas that were permanently dewatered or permanently developed (*i.e.*, natural vegetation removed), or areas in which there was some other indication that suitable habitat no longer existed and was not likely to be restored. Larger critical habitat units with more stream reaches of unsuitable or low-quality habitat that is not likely restorable would not provide additional benefit to the jumping mouse and do not meet the definition of critical habitat. In the *Criteria Used To Identify Critical*

Habitat section, below, we used the best scientific and commercial data available to set out the criteria for identifying the areas that meet the requirements of the Act.

Comments From Federal Agencies

(31) *Comment:* There is no clear definition of what constitutes occupied versus unoccupied habitat.

Our Response: Occupied areas include the 29 locations where jumping mice were captured since 2005, plus a 0.8-km (0.5-mi) segment upstream and downstream of the capture localities. The 0.8-km (0.5-mi) segments have the potential to be occupied during the active season of the subspecies if a jumping mouse moves the maximum known distance beyond the protective herbaceous cover found within the 29 locations. We also include areas that are considered unoccupied, but are immediately adjacent to these occupied areas. These unoccupied areas are beyond 0.8 km (0.5 mi) of the capture location and generally do not contain currently suitable habitat. These occupied and unoccupied areas immediately adjacent to each other comprise 19 of the 21 critical habitat units/subunits. These critical habitat units are labeled “partially occupied” because they include both occupied and unoccupied areas. Finally, we included another two subunits that are completely unoccupied but are essential for the conservation of the jumping mouse. Inclusion of these unoccupied areas provides for expansion of the overall geographic distribution of the subspecies and increases the redundancy.

(32) *Comment:* There is no clear distinction between suitable habitat and critical habitat. Consequently, if an area is not deemed to be essential for the conservation of the subspecies, is consultation still necessary?

Our Response: Suitable habitat is a biological term used to describe the necessary habitat characteristics that support a species. For the jumping mouse, suitable habitat is composed of dense, herbaceous riparian vegetation with sufficient seasonally available or perennial flowing waters to support this vegetation as described in the “Specific Microhabitat Requirements” section 2.4.1 of our SSA Report (Service 2014). Critical habitat is a regulatory term under the Act and means those areas occupied by the species at the time of listing on which are found those physical or biological features essential for the conservation of the species and may require special management, and those unoccupied areas that are essential for the conservation of the

jumping mouse. Critical habitat is defined through rulemaking and may include areas that are and are not considered suitable habitat for the jumping mouse. Conversely, not all areas considered to be suitable jumping mouse habitat are included within a critical habitat designation.

Section 7 of the Act requires any Federal agency to insure that any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of critical habitat. If a Federal action may affect a listed species or its critical habitat, regardless of whether that habitat is currently suitable or not, the responsible Federal agency (action agency) must enter into consultation with us (50 CFR 402.14). Federal actions not affecting listed species or critical habitat, and actions on State, tribal, local, or private lands that are not federally funded or authorized, do not require section 7 consultation.

(33) *Comment:* Fire, flood, drought, and wild ungulates have always been forces influencing the dynamics of jumping mouse habitat.

Our Response: The Service recognizes that these factors have likely always influenced jumping mouse habitat to some degree. However, because of historical, current, and future habitat loss, all of the 29 populations found since 2005 occur within extremely small patches of suitable habitat and most likely contain very few jumping mice, resulting in low population resiliency. In addition, these multiple sources of habitat loss are not acting independently, but may produce cumulative impacts that magnify the effects of habitat loss on jumping mouse populations. Historically larger connected populations of jumping mice would have been able to withstand or recover from local stressors, such as habitat loss from drought, wildfire, or floods. However, the current condition of the remaining small populations means the likelihood of local extirpations is higher. See the discussion of these in section 5.0 “Stressors and Sources” in the SSA Report (Service 2014).

Comments From States

(34) *Comment:* Please define the phrase appropriately sized patches of suitable habitat, which is first mentioned under the *Physical and Biological Features* section.

Our Response: Appropriately sized patches of suitable habitat surrounding each jumping mouse population should

be 27.5 to 73.2 ha (68 to 181 ac) along 9 to 24 km (5.6 to 15 mi) of flowing streams, ditches, or canals. The minimum area needed is given as a range due to the uncertainty of an absolute minimum and because local conditions within drainages vary.

(35) *Comment:* In Arizona, many areas where the jumping mouse occurs are also visited by anglers, and the critical habitat designation could impact the public’s fishing opportunities.

Our Response: We do not expect impacts to anglers from the designation of critical habitat. The designation of critical habitat does not affect land ownership or establish a refuge, wilderness, reserve, preserve, or other conservation area. Critical habitat receives protection under section 7 of the Act through the requirement that Federal agencies ensure, in consultation with the Service, that any action they authorize, fund, or carry out is not likely to result in the destruction or adverse modification of critical habitat. Where a landowner requests Federal agency funding or authorization for an action that may affect a listed species or critical habitat, the consultation requirements of section 7(a)(2) of the Act would apply. If there is not a Federal nexus for activities taking place on private or State lands, then critical habitat designation does not restrict any actions that destroy or adversely modify critical habitat. Although expected to be rare, where recreational fishing may have a Federal nexus within the critical habitat designation for jumping mouse, the agency will be required to consult with Service to ensure its actions will not destroy or adversely modify critical habitat.

Where the habitat in question is occupied by the listed species, if there is a Federal nexus, the action agency already consults with the Service to ensure its actions will not jeopardize the continued existence of the species. If critical habitat may be adversely modified or destroyed, then this would also be included in the consultation. If the action was found likely to jeopardize the species or destroy or adversely modify critical habitat, the Service is required, to the extent feasible, to provide reasonable and prudent alternatives (RPAs) that would allow the action to proceed and comply with section 7(a)(2) of the Act. Any RPA must be technologically and economically feasible, must allow for the intended purpose of the action to be met, must avoid jeopardy or adverse modification, and must be within the authority of the action agency to implement. In our experience, in the vast majority of cases, the Service is able

to work with the action agency to successfully provide RPAs.

(36) *Comment:* The Service provides no specific information in the proposed rule regarding the need to designate critical habitat in New Mexico, including the middle Rio Grande, Pecos, and Canadian River basins.

Our Response: Section 4 of the Act, and its implementing regulations, require that, to the maximum extent prudent and determinable, the Secretary designate critical habitat at the time the species is determined to be an endangered or threatened species, using the best scientific and commercial data available at the time. In our proposed rule (78 FR 37328; June 20, 2013), we found critical habitat to be both prudent and determinable and are therefore required to designate critical habitat under the Act.

(37) *Comment:* There is no scientific basis for extending the upstream and downstream boundaries by 0.8 km (0.5 mi) of capture locations to include areas that could be potentially used by the jumping mouse.

Our Response: We have used the best available scientific and commercial data regarding movement and dispersal of the jumping mouse. The 0.8-km (0.5-mi) segments are considered occupied because the maximum distance travelled between two successive points by all radio-collared jumping mice on Bosque del Apache NWR was approximately 0.74 km (0.46 mi) (Frey and Wright 2012, pp. 16, 109, Figure 9). See section 2.6 “Movements and Home Range” in the SSA Report (Service 2014) for additional information.

(38) *Comment:* The Service should exclude proposed jumping mouse critical habitat from the Rio Grande, New Mexico (Unit 6—Middle Rio Grande) because of the Middle Rio Grande Endangered Species Collaborative Program that provides benefits to endangered species and their habitats, including the jumping mouse.

Our Response: Section 4(b)(2) of the Act states that the Secretary shall designate and make revisions to critical habitat 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 he determines that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless she 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 statute on its face, as well as the legislative history, are clear that the Secretary has broad discretion regarding which factor(s) to use and how much weight to give to any factor. When identifying the benefits of inclusion for an area, we consider the additional regulatory benefits that area would receive from the protection from adverse modification or destruction as a result of actions with a Federal nexus, the educational benefits of mapping essential habitat for recovery of the listed species, and any benefits that may result from a designation due to State or Federal laws that may apply to critical habitat. When identifying the benefits of exclusion, we consider, among other things, whether exclusion of a specific area is likely to result in conservation; the continuation, strengthening, or encouragement of partnerships; or implementation of a management plan that provides equal to or more conservation than a critical habitat designation would provide. See Consideration of Impacts under Section 4(b)(2) of the Act, below, for more information.

In our proposed rule, we did not consider excluding critical habitat within Unit 6 based on the Middle Rio Grande Endangered Species Collaborative Program because this entity does not own or manage lands within critical habitat. While the Service recognizes the contributions to species conservation made by the Middle Rio Grande Endangered Species Collaborative Program, without lands under their authority which they could manage for listed species, we did not consider exclusion based on this program.

(39) *Comment:* The Service claims that all unoccupied areas contain flowing water. This is an error. Surveys conducted by the Arizona Game and Fish Department in 2011 found Centerfire Creek (Subunit 5F) had little water and was underground in some areas with only standing pools.

Our Response: In the *Unit Descriptions* section of the proposed rule, we do state that all of the completely or partially unoccupied units and subunits currently have flowing water to allow for future restoration of the essential PCEs 1 and 2. However, in the *Physical or Biological Features* section of the proposed rule, we clarify that suitable habitat is found only when wetland vegetation achieves full growth potential associated with seasonally perennial (persistent water during the vegetation growing season) flowing water and saturated soils. In the *Primary Constituent Elements* section of

the proposed rule, we provide further clarification of seasonally perennial flowing water as that which provides saturated soils throughout the jumping mouse's active season that supports tall (average stubble height of herbaceous vegetation of at least 69 centimeters (cm) (27 inches)); in this final rule, we have changed that to average stubble height of herbaceous vegetation of at least 61 cm (24 inches)) and dense herbaceous riparian vegetation composed primarily of sedges (*Carex* spp.) and forbs. In the proposed rule (78 FR 37328; June 20, 2013) and the SSA Report (Service 2014), we explain that jumping mouse habitat is subject to dynamic changes that result from flooding and drying of these waterways and the ensuing fluctuations (loss and regrowth) in the quantity and location of dense riparian herbaceous vegetation over time, particularly in response to the ongoing drought. Southwestern riparian and aquatic systems fluctuate due to seasonal and longer-term drought and wet periods, floods, and wildfire. We have updated this final rule and the SSA Report to clarify that flowing water includes seasonally perennial (persistent water during the vegetation growing season) flowing water.

(40) *Comment:* There is too much emphasis placed on the benefits of the American beaver, while ignoring other species such as elk, native fish, mountain lions, bears, and owls.

Our Response: More than any other species, the management and restoration of beaver is an important component of jumping mouse conservation. The jumping mouse is often associated with beaver activity because the shallow, slow-moving water from dams and ponds behind beaver dams creates diverse wetland communities that support the required dense riparian herbaceous vegetation for jumping mice (Frey 2006d, p. 52; Frey and Malaney 2009, p. 37). The diverse wetland plant species found in beaver-modified habitat patches may contribute as much as 25 percent of the total herbaceous plant species richness of riparian zones (Wright *et al.* 2002, p. 99). Beavers can also have a substantial impact on the structure and productivity of riparian areas through the cutting of trees and shrubs, which assist a stream in its ability to resist and recover from disturbance (Naiman *et al.* 1988, entire). This may contribute to the maintenance of riparian communities in an early seral (phase of ecological succession advancing towards climax) stage with sparse tree and shrub canopy cover where the sunlight can penetrate, thereby providing a dense herbaceous

understory that is suitable habitat for the jumping mouse.

Beaver activities help to expand areas of shallow ground water and hydrophytic (growing wholly or partially in water) vegetation, and generally create a more heterogeneous floodplain by frequently converting streams from intermittent flow to perennial flow (Baker and Hill 2003, p. 299). This can create natural fire breaks and provide refugia from fire effects, especially where beaver activity results in extensive areas of marsh, wetland, and open water habitats, such as those conditions found within or adjacent to jumping mouse habitat. Because beaver populations have been reduced in many areas throughout the range of the jumping mouse, the corresponding loss of wetland habitats and perennial stream flow has contributed to drying and increased flammability of riparian vegetation.

(41) *Comment:* Colorado Parks and Wildlife encourages the Service to invest additional resources in public outreach for Unit 7 along the Florida River.

Our Response: We invested additional resources in public outreach along Unit 7. Although we received no requests for public hearings on the proposed designation, we held informational meetings to address public concerns regarding Unit 7 on August 15, 2013, and on April 24, 2014, in Durango, Colorado.

(42) *Comment:* The conclusions drawn in the critical habitat proposal lack robust experimental study designs and are best characterized as conjecture. How is it possible to develop habitat preferences for a species that is difficult to survey?

Our Response: We agree that it would be useful to have more information on the jumping mouse, but it is often the case that robust biological information is lacking for rare species. Section 4 of the Act, and its implementing regulations, require that, to the maximum extent prudent and determinable, the Secretary designate critical habitat at the time the species is determined to be an endangered or threatened species, using the best scientific and commercial data available at the time. We reviewed the best available scientific information pertaining to the biological needs of the jumping mouse and habitat characteristics where this subspecies is located. We sought comments from independent peer reviewers to ensure that our designation is based on scientifically sound data, assumptions, and analysis. We also solicited information from the general public,

nongovernmental conservation organizations, State and Federal agencies that are familiar with the subspecies and its habitat, academic institutions, and groups and individuals that might have information that would contribute to an update of our knowledge of the subspecies, as well as information on the activities and natural processes that might be contributing to the decline of the subspecies. The best available scientific and commercial data, as stated in the "Specific Microhabitat Requirements" section of the SSA Report (Service 2014), indicates the jumping mouse has exceptionally specialized habitat requirements that include dense herbaceous riparian habitat with sufficient seasonally available or perennial flowing waters to support this vegetation.

(43) *Comment:* What impact will this critical habitat designation have on the ability of Federal agencies to conduct meaningful forest restoration projects?

Our Response: Critical habitat receives protection under section 7 of the Act through the requirement that Federal agencies ensure, in consultation with the Service, that any action they authorize, fund, or carry out is not likely to result in the destruction or adverse modification of critical habitat. The obligation of the Federal action agency under section 7(a)(2) of the Act is not to restore or recover the species, but to implement reasonable and prudent alternatives to avoid destruction or adverse modification of critical habitat. It is unlikely that designating critical habitat for the jumping mouse will reduce proactive treatments necessary for forest restoration projects (*i.e.*, to alleviate the risk of catastrophic wildfire) because the majority of treatments are likely to be confined to forested uplands and not within riparian and adjacent upland habitat used by the jumping mouse. As an example, in 2015, when the Service completed a consultation on 110,000 acres for the Southwest Jemez Mountains Restoration Project on the Santa Fe National Forest in New Mexico, no forest restoration treatments were curtailed from the proposed jumping mouse critical habitat (Service 2015). However, the Forest Service or other Federal agencies will need to determine whether their Federal action (*i.e.*, fuels treatments) may affect a listed species or designated critical habitat in accordance with section 7 of the Act. During consultation, the Service works with the Federal agencies on their project description to avoid impacts to the species or critical habitat. If the action is likely to adversely modify critical habitat, reasonable and prudent

alternatives to the project description would be established, which could be implemented in a manner consistent with the intended purpose of the action, that can be implemented consistent with the scope of the Federal agency's legal authority and jurisdiction, that is economically and technologically feasible, and that the Director believes would avoid the likelihood of jeopardizing the continued existence of the listed species or resulting in the destruction or adverse modification of critical habitat. Each consultation is evaluated on a case-by-case basis following our regulations (50 CFR part 402).

(44) *Comment:* Why are locations where the jumping mouse has likely been extirpated from impacts due to wildland fire considered as occupied?

Our Response: We are required to use the best available scientific and commercial data for the designation of critical habitat. In our designation, occupancy was determined based on any detections during surveys conducted since 2005. Recent surveys (surveys conducted since 2005) have relied on detection or non-detection (presence or absence) data to determine whether jumping mice persist in areas that contained historical populations or areas that currently contain suitable habitat. As stated in the SSA Report (Service 2014), of the 29 populations where the New Mexico meadow jumping mice have been found extant since 2005, at least 11 populations have been substantially compromised in the past 2 years and seven others may have been affected by recent wildfires. We recognize that it is possible that the jumping mouse could be extirpated from these areas, but the most recent survey data available indicate that these 29 areas are occupied. Further, at the time of listing, these areas contained the physical or biological features essential to the conservation of the subspecies.

(45) *Comment:* PCE 3 includes sufficient areas that contain suitable or restorable habitat. Habitat that is in need of restoration should not be designated as critical habitat.

Our Response: Jumping mouse populations are currently small and isolated from one another, and the survival and recovery of the subspecies will require expanding the size of currently occupied areas containing suitable habitat into currently unoccupied areas that may need to reestablish suitable conditions. Currently occupied areas were not deemed sufficient to provide for resiliency and representation for viability. In the SSA Report (Service 2014), we estimate that resilient

populations of jumping mice need connected areas of suitable habitat in the range of at least 27.5 to 73.2 ha (68 to 181 ac), along 9 to 24 km (5.6 to 15 mi) of flowing streams, ditches, or canals (Service 2014a, p. 32). Under the second part of the Act's definition of critical habitat, we can designate critical habitat in areas outside the geographical area occupied by the subspecies at the time it is listed (*i.e.*, unoccupied), upon a determination that such areas are essential for the conservation of the subspecies.

(46) *Comment*: The premise that any and all livestock grazing is incompatible with jumping mouse habitat is not scientifically defensible. Properly managed livestock grazing can provide ecological benefits to riparian and upland areas.

Our Response: Whether livestock grazing results in loss of suitable habitat and adverse effects to a jumping mouse population is likely dependent upon a number of factors including, but not limited to: The number of livestock present; the proportion of suitable habitat patch subjected to grazing; whether grazing occurs during the growing season; precipitation patterns; and the amount of isolation from other patches of suitable habitat. Morrison (1990, p. 142) found that moderate levels of livestock grazing may be compatible with the jumping mouse; however, Morrison (1990a, p. 1; 1990, p. 142; 1991, pp. 16–18) also concluded that, compared to other forms of habitat loss, grazing has the greatest potential for negative impacts on the jumping mouse and riparian habitat. Frey (2006b, p. 57) found that when livestock grazing is present for short periods of time (such as a few hours or days because of unauthorized use when cattle enter livestock enclosures), population abundance of jumping mice may be reduced, but is not extirpated.

However, most livestock grazing is likely to be incompatible with the persistence of jumping mouse populations because of the subspecies' sensitivity to habitat disturbance (Frey 2006b, p. 57). Although livestock grazing can be managed in many different ways, the best available scientific and commercial data indicate that the jumping mouse does not persist in areas when its habitat is subjected to heavy grazing pressure (Morrison 1985, p. 31; Frey 2005a, entire; 2005b, p. 2; 2011, entire). Livestock grazing can cause a rapid loss of herbaceous cover and eliminate dense riparian herbaceous vegetation that is suitable jumping mouse habitat in less than 60 days (Frey 2005a, p. 60; 2007b, pp. 16–17; 2011, p. 43, Figure 16), and possibly even as

short as 7 days (Morrison 1989, p. 20). Widespread and intensive livestock grazing, leading to a reduction of tall dense riparian herbaceous vegetation, has been detrimental for the jumping mouse because the quality and quantity of occupied habitats containing suitable habitat have been reduced or eliminated (Frey 2003, pp. 10–14; 2005a, pp. 15–40; 2006d, pp. 10–33; 2011, entire; 2012a, pp. 42, 46, 52; Service 2012c, pp. 1, 6–8, Figure 13). In addition, livestock and elk grazing within jumping mouse habitat affects individual mice by reducing the availability of food resources (Morrison 1987, p. 25; Morrison 1990, p. 141; Frey 2005a, p. 59; 2011, p. 70). Current grazing practices in many areas have resulted in the removal of dense riparian herbaceous vegetation that historically provided jumping mouse habitat and caused the loss of historical populations. There is a strong tendency for livestock to congregate in riparian habitat (Forest Service 2006, pp. 76–77). Frey and Malaney (2009, p. 38) suggests that maintenance of suitable riparian habitat and long-term viability of jumping mouse populations might only be possible through creation of refugial areas by complete exclusion of livestock from the riparian zone. Please see the SSA Report (Service 2014) for further information.

(47) *Comment*: What areas proposed for critical habitat designation have privately owned water rights associated with grazing allotments, water diversions, or irrigation? If private landowners are going to be excluded from using these waters, the Service must complete a takings implications assessment.

Our Response: We did not conduct an analysis of privately owned water rights because it is beyond the scope of the environmental assessment and economic analysis. Nevertheless, the economic analysis found that no significant economic impacts are likely to result from the designation of critical habitat for the jumping mouse. As the Act's critical habitat protection requirements apply only to Federal agency actions, few conflicts between critical habitat and private property rights should result from this designation. In accordance with E.O. 12630 (Government Actions and Interference with Constitutionally Protected Private Property Rights), we have analyzed the potential takings implications of designating critical habitat for the jumping mouse in a takings implications assessment. The designation of critical habitat affects only Federal actions. Although private parties that receive Federal funding or

assistance or 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.

(48) *Comment*: What specific recreational uses cause degradation or destruction of riparian habitat?

Our Response: Unregulated dispersed recreational activities, such as camping, fishing, and off-road vehicle use, pose a concern to the jumping mouse because the development of trails, the development of barren areas, and trampling can render habitat unsuitable by reducing or removing dense riparian herbaceous vegetation containing required microhabitat (see section 2.4.1 "Specific Microhabitat Requirements" in the SSA Report (Service 2014)). The development of streamside trails and large, bare, compacted areas used for camping and fishing has been and continues to be reported throughout jumping mouse habitat in areas of the Jemez Mountains, New Mexico, and the White Mountains, Arizona (Frey 2005a, pp. 27–28; 2011, pp. 70–71, 76, 88, Figure 30). See section 5.1.10 "Recreation" in the SSA Report (Service 2014) for additional details.

(49) *Comment*: The proposed rule states that critical habitat does not include manmade structures (such as buildings, fire lookout stations, runways, roads, and other paved areas) and the land on which they are located; however, some proposed stream reaches, such as the East Fork of the Black River, include developed campgrounds. These areas should be removed from the final critical habitat designation.

Our Response: We determined that developed campgrounds or other manmade structures (such as buildings, fire lookout stations, runways, roads, and other paved areas) within the boundaries of critical habitat do not contain physical or biological features essential for the conservation of the subspecies. We have made every effort to remove these developed areas where possible; however, due to the scale of the maps, some areas may inadvertently be included. Developed areas are not reasonably believed to contain, or are capable of supporting, the physical or biological features essential for jumping mouse conservation. Therefore, a Federal action involving these developed lands will not trigger section 7 consultation with respect to critical habitat and the requirement of no adverse modification, unless the specific action would directly or

indirectly affect the physical or biological features in the adjacent critical habitat.

(50) *Comment*: What information does the Service have that indicates specific ecological characteristics are currently present or capable of being restored within the proposed critical habitat? The Service should analyze the Forest Service's Terrestrial Ecological Unit data prior to designating critical habitat.

Our Response: Each unit and subunit was evaluated on a site-by-site basis to determine the best configuration of critical habitat to support jumping mouse populations in that unit or subunit. The information we relied upon is presented in the SSA Report (see section 4.6 "Subspecies Conditions Compared to Needs by Geographic Management Area" in the SSA Report (Service 2014)). The critical habitat units were first delineated by creating rough areas by screen-digitizing polygons (map units) using Google Earth. We then digitized and refined the units using ArcMap version 10 (Environmental Systems Research Institute, Inc.), a computer Geographic Information System (GIS) program. The polygons were finalized by using current (2005 to 2014) and historical (1985 to 1996) subspecies location points, which were then used in conjunction with hydrology, vegetation, and expert opinion to propose and then finalize the designation. The Forest Service's Terrestrial Ecological Unit data are a GIS coverage of mapped units of land that provide an inventory of various ecotypes on the National Forest. Current vegetative conditions are often used to delineate these ecological map units; however, existing vegetation does not always reflect historical or potential vegetation. Consequently, we did not use this information.

(51) *Comment*: How many riparian areas associated with the critical habitat proposal are classified as being in proper functioning condition by the Forest Service?

Our Response: Proper functioning condition is a qualitative assessment method developed by the Bureau of Land Management (BLM) and Forest Service to assess the condition of riparian wetland areas based on hydrology, vegetation, and erosion or deposition (soils) attributes. Although this analysis may be used to inform management prescriptions, develop environmental assessments, or inform resource management plans, the frequency of most proper functioning condition analyses are sporadic in time and space. As a result, we found the best available information for designation of critical habitat for the

jumping mouse was based on site-specific data and our knowledge of the corresponding units as described in the SSA Report (Service 2014) and this final rule.

Comments From Tribes

(52) *Comment*: The land proposed as critical habitat in Unit 7 (Florida River) is within the boundary of the Southern Ute Indian Reservation and should be indicated accordingly on the map.

Our Response: We verified, using the most current land ownership information in GIS, that Unit 7 does not include any lands within the Southern Ute Indian Reservation.

(53) *Comment*: During the public comment period, we received comments from Isleta Pueblo and Ohkay Owingeh expressing their view that they were opposed to the designation of critical habitat and that exclusion of their lands is warranted due to tribal self-governance and continuing our cooperative working relationships.

Our Response: Subunits 6A and 6B are excluded from this final designation under section 4(b)(2) of the Act. We have determined that the benefits of exclusion outweigh the benefits of inclusion and have, therefore, excluded these areas from this final critical habitat designation. See Consideration of Impacts under Section 4(b)(2) of the Act, below, for further discussion.

(54) *Comment*: The San Carlos Apache Tribe does not support designation of critical habitat on their reservation.

Our Response: We did not propose, nor do we designate, any lands as critical habitat on the San Carlos Apache Reservation.

Comments From the Public

(55) *Comment*: It is premature to designate critical habitat for the jumping mouse when it is not even listed as an endangered species.

Our Response: Section 4(a)(3) of the Act, as amended, and implementing regulations (50 CFR 424.12), require that, to the maximum extent prudent and determinable, the Secretary designate critical habitat at the time the species is determined to be endangered or threatened. The jumping mouse was listed as endangered on June 10, 2014 (79 FR 33119).

(56) *Comment*: The SSA Report was not published in the **Federal Register**, even though it was the primary document on the biology and habitat of the subspecies.

Our Response: We made the SSA Report publically available throughout our consideration of critical habitat for the subspecies via the Federal

eRulemaking Portal: <http://www.regulations.gov>. We are not required to publish the SSA Report and other supporting documents in the **Federal Register**, but must make all comments, materials, and documentation that we considered in developing this rulemaking publicly available. The June 20, 2013, proposed listing and critical habitat rules (78 FR 37363 and 78 FR 37328, respectively) provided notification that the SSA Report was available on <http://www.regulations.gov> and that we were requesting comments on the proposed rule and associated documents, including the SSA Report. The final listing rule (79 FR 33119; June 10, 2014) also provided notification that the SSA Report was available on <http://www.regulations.gov>.

(57) *Comment*: The fencing of riparian areas to allow only wildlife to access the water is illegal and represents an unconstitutional taking of private property water rights in violation of the Fifth Amendment of the U.S. Constitution.

Our Response: The Service has not fenced any areas for the protection of the jumping mouse or its habitat, nor are we proposing any fencing, on private lands. We conducted an economic analysis, an environmental assessment to comply with National Environmental Policy Act (NEPA; 42 U.S.C. 4321 *et seq.*), and a takings implications assessment. Full details can be found in the Required Determinations section, below.

(58) *Comment*: The Service failed to hold any meetings with grazing permittees.

Our Response: We did not hold any formal public hearings because we did not receive any requests to do so. However, we did receive requests for informational meetings. Consequently, to address concerns related to the proposed critical habitat, we held informational meetings on August 15, 2013, in Durango, Colorado. Similarly, we held informational meetings in Cañon, New Mexico, on April 24, 2014; in Durango, Colorado, on April 24, 2014; and in Alamogordo, New Mexico, on May 28, 2014.

(59) *Comment*: The Service did not coordinate with the respective counties in each State regarding the proposed designation.

Our Response: We mailed notices to all County Commissioners within the proposed designation regarding the proposed rule. We also notified all County Commissioners within the proposed critical habitat designation of the draft environmental assessment and draft economic analysis. Further, we

published a legal notice inviting the general public to comment on the proposed rule in the Albuquerque Journal on June 27, 2013. We also held several informational meetings, as noted in our response to Comment 58, above.

(60) *Comment:* Designation of critical habitat has yielded very poor results in terms of recovery for the majority of listed species.

Our Response: Section 4(a)(3) of the Act, and implementing regulations (50 CFR 424.12), require that, to the maximum extent prudent and determinable, the Secretary designate critical habitat at the time the species is determined to be endangered or threatened. The jumping mouse was listed as endangered on June 10, 2014 (79 FR 33119). We found the designation of critical habitat to be prudent and determinable in our proposed critical habitat rule (78 FR 37328; June 20, 2013), and we are therefore required to designate critical habitat under the Act.

(61) *Comment:* Will New Mexico Department of Game and Fish be mandated to remove elk to minimize grazing impacts on the critical habitat?

Our Response: No. The designation of critical habitat does not impose grazing requirements or restrictions. Critical habitat receives protection under section 7 of the Act through the requirement that Federal agencies ensure, in consultation with the Service, that any action they authorize, fund, or carry out is not likely to result in the destruction or adverse modification of critical habitat. Such designation does not require implementation of restoration, recovery, or enhancement measures by non-Federal landowners. Where a State requests Federal agency funding or authorization for an action that may affect a listed species or critical habitat, the consultation requirements of section 7(a)(2) of the Act would apply, but even in the event of a destruction or adverse modification finding, the obligation of the Federal action agency and the landowner is not to restore or recover the species, but to implement reasonable and prudent alternatives to avoid destruction or adverse modification of critical habitat. See our response to Comment 35, above.

(62) *Comment:* Does the Endangered Species Act abrogate the Treaty of Guadalupe Hidalgo?

Our Response: No. The Treaty of Guadalupe Hidalgo resulted in grants of land made by the Mexican government in territories previously appertaining to Mexico, and remaining for the future within the limits of the United States. These grants of land were respected as valid, to the same extent that the same

grants would have been valid within the territories if the grants of land had remained within the limits of Mexico.

The designation of critical habitat has no impact on non-Federal actions taken on private land (e.g., land grants), unless those activities involve Federal lands, Federal funding, a Federal permit (e.g., grazing permits), or other Federal action. If such a Federal nexus exists and the action affects the designated critical habitat, we will review the action under section 7 of the Act with the appropriate Federal agency. In these cases, a Federal agency action that may affect the listed species or its designated critical habitat would be required to consult with the Service to ensure that their action does not jeopardize the continued existence of the species, and if critical habitat is designated, to ensure that their action is not likely to destroy or adversely modify critical habitat. Therefore, we do not believe that designation of critical habitat for the jumping mouse abrogates any treaty of the United States, including the Treaty of Guadalupe Hidalgo.

(63) *Comment:* There is no evaluation of conservation easements or whether private lands are subject to county land use restrictions that would prevent the threat of development. This indicates that the Service has not made the required findings under the Act of designating only “determinable” critical habitat. The Service should forgo designating private lands and work with landowners on a voluntary basis.

Our Response: The Service recognizes the vital importance of voluntary, nonregulatory conservation measures in achieving the recovery of endangered species. However, we found no conservation easements or State, Federal, or local regulations that might provide some protection to the jumping mouse or its habitat (see section 5.3 “Protective Regulations” in the SSA Report (Service 2014)). Therefore, we are unaware of any protective regulations to prevent ongoing losses of jumping mouse habitat or are unlikely to prevent further future declines of the subspecies, which is why the species is currently listed as endangered.

In regards to county land use restrictions, critical habitat receives protection under section 7 of the Act through the requirement that Federal agencies ensure, in consultation with the Service, that any action they authorize, fund, or carry out is not likely to result in the destruction or adverse modification of critical habitat. The designation of critical habitat does not require implementation of restoration, recovery, or enhancement measures by non-Federal landowners. If there is not

a Federal nexus for activities taking place on private or State lands, then critical habitat designation does not restrict any actions that destroy or adversely modify critical habitat.

Section 4(a)(3)(A) of the Act, and implementing regulations (50 CFR 424.12), require us to designate critical habitat to the maximum extent prudent and determinable. Regulations at 50 CFR 424.12(a)(2) state that critical habitat is not determinable when one or both of the following exist: (1) Information sufficient to perform required analyses of the impacts of the designation is lacking, or (2) the biological needs of the subspecies are not sufficiently well known to permit identification of an area as critical habitat. We found in our June 20, 2013 (78 FR 37328), proposed rule to designate critical habitat that the biological needs of the subspecies and habitat characteristics where this subspecies is located are sufficiently well known. Further, we conducted an economic analysis, an environmental assessment to comply with NEPA, and a takings implications assessment to assess the impacts of the designation. This and other information represent the best scientific and commercial data available and led us to conclude that the designation of critical habitat is prudent and determinable for the jumping mouse. Therefore, we are required to designate critical habitat for this subspecies to fulfill our legal and statutory obligations.

(64) *Comment:* Given the misperceptions of the impact of the Act, and possible intentional damage to jumping mouse habitat on public land by livestock grazing interests, we suggest the Service consider the economic impacts and benefits of a voluntary grazing permit retirement program as a viable solution to land-use conflicts impacting this and other imperiled species.

Our Response: We did not conduct an analysis of a voluntary grazing permit retirement program. Because we do not anticipate that this designation will result in a voluntary grazing permit retirement program, it is beyond the scope of the environmental assessment and economic analysis.

(65) *Comment:* The Service should exclude the area proposed as critical habitat in Unit 7 because it would have significant economic impacts. The Service should also exclude lands owned by the Arizona Game and Fish Department in Unit 5.

Our Response: We have not excluded Unit 7 or Unit 5 from designated critical habitat. The Service is not aware of any conservation plans for Unit 7 or Unit 5.

Further, our economic analysis did not find any incremental costs for grazing in Unit 7 and estimated only \$5,000 for additional administrative costs for consultation on the operations of the Lemon Dam in Unit 7, the only other possible incremental cost. The economic analysis estimated \$9,940,000 of incremental costs for grazing and all other consultation activities in Unit 5 that would only be associated with Forest Service lands and no lands owned by the Arizona Game and Fish Department. Our environmental assessment did not find significant impacts to the human environment. In addition, we are not aware of any national security impacts or any other relevant impacts of the designation of critical habitat. Consequently, neither Unit 7 nor Unit 5 were excluded from this designation under section 4(b)(2) of the Act. The commenters did not provide any additional information for the Service to consider. See Consideration of Impacts under Section 4(b)(2) of the Act, below, for additional information.

(66) *Comment:* One commenter requested that the upstream extent of critical habitat in Unit 7 should be moved farther downstream, as the Florida Ditch's main headgate is regularly maintained and does not currently, nor will it in the future, contain PCEs.

Our Response: We reviewed photographs provided by the commenter, as well as imagery from Google Earth, and we agree that this segment at the proposed upstream boundary of Unit 7 does not contain the physical and biological features essential to the conservation of the jumping mouse. It is unoccupied, and is not likely to provide habitat in the future. Therefore, we removed this area from this final critical habitat designation by moving the upstream extent of designated critical habitat along the Florida River 68.6 m (225 ft) downstream of the Florida Ditch's main headgate (see the Summary of Changes from the Proposed Rule section, below). We determined that the area around Florida Ditch's main headgate is unsuitable for the jumping mouse because it is frequently devoid of vegetation and contains irrigation diversion structure, creating unsuitable conditions.

(67) *Comment:* Populations of the jumping mouse along the Florida River have been supported by existing land uses without regulatory intervention. Consequently, the Service cannot demonstrate any benefits from the proposed designation of Unit 7 that is predominately composed of private

lands, indicating that the designation would be "prudent."

Our Response: Regulations at 50 CFR 424.12(a)(1) state that the designation of critical habitat is not prudent when one or both of the following situations exist: (1) The species is threatened by taking or other activity and the identification of critical habitat can be expected to increase the degree of threat to the species; or (2) the designation of critical habitat would not be beneficial to the species. We found in our June 20, 2013, proposed rule (78 FR 37328) that designation of critical habitat was prudent. There is no indication that the jumping mouse is threatened by collection, and there are no likely increases in the degree of threats to the subspecies if critical habitat is designated. This subspecies is not the target of collection, and the majority of the area we are designating in Unit 7 is privately owned with restricted public access. For these reasons, the designation of critical habitat is unlikely to increase the degree of threats to the jumping mouse.

In the absence of finding that the designation of critical habitat would increase threats to a species, if there are any benefits to a critical habitat designation, then a prudent finding is warranted. The potential benefits of critical habitat to the jumping mouse include: (1) Protection under section 7(a)(2) of the Act through the requirement that Federal agencies ensure, in consultation with the Service, that any action they authorize, fund, or carry out is not likely to result in the destruction or adverse modification of critical habitat in unoccupied areas (for example, Federal agencies were not aware of the potential impacts of an action on the subspecies or, in this case, the majority of habitat along the Florida River that is unoccupied by the subspecies); (2) implementation of section 7(a)(1) of the Act by identifying areas where Federal agencies can focus their conservation programs and use their authorities to further the purposes of the Act; (3) identification of areas where other conservation partners, such as State and local governments, nongovernmental organizations, and individuals, can focus their conservation efforts; (4) provision of educational benefits to State or county governments, or private entities; (5) provision of early conservation planning guidance, to bridge the gap until the Service can complete more thorough recovery planning, because designation of critical habitat occurs near the time of listing; and (6) improvement of awareness to prevent people from causing inadvertent harm to the

subspecies. Therefore, we found designation of critical habitat to be prudent (78 FR 37328; June 20, 2013).

(68) *Comment:* The Service did not explain how the general rationale provided justifies designating critical habitat in Units 7 and 8. There is no unit-specific analysis demonstrating that the enormous portion of unoccupied lands in Units 7 and 8 is "essential to the conservation of the species" and that limiting the designation to occupied areas "would be inadequate to ensure the conservation of the species." Therefore, the broad area proposed for these units is arbitrary and capricious.

Our Response: As we presented in the SSA Report (Service 2014), the jumping mouse occurs within eight geographic management areas, which are defined by the external boundaries of the geographic distribution of historical populations. Each critical habitat unit is within one of the eight geographic management areas. Rangelwide, we determined that the jumping mouse needs at least two resilient populations (where at least two existed historically) within each of eight identified geographic management areas (*i.e.*, critical habitat units). This number and distribution of resilient populations is expected to provide the subspecies with the necessary redundancy and representation to provide for viability.

Units 7 and 8 are considered partially occupied. Currently the jumping mouse is known only from one location within each of these geographic management areas (Units 7 and 8). Further, the current population in the occupied critical habitat units is represented by habitat patches that are undersized, isolated, and too small to be resilient. Consequently, unoccupied critical habitat is needed to allow for the expansion of the current population and for the establishment of new populations. These unoccupied areas are essential to the conservation of the jumping mouse because they contain current and restorable PCEs that will allow for the expansion of the existing populations and allow for the establishment of new populations. Therefore, unoccupied areas are included in the designation under section 3(5)(A)(ii) of the Act. Further description is provided in the SSA Report in sections 3.3 "Rangelwide Subspecies Needs" and 4.2 "Habitat Connectivity and Patch Sizes" (Service 2014).

(69) *Comment:* Examination of satellite imagery shows that the 100-m (330-ft) lateral extent of proposed critical habitat units contains a great deal of land in some areas that is under

cultivation, or otherwise does not contain riparian dense herbaceous vegetation, and does not have flowing water. Therefore, this larger area does not include any of the PCEs and should not be part of the designation.

Alternatively, other commenters believed that the proposed 100-m (330-ft) lateral extent of proposed critical habitat did not accurately reflect limits of the jumping mouse habitat and is likely to leave individual jumping mice or the entire subpopulation outside of critical habitat areas (e.g., Unit 6), seasonally or even permanently.

Our Response: The Act defines critical habitat as (1) specific areas within the geographical area occupied by the [sub]species, at the time it is listed, on which are found those physical or biological features essential to the conservation of the [sub]species and which may require special management considerations or protection; and (2) specific areas outside the geographical area occupied by the [sub]species at the time it is listed, upon a determination that such areas are essential for the conservation of the [sub]species. The areas that are unoccupied at the time of listing are not required to contain the PCEs essential to conservation of the subspecies. However, all unoccupied areas we are designating as critical habitat have seasonally perennial flowing water with saturated soils and have the potential to be restored to suitable habitat, including the 100-m (330-ft) lateral extent that captures upland areas necessary for hibernation that are outside the regularly inundated floodplain.

Areas used for hibernation likely do not include lands under cultivation, yet little research has been done on hibernacula (hibernation burrows) of the jumping mouse. It is assumed that they are similar to other subspecies of meadow jumping mouse. Preble's meadow jumping mice dig their own hibernation burrows and are solitary hibernators (Service 2003, p. 8). Only one hibernation nest has ever been observed for the New Mexico meadow jumping mouse (Wright and Frey 2011, p. 3). The hibernaculum was below ground and beneath woody debris under a seep willow (*Baccharis* spp.) (Wright and Frey 2011, p. 8). The site was dry, with an absence of herbaceous vegetation, which was similar to maternal nest sites selected by females (Wright and Frey 2011, pp. 8, 11; Frey and Wright 2012, p. 28).

We acknowledge that some jumping mice may use areas outside of the mapped boundary of designated critical habitat. However, the best available scientific and commercial information

indicates that a 100-m (330-ft) lateral extent of critical habitat in occupied areas contains the physical or biological features essential to the jumping mouse and in unoccupied areas is essential for the conservation of the subspecies (see our response to Comment 68, above). As stated in the SSA Report (Service 2014), individual jumping mice also need intact upland areas that are up-gradient and beyond the floodplain of rivers and streams and adjacent to riparian areas and wetlands because this is where they build nests or use burrows to give birth to young in the summer and to hibernate over the winter. Trainor *et al.* (2012, p. 433) found that 97 percent of the normal daily movements and resource requirements of Preble's meadow jumping mice occurred within 110 m (361 ft) from the edge of streams; this includes areas outside of the immediate riparian zones. Extensive movements beyond this distance were limited to less than 3 percent of the home range sizes in Preble's meadow jumping mouse (Trainor *et al.* 2012, p. 433). We assume that regular use of these adjacent uplands areas would be similar with the jumping mouse. Therefore, we are designating the adjacent floodplain and upland areas extending approximately 100 m (330 ft) outward from the boundary between the active water channel and the floodplain (as defined by the bankfull stage of streams) or from the top edge of the ditch or canal.

(70) *Comment:* The Service should investigate alternatives within proposed Subunit 6C (Unit 6 in this final rule) that would reduce or eliminate any additional water flow requirements at any of the points where the Middle Rio Grande Conservancy District delivers water to Bosque del Apache NWR. What are the specific flow requirements for critical habitat?

Our Response: The designation of critical habitat does not impose water flow requirements or restrictions. Critical habitat receives protection under section 7 of the Act through the requirement that Federal agencies ensure, in consultation with the Service, that any action they authorize, fund, or carry out is not likely to result in the destruction or adverse modification of critical habitat. Our environmental assessment found that it is unlikely that section 7 consultations will result in flow requirements solely for avoiding adverse modification of critical habitat because the flows would already be necessary for avoiding jeopardy to the jumping mouse in the occupied segments along each stream (Harris Environmental 2014, p. 63). In our economic analysis, we also found it is

unlikely that critical habitat on Bosque del Apache NWR would generate additional requests for conservation efforts beyond what would be required due to the listing of the species because the subunit is partially occupied by the jumping mouse (IEc 2014, entire). Nevertheless, future section 7 consultations will evaluate whether proposed actions jeopardize the continued existence of the jumping mouse or adversely modify or destroy critical habitat.

(71) *Comment:* The Service should exclude the subunits proposed as critical habitat in Unit 6 (Middle Rio Grande, New Mexico).

Our Response: Section 4(b)(2) of the Act states that the Secretary may exclude areas from the final critical habitat after considering the economic impact, impact on national security, or any other relevant impact of the designation. In our June 20, 2013, proposed rule (78 FR 37328), Unit 6 consisted of three subunits: 6A (Isleta Marsh), 6B (Ohkay Owingeh), and 6C (Bosque del Apache NWR). Proposed Subunits 6A and 6B are excluded from this final designation under section 4(b)(2) of the Act because the benefits of exclusion outweigh the benefits of including these areas as critical habitat. For more information, see Consideration of Impacts under Section 4(b)(2) of the Act, below. Proposed Subunit 6C, Bosque del Apache NWR, is occupied by the subspecies and is under Federal ownership. The Service's draft 4(b)(2) guidance states that we will generally not exclude Federal lands from critical habitat designation. Consequently, proposed Subunit 6C was not considered for exclusion in our proposed rule (78 FR 37328; June 20, 2013), and is not excluded in this final rule. As a result, proposed Subunit 6C is renamed Unit 6 in this rule. The commenter did not provide any additional information for the Service to consider.

(72) *Comment:* The Service should exclude proposed Subunit 3C (Rio de las Vacas, New Mexico) because it is unoccupied and there is no scientific basis for the designation.

Our Response: We conclude that this area is essential to the conservation of the jumping mouse because: (1) The areas occupied by the jumping mouse since 2005 do not contain enough suitable, connected habitat to support resilient populations of jumping mouse; (2) the currently unoccupied segments within individual stream reaches or waterways need to be of sufficient size to allow for the expansion of populations and provide connectivity (active season movements and

dispersal) between multiple populations as they become established; (3) additional areas need habitat protection to allow restoration of the necessary herbaceous vegetation for possible future reintroductions; and (4) multiple local populations along streams are important to maintaining genetic diversity within the populations and for providing sources for recolonization if local populations are extirpated. Therefore, all of the partially occupied or completely unoccupied areas are included in the designation under section 3(5)(A)(ii) of the Act.

The Service is not aware of any conservation plans for Subunit 3C. The economic analysis estimated \$3,400,000 of incremental costs for grazing and all other consultation activities in Subunit 3C associated with Forest Service lands. Our environmental assessment did not find significant impacts to the human environment. In addition, we are not aware of any national security impacts or any other relevant impacts of the designation of critical habitat. Consequently, we did not exclude Subunit 3C from this designation. See Consideration of Impacts under Section 4(b)(2) of the Act, below. The commenter did not provide any additional information for the Service to consider.

(73) *Comment:* Morrison (1990, entire) reported that grazing may be compatible with maintenance of jumping mouse populations. Moreover, in the environmental impact statement for the San Diego Range Allotment, the Forest Service found that maintaining 10 cm (4 in) of stubble height in grazed areas would not cause a trend toward Federal listing of the jumping mouse.

Our Response: Morrison (1990, p. 142) found that moderate livestock grazing that is carefully monitored could be compatible. Unfortunately, little monitoring has occurred over the last few decades within jumping mouse habitat on National Forest lands. Morrison (1990, p. 142) also reported that livestock grazing had the highest potential for impacting streamside riparian vegetation and wet meadow habitat. See our response to Comment 46, above, about livestock grazing and the jumping mouse.

We found that current forage utilization guidelines of the Forest Service have limited the availability of adequate vertical cover of herbaceous vegetation and significantly affected jumping mouse habitat in areas that are not protected from livestock (Forest Service 2013, entire; Frey 2005a, entire; 2007b, pp. 16–17; 2011, p. 43; Service 2007, entire).

We have no information that indicates that livestock grazing is likely to be reduced in the future or that areas adjacent to recently documented populations would be managed to provide suitable habitat for expansion of jumping mouse populations. Morrison (2014, p. 2) indicates that grazing is one of the most problematic factors affecting jumping mouse habitat and this issue must be addressed in conjunction with critical habitat and recovery of the subspecies. Consequently, the designation of critical habitat will ensure that livestock management practices authorized by Federal agencies are not conducted without required consultation.

(74) *Comment:* The Service must identify specific areas or sections as critical habitat rather than long stretches of San Antonio Creek (Subunit 3A), Rio Cebolla (Subunit 3B), and Rio de las Vacas (Subunit 3C).

Our Response: When we conduct a critical habitat analysis, we use the best available scientific and commercial data to determine 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 essential for the conservation of the species which may require special management considerations or protection. We also analyze whether specific areas outside the geographical area occupied by a species at the time it is listed are essential for the conservation of the species. As stated in the proposed rule (78 FR 37328; June 20, 2013) and the SSA Report (Service 2014), in considering the area needed for maintaining resilient populations of adequate size with the ability to endure adverse events (such as floods or wildfire), we estimate that resilient populations of jumping mice need connected areas of suitable habitat in the range of at least 27.5 to 73.2 ha (68 to 181 ac), along 9 to 24 km (5.6 to 15 mi) of flowing streams, ditches, or canals. We selected upstream and downstream boundaries that would avoid including highly degraded areas that are not likely restorable, areas that were permanently dewatered or permanently developed (*i.e.*, natural vegetation removed), or areas in which there was some other indication that suitable habitat no longer existed and was not likely to be restored. These unoccupied areas are essential to the conservation of the jumping mouse because they will allow for the expansion of the existing populations and allow for the establishment of new populations. See our responses to

Comments 1, 68, and 69, above, for additional information.

(75) *Comment:* There is not enough information known on the biological needs of the jumping mouse to designate critical habitat, especially because almost nothing is known about the populations along the Florida River (Unit 7) and Sambrito Creek (Unit 8).

Our Response: The Act requires us, to the maximum extent prudent and determinable, to designate critical habitat at the time the species is determined to be an endangered or threatened species based on the best scientific and commercial data available. It is often the case that biological information may be limited for rare species; however, we reviewed all available information and incorporated it into this final rule.

(76) *Comment:* There are ongoing efforts by Colorado Parks and Wildlife to revitalize and enhance the wetlands of Sambrito Creek. Accordingly, section 7 consultation requirements for proposed Unit 8 would impact the ability to complete the project in a timely matter and result in increased administrative and substantive costs.

Our Response: Our understanding from Colorado Parks and Wildlife is that the project is complete and there were no increased administrative and substantive costs.

(77) *Comment:* What dams, diversions, wells, and management activities involve a Federal nexus? What areas proposed as critical habitat have privately owned water rights associated with them?

Our Response: Section 7(a)(2) of the Act requires that Federal agencies ensure, in consultation with the Service, that any action they authorize, fund, or carry out is not likely to result in the destruction or adverse modification of critical habitat in unoccupied areas. The Service conducted outreach efforts to other Federal agencies and limited interviews with relevant stakeholders concerning the likely effects of critical habitat. The U.S. Army Corps of Engineers anticipated section 7 consultation for the rehabilitation of Lake Dorothea and Lake Alice in Unit 1 (partially occupied by the subspecies). In addition, the Service anticipates consulting on the operations of the Lemon Dam in Unit 7 (partially occupied by the subspecies), which is owned by the Bureau of Reclamation. Lastly, the Service anticipates the re-initiation of a programmatic consultation for water use and management activities on the Middle Rio Grande in Unit 6 (partially occupied by the subspecies) (Harris Environmental Inc., 2014, pp. 59–61;

IEc 2014, pp. 14–16). The Service did not receive any further information on water management structures. Per section 7 of the Act, it is the responsibility of the respective Federal agencies to determine whether any of their ongoing or proposed actions may affect jumping mouse critical habitat and to consult with the Service. We did not conduct an analysis of privately owned water rights because it is beyond the scope of the environmental assessment and economic analysis. Nevertheless, the economic analysis found that no significant economic impacts are likely to result from the designation of critical habitat for the jumping mouse. As the Act's critical habitat protection requirements apply only to Federal agency actions, few conflicts between critical habitat and private property rights should result from this designation.

(78) *Comment*: Many private land inholdings are unfenced and managed as part of a grazing unit with Forest Service lands.

Our Response: In these instances, the Forest Service will determine whether actions on private lands are interrelated or interdependent with the Federal permit authorizing grazing on public lands. If the action is interrelated or interdependent and may affect the listed species or its designated critical habitat, then section 7 consultation under the Act will be necessary.

(79) *Comment*: The proposed critical habitat designation would conflict with Executive Order 13563 (Improving Regulation and Regulatory Review), which says that our regulatory system must protect public health, welfare, safety, and the environment, while promoting economic growth, innovation, competitiveness, and job creation.

Our Response: We have developed this rule in a manner consistent with these requirements. See the *Regulatory Planning and Review (Executive Orders 12866 and 13563)* statement in this final rule, below.

(80) *Comment*: It is impossible to maintain an average stubble height of greater than 61 cm (24 in) throughout the growing season because plants die back each year and because site potential or year-to-year variability in growing conditions will preclude plants reaching this height every year.

Our Response: The designation of critical habitat does not require management or maintenance of the PCEs, such as vegetation height. This suitable habitat, of average stubble height of greater than 61 cm (24 in), is found only when wetland vegetation achieves full growth potential

associated with seasonally perennial flowing water and moist soils.

(81) *Comment*: At three locations along the East Fork of the Little Colorado River, Arizona, herbaceous riparian vegetation that was ungrazed did not average 61 cm (24 in) in height. Site potential and yearly variability in growing conditions will preclude plants achieving maximum expression of height on every site and in every year.

Our Response: We acknowledge and agree that site potential and yearly growing conditions will influence the height of dense herbaceous riparian vegetation. The designation of critical habitat does not require the management or maintenance of the PCEs, such as vegetation height. Critical habitat receives protection under section 7 of the Act through the requirement that Federal agencies ensure, in consultation with the Service, that any action they authorize, fund, or carry out is not likely to result in the destruction or adverse modification of critical habitat. See our response to Comment 61, above, for additional information on section 7 consultation.

(82) *Comment*: There is significant uncertainty and lack of scientific evidence demonstrating that the jumping mouse exists or existed in the Florida River, Colorado (Unit 7); therefore, critical habitat should not be designated there.

Our Response: The best available scientific evidence confirms the existence of New Mexico meadow jumping mice from the Florida River, Colorado. Frey (2008c, pp. 36, 42, 44) verified three museum specimens (one from 1945 and two from 2007) from Florida River, La Plata County. Two of these jumping mice were captured from private property along the Florida River (Museum of Southwestern Biology 2007, entire; 2007a, entire; Frey 2008c, pp. 42–45, 56; 2011a, pp. 19, 33). Another peer reviewer and subspecies expert, Dr. Jason Malaney (Malaney *et al.* 2012, p. 695; Appendix S1), genetically verified specimens collected in 2007 along the Florida River as New Mexico meadow jumping mice (museum numbers 1154917 and 155117). Recent genetic and morphological studies also conclusively found that the New Mexico meadow jumping mouse is a distinct subspecies and is genetically discrete from other *Zapus hudsonius* subspecies (King *et al.* 2006, pp. 4336–4348; Vignieri *et al.* 2006, p. 242; Frey 2008c, p. 34; Malaney *et al.* 2012, p. 695; Figure 1).

(83) *Comment*: The proposed Unit 7 (Florida Unit) extends over 9.7 km (6 mi) upriver from where the two jumping mice were captured; this distance is not

supported by scientific information regarding habitat requirements or reported movements by the subspecies.

Our Response: We used the best available scientific and commercial information in designating critical habitat based on the physical and biological features and PCEs of occupied areas; and unoccupied areas that were essential to the conservation of the subspecies, as specified in section 4 of the Act. See our response to Comment 1, above, which describes our method of designating critical habitat. As stated in the SSA Report (Service 2014, entire) and this final rule, additional populations are needed to provide connectivity and expand jumping mouse populations throughout the drainage. Since there is currently limited suitable habitat of only 0.15 ha (0.37 ac), we included 13.6 km (8.4 mi) in the unit, which would provide the needed size and connectivity of suitable habitat of the jumping mouse in the Florida River and provide population redundancy and resiliency essential to the conservation of the subspecies.

(84) *Comment*: There is no evidence that, even if the specimens from the Florida River (Unit 7) are New Mexico meadow jumping mice, this northern, outlier area is critical to the survival of the subspecies.

Our Response: See our response to Comment 82, above, about the existence of the subspecies in the Florida River. As stated in the SSA Report (Service 2014), the subspecies' overall level of extinction risk is high, given the ongoing and likely future losses of habitat in conjunction with the disjunct and isolated nature of populations. Rangewide, we concluded that the jumping mouse needs at least two resilient populations (where at least two existed historically) within each of eight identified geographic management areas. This number and distribution of resilient populations is expected to provide the subspecies with the necessary redundancy and representation to provide for viability. Conservation of each of the currently remaining 29 populations is vital for maintaining the overall redundancy and representation for the subspecies. Because jumping mouse populations are currently small and isolated from one another, the survival and recovery of the subspecies will require expanding the size of currently occupied areas containing suitable habitat into currently unoccupied areas that need to reestablish suitable conditions. The ability of jumping mouse populations to be resilient to adverse stochastic events depends on the robustness of a population and the ability to recolonize

if populations are extirpated. In this designation, each of the eight critical habitat units is essential for critical habitat to serve its intended purpose; loss of functionality of even one unit would severely impair the conservation functionality of the entire designation. This is further explained in section 3.3 “Rangewide Subspecies Needs” of the SSA Report (Service 2014).

(85) *Comment:* The prohibition against adversely modifying critical habitat under section 9 of the Act, irrespective of a Federal nexus, will affect private landowners.

Our Response: Section 9 of the Act does not pertain to critical habitat. The prohibition against “take” of a listed species under section 9 of the Act applies to individuals of an endangered or threatened species.

Comments on Environmental Assessment

(86) *Comment:* The environmental assessment should address the type and extent of monitoring that will be needed for jumping mouse populations and habitat.

Our Response: The environmental assessment analyzes the environmental consequences that may result from the designation of critical habitat for the jumping mouse. The designation of critical habitat does not require monitoring of populations or habitat of the jumping mouse. This is beyond the scope of the environmental assessment, but will likely be part of the forthcoming recovery plan.

(87) *Comment:* Multiple factors, including significance of impacts, controversy, regulatory takings implications, and environmental justice, indicate that an environmental impact statement is required under NEPA.

Our Response: An environmental impact statement is required only in instances where a proposed Federal action is expected to have a significant impact on the human environment. In order to determine whether designation of critical habitat would have such an effect, we prepared an environmental assessment of the effects of the proposed designation. On April 8, 2014, we announced the availability of the draft environmental assessment in the **Federal Register** (79 FR 19307) and asked for public comment. Following consideration of public comments, we prepared a final environmental assessment that determined that the critical habitat designation for the jumping mouse does not constitute a major Federal action having a significant impact on the human environment. That determination is the basis for our finding of no significant

impact (FONSI). Both the final environmental assessment and FONSI are available for public on <http://www.regulations.gov> under Docket No. FWS-R2-ES-2013-0014.

(88) *Comment:* There has been no consideration of excluding areas of critical habitat based on other relevant impacts to the cultural and historic traditions of the people within northern New Mexico.

Our Response: In the draft environmental assessment, we evaluated impacts to cultural and historical resources from the designation of critical habitat for the jumping mouse. We found that negative impacts on human health or the natural environment are not anticipated.

In the draft economic analysis, we evaluated impacts to cultural and historical resources from the designation of critical habitat for the mouse. Project modifications to avoid adverse modification of unoccupied critical habitat (Service 2013c), which may affect cultural resources, include: (1) Relocate the project to an area outside of jumping mouse critical habitat; (2) reduce the size and configuration of the proposed project to avoid, reduce, or eliminate the effects to unoccupied critical habitat; and (3) avoid ground-disturbing activities or reduce project elements that would preclude the development of habitat patches containing dense herbaceous riparian vegetation.

These project modifications are unlikely to affect cultural resource projects. Similar project modifications also would apply to many other types of projects (e.g., highway reconstruction, development, water management) and would serve to protect cultural resources from impacts caused by these other projects. Any ground-disturbing actions to protect critical habitat (e.g., enclosure fencing) would require cultural and archaeological surveys and be subject to separate cultural resource and NEPA analysis. In our draft environmental assessment, we analyzed potential impacts on unique cultural and historic resources in the area and found no impacts (Harris Environmental 2014, p. 118).

In the draft environmental assessment, we found that costs associated with designation of critical habitat for the jumping mouse are not likely to have a significant impact on low-income or minority populations because: (1) Total costs are estimated to be less than \$100 million in any one year (and were estimated to be \$23 million per year in 2014), and (2) costs would be distributed among multiple agencies and private parties. Therefore,

significant disproportionately high and adverse impacts to minority or low-income populations, or to cultural and historic traditions, are unlikely to occur.

(89) *Comment:* Several commenters stated that the Service cannot propose a critical habitat designation prior to the analysis of alternatives under NEPA and a draft economic analysis. On August 28, 2013 (78 FR 53058), the Service revised regulations implementing the Act to provide that a draft economic analysis be completed and made available for public comment at the time of publication of a proposed rule to designate critical habitat. The Service did not complete an economic analysis and make it available for public comment at the time of publication of a proposed rule to designate critical habitat for jumping mouse.

Our Response: The Service published our proposed rule to designate critical habitat for the jumping mouse on June 20, 2013 (78 FR 37328), more than 2 months prior to the publication of the final rule revising the regulations for impact analyses of critical habitat (78 FR 53058; August 28, 2013), and more than 4 months prior to that final rule’s effective date (October 30, 2013). On June 20, 2013, our regulations at 50 CFR 424.19 stated: “The Secretary shall identify any significant activities that would either affect an area considered for designation as critical habitat or be likely to be affected by the designation, and shall, after proposing designation of such an area, consider the probable economic and other impacts of the designation upon proposed or ongoing activities.” The Service interpreted “after proposing” to mean after publication of the proposed critical habitat rule. Consequently, when we published the jumping mouse proposed critical habitat rule, we followed the regulations that were current at that time.

The draft environmental assessment is used to decide whether critical habitat will be designated as proposed or if further refinements or analyses are needed. The Council on Environmental Quality’s regulations for implementing the procedural provisions of NEPA (40 CFR 1501.3) state that “Agencies may prepare an environmental assessment on any action at any time in order to assist agency planning and decisionmaking.” This same statement is reiterated in the Department of the Interior’s regulations for implementing NEPA (43 CFR 46.300(b)). Therefore, we are not required to prepare an environmental assessment prior to the publication of a proposed critical habitat designation. In addition, the Departmental regulations state that

“bureaus may seek comments on an environmental assessment if they determine it to be appropriate” (43 CFR 46.305(b)). As such, on April 8, 2014, we announced the availability of, and solicited public comment on, the draft environmental assessment of the proposed critical habitat designation in the **Federal Register** (79 FR 19307).

(90) *Comment:* The Service must perform a more thorough analysis of the oil and gas potential in proposed Unit 7 because new geological information and technologies may reveal deposits that currently have no or low potential.

Our Response: We have used the best scientific and commercial data available at the time in developing this critical habitat designation and associated documents such as the environmental assessment and economic analysis. In our draft environmental assessment, we found that conventional oil and gas extraction does not currently occur within the proposed critical habitat, and we are aware of no proposed oil or gas extraction beyond coalbed methane. As stated in the environmental assessment, coalbed methane exploration and production has the potential to fragment or eliminate habitat of the jumping mouse within Sugarite Canyon, New Mexico, and the Florida River and Sambrito Creek, Colorado (Harris Environmental 2014, pp. 76–81). Within Unit 7, there are only 2.5 ha (6 ac) of critical habitat in areas with potential for coalbed methane development on BLM lands. The BLM does not anticipate consultation for coalbed methane development on any of the critical habitat units (BLM 2013, entire). There is no critical habitat on Forest Service lands within Unit 7. This indicates consultation concerning coalbed methane development is not likely.

Consequently, an analysis of potential impacts to conventional oil and gas extraction is not warranted. The “Energy Resources” section of the draft environmental assessment provides further discussion regarding this topic.

(91) *Comment:* The designation of critical habitat will have a greater impact than the mere listing of the subspecies because it contains large areas not occupied by the jumping mouse and will result in additional consultations with Federal agencies that might not have otherwise occurred.

Our Response: The designation of unoccupied critical habitat may result in additional consultations. However, only those projects that may affect critical habitat and have a Federal nexus would require section 7 consultations with the Service. During these consultations, it is the responsibility of

the Federal action agency to consult with the Service, not the private individual or company. If there is not a Federal nexus for a given action or if critical habitat is not affected, then critical habitat designation does not restrict any actions that destroy or adversely modify critical habitat including on private lands. Our environmental assessment found that the effects of proposed critical habitat designation for the jumping mouse would likely only result in minor increases in administrative effort for section 7 consultations (Harris Environmental 2014, pp. 115–116). See our response to Comment 35, above, for further information on section 7 consultation for critical habitat. See also Consideration of Impacts under Section 4(b)(2) of the Act, below.

(92) *Comment:* Several commenters asked that we not designate critical habitat if it would compromise water rights or otherwise adversely impact farmers or other agricultural interests such as livestock grazing, irrigation ditches, acequias, or Rio Grande Compact delivery obligations within critical habitat units.

Our Response: Pursuant to the Act, we are statutorily required to designate critical habitat for a federally listed species if it is determined to be both prudent and determinable. We made a determination that critical habitat was both prudent and determinable in our proposed rule (78 FR 37328; June 20, 2013). 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 the government or public to access State, tribal, local, or private lands. Such designation does not require implementation of restoration, recovery, or enhancement measures by non-Federal landowners. If there is not a Federal nexus for activities taking place on private or State lands, then critical habitat designation does not restrict those actions. Where a landowner requests Federal agency funding or authorization for an action that may affect a listed species or critical habitat, the consultation requirements of section 7(a)(2) of the Act would apply, but even in the event of a destruction or adverse modification finding, the obligation of the Federal action agency and the landowner is not to restore or recover the species, but to implement reasonable and prudent alternatives to avoid destruction or adverse modification of critical habitat. The mere promulgation of a regulation, like designating critical habitat, does not take private property unless the

regulation on its face denies the property owners all economically beneficial or productive use of their land, which is not the case with critical habitat. The Act does not restrict all uses of critical habitat, but only imposes requirements under section 7(a)(2) on Federal agency actions that may result in destruction or adverse modification of designated critical habitat. These requirements do not apply to private actions that do not need Federal approvals, permits, or funding. Furthermore, as mentioned above, if a biological opinion concludes that a proposed action is likely to result in destruction or modification of critical habitat, we are required to suggest reasonable and prudent alternatives. See our response to Comment 35, above.

Section 4(b)(2) of the Act states that the Secretary shall designate and make revisions to critical habitat 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 Service has considered these factors; see Consideration of Impacts under Section 4(b)(2) of the Act, below. We are unaware of any instances where water rights or other agricultural interests would be significantly impacted by this designation. Our environmental assessment found that the designation of critical habitat would not have a significant impact on the human environment and that potential impacts on environmental resources, both beneficial and adverse, would be minor. Impacts of critical habitat designation on natural resources within the areas proposed as jumping mouse critical habitat were analyzed and discussed in chapter 3 of the environmental assessment. Applying the analysis of impacts to the significance criteria identified in chapter 3, the Service concluded that the adverse impacts of critical habitat designation would not be significant (Harris Environmental 2014, pp. 115–116).

Further, our final economic analysis did not indicate any disproportionate economic impacts resulting from the designation, and no impacts to national security or other relevant impacts were identified with the exception of Isleta Pueblo and Ohkay Owingeh (see Tribal Lands—Exclusions Under Section 4(b)(2) of the Act, below). The economic analysis also addresses impacts to livestock grazing in section 4 and impacts on water management in section 3.

Comments on Economic Analysis

(93) *Comment:* The designation of critical habitat for the jumping mouse in the Middle Rio Grande, New Mexico (Unit 6), would result in an increase in time and cost for consultations and impact water diversions, the use of water, and agriculture.

Our Response: In our economic analysis, we anticipate the re-initiation of a programmatic consultation for water use and management activities on the Middle Rio Grande, which would include critical habitat on Bosque del Apache NWR. This re-initiation is expected to occur regardless of critical habitat designation because Unit 6 is partially occupied by the subspecies. It is unlikely that additional project modification would be required to avoid adversely modifying or destroying critical habitat, because the subspecies is tied so closely to its habitat. Our incremental effects memo provides a detailed description of the information used for the analysis (Service 2014, entire). Therefore, incremental costs are likely limited to the additional administrative costs associated with addressing adverse modification in the consultation. This incremental administrative effort due to the designation of critical habitat should not impact the timeliness of consultation.

(94) *Comment:* Any increase in water demand to maintain flow requirements for critical habitat on Bosque del Apache NWR will result in less water for consumptive use within the middle Rio Grande in New Mexico.

Our Response: In our economic analysis, we found it is unlikely that critical habitat on Bosque del Apache NWR would generate additional requests for conservation efforts beyond what would be required due to the listing of the subspecies because the subspecies is tied so closely to its habitat. It is unlikely that additional project modification would be required to avoid adversely modifying or destroying critical habitat. See our response to Comment 93, above.

(95) *Comment:* The Service is bound by law to provide a more complete economic analysis of the impacts and not just the draft economic screening memorandum.

Our Response: The economic screening memorandum is our economic analysis of the proposed critical habitat designation (IEc 2014, entire). This analysis provides us with information on the potential for the proposed critical habitat rule to result in costs exceeding \$100 million in a single year. The draft economic analysis addressed potential economic impacts

of critical habitat designation for the jumping mouse. To that end, the analysis estimates impacts to activities, including grazing, water use, and recreation, that may experience the greatest impacts in compliance with section 4(b)(2) of the Act. The draft screening memo is provided to the public for review and comment.

Following the close of the comment period, we reviewed and evaluated all information submitted during the comment period that may pertain to our consideration of the probable economic impacts of this critical habitat designation. We conclude that critical habitat designation for the jumping mouse is unlikely to generate costs exceeding \$100 million in a single year. Information relevant to the probable economic impacts of critical habitat designation for the jumping mouse is available in the screening analysis (IEc 2014), available at <http://www.regulations.gov>.

(96) *Comment:* The economic analysis fails to consider consultation with Federal Emergency Management Agency and Natural Resources Conservation Service in proposed Unit 7 that would affect farmers on private land that get loans, grants, subsidies, and technical assistance.

Our Response: We contacted these agencies via letter and requested information to serve as a basis for conducting an economic analysis of the proposed critical habitat designation for the jumping mouse. We received no information on anticipated consultations relating to this critical habitat designation from these two Federal agencies. Consequently, based on the best available scientific and commercial data, the economic analysis did not forecast any consultations occurring with Federal Emergency Management Agency or Natural Resources Conservation Service in Unit 7.

(97) *Comment:* The Southern Ute Tribe receives water from the Florida Project in proposed Unit 7 (Florida River) to irrigate land within the reservation. The Southern Ute Tribe is concerned that the Service did not evaluate the economic impacts related to consultation with the Bureau of Reclamation and whether the designation of critical habitat may impair their abilities to divert and manage water.

Our Response: Our economic analysis found that it is unlikely that critical habitat would generate additional requests for conservation efforts beyond what would be required due to the listing of the subspecies because the needs of the subspecies are tied so

closely to its habitat. It is unlikely that additional project modification would be required to avoid adversely modifying or destroying critical habitat. See our response to Comment 93, above. Therefore, incremental costs to this project are likely limited to the additional administrative costs associated with addressing adverse modification in the consultation.

(98) *Comment:* Lemon Dam upstream of Unit 7 (Florida River) is principally managed by the Bureau of Reclamation. Consequently, there is a concern that routine maintenance and operations may trigger section 7 consultation, which may impact timely dam repairs and water releases.

Our Response: Our economic analysis anticipated that we will undergo a formal consultation on the operations of the Lemon Dam in Unit 7, which is owned by the Bureau of Reclamation (IEc 2014, p. 15). As described in the economic screening memorandum, it is unlikely that critical habitat would generate additional requests for conservation efforts beyond what would be required due to the listing of the subspecies because the subspecies is so closely tied to its habitat. Unit 7 is partially occupied by the jumping mouse (IEc 2014, p. 15). It is unlikely that additional project modification would be required to avoid adversely modifying or destroying critical habitat. See our response to Comment 93, above. Therefore, incremental costs to this project are likely limited to about \$5,000, the additional administrative costs associated with addressing adverse modification in the consultation (IEc 2014, pp. 15, 17). This incremental administrative effort due to the designation of critical habitat should not impact the timeliness of repairs and water releases.

(99) *Comment:* Private landowners within the proposed critical habitat units are opposed to the designation due to the economic impacts that will result.

Our Response: We completed an economic analysis of the likely impacts of designating critical habitat for the jumping mouse on water use and management, transportation, recreation, development, and subspecies and habitat management. The economic analysis provides us with the information on the potential for the proposed critical habitat rule to result in costs exceeding \$100 million in a single year. This analysis estimated direct (section 7) and indirect costs likely to result from the proposed critical habitat designation for the jumping mouse undertaken by or permitted by Federal agencies within proposed critical habitat. The total quantifiable

incremental section 7 costs associated with the proposed designation was estimated to be \$23,000,000 per year in 2014. Federal actions not affecting listed species or critical habitat, and actions on State, tribal, local, or private lands that are not federally funded or authorized, do not require section 7 consultation. In addition, the analysis concluded that the designation of critical habitat is unlikely to trigger additional indirect requirements under State or local regulations. Further, this analysis is supplemented by a separate memorandum assessing the potential perceptual effects on grazing. This analysis concludes that the aggregate value of all activities on these lands is less than \$100 million. Therefore, we conclude that critical habitat designation for the jumping mouse is unlikely to generate costs exceeding \$100 million in a single year. Based on this information, we did not find any areas warranted exclusion from designation of critical habitat based on economic impacts (see our response to Comment 88, above).

(100) *Comment:* The incremental effects memorandum and economic screening memorandum were available for public comment for only 30 days, rather than the required 60 days under 50 CFR 424.16(c)(2).

Our Response: Under 50 CFR 424.16(c)(2), we are required to allow at least 60 days for public comment following publication of a rule proposing the designation of critical habitat. This regulation applies to the proposed rulemaking, not the economic analysis or environmental assessment. We requested written comments from the public on the proposed designation of critical habitat during two comment periods. The first comment period rule associated with the publication of the proposed rule (78 FR 37328) opened on June 20, 2013, and closed on August 19, 2013. We also requested comments on the proposed critical habitat designation and associated draft economic analysis and draft environmental assessment during a comment period that opened April 8, 2014, and closed on May 8, 2014 (79 FR 19307).

We provided the normal 30-day comment period for the announcement of the availability of these associated documents. We contacted appropriate Federal and State agencies, State congressional representatives, local governments, tribes, scientific experts and organizations, and other interested parties and invited them to comment on the proposed rule and associated draft economic analysis and draft environmental assessment. On August 15, 2013, we also held an informational

meeting in Durango, Colorado, after receiving requests from interested parties. Similarly, we held informational meetings in Cañon, New Mexico, on April 24, 2014; Durango, Colorado, on April 28, 2014; and Alamogordo, New Mexico, on May 28, 2014.

(101) *Comment:* No attempt was made by the Service to notify any stakeholders or prior commenters on the proposed rule when the Service made available the draft environmental assessment and draft economic analysis for public comment.

Our Response: We sent letters to Federal and State agencies, State congressional representatives, local governments, and interested parties, including all individuals that commented on the June 20, 2013, proposed rule and those that signed in and provided their full addresses to us during the informational meetings (see our response to Comment 58, above), and we issued a news release on our Web site. Similarly, we held informational meetings in Cañon, New Mexico, on April 24, 2014; Durango, Colorado, on April 28, 2014; and Alamogordo, New Mexico, on May 28, 2014.

(102) *Comment:* A full analysis of economic impacts has not been completed and disseminated for public comment.

Our Response: In order to consider economic impacts, we prepared an incremental effects memorandum and screening analysis, which together with our narrative and interpretation of effects, was our draft economic analysis of the proposed critical habitat designation (IEc 2014, entire). The draft analysis, dated February 18, 2014, along with the draft environmental assessment, was made available for public review from April 8, 2014, through May 8, 2014 (79 FR 19307). See our responses to Comments 100 and 101, above, that address our outreach efforts. The draft environmental assessment addressed potential economic impacts of critical habitat designation for the jumping mouse. Following the close of the comment period, we reviewed and evaluated all information submitted during the comment period that may pertain to our consideration of the probable economic impacts of this critical habitat designation. The economic analysis provides us with information on the potential for the proposed critical habitat rule to result in costs exceeding \$100 million in a single year. We conclude that critical habitat designation for the jumping mouse is unlikely to generate costs exceeding

\$100 million in a single year.

Information relevant to the probable economic impacts of critical habitat designation for the jumping mouse is available in the screening analysis (IEc 2014), available at <http://www.regulations.gov>.

(103) *Comment:* The cost estimates presented in the economic analysis should be adjusted to account for errors in the land ownership information presented in the proposed rule within Subunit 4B.

Our Response: Federal and private land ownership acreages for Subunit 4B were presented incorrectly in Exhibit 1 of the economic screening memorandum as a result of a reporting error. However, the economic analysis was conducted using the correct ownership acreages, namely 118 ha (291 ac) of Federal land and 18 ha (44 ac) of private land.

(104) *Comment:* The economic analysis does not follow the binding legal precedent in the Tenth Circuit by evaluating only the incremental effects of critical habitat designation.

Our Response: As stated in the Service's 2013 revisions to the regulations for impact analyses conducted for designations of critical habitat under the Act (78 FR 53058, August 28, 2013, see p. 53062), "because the primary purpose of an economic analysis is to facilitate the mandatory consideration of the economic impact of a designation of critical habitat, to inform the discretionary 4(b)(2) exclusion analysis, and to determine compliance with relevant statutes and Executive Orders, the economic analysis should focus on the incremental impact of the designation." Therefore, our analysis focuses on incremental impacts.

(105) *Comment:* The economic screening memorandum does not include an analysis of impacts on small businesses.

Our Response: Under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*), Federal agencies are only required to evaluate the potential incremental impacts of a rulemaking on those entities directly regulated by the rulemaking itself and, therefore, are not required to evaluate the potential impacts to indirectly regulated entities. The regulatory mechanism through which critical habitat protections are realized is section 7 of the Act, which requires Federal agencies, in consultation with the Service, to ensure that any action authorized, funded, or carried by the agency is not likely to adversely modify critical habitat. Therefore, under section 7, only Federal action agencies are directly subject to

the specific regulatory requirement (avoiding destruction and adverse modification) imposed by critical habitat designation. Under these circumstances, it is the Service's position that only Federal action agencies will be directly regulated by this designation. Therefore, because Federal agencies are not small entities, the Service may certify that the proposed critical habitat rule will not have a significant economic impact on a substantial number of small entities. Because certification is possible, no regulatory flexibility analysis is required.

(106) *Comment:* The economic analysis is limited to "a point in time" and does not allow for future changes in pricing for cattle, costs for fencing and fence maintenance, inflation, jumping mouse population growth, and expansion of suitable habitat.

Our Response: The economic analysis provides information to the Service on the potential for the proposed critical habitat rule to result in costs exceeding \$100 million in a single year. Many of the anticipated impacts, such as animal unit month (AUM) reductions, are expected to occur in 2016, following the designation of critical habitat for the jumping mouse. In addition, the economic analysis conservatively assigns all other impacts, such as fencing, to one year, even though some of these costs may occur at a later date, which would reduce the actual impact occurring in a single year. Therefore, it is appropriate to use current prices.

(107) *Comment:* The economic analysis fails to fully consider the impact of the designation on State agencies, which may be required to consult with the Service on activities that receive Federal funding. These activities may include operation and maintenance activities at Seven Springs Fish Hatchery, habitat modification or water diversion projects on State lands, and removal of nuisance beaver on private or public lands.

Our Response: It is the responsibility of the respective Federal agencies, not the State agency, private individual, or company, to determine whether any of their ongoing or proposed actions may affect jumping mouse critical habitat and to consult with the Service. As stated in the economic screening memorandum, critical habitat could result in incremental section 7 impacts to State agencies if a Federal nexus is present (e.g., if a State agency receives Federal funding). However, based on information provided to the Service from Federal agency stakeholders and outreach to other stakeholders, we did not identify any situations where State

agencies receiving Federal funding would be affected by the proposed critical habitat designation. Incremental costs associated with consultation on operations and maintenance activities at the Seven Springs Fish Hatchery in Subunit 3B would be limited to administrative costs of consultation because, as noted in the proposed rule, this area is partially occupied by the subspecies and consultation would occur regardless of the designation of critical habitat. Should consultation be required for habitat projects or removal of nuisance beaver, the costs of these consultations are likely to be minimal because all of the critical habitat units are partially occupied. Therefore, the incremental costs associated with consultation on these State-led activities are likely limited to the additional administrative costs of considering critical habitat as part of the informal consultations and would not result in a substantial increase in the total costs estimated in the economic analysis.

(108) *Comment:* The incremental effects memorandum cannot be considered an economic analysis as required under section 4(b)(2) of the Act as it does not address the potential land use sectors that may be affected by the designation and does not estimate costs to directly and indirectly impacted entities.

Our Response: The purpose of the Service's incremental effects memorandum is to provide information to serve as a basis for conducting the economic analysis of the proposed critical habitat designation. The economic screening memorandum (complete title is "Consideration of Economic Impacts: Screening Analysis of the Likely Economic Impacts of Critical Habitat Designation for the New Mexico Meadow Jumping Mouse") provides information on the potential for the proposed critical habitat rule to result in costs exceeding \$100 million in a single year. To that end, the analysis in the economic screening memorandum estimates impacts to activities (i.e., potential land use sectors) that may experience the greatest impacts in compliance with section 4(b)(2) of the Act, including grazing, water use, and recreation. We did not find that these or any other activities (i.e., potential land use sectors) would result in significant economic impacts. See our response to Comment 107, above, regarding cost to directly and indirectly impacted entities.

(109) *Comment:* The designation of critical habitat for the jumping mouse will place restrictions on future land uses, causing a reduction in property values.

Our Response: Section 4 of the economic screening memorandum includes a discussion of the possible impacts of public perception on private property values. The analysis considered the impact that the designation of critical habitat may have on grazing, which is considered the highest value use of these lands. To evaluate the possible magnitude of such costs, the analysis estimates the total perpetuity value of the cattle that could be supported by all privately owned land and associated Federal leases in the proposed critical habitat designation and concludes that it is unlikely to exceed \$100 million. Thus, should property values be affected by the designation, the diminution in value could not exceed the total value of the properties. Data limitations prevent the estimation of the degree to which values might decrease; however, given current property values, such costs would not exceed \$100 million when combined with the other costs estimated in the screening analysis.

(110) *Comment:* A more localized analysis of the economic impacts of the designation is necessary as the affected communities are quite different from one another.

Our Response: The economic analysis provides us with the information on the potential for the proposed critical habitat rule to result in costs exceeding \$100 million in a single year. To that end, the analysis in the economic screening memorandum estimates impacts to activities, including grazing, water use, and recreation, that may experience the greatest impacts in compliance with section 4(b)(2) of the Act. The economic analysis focuses on activities with a Federal nexus because an action with no Federal nexus, including actions on private lands, is not affected by a designation of critical habitat. A key focus of this economic analysis is whether the designation of critical habitat would trigger project modifications to avoid adverse modification that would be above and beyond any modifications triggered by adverse effects to the species itself.

(111) *Comment:* The economic analysis fails to consider the economic impacts of the proposed critical habitat designation on the holders of grazing leases whose allotments are within the proposed critical habitat area and must be revised to consider these impacts. One commenter suggests that these impacts should be quantified as a reduction in the market value of allotments and provides a reference to the approach of Hawkes and Libbin (2014) to estimate the market value.

Our Response: The economic analysis includes an assessment of impacts to grazing (see section 3 of the economic screening memorandum). Specifically, the analysis estimates costs associated with AUM reductions and fencing where allotments overlap proposed critical habitat. AUM reductions represent a high-cost conservation alternative; lower cost alternatives may be available, including shifting cattle rotation patterns and developing alternative water sources. In line with this threshold analysis approach, we focus our analysis on the highest possible cost impact. Total costs associated with grazing activities are estimated to be \$23 million. (The draft screening memorandum estimate is \$15 million. However, based on public comments, additional analysis regarding water developments, cattle guards, and NEPA processes was conducted.)

Despite the fact that a section 7 nexus is unlikely for grazing activities conducted on private lands, the ranching community may perceive that the designation of certain parcels as critical habitat will limit future grazing activities in those areas. In addition, private landowners hold renewable leases that are both inheritable and transferrable with the sale of the land, or in the case of Forest Service permits, the transfer of livestock (pending the approval of the Forest Service). In the “Supplemental Information on Perceptual Effects on Grazing—Critical Habitat Designation for the New Mexico Meadow Jumping Mouse” (supplemental memorandum) we evaluated the possible magnitude of such costs. Based on the analysis presented in this memorandum, the value of grazing activities is unlikely to exceed \$100 million.

To quantify these impacts, the economic analysis: (1) Identifies reductions in the number of cattle that will be allowed to graze in the form of reductions in AUMs; and (2) estimates costs associated with these reductions using the permit value per AUM in perpetuity. Permit value can be used as a measure of rancher wealth tied up in grazing permits, and forced reductions in AUMs can be represented by a loss in permit value. We rely on estimates of permit value, in perpetuity, of grazing on Forest Service lands from nine published studies to determine an average permit value per AUM. This approach has been applied in previous economic analyses of proposed critical habitat designations promulgated by the Service and has been the subject of technical review by academic experts.

(112) *Comment:* Multiple commenters state that the designation of critical

habitat will have a significant economic impact on ranchers who own allotments on National Forest lands. This impact will result from the Forest Service reducing stocking rates and limiting livestock access to water. The commenters assert that without access to water, ranchers may be put out of business, which would have a larger effect on the economies of the region.

Our Response: See our response to Comment 111, above, regarding economic impact on ranchers. We acknowledge that if fencing limits access to water, costs could be higher than what was estimated in the screening analysis. Therefore, we incorporate costs associated with the development of alternative water sources for cattle based on information provided by the Forest Service (see our response to Comment 114, below).

(113) *Comment:* The commenters state that the assumption applied in the economic analysis that AUM reductions due to jumping mouse conservation are proportional to the percentage of allotment area proposed for critical habitat designation is incorrect. One commenter notes that this assumption does not take into account the fact that fencing riparian areas also fences off water and other areas that are not proposed as critical habitat.

Our Response: The assumption that AUM reductions are proportional to the percentage of allotment area proposed for critical habitat designation could understate or overstate costs. However, absent specific information on forecast AUM reductions, we believe that this is a reasonable assumption. This assumption has been applied in previous economic analyses that were peer-reviewed by subject experts. In addition, the estimated total value of the AUMs of all allotments intersecting the proposed designation is approximately \$2.0 million, and, therefore, even in the unlikely scenario that fencing of riparian areas results in the full loss of AUMs from allotments intersecting proposed critical habitat, the total impacts would not approach the \$100 million threshold. Lastly, in response to information provided by the Forest Service, we incorporate costs associated with the development of alternative water sources for cattle that may be required if fencing limits access to water (see our response to Comment 114, below).

(114) *Comment:* One commenter suggests that costs must be added to the economic analysis associated with management for the jumping mouse and its habitat within the National Forests. In particular, water developments will be necessary if fencing around streams

occurs, at a cost of up to \$500,000 within the Apache-Sitgreaves National Forest and \$400,000 within the Lincoln National Forest. In addition, within the Lincoln National Forest, cattleguards would be needed where fencing intersects roads and trails, at a cost of \$310,000. Also within the Lincoln National Forest, costs associated with employing an on-site fire crew and law enforcement during fence installation are estimated to cost \$3,500 per day. Similar water development, cattleguard, and fire protection costs are anticipated within the Santa Fe National Forest. Finally, the high-end cost for completing the NEPA process to address critical habitat for the mouse is estimated to be \$200,000 for each National Forest.

Our Response: Based on information provided by the Southwestern Region of the Forest Service, we conservatively assumed that water developments, cattle guards, and NEPA processes would be required as a result of the proposed critical habitat designation for the jumping mouse, and this cost has been included in the economic analysis. At this time, it is unknown whether on-site fire crews and law enforcement will be needed during future fence installation, and therefore this was not included in the economic analysis. We estimated a cost of \$200,000 per forest for NEPA processes, totaling \$600,000. In addition, we estimated costs of \$100,000 per pasture for water developments within five pastures in the Apache-Sitgreaves National Forest, four pastures in the Lincoln National Forest, and six pastures in Santa Fe National Forest, for a total of \$1.5 million. The Apache-Sitgreaves National Forest and Lincoln National Forest provided the estimates of the number of pastures requiring water developments, and we conservatively assumed that all pastures intersecting the proposed designation in Santa Fe National Forest will require water developments. We applied the high-end cost estimate of \$100,000 per-development provided by the Forest Service for each anticipated water development. In addition, we estimated costs of \$310,000 per forest for cattleguards. Santa Fe and Apache-Sitgreaves National Forests were not able to provide cost estimates for cattleguards, so we assumed that their needs will be similar to those in the Lincoln National Forest, which estimated that 20 road and 5 trail cattleguards will be needed. In total, the estimated cost of the conservation measures described above is \$2.7 million. This estimate is likely to overstate incremental costs, as some of

these conservation measures may be implemented in occupied habitat; the costs in occupied areas would not be incremental costs due to the designation of critical habitat. The addition of these conservation costs, as well as updates to the number of permitted AUMs in Apache-Sitgreaves National Forest (described below in Comment 118), yields a revised incremental impacts estimate of \$23 million, which does not approach the \$100 million threshold, even when combined with information about the total value of grazing rights in the proposed critical habitat designation (see our response to Comment 111, above, regarding potential perception effects).

(115) *Comment:* It is incorrect to assume that allotments with less than 5 percent of their total area overlapping proposed critical habitat will be able to shift grazing activities away from the critical habitat areas at minimal cost and without affecting the overall grazing within the allotment. Because grazing does not occur equally across the allotment and habitat conditions vary considerably within each allotment, grazing pressure can vary.

Our Response: This assumption has been applied in previous economic analyses that were peer-reviewed by subject experts. To test the effect of this assumption on our overall cost estimate, we updated our analysis to include those allotments with less than 5 percent of their total area overlapping proposed critical habitat and find that the total cost of AUM reductions in these additional areas would be less than \$40,000.

(116) *Comment:* The commenter states that exhibit 3 of the economic analysis is incorrect in stating that AUM reductions are not anticipated for allotments for which the number of permitted AUMs is unknown.

Our Response: Exhibit 3 indicates that AUM reductions are not anticipated for these allotments because the percentage of overlap of these allotments with the proposed critical habitat does not exceed the 5 percent threshold.

(117) *Comment:* The costs of replacing fencing lost due to the Wallow Fire in areas where the species is present should be included in the economic analysis.

Our Response: Guidelines issued by the U.S. Office of Management and Budget (OMB) for the economic analysis of regulations direct Federal agencies to measure the costs and benefits of a regulatory action against a baseline. Costs incurred in areas where the species is present are baseline costs, meaning that these actions would occur without critical habitat designation.

Impacts that are incremental to the baseline are those that are solely attributable to the designation of critical habitat. This screening analysis focuses on the likely incremental effects of the critical habitat designation for the jumping mouse.

(118) *Comment:* Several commenters assert that the AUMs reported in the economic analysis do not accurately reflect the permitted AUMs for each allotment. One commenter states that given the multiple-year drought impacting these areas, using the current AUMs significantly underestimates AUMs associated with each allotment and the analysis should use the full permitted AUMs. A second commenter provides a more accurate reflection of the permitted AUMs for allotments within the Apache-Sitgreaves National Forest.

Our Response: The grazing analysis described in the economic screening memorandum is based on the best available information at the time of writing. For the Apache-Sitgreaves National Forest, specific permitted AUMs were not available, so the analysis used estimated AUMs based on the Apache-Sitgreaves National Forest's annual operating instructions. We have updated our analysis to include the more accurate permitted AUM data provided by the Apache-Sitgreaves National Forest during the public comment period. Using this information, we find that the overall results of the economic analysis were not significantly affected and the costs we estimated in 2014 do not approach the \$100 million threshold.

(119) *Comment:* The designation of critical habitat will result in increased operating costs associated with altering the current grazing system within allotments. The commenter believes that changes to the grazing system will result in increased labor and travel costs, and excessive handling of cattle may result in lower weaning weights, increased calf losses, and lower reproductive rates.

Our Response: The economic analysis estimates costs associated with AUM reductions and fencing of riparian areas (including alternative water sources for cattle). As described in section 3 of the economic screening memorandum, these costs represent a high-cost estimate. Lower cost options may be available, including shifting cattle rotation patterns and developing alternative water sources. The estimated total value of the AUMs of all allotments intersecting the proposed designation is approximately \$2.0 million, and, therefore, even in the unlikely scenario that lower weaning weights, increased

calf losses, and lower reproductive rates result in the full loss of AUMs from allotments intersecting proposed critical habitat, the total impacts would not approach the \$100 million threshold.

(120) *Comment:* Under section 9 of the Act, notwithstanding Federal nexus, a farmer or rancher may be prohibited from grazing cattle or conducting other agricultural activities. The commenter asserts that costs stemming from this requirement should be included in the economic analysis.

Our Response: Section 9 of the Act prohibits take of any species listed as an endangered species and makes it illegal for any person subject to the jurisdiction of the United States to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt any of these, such species. Section 9 is not applicable to critical habitat. Critical habitat receives protection under section 7 of the Act through the requirement that Federal agencies ensure, in consultation with the Service, that any action they authorize, fund, or carry out is not likely to result in the destruction or adverse modification of critical habitat. Therefore, costs related to the requirements of section 9 of the Act are not incremental impacts of the proposed critical habitat designation and are not included in the economic analysis.

(121) *Comment:* Several commenters note that project modifications to water development and use activities may disrupt the availability of water for agriculture, reducing agricultural productivity. The commenters state that the economic analysis should include an assessment of impacts to agricultural productivity on all lands irrigated by water management infrastructure included in the proposed critical habitat designation.

Our Response: In section 3 of the economic screening memorandum, we address potential impacts to water management projects, including the Bernalillo to Belen Levees project in excluded Subunit 6A, the Lake Dorothea and Lake Alice projects in Unit 1, the Lemon Dam in Unit 7, and water use and management activities on the Middle Rio Grande. Overall, we find that the designation of critical habitat for the jumping mouse will not result in incremental changes to water management activities, and, therefore, the designation is not expected to result in impacts to agricultural productivity.

(122) *Comment:* The commenters state that the economic analysis underestimates the impacts associated with water management in proposed Unit 7 (Florida River) and should include costs associated with

consultation on the Florida Project and any operating restrictions that may result in decreased water availability to end-users. Additionally, the economic analysis must consider costs associated with managing the Lemon Reservoir on the Florida River.

Our Response: The economic analysis includes an assessment of potential incremental effects on the Lemon Dam, which is the principal feature of the Florida Project (see section 3 of the economic screening memorandum). Specifically, the analysis forecasts costs associated with a consultation between the Service and the Bureau of Reclamation to consider the effects of the operations of the Lemon Dam in Unit 7. As described in the economic screening memorandum, as Unit 7 is partially occupied by the species, it is unlikely that critical habitat would generate additional requests for conservation efforts beyond what would be required due to the listing of the species, and, therefore, the incremental costs to this project are likely limited to administrative consultation costs associated with addressing adverse modification in the consultation.

(123) *Comment:* Ongoing efforts by the Bureau of Reclamation to enhance wetlands within Unit 8 (Sambrito Creek) will be affected by section 7 consultation requirements. The commenters assert that these costs should be included in the economic analysis.

Our Response: While the Bureau of Reclamation's wetland restoration efforts in Unit 8 may require section 7 consultation with the Service, the administrative costs associated with addressing adverse modification in a consultation would be minor (approximately \$5,000 for a formal consultation). As the unit is partially occupied it is unlikely that critical habitat would generate additional requests for conservation efforts beyond what would be required due to the listing of the species. In addition, because the purpose of these activities is to benefit the habitat, the Service does not expect to recommend conservation measures above and beyond those already required by the Bureau of Reclamation as part of the project.

(124) *Comment:* The economic analysis should evaluate the impact of fencing areas on elk populations and the associated impact on hunting. Through limiting the availability of water, there is a potential for a decrease in elk herd sizes leading to decreases in hunting revenue.

Our Response: The Forest Service does not expect pipe fencing to affect elk populations because elk will be able

to jump over the fencing. In addition, elk and other game will be able to access water developments, provided by the Forest Service, installed in pastures with fencing around streams. Costs related to these water developments are discussed in our response to Comment 114, above.

(125) *Comment:* The conclusion of the economic analysis that impacts to recreation will likely be minor to moderate is inaccurate because recreationists on Forest Service lands are drawn to areas with water. Restricting off-trail uses, including angling, may cause recreationists to travel to other areas and reduce income to communities that depend on the recreation industry.

Our Response: See our response to Comment 35, above.

(126) *Comment:* Several commenters state that the economic analysis is incorrect in saying that the proposed critical habitat designation is located in areas where development pressure is low and that in fact development pressure is significant along the Florida River (Unit 7) and is likely to grow. The commenters state that the analysis does not consider the impacts of critical habitat designation on highly valuable private property in Unit 7 and Unit 8, and does not consider that many private landowners hold inheritable and transferable grazing leases for the land that may affect the value of connected private holdings or property rights.

Our Response: One comment references La Plata County Planning Department maps that show potential land use opportunities for subdivisions or commercial development projects. However, the commenter did not provide the maps, and we were unable to locate these maps. We consulted available La Plata County Planning Department land use plans and noted that the land use plan for Florida Mesa District, which includes Unit 7, specifically includes an objective to discourage future building in the 100-year flood plains, noting benefits to recreation and wildlife. See our response to Comment 47, above, for a response to private holdings and property rights.

In section 4 of the economic screening memorandum, we analyze potential perceptual effects of the proposed designation on private grazing lands and associated grazing permits on public lands. We conclude that the total value of grazing supported by privately owned land and Federal leases within the proposed designation is unlikely to exceed \$100 million. Thus, should property values be affected by the designation, the diminution in value

could not exceed the total value of the properties. Data limitations prevent the estimation of the degree to which values might decrease; however, given current property values, such costs would not exceed \$100 million when combined with the other costs estimated in the screening analysis. See our response to Comment 111, above, for information regarding grazing and grazing leases.

(127) *Comment:* The economic analysis should consider how potential future energy development could be impacted by the designation, including impacts on leases held in proposed Units 7 and 8, job impacts, and revenue impacts. New geological information and advances in exploration and production technologies may reveal that areas proposed for critical habitat designation currently regarded as having no or low potential for oil and gas development could actually have much higher potential in the future.

Our Response: Our economic analysis includes "reasonably foreseeable" impacts of the proposed designation. The Service conducted outreach efforts to other Federal agencies concerning the likely effects of critical habitat and limited interviews with relevant stakeholders. We received no response on anticipated consultations relating to oil and gas development within critical habitat designation for the jumping mouse. Consequently, based on the best available scientific and commercial data, the economic analysis did not forecast any consultations related to oil and gas.

(128) *Comment:* The economic analysis should consider impacts to the U.S. Army Corps of Engineers (Corps) associated with future consultations.

Our Response: The Corps' Albuquerque District provided the Service with feedback on ongoing and planned activities within the proposed critical habitat units, which include species and habitat management activities and water management projects. Exhibit 6 in the economic analysis presents the total incremental costs by subunit associated with the forecast consultations with the Forest Service and the Corps (IEc 2014, pp. 16–17). These costs include the administrative costs associated with the consultations, as well as the costs of potential conservation measures, where applicable. Total costs are estimated to be \$4.1 million over the next 20 years, or \$360,000 on an annualized basis (7 percent discount rate).

(129) *Comment:* Due to the designation of critical habitat, county and State governments may develop regulations regarding private lands that

restrict future land uses, such as development.

Our Response: Section 4 of the economic screening memorandum discusses the potential for indirect incremental costs to occur outside of the section 7 consultation process. These types of costs include triggering additional requirements or project modifications under State laws or regulations, and perceptual effects on markets. The jumping mouse is provided some level of protection in each of the States containing proposed critical habitat designation (see exhibit 8 in the economic screening memorandum). Although protective status for the subspecies may not require implementation of conservation efforts sufficient to protect the subspecies' habitat, these designations suggest that State agencies are likely to be aware of the presence of the subspecies. We therefore assume that the designation of critical habitat is unlikely to trigger State- or county-level impacts as a result of increased awareness of the subspecies and its habitat in States where the jumping mouse is currently afforded some protective status. We are not aware of any effects of this type associated with prior designations of critical habitat for other species in the region. Therefore, absent specific additional information related to the probability of local governments developing such regulations, and the specific restrictions that could be imposed, we are unable to quantify impacts.

(130) *Comment:* The benefits listed in the economic screening memorandum are lacking specificity and are incapable of being evaluated.

Our Response: As stated in section 5 of the economic screening memorandum, benefits resulting from incremental conservation efforts include direct benefits associated with the primary goal of species conservation and ancillary benefits that derive from conservation efforts but are not the purpose of the Act. In order to quantify and monetize these benefits, information is needed to determine the incremental change in the probability of jumping mouse conservation expected to result from the designation and the public's willingness to pay for such beneficial changes. We were not able to identify any published studies that estimate the value the public places on preserving the jumping mouse. In addition, we do not have information on the expected change in the subspecies' population levels that may result from critical habitat designation for the jumping mouse. We therefore provide a

qualitative summary of the expected benefits.

Summary of Changes from the Proposed Rule

In this rule, we are designating a total of approximately 5,657 ha (13,973 ac) along 272.4 km (169.3 mi) of flowing streams, ditches, and canals as critical habitat for the jumping mouse. This amounts to a reduction of 235 ha (587 ac) from what we proposed to designate on June 20, 2013 (78 FR 37328). We reviewed a number of site-specific comments related to critical habitat for the jumping mouse during the comment periods. In addition, we completed our analysis of areas considered for exclusion under section 4(b)(2) of the Act, completed the final environmental assessment and the finding of no significant impact, and completed the economic analysis of the designation. We fully considered all comments we received from the public, peer reviewers, States, and Federal agencies on the proposed rule and the associated environmental assessment and economic analysis to develop this final designation of critical habitat for the jumping mouse. We received requests to both reduce and expand the designation within many units. Except for minor boundary modifications and two exclusions, we did not receive any information that resulted in modification of our original proposal to designate critical habitat. Our final designation of critical habitat reflects the following changes from the proposed rule:

(1) We updated the primary constituent elements (PCEs) for the jumping mouse by removing reed canarygrass from the list of plants and by revising the description of "tall" vegetation to mean an average stubble height of herbaceous vegetation of at least 61 cm (24 inches). The removal of reed canarygrass from the PCEs is a minor technical correction based on a comment from one peer reviewer that indicated that inclusion of reed canarygrass was unusual and based on outdated information. In the proposed rule, we defined average stubble height as measured with a ruler to be 69 cm (27 inches), and vertical cover as measured with a Robel pole to be 61 cm (24 inches). As stubble height and vertical cover are highly correlated, we have revised "tall" vegetation to reflect the measurements made with a Robel pole, which is a more rapid technique and would thus allow for both height and vertical density of vegetation to be assessed. Because of these changes, the PCEs for the jumping mouse in this rule state that the jumping mouse uses areas

that support tall (average stubble height of herbaceous vegetation of at least 61 cm (24 inches)) and dense herbaceous riparian vegetation composed primarily of sedges (*Carex* spp. or *Schoenoplectus pungens*) and forbs.

(2) Based on recently finalized map data that were still in draft form during our initial analysis, we revised mapping errors at the terminus of Subunit 4A and Unit 7. These minor corrections did not reduce the size of Subunit 4A, but reduced Unit 7 by 3 ha (8 ac).

(3) Based on a review of land ownership acres, we reversed the land ownership values in Subunit 4B (Upper Peñasco), which was incorrectly presented in the proposed rule as 18 ha (44 ac) Forest Service, 118 ha (291 ac) Private. The correct land ownership values are 118 ha (291 ac), 18 ha (44 ac) Private.

(4) Based on a comment and new information we received, we changed the upstream boundary of Unit 7 (Florida River, in the State of Colorado) because the area in our proposal included manmade structures and lands that do not contain suitable habitat or restorable habitat for the subspecies. Our subsequent analysis of Unit 7 determined that approximately 3 ha (8 ac) of unoccupied critical habitat that we proposed is not essential for the conservation of the jumping mouse. This area contains a manmade water diversion structure and associated lands that are not likely restorable habitat and therefore unlikely to ever support the jumping mouse. Accordingly, we made minor changes to the critical habitat boundary and revised the Unit 7 map to remove this area because this area does not meet our definition of critical habitat. The final revised critical habitat in Unit 7 consists of 253 ha (626 ac) of private lands.

(5) We carefully considered the benefits of inclusion and the benefits of exclusion, under section 4(b)(2) of the Act, of the specific areas identified in the proposed critical habitat rule, particularly in areas where a management plan specific to the jumping mouse is in place, and also where the maintenance and fostering of important conservation partnerships were a consideration. Based on the results of our analysis, we are excluding approximately 94 ha (230 ac) of Subunits 6A and 6B from this final critical habitat designation for the jumping mouse (see *Tribal Lands—Exclusions Under Section 4(b)(2) of the Act*, below). Due to these changes in our final critical habitat designation, proposed critical habitat Subunit 6C is now Unit 6 in this rule.

Exclusion from critical habitat should not be interpreted as a determination that these areas are unimportant, that they do not provide physical or biological features essential to the conservation of the species (for occupied areas), or are not otherwise essential for conservation (for unoccupied areas); exclusion merely reflects the Secretary's determination that the benefits of excluding those particular areas outweigh the benefits of including them in the designation.

(5) We corrected an error in our area calculations for Subunit 6C, Bosque del Apache NWR (now Unit 6). In the proposed rule (78 FR 37328; June 20, 2013), we identified 201 ha (496 ac) as critical habitat on the Bosque del Apache NWR. This final rule correctly identifies 403 ha (995 ac) of critical habitat.

(6) We corrected an error in our area calculations for Unit 1. In the proposed rule (78 FR 37328; June 20, 2013), we erroneously identified Unit 1 as having 344 ha (849 ac) of private lands within critical habitat. However, there are not any private lands designated as critical habitat within Unit 1. The proposed rule identified 687 ha (1,698 ac) for the total area of Unit 1. The corrected total in this final rule for Unit 1 is 343 ha (849 ac).

(7) Descriptions and critical habitat maps can be found later in this document. This final designation of critical habitat represents a reduction of 235 ha (587 ac) from our proposed critical habitat for the jumping mouse for the reasons detailed above.

Critical Habitat

Background

Critical habitat is defined in section 3 of the Act as:

(1) The specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the Act, on which are found those physical or biological features:

(a) Essential to the conservation of the species and

(b) Which may require special management considerations or protection; and

(2) Specific areas outside the geographical area occupied by the 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 that are necessary to bring an endangered or threatened species to the point at which the measures provided

under 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 requirement that Federal agencies ensure, in consultation with the Service, that any action they authorize, fund, or carry out is not 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 the government or public to access private lands. Such designation does not require implementation of restoration, recovery, or enhancement measures by non-Federal landowners. Where a landowner requests Federal agency funding or authorization for an action that may affect a listed species or critical habitat, the consultation requirements of section 7(a)(2) of the Act would apply, but even in the event of a destruction or adverse modification finding, the obligation of the Federal action agency and the landowner is not to restore or recover the species, but to implement reasonable and prudent alternatives to avoid destruction or adverse modification of critical habitat.

Under the first prong of the Act's definition of critical habitat, areas within the geographical area occupied by the species at the time it was listed are included in a critical habitat designation if they contain physical or biological features (1) which are essential to the conservation of the species and (2) which may require special management considerations or protection. For these areas, critical habitat designations identify, to the extent known using the best scientific and commercial data available, those physical or biological features that are essential to the conservation of the species (such as space, food, cover, and protected habitat). In identifying those physical and biological features within an area, we focus on the principal biological or physical constituent elements (primary constituent elements such as roost sites, nesting grounds, seasonal wetlands, water quality, tide, soil type) that are essential to the conservation of the species. Primary

constituent elements are the specific elements of physical or biological features that provide for a species' life-history processes, and are essential to the conservation of the species.

Under the second prong of the Act's definition of critical habitat, we can designate critical habitat in areas outside the geographical area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species. For example, an area currently occupied by the species but that was not occupied at the time of listing may be essential to the conservation of the species and may be included in the critical habitat designation. We designate critical habitat in areas outside the geographic area occupied by a species only when a designation limited to its range would be inadequate to ensure the conservation of the species.

Section 4 of the Act requires that we designate critical habitat on the basis of the best scientific and commercial data available. Further, our Policy on Information Standards Under the Endangered Species Act (published in the **Federal Register** on July 1, 1994 (59 FR 34271)), the Information Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Pub. L. 106-554; H.R. 5658)), and our associated Information Quality Guidelines, provide criteria, establish procedures, and provide guidance to ensure that our decisions are based on the best scientific data available. They require our 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 we are determining which areas should be designated as critical habitat, our primary source of information is generally the information developed during the listing process for the species (for the jumping mouse, as reviewed in the SSA Report (Service 2014)) and the proposed and final rules for listing the species. Additional information sources may include articles in peer-reviewed journals, conservation plans developed by States and counties, scientific status surveys and studies, biological assessments, other unpublished materials, or experts' opinions or personal knowledge.

Habitat is dynamic, and species may move from one area to another over time. We recognize that critical habitat designated at a particular point in time may not include all of the habitat areas that we may later determine are

necessary for the recovery of the species. For these reasons, a critical habitat designation does not signal that habitat outside the designated area is unimportant or may not be needed for recovery of the species. Areas that are important to the conservation of the species, both inside and outside the critical habitat designation, will continue to be subject to: (1) Conservation actions implemented under section 7(a)(1) of the Act, (2) regulatory protections afforded by the requirement in section 7(a)(2) of the Act for Federal agencies to ensure their actions are not likely to jeopardize the continued existence of any endangered or threatened species, and (3) section 9 of the Act's prohibitions on taking any individual of the species, including taking caused by actions that affect habitat. Federally funded or permitted projects affecting listed species outside their designated critical habitat areas may still result in jeopardy findings in some cases. These protections and conservation tools will continue to contribute to recovery of this species. 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 at the time of these planning efforts calls for a different outcome.

Physical or Biological Features

In accordance with section 3(5)(A)(i) and 4(b)(1)(A) of the Act and regulations at 50 CFR 424.12, in determining which areas within the geographical area occupied by the species at the time of listing to designate as critical habitat, we consider the physical or biological features that are essential to the conservation of the species and which may require special management considerations or protection. These include, but are not limited to:

- (1) Space for individual and population growth and for normal behavior;
- (2) Food, water, air, light, minerals, or other nutritional or physiological requirements;
- (3) Cover or shelter;
- (4) Sites for breeding, reproduction, or rearing (or development) of offspring; and
- (5) Habitats that are protected from disturbance or are representative of the historical, geographic, and ecological distributions of a species.

We derive the specific physical or biological features required for the jumping mouse from studies of this

species' habitat, ecology, and life history as described below. Unfortunately, there have been relatively few studies on the jumping mouse and its natural life history, and information gaps remain. However, we have used the best available information as described in the SSA Report (Service 2014). To identify the physical and biological needs of the jumping mouse, we relied on conditions at currently occupied locations where the jumping mouse has been observed during surveys, and the best information available on the species and its close relatives. Below, we summarize the physical and biological features needed by foraging, breeding, and hibernating New Mexico meadow jumping mice. For a complete review of the physical and biological features required by the jumping mouse, see chapter 2 in the SSA Report (Service 2014).

For the jumping mouse to be considered viable, individual mice need specific vital resources for survival and completion of their life history. One of the most important aspects of the jumping mouse's life history is that it hibernates about 8 or 9 months out of the year, longer than most mammals. Conversely, it is only active 3 or 4 months during the summer. Within this short timeframe, it must breed, birth, raise young, and store up sufficient fat reserves to survive the next year's hibernation period. In addition, New Mexico meadow jumping mice only live 3 years or less and have one small litter annually with 7 or fewer young, so the subspecies has limited capacity for high population growth rates due to this low fecundity. As a result, if resources are not available in a single season, jumping mice populations will be greatly impacted.

The jumping mouse has exceptionally specialized habitat requirements to support these life-history needs and maintain adequate population sizes. Habitat requirements are characterized by tall (averaging at least 61 cm (24 in)), dense herbaceous (plants with no woody tissue) riparian vegetation composed primarily of sedges and forbs. This suitable habitat is found only when wetland vegetation achieves full growth potential associated with seasonally perennial (persistent water during the vegetation growing season) flowing water and saturated soils. This vegetation is an important resource need for the jumping mouse because it provides vital food sources (insects and seeds), as well as the structural material for building day nests that are used for shelter from predators. It is imperative that the jumping mouse have rich abundant food sources during the

summer so that it can accumulate sufficient fat reserves to survive the long hibernation period because the subspecies does not cache food for the winter. In addition, individual New Mexico meadow jumping mice also need intact upland areas adjacent to riparian wetland areas because this is where they build nests or use burrows to give birth to young in the summer and to hibernate over the winter.

These suitable habitat conditions need to be in appropriate locations and of adequate sizes to support healthy populations of the jumping mouse. Historically, these wetland habitats would have been in large patches located intermittently along long stretches of streams. The ability of jumping mouse populations to be resilient to adverse stochastic events depends on the robustness of a population and the ability to recolonize if populations are extirpated. Because counting individual New Mexico meadow jumping mice to assess population sizes is very difficult and data are unavailable, we can best measure population health by the size of the intact, suitable habitat available. We estimate that resilient populations of New Mexico meadow jumping mice need at least 27.5 to 73.2 ha (68 to 181 ac) of suitable habitat along 9 to 24 km (5.6 to 15 mi) of flowing streams, ditches, or canals. This distribution and amount of suitable habitat will support multiple subpopulations of New Mexico meadow jumping mice throughout each of the waterways and would provide for sources of recolonization if some areas were extirpated due to disturbances, thereby increasing the chance of jumping mouse populations surviving the elimination or alteration of suitable habitat from a variety of sources and persisting while the necessary vegetation is restored. The suitable habitat patches must be relatively close together because the jumping mouse has limited dispersal capacity for natural recolonization. In our SSA Report (Service 2014), we determined that rangewide, the jumping mouse needs at least two resilient populations (where at least two existed historically) within each of eight identified geographic management areas. The eight geographic management areas are defined by the external boundaries of the geographic distribution of historical populations. We use the term geographic management area to describe the geographic region where populations of jumping mice are located. This number and distribution of resilient populations is expected to provide the subspecies

with the necessary redundancy and representation to provide for viability.

Populations of New Mexico meadow jumping mice with a high likelihood of long-term viability require functionally connected areas throughout stream reaches, ditches, or canals. This continuous suitable habitat is necessary to attain the population sizes and densities needed to increase the probability that populations of the subspecies will persist in the face of natural or manmade events and seasonal fluctuations of food resources. Because the subspecies occurs only in areas that are water-saturated, populations have a high potential for extirpation when habitat dries due to ground and surface water depletion, draining of wetlands, or drought. Jumping mouse habitat is subject to dynamic changes that result from flooding and drying of these waterways and the ensuing fluctuations (loss and regrowth) in the quantity and location of dense herbaceous riparian vegetation over time. Consequently, fluctuating water levels may create circumstances in which New Mexico meadow jumping mouse population sizes and locations within a waterway vary over time, and populations may be periodically extirpated and subsequently recolonized. To encompass the daily and seasonal movements of the majority of individual New Mexico meadow jumping mice and allow for the occasional inter-population dispersal to occur unimpeded, appropriately sized patches of suitable habitat should be no more than 200 m (656 ft) apart within designated waterways (see section 2.7.2 "Habitat Patch and Population Sizes" in the SSA Report (Service 2014)).

Primary Constituent Elements

Under the Act and its implementing regulations, we are required to identify the physical or biological features essential to the conservation of the jumping mouse in the geographic area occupied by the species at the time of listing, focusing on the features' primary constituent elements (PCEs). Primary constituent elements are those specific elements of physical or biological features that provide for a species' life-history processes and that are essential to the conservation of the species.

Based on our current knowledge of the physical or biological features and habitat characteristics required to sustain the species' life-history processes (see chapter 2 in the SSA Report (Service 2014)), we determine that the PCEs specific to the jumping mouse consist of the following:

(1) Riparian communities along rivers and streams, springs and wetlands, or canals and ditches that contain:

(a) Persistent emergent herbaceous wetlands especially characterized by presence of primarily forbs and sedges (*Carex* spp. or *Schoenoplectus pungens*); or

(b) Scrub-shrub riparian areas that are dominated by willows (*Salix* spp.) or alders (*Alnus* spp.) with an understory of primarily forbs and sedges; and

(2) Flowing water that provides saturated soils throughout the jumping mouse's active season that supports tall (average stubble height of herbaceous vegetation of at least 61 cm (24 inches)) and dense herbaceous riparian vegetation composed primarily of sedges (*Carex* spp. or *Schoenoplectus pungens*) and forbs, including, but not limited to, one or more of the following associated species: Spikerush (*Eleocharis macrostachya*), beaked sedge (*Carex rostrata*), rushes (*Juncus* spp. and *Scirpus* spp.), and numerous species of grasses such as bluegrass (*Poa* spp.), slender wheatgrass (*Elymus trachycaulus*), brome (*Bromus* spp.), foxtail barley (*Hordeum jubatum*), or Japanese brome (*Bromus japonicas*), and forbs such as water hemlock (*Circuta douglasii*), field mint (*Mentha arvensis*), asters (*Aster* spp.), or cutleaf coneflower (*Rudbeckia laciniata*); and

(3) Sufficient areas of 9 to 24 km (5.6 to 15 mi) along a stream, ditch, or canal that contain suitable or restorable habitat to support movements of individual New Mexico meadow jumping mice; and

(4) Adjacent floodplain and upland areas extending approximately 100 m (330 ft) outward from the boundary between the active water channel and the floodplain (as defined by the bankfull stage of streams) or from the top edge of the ditch or canal.

This designation is designed to support the necessary life-history functions of the subspecies and the areas containing those PCEs in the appropriate quantity and spatial arrangement essential for the conservation of the subspecies. We determined that these primary constituent elements provide for the physiological, behavioral, and ecological requirements of the subspecies. New Mexico meadow jumping mice require herbaceous riparian vegetation associated with seasonally perennial flowing water and adjacent uplands that can support the necessary habitat components needed for foraging, breeding, and hibernating individuals. Jumping mice must also have sufficient cover within which to forage in an appropriate configuration

and proximity to day, maternal, and hibernation nesting sites. This vegetation enables jumping mice to find adequate food resources not only to successfully raise young, but also to accumulate sufficient body fat for survival during hibernation. The appropriate configuration is provided by protecting multiple local subpopulations throughout a minimum length of stream, ditch, or canal of 9 to 24 km (5.6 to 15 mi) of suitable habitat, as described above, which will ensure sufficient resiliency of populations such that the species will be able to withstand and recover from periodic disturbances. Therefore, this amount of suitable habitat will support multiple local populations throughout each of the waterways, thereby increasing the chance of jumping mouse populations surviving periodic temporary disturbances of suitable habitat.

Populations of New Mexico meadow jumping mice with a high likelihood of long-term viability require functionally connected areas throughout stream reaches, ditches, or canals. This continuous suitable habitat is necessary to attain the population sizes and densities needed to ensure that the subspecies will persist in the face of stochastic events and seasonal fluctuations of food resources. This configuration of suitable habitat will encompass the daily and seasonal movements of the majority of individual jumping mice and will allow occasional inter-population dispersal to occur.

Special Management Considerations or Protection

When designating critical habitat, we assess whether the specific areas within the geographic area occupied by the species at the time of listing contain features that are essential to the conservation of the species and which may require special management considerations or protection. The features essential to the conservation of this species may require special management considerations or protection to reduce the following threats: Excessive grazing pressure, water use and management, highway reconstruction, commercial and residential development, severe wildland fires, unregulated recreation, and the reduction in the distribution and abundance of beaver ponds. These activities have the potential to affect the PCEs if they are conducted within or adjacent to units designated as critical habitat.

Management activities that could ameliorate these threats include, but are not limited to: (1) Maintaining occupied jumping mouse sites with active

management to continue the protection of these areas from livestock grazing; (2) restoring, enhancing, and managing additional habitat through fencing of riparian areas, especially the Santa Fe, Lincoln, and Apache-Sitgreaves National Forests (this will facilitate restoration of the required vegetative components and support the expansion of populations of the jumping mouse into areas that were historically occupied by the species, but where natural expansion is currently unlikely because no suitable habitat remains); (3) restoring habitat on Bosque del Apache NWR or other areas by carefully managing mowing (*e.g.*, not mowing during the active season) and removing willows older than 5 years to maintain early seral habitat conditions along irrigation canals and ditches; and (4) developing and implementing a beaver management or restoration plan for occupied and historic jumping mouse localities where appropriate. In addition, Federal agencies should look to guidance provided by the completed recovery outline (available online at <http://www.regulations.gov> under Docket No. FWS-R2-ES-2013-0023) and the recovery plan that will be developed for the jumping mouse. A more complete discussion of the threats to the jumping mouse and its habitats can be found in the SSA Report (Service 2014).

Criteria Used To Identify Critical Habitat

The following discussion describes the process and methodology that we used to identify the areas to propose and finalize critical habitat units for the jumping mouse. As required by section 4(b)(2) of the Act, we used the best scientific data available to designate critical habitat. For this rule, we relied heavily on the analysis of biological information reviewed in the SSA Report (Service 2014). In accordance with section 3(5)(A) of the Act and its implementing regulation at 50 CFR 424.12(b), we determined the specific areas within the geographical area occupied by the species, at the time it is listed, where are found the physical or biological features that are essential to the conservation of the species and which may require special management considerations or protections. Next, we determined the specific areas outside the geographical area occupied by the species at the time it is listed that are found to be essential for the conservation of the species. Finally, we described how we determined the lateral extent and mapping processes used in developing the critical habitat units.

Occupied Areas—Section 3(5)(A)(i) of the Act

Our initial step was to determine what areas are within the geographic area occupied by the jumping mouse at the time of listing (occupied areas). In reviewing all of the available data on jumping mouse occurrences, we decided that verified collections of the species between 2005 to 2014 would be used to identify the areas considered occupied by the jumping mouse at the time of listing. This timeframe was selected because we found no capture records of jumping mice between 1996 and 2005. For a detailed review of this assessment, see chapter 3 of the SSA Report (Service 2014), where we referenced historical records as those from the 1980s and 1990s, and current records as those verified from 2005 to 2014. This assessment resulted in 29 locations of the jumping mouse considered occupied at the time of listing. However, there is uncertainty regarding the current status of the 29 populations that have been found since 2005 because 11 of the 29 populations and their habitat have been substantially compromised since 2011 (due to water shortages, grazing, or wildfire and postfire flooding), and these populations could already be extirpated. Moreover, an additional seven populations may continue to experience loss of habitat from postfire flooding in the near term. Nevertheless, there is no information that shows the jumping mouse to be extirpated from any of these 29 locations, so we conclude that the best available information supports that these areas are within the geographic area occupied by the jumping mouse at the time of listing.

The areas considered occupied include the 29 locations that contain suitable habitat plus an additional 0.8-km (0.5-mi) segment upstream and downstream of these capture localities. These additional 0.8-km (0.5-mi) segments are considered occupied because this is approximately the maximum distance travelled between two successive points by all radio-collared jumping mice on Bosque del Apache NWR, which was 744 m (2,441 ft) (Frey and Wright 2012, pp. 16, 109; Figure 9). Although the subspecies usually exhibits extreme site fidelity with regular daily and seasonal movements of less than 100 m (330 feet) (Frey and Wright 2012, pp. 16, 109), these additional 0.8-km (0.5-mi) segments have the potential to be occupied during the active season of the subspecies if a jumping mouse moves the known maximum distance beyond the protective herbaceous cover found

within the 29 locations. For each of the occupied areas, we next decided whether these areas contain the PCEs of the physical and biological features, which may require special management considerations or protections. As noted, all of the 29 locations found since 2005 are considered currently occupied by the jumping mouse and contain the PCEs 1 and 2. Each of these 29 locations documented since 2005 occur within eight critical habitat units. Three of these eight units have multiple subunits, bringing the total number of units and subunits to 21. Two of these subunits are considered unoccupied (discussed below), and the remaining 19 subunits contain the 29 locations documented since 2005. For a site-by-site analysis of the 29 locations, see chapter 4 of the SSA Report (Service 2014).

Partially Occupied Areas—Section 3(5)(A)(ii) of the Act

We then decided which areas that are outside the geographic area occupied by the species at the time of listing (unoccupied areas) are essential for the conservation of the jumping mouse. We first determined that, because of the loss of a substantial number (approximately 70) of historically occupied locations of the jumping mouse (Service 2014, chapter 4), the number and distribution of populations need to increase at all of the currently occupied areas for the jumping mouse to be viable. Increased populations at these areas are needed to maintain sufficient redundancy and representation to provide for the subspecies' viability (see chapters 3 and 6 of the SSA Report (Service 2014)). However, the areas occupied by the mouse since 2005 do not contain enough suitable, connected habitat to support resilient populations of jumping mouse (see chapter 3 of the SSA Report (Service 2014)).

Because the subspecies needs multiple local populations along streams and other waterways to maintain genetic diversity and provide sources for recolonization when local populations are extirpated, areas adjacent to the 29 locations (including the 0.8-km (0.5-mi) areas) are essential to the conservation of the subspecies to provide for population resiliency and subspecies viability. We found that it is essential for the conservation of the jumping mouse to expand its occupied habitats into areas considered currently unoccupied, but within its historical range. The inclusion of essential but unoccupied areas will not only protect these areas and provide habitat for population expansion from the 29 locations documented since 2005, but

also provide sites for possible future reintroduction that will improve the subspecies' status through added population resiliency. For example, when unoccupied habitat is restored, the jumping mouse would have the ability to expand beyond the 0.8-km (0.5-mi) areas surrounding each of the 29 locations and populate the additional areas along the individual stream reaches or waterways. Consequently, the currently unoccupied areas within individual stream reaches or waterways need to be of sufficient size to allow for the expansion of current and future populations and provide connectivity (active season movements and dispersal) between multiple populations as they become established.

So for each of the 19 units (encompassing 29 locations) considered occupied, we include areas that are considered unoccupied that are adjacent to the occupied areas in designated critical habitat units. The currently occupied areas contain PCEs 1 and 2. However, the unoccupied areas are essential for the conservation of the subspecies, and the all of the PCEs (1, 2, 3, and 4) can be restored along streams and other waterways within these unoccupied areas. Each of these 19 units are considered "partially occupied" because they include some small areas (within the 0.8-km (0.5-mi) areas) that have been occupied by the species since 2005, and other larger areas upstream or downstream (beyond the 0.8-km (0.5-mi) areas) that are not known to be occupied by the jumping mouse at the time of listing.

To decide what geographic areas of unoccupied habitat upstream and downstream adjacent to occupied areas should be included in critical habitat units, we focused on areas that had historical collection records confirmed to be the jumping mouse. Historic capture locations were then used to approximate previously occupied habitat and guide our designation of unoccupied critical habitat areas. Within the historic range of the subspecies, we then identified areas of potential habitat that have been recently restored, areas that likely still contain the habitat characteristics sufficient to support the life history of the subspecies, and areas where functionally connected patches of suitable habitat will be required to provide for resilient populations and to conserve the subspecies.

In considering how much area to include in critical habitat units we considered how much suitable habitat might be needed to support resilient populations. Based upon review of the available information, jumping mouse

populations generally need connected areas of suitable habitat along at least 9 to 24 km (5.6 to 15 mi) of continuous suitable habitat to support viable populations of jumping mice with a high likelihood of long-term persistence (see section 2.7 of the SSA Report (Service 2014)). This stream length will increase the probability of the populations to withstand catastrophic events such as wildfire. We used this length as a general guide for determining critical habitat units and subunits along waterways, but each unit and subunit were evaluated on a site-by-site basis to determine the best configuration of critical habitat to support jumping mouse populations in that unit or subunit.

In designating critical habitat boundaries, we also considered the need for movement and dispersal to occur between suitable habitat areas within a critical habitat unit or subunit. We do not anticipate that suitable habitat containing dense riparian herbaceous vegetation will be continuous throughout each of the critical habitat units, but rather, that suitable habitat should be dispersed throughout waterways in the critical habitat units to allow for natural behaviors and perhaps occasional longer distance (*i.e.*, from 200 to 700 m (656 to 2,297 ft)) exploratory movements (Frey and Wright 2012, p. 109), including dispersal.

These movement and dispersal corridors are needed to connect occupied sites to one another within individual units (see section 2.6 of the SSA Report (Service 2014)). Historically, populations were likely distributed throughout drainages, with a series of interconnected local populations (also called subpopulations) occupying suitable habitat patches within individual streams. Interconnected local populations were likely arranged within suitable habitat patches along streams in such a way that individuals could fulfill their daily and seasonal movements of about 200 m (656 ft), but also occasionally move greater distances (*i.e.*, 200 to 744 m (656 to 2,441 ft)) to disperse to other habitat patches within stream areas (Frey and Wright 2012, p. 109). This ability to have multiple local populations is important to maintaining genetic diversity within the populations along streams and providing sources for recolonization when local populations are extirpated. For example, if a site is extirpated, recolonization from persisting local source populations within the same general area would have to occur along riparian corridors

that contain suitable habitat (Frey 2011, p. 41).

Based on the above information, the most likely routes for dispersal of jumping mice among sites would occur along perennial or intermittent drainages where suitable habitat is present or restorable. Although we did not select specific areas in which to designate movement corridors (but rather geographic areas of suitable habitat along at least 9 to 24 km (5.6 to 15 mi)), we assumed perennial drainages are better movement corridors than ephemeral or intermittent drainages, and the ephemeral or intermittent drainages are better movement corridors than upland routes. We also assume that, if all else is equal, the shorter the route the more likely New Mexico meadow jumping mice will successfully move. Because jumping mouse habitat is subject to the dynamic process of flooding, inundation, and drought, the extent and location of riparian corridors along streams and rivers may not remain constant and, depending on local conditions, are likely to expand and contract. Nevertheless, areas containing suitable habitat should be no more than 200 m (656 ft) apart within these waterways, which would encompass the majority of daily and seasonal movements of individual jumping mice (Wright and Frey 2012, p. 109). This configuration of habitat provides for a local population to be "functionally connected" (as described in the SSA Report (Service 2014)), such that the movements of the majority of individual jumping mice and perhaps occasional interpopulation dispersal occur unimpeded.

As a result of this analysis, we have determined that some of the areas within the critical habitat units are essential for the conservation of the species even though they do not contain currently suitable habitat and are more than 0.8 km (0.5 mi) away from occupied sites. For example, within Unit 2, we include the Harold Brock Fishing Easement that is located between the two sites that we consider occupied on Coyote Creek. The fishing easement is considered unoccupied because there are no current records indicating this area is occupied, it does not currently contain suitable habitat, and it is beyond the distance travelled by jumping mice for the majority of daily and seasonal movements within the two occupied sites along Coyote Creek. Restoring currently degraded habitat in units like Coyote Creek is essential to the conservation of the subspecies because it expands the available habitat within a given unit that can be occupied by the subspecies and

provides for potentially increasing population size within that riparian system. Increased population sizes are essential to conserving the subspecies as higher numbers of individuals in the populations increases the likelihood of the persistence of the populations over time, increasing population resiliency.

Completely Unoccupied Areas—Section 3(5)(A)(ii) of the Act

We next considered whether there were any other areas within the species' historical range but outside of the geographic area occupied at the time of listing (in other words completely unoccupied areas) that are essential for the conservation of the jumping mouse. We examined whether resilient populations at the 19 partially occupied units and subunits (with 29 locations occupied since 2005) would be sufficient to provide for viability of the jumping mouse. We reviewed the current and historical distribution of the subspecies within each of the eight geographic management areas across its range and the need for sufficient redundancy for the jumping mouse (see chapter 3 of the SSA Report (Service 2014)). We found five of the eight geographic management areas would have sufficient populations to support species viability if the current jumping mouse areas were expanded to provide for resilient populations. The three exceptions where the historic distribution is not adequately represented by recently located populations were in the Jemez Mountains, the Sacramento Mountains, and the Rio Grande geographic management areas. We found that the conservation of the subspecies requires increasing the number and distribution of populations of the jumping mouse to allow for the restoration of new populations and expansion of current populations into areas that were historically occupied within the Jemez Mountains, Sacramento Mountains, and the middle Rio Grande.

On June 20, 2013 (78 FR 37328), we proposed four subunits (3C, 4B, 6A, and 6B) within three geographic management areas that are completely unoccupied, but are essential for the conservation of the jumping mouse. Inclusion of these areas provides for expansion of the overall geographic distribution of the species and increases the redundancy within these geographic management areas. Much of the habitat within these four unoccupied subunits contained New Mexico meadow jumping mice as recently as the late 1980s (Morrison 1985, entire; 1988, pp. 22–35; 1989, pp. 7–23; 1992, p. 311; Frey 2005a, p. 7). In this rule, we have

excluded proposed subunits 6A and 6B (Isleta Pueblo and Ohkay Owingeh) from the final designation under section 4(b)(2) of the Act because the benefits of exclusion outweigh the benefits of including these areas as critical habitat (see *Tribal Lands—Exclusions Under Section 4(b)(2) of the Act*, below).

In evaluating what areas are essential for jumping mouse, we are not designating as critical habitat a number of historical locations of the jumping mouse because we do not think they are essential for conservation of the species. These omitted locations are, compared to other habitat segments, of lesser quality, have a low potential of being restored, and would not contribute to connectivity, stability, or protection against catastrophic loss. Consequently, we are not designating other historical locations along riparian areas as critical habitat because we did not find them to be essential for conservation of the jumping mouse. The currently unoccupied units that are included in this final designation (Subunits 3C and 4B) both contain perennial flowing water with saturated soils, making these units highly restorable and essential for the conservation of the species.

Lateral Extent

To allow normal behavior, to ensure protection of the jumping mouse and the physical and biological habitat features, and to ensure maintenance of sufficient PCEs on which the subspecies depends, the outward, lateral extent of critical habitat from the riparian habitats should at least approximate the 100-year floodplain. Unfortunately, floodplains have not been mapped for many streams within the jumping mouse's range. While alternative delineation of critical habitat based on geomorphology and existing vegetation could accurately portray the presence and extent of required habitat components, we lack the explicit data to allow us to conduct such a delineation of critical habitat on a site-by-site basis. To address these issues, we use a set distance of 100 m (328 ft) outward from either side of the bankfull stage, which is defined as the boundary between the active water channel (*i.e.*, river or stream) and the floodplain (Moody *et al.* 2003, entire). Moreover, some locations are associated with canals and ditches (*e.g.*, Bosque del Apache NWR) that are manmade and do not have any associated floodplain. For ditches or canals we use a set distance of 100 m (328 ft) outward from the top edge of the ditch or canal because there is no bankfull stage. We consider this width necessary to accommodate not only stream meandering and high flows within natural waterways, but also to

capture essential upland areas to ensure that this designation contains the features essential to all of the life-history stages (*e.g.*, foraging, breeding, and hibernation) and the conservation of the subspecies (see chapter 3 of the SSA Report (Service 2014)). While this lateral extent of critical habitat may not extend outward to all areas used by individual jumping mice over time, we expect that it will support the full range of PCEs essential for conservation of jumping mouse populations in these reaches.

Bankfull stage is defined as the upper level of the range of channel-forming flows, which transport the bulk of available sediment over time. Bankfull stage is generally considered to be that level of stream discharge reached just before flows spill out onto the adjacent floodplain. The discharge that occurs at bankfull stage, in combination with the range of flows that occur over a length of time, govern the shape and size of the river channel (Rosgen 1996, pp. 2–2 to 2–4). The use of bankfull stage and 100 m (328 ft) on either side recognizes the naturally dynamic nature of riverine systems, recognizes that floodplains are an integral part of the stream ecosystem, and contains the area and associated features essential to the conservation of the subspecies. The location of the bankfull stage is not an ephemeral feature, meaning it does not disappear. Bankfull stage can be determined and delineated for any stream and for the canals and ditches we are designating as critical habitat. There are consistent indicators or physical evidence (*e.g.*, deposition features, slopes of stream banks, and vegetation) and regional relationships that help to identify the bankfull stage in the arid southwest (Moody *et al.* 2003, entire). We acknowledge that the bankfull stage of any given segment may change depending on the magnitude of a flood event, but it is a definable and standard measurement for stream systems. Following high flow events, stream channels can move from one side of a canyon to the opposite side, for example. If we were to designate critical habitat based on the location of the stream on a specific date, the area within the designation could be a dry channel in less than 1 year from the publication of the determination, should a high flow event occur.

Mapping

The critical habitat units were first delineated by creating rough areas for each unit by screen-digitizing polygons using Google Earth. We then digitized and refined the units using ArcMap version 10 (Environmental Systems

Research Institute, Inc.), a computer GIS program. The polygons were created by using current (2005 to 2014) and historical (1985 to 1996) species location points. No New Mexico meadow jumping mice were captured between 1996 and 2005, and so the delineation of current and historic is based on dates of capture records or lack of capture records. These current and historic location points were then used in conjunction with hydrology, vegetation, and expert opinion.

We set the limits of each critical habitat unit by identifying landmarks (islands, confluences, roadways, crossings, dams) that clearly delineated each area. Stream confluences are often used to delineate the boundaries of a unit for an aquatic species because the confluence of a tributary typically marks a significant change in the size or habitat characteristics of the stream. Stream confluences are also logical and recognizable termini. When a named tributary was not available, or if another landmark provided a more recognizable boundary, we used that landmark as a boundary.

When current or historical locations of New Mexico meadow jumping mice were used to delineate upstream and downstream boundaries of critical habitat, we extended the boundaries by about 0.8 km (0.5 mi) to encompass areas that have the potential to be occupied during the active season of the species. We then refined the starting and end points by evaluating appropriate habitat conditions based on the presence or absence of perennial water or suitable vegetation. We selected upstream and downstream

cutoff points that would avoid including highly degraded areas that are not likely restorable. For example, we did not include areas that were permanently dewatered or permanently developed (*i.e.*, natural vegetation removed), or areas in which there was some other indication that suitable habitat no longer existed and was not likely to be restored.

When determining critical habitat boundaries, we also made every effort to avoid including developed areas such as lands covered by buildings, pavement, and other structures because such lands lack physical or biological habitat features for the jumping mouse. The scale of the maps we prepared under the parameters for publication within the Code of Federal Regulations may not reflect the exclusion of such developed lands. Any such lands inadvertently left inside critical habitat boundaries shown on the maps of this final rule have been excluded by text in the final rule and are not designated as critical habitat. Therefore, a Federal action involving these lands would not trigger section 7 consultation with respect to critical habitat and the requirement of no adverse modification unless the specific action would affect the physical or biological features in the adjacent critical habitat.

Summary

In summary, we are designating as critical habitat those geographic areas that we have determined to be occupied by the jumping mouse at the time of listing and that contain sufficient elements of physical or biological features to support life-history processes

essential for the conservation of the species and require special management. We are also designating as critical habitat additional areas that are considered presently unoccupied, but are essential to the conservation of the jumping mouse.

The critical habitat designation is defined by the maps, as modified by any accompanying regulatory text, presented in the Regulation Promulgation section of this rule. We will make the coordinates or plot points or both on which each map is based available to the public on <http://www.regulations.gov> under Docket No. FWS-R2-ES-2013-0014, at <http://www.fws.gov/southwest/es/NewMexico/>, and at the New Mexico Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**, above).

Final Critical Habitat Designation

We are designating approximately 5,657 hectares (13,973 acres) along 272.4 kilometers (169.3 miles) of flowing streams, ditches, and canals in eight units as critical habitat for the jumping mouse in the States of Colorado, New Mexico, and Arizona. Units 3, 4, and 5 have subunits, resulting in a total of 21 subunits and units designated. The critical habitat areas we describe below constitute our current best assessment of areas that meet the definition of critical habitat for the jumping mouse. The units we designate as critical habitat and the approximate area of each critical habitat unit and land ownership are shown in Table 1. A summary of the areas by land ownership and State are provided in Table 2.

TABLE 1—CRITICAL HABITAT UNITS FOR THE NEW MEXICO MEADOW JUMPING MOUSE
[Area estimates reflect all land within critical habitat unit boundaries]

Stream segment	Occupied at the time of listing	Land ownership	Length of unit, km (mi)	Area, ha (ac)
Unit 1—Sugarite Canyon				
Chicorica Creek	Partial	State of New Mexico .....	.....	229 (567)
		State of Colorado .....	.....	114 (282)
Total Unit 1 .....	.....	.....	13.0 (8.1)	344 (849)
Unit 2—Coyote Creek				
Coyote Creek	Partial	State of New Mexico .....	.....	26 (64)
		Private .....	.....	213 (527)
Total Unit 2 .....	.....	.....	11.8 (7.4)	239 (591)
Unit 3—Jemez Mountains				
<i>Subunit 3A—San Antonio:</i> San Antonio Creek	Partial	Forest Service .....	.....	223 (550)
		Private .....	.....	10 (26)
		Other Federal Agency .....	.....	1 (3)

TABLE 1—CRITICAL HABITAT UNITS FOR THE NEW MEXICO MEADOW JUMPING MOUSE—Continued
 [Area estimates reflect all land within critical habitat unit boundaries]

Stream segment	Occupied at the time of listing	Land ownership	Length of unit, km (mi)	Area, ha (ac)
Total Subunit 3A			11.5 (7.1)	234 (579)
<i>Subunit 3B—Rio Cebolla:</i> Rio Cebolla	Partial	Forest Service		278 (686)
		Private		76 (187)
		State of New Mexico		76 (187)
Total Subunit 3B			20.7 (12.9)	429 (1,060)
<i>Subunit 3C—Rio de las Vacas:</i> Rio de las Vacas	No	Forest Service		332 (820)
		Private		122 (302)
Total Subunit 3C			23.3 (14.5)	454 (1,122)
Total Unit 3			55.5 (34.5)	1,118 (2,761)
Unit 4—Sacramento Mountains				
<i>Subunit 4A—Silver Springs:</i> Silver Springs Creek	Partial	Forest Service		28 (70)
		Private		77 (190)
Total Subunit 4A			5.2 (3.2)	105 (260)
<i>Subunit 4B—Upper Peñasco:</i> Rio Peñasco	No	Forest Service		118 (291)
		Private		18 (44)
Total Subunit 4B			6.4 (4.0)	136 (335)
<i>Subunit 4C—Middle Peñasco:</i> Rio Peñasco	Partial	Forest Service		26 (65)
		Private		238 (587)
Total Subunit 4C			11.4 (7.1)	264 (652)
<i>Subunit 4D—Wills Canyon:</i> Mauldin Springs	Partial	Forest Service		65 (162)
		Private		46 (113)
Total Subunit 4D			5.5 (3.4)	111 (275)
<i>Subunit 4E—Agua Chiquita Canyon:</i> Agua Chiquita Creek	Partial	Forest Service		161 (398)
Total Subunit 4E			7.7 (4.8)	161 (398)
Total Unit 4			36.2 (22.5)	777 (1,920)
Unit 5—White Mountains				
<i>Subunit 5A—Little Colorado:</i> Little Colorado River	Partial	Forest Service		445 (1,100)
		Private		33 (81)
Total Subunit 5A			22.6 (14.0)	478 (1,181)
<i>Subunit 5B—Nutrioso:</i> Nutrioso River	Partial	Forest Service		142 (351)
		Private		271 (670)
Total Subunit 5B			20.4 (12.7)	413 (1,021)
<i>Subunit 5C—San Francisco:</i> San Francisco River	Partial	Forest Service		68 (167)
		Private		184 (455)
Total Subunit 5C			11.8 (7.3)	252 (622)
<i>Subunit 5D—East Fork Black:</i> East Fork Black River	Partial	Forest Service		421 (1,040)
Total Subunit 5D			20.3 (12.6)	421 (1,040)
<i>Subunit 5E—West Fork Black:</i> West Fork Black River	Partial	Forest Service		415 (1,025)
		Private		17 (43)

TABLE 1—CRITICAL HABITAT UNITS FOR THE NEW MEXICO MEADOW JUMPING MOUSE—Continued
 [Area estimates reflect all land within critical habitat unit boundaries]

Stream segment	Occupied at the time of listing	Land ownership	Length of unit, km (mi)	Area, ha (ac)
Total Subunit 5E		State of Arizona	23.0 (14.3)	49 (120)
Subunit 5F—Boggy and Centerfire: Boggy and Centerfire Creeks	Partial	Forest Service		481 (1,188)
Total Subunit 5F			8.9 (5.5)	197 (485)
Subunit 5G—Corduroy: Corduroy Creek	Partial	Forest Service		104 (256)
Total Subunit 5G			4.8 (3.0)	104 (256)
Subunit 5H—Campbell Blue: Campbell Blue Creek	Partial	Forest Service Private		100 (247) 2 (6)
Total Subunit 5H			4.8 (3.0)	102 (253)
Total Unit 5			116.6 (72.4)	2,448 (6,046)
Unit 6—Bosque del Apache NWR				
Canal	Partial	Service		403 (995)
Total Unit 6			21.1 (13.1)	403 (995)
Unit 7—Florida				
Florida River	Partial	Private Bureau of Land Mgt		251 (620) 3 (6)
Total Unit 7			13.6 (8.4)	253 (626)
Unit 8—Sambrito Creek				
Sambrito Creek	Partial	State of Colorado Private		61 (150) 14 (35)
Total Unit 8			4.6 (2.9)	75 (185)
Grand Total All Units			272.4 (169.3)	5,657 (13,973)

Note: Area sizes may not sum due to rounding.

TABLE 2—CRITICAL HABITAT UNITS FOR THE NEW MEXICO MEADOW JUMPING MOUSE, SUMMARIZED BY LAND OWNERSHIP AND STATE

State	Land ownership, ha (ac)			
	Federal	State	Private	Total
New Mexico	1,635 (4,040)	331 (818)	800 (1,976)	2,766 (6,834)
Arizona	1,892 (4,671)	49 (120)	507 (1,255)	2,448 (6,046)
Colorado	3 (6)	175 (432)	265 (655)	443 (1,093)
Total	3,530 (8,717)	555 (1,370)	1,572 (3,886)	5,657 (13,973)

Unit Descriptions

We present brief descriptions of each of the critical habitat units, and reasons why they meet the definition of critical habitat for the jumping mouse, below. For additional information on each unit, see chapter 4 in the SSA Report (Service 2014).

We consider the 29 locations where the jumping mouse has been found

since 2005 to be within the geographic area occupied at the time of listing (occupied areas). All of these 29 occupied areas are contained within 19 of the 21 critical habitat units that we refer to as partially occupied in Table 1. There are two completely unoccupied subunits (Subunit 3C—Rio de las Vacas, and Subunit 4B—Upper Peñasco). We specifically describe each of the

occupied areas within the critical habitat unit descriptions presented below. All of these occupied areas contain suitable habitat with one or more of the essential physical or biological features that may require special management and are, therefore, included in the designation under section 3(5)(A)(i) of the Act. All of these occupied areas exhibit both PCE 1—

appropriate wetland vegetation communities, and PCE 2—flowing water with tall herbaceous vegetation. The occupied areas within these 19 units may require special management or protection to address the direct or indirect loss or alteration of the essential physical and biological features. These special management considerations or protections may be needed to address water development, recreational use, livestock grazing, road reconstruction, the loss of beaver ponds, and vegetation mowing.

Every critical habitat unit contains areas outside the geographic area occupied by the species at the time of listing (unoccupied areas) that we conclude are essential for the conservation of the jumping mouse. As noted, two of these units (Subunits 3C and 4B) are considered completely unoccupied. The remaining 19 critical habitat subunits include unoccupied areas that are upstream or downstream of the occupied areas, but do not currently have the necessary vegetation to protect jumping mice from predators or to provide food sources. We describe these subunits containing both occupied and unoccupied areas within the same stream reach as partially occupied (Table 1). All of the completely or partially occupied areas currently have flowing water to allow for future restoration of the PCEs 1 and 2, as well as PCE 3—sufficient areas of streams, ditches, or canals; and PCE 4—adjacent floodplain and upland areas that would collectively provide the needed physical and biological features of habitat required to sustain the species' life-history processes.

We conclude that all of these areas, whether they are within partially occupied or completely unoccupied units, are essential to the conservation of the jumping mouse because: (1) The areas occupied by the mouse since 2005 do not contain enough suitable, connected habitat to support resilient populations of jumping mouse; (2) the currently unoccupied segments within individual stream reaches or waterways need to be of sufficient size to allow for the expansion of populations and provide connectivity (active season movements and dispersal) between multiple populations as they become established; (3) additional areas need habitat protection to allow restoration of the necessary herbaceous vegetation for possible future reintroductions; and (4) multiple local populations along streams are important to maintaining genetic diversity within the populations and for providing sources for recolonization if local populations are extirpated. Therefore, all of the partially

occupied or completely unoccupied areas are included in the designation under section 3(5)(A)(ii) of the Act.

Unit 1—Sugarite Canyon

Unit 1 consists of 344 ha (849 ac) along 13.0 km (8.1 mi) of streams on private lands and areas owned by the States of Colorado and New Mexico. The Colorado stream areas are found within Las Animas County, Colorado, and the New Mexico stream areas are found within Colfax County, New Mexico. The unit begins 0.6 km (0.4 mi) north of the headwaters of Lake Dorothey, Colorado, along the East Fork and 1.1 km (0.7 mi) north of the headwaters of Lake Dorothey along the West Fork of Schwacheim Creek and follows the drainage downstream, to include a 2.0-km (1.25-mi) segment of Chicorica Creek that is a tributary flowing into the headwaters of Lake Maloya and a 0.8-km (0.5-mi) segment of Segerstrom Creek, which is a tributary flowing into the western edge of Lake Maloya, New Mexico. The unit continues through Lake Maloya and includes about 1.8 km (1.1 mi) of the small western tributary Soda Pocket Creek, which flows into and includes lower Chicorica Creek below Lake Maloya Dam downstream to the terminus of the area at Lake Alice Dam within Sugarite Canyon State Park.

Based upon captures of the jumping mouse since 2005 (Frey 2006d, pp. 19–21, 67; Frey and Kopp 2013, entire; Colorado Parks and Wildlife 2013a, p. 1) approximately 2.8 ha (7 ac) within Unit 1 are considered occupied at the time of listing and contain suitable habitat. The occupied areas occur within Sugarite Canyon State Park in New Mexico along Sugarite Canyon at five locations: (1) Chicorica Creek 0.6 km (0.4 mi) below Lake Maloya Dam; (2) Segerstrom Creek just above the western confluence with Lake Maloya; (3) the headwaters of Lake Alice; and (4) Soda Pocket Creek and Campground along the two streams (2 separate locations) that cross the open meadow on Barlett Mesa near the campfire program area and behind campsite number 16 (Frey 2006d, pp. 19–21, 67; Frey and Kopp 2013, entire; Colorado Parks and Wildlife 2013a, p. 1). In 2011, the Track Fire burned nearly the entire watershed of Sugarite Canyon, significantly impacting the population at Sugarite Canyon State Park (Frey and Kopp 2013, entire; Service 2013c, entire). We consider this area within the geographical area occupied by the jumping mouse at the time of listing. The features essential to the conservation of this subspecies may require special management considerations or protection to reduce

the following threats: Severe wildland fires, recreation, grazing, water use and management, floods, the reduction in the distribution and abundance of beaver ponds, and coalbed methane development. The occupied areas are centered around the five capture locations plus an additional 0.8-km (0.5-mi) segment upstream and downstream of each of these areas where the physical and biological features of critical habitat are found. The remaining unoccupied areas within Unit 1 are found both upstream and downstream of the occupied areas, and are considered essential to the conservation of the jumping mouse (as described under the heading *Unit Descriptions*, above).

Unit 2—Coyote Creek

Unit 2 consists of 239 ha (591 ac) along 11.8 km (7.4 mi) of Coyote Creek on private lands and an area owned by the State of New Mexico within Mora County. The unit begins at the confluence of Little Blue Creek and Coyote Creek and extends downstream to about the terminus just south of the Village of Guadalupita.

Based upon captures of the jumping mouse since 2006 (Frey 2006d, pp. 24, 70; Frey 2012, p. 6), approximately 1.7 ha (4.3 ac) within Unit 2 are considered occupied at the time of listing and contain suitable habitat. The occupied areas occur within Coyote Creek State Park and several miles north of the park along Highway 434 in New Mexico at two locations along Coyote Creek including: (1) An area that contains extensive beaver ponds, dams, and canals and is located between the only vehicle bridge within the southwestern part of Coyote Creek State Park and the southern boundary of the park; and (2) within another area that contains extensive beaver activity about 1.9 km (1.2 mi) south of the confluence of Little Blue Creek and Coyote Creek. The features essential to the conservation of this subspecies may require special management considerations or protection to reduce the following threats: Severe wildland fires, recreation, grazing, water use and management, floods, the reduction in the distribution and abundance of beaver ponds, and development. The occupied areas are centered around the two capture locations plus an additional 0.8-km (0.5-mi) segment upstream and downstream of these areas where the physical and biological features of critical habitat are found. The remaining unoccupied areas within Unit 2 are found both upstream and downstream of the occupied areas, and are considered essential to the conservation

of the jumping mouse (as described under the heading *Unit Descriptions*, above).

Unit 3—Jemez Mountains

Unit 3 consists of 1,118 ha (2,761 ac) along 55.5 km (34.5 mi) of streams within three subunits on private lands and areas owned by the Forest Service and the State of New Mexico within Sandoval County, New Mexico. Areas designated as critical habitat for the jumping mouse in this unit incorporate the only habitat known to be occupied by the species since 2005 within the Jemez Mountains with the capability to support the breeding and reproduction of the species.

Subunit 3A—San Antonio: Subunit 3A consists of 234 ha (579 ac) along 11.5 km (7.1 mi) of San Antonio Creek on private lands and areas owned by the Forest Service. This subunit begins along the northern part of San Antonio Creek where it exits the boundary of the Valles Caldera National Preserve and follows the creek through mostly Forest Service lands where it meets private land immediately downstream of the San Antonio Campground.

Based upon the capture of one jumping mouse since 2005 (Frey 2005a, pp. 15, 24, 58), approximately 0.4 ha (1 ac) within Subunit 3A are considered occupied at the time of listing and contain suitable habitat. The occupied area is located along San Antonio Creek within a wet meadow near the southwestern part of San Antonio Campground (Frey 2005a, pp. 15, 24, 58). The features essential to the conservation of this subspecies may require special management considerations or protection to reduce the following threats: Severe wildland fires, recreation, grazing, floods, and the reduction in the distribution and abundance of beaver ponds. The occupied area is centered around the one capture location plus an additional 0.8-km (0.5-mi) segment upstream and downstream of this area where the physical and biological features of critical habitat are found. The remaining unoccupied areas within Subunit 3A are found both upstream and downstream of the occupied area, and are considered essential to the conservation of the jumping mouse (as described under the heading *Unit Descriptions*, above).

Subunit 3B—Rio Cebolla: Subunit 3B consists of 429 ha (1,060 ac) along 20.7 km (12.9 mi) of the Rio Cebolla on private lands and areas owned by the Forest Service and the State of New Mexico. This subunit extends from an old beaver dam about 0.6 km (0.4 mi) north of Hay Canyon downstream about where it meets the Rio de las Vacas.

Based upon captures of the jumping mouse since 2005 (Frey 2005a, pp. 23–28, 37–38; Frey 2007b, p. 11), approximately 10.7 ha (26.4 ac) within Subunit 3B are considered occupied at the time of listing and contain suitable habitat. The occupied areas occur on State of New Mexico and Forest Service lands in New Mexico at six locations along the Rio Cebolla: (1) Near the western edge of the northwestern pond along the access road within the New Mexico Department of Game and Fish's Seven Springs Hatchery; (2) within Fenton Lake State Park at the upper end of Fenton Lake Marsh above Highway 126 and the New Mexico Highway 126 bridge; (3) within Fenton Lake State Park Day Use Area at the mouth of a small tributary that enters the southwest side of Fenton Lake; (4) within Lake Fork Canyon inside a livestock enclosure above the bridge on Forest Road 376; (5) within a network of channels, beaver ponds, and wet meadows about 0.9 km (0.6 mi) southwest of Forest Road 376 bridge; and (6) about 2.7 km (1.7 mi) north of the confluence of the Rio Cebolla and the Rio de las Vacas (Frey 2005a, pp. 23–28, 37–38; Frey 2007b, p. 11). The features essential to the conservation of this subspecies may require special management considerations or protection to reduce the following threats: Severe wildland fires, recreation, grazing, floods, the reduction in the distribution and abundance of beaver ponds, development, and highway reconstruction. The occupied areas are centered around the six capture locations plus an additional 0.8-km (0.5-mi) segment upstream and downstream of these areas where the physical and biological features of critical habitat are found. The remaining unoccupied areas within Subunit 3B are found both upstream and downstream of the occupied areas, and are considered essential to the conservation of the jumping mouse (as described under the heading *Unit Descriptions*, above).

Subunit 3C—Rio de las Vacas: Subunit 3C consists of 454 ha (1,122 ac) along 23.3 km (14.5 mi) of the Rio de las Vacas on private lands and areas owned by the Forest Service. This subunit starts about 0.8 km (0.5 mi) north of Forest Road 94 adjacent to Burned Canyon and extends downstream to the confluence with Subunit 3B.

Although much of the habitat was historically occupied with individuals detected as recently as 1989 (Morrison 1985; 1992, p. 311; Frey 2005a, p. 7), no New Mexico meadow jumping mice were captured during surveys in 2005 (Frey 2005a, p. 18). The entire subunit

is considered unoccupied at the time of listing. This subunit has perennial flowing water with saturated soils and a high potential of being restored to suitable habitat. It has the potential for natural recolonization of jumping mice populations through individuals that naturally disperse. This subunit would provide connectivity to Subunit 3B and allow for possible expansion of jumping mice from that currently occupied subunit, which is contiguous with Subunit 3C, into historically occupied habitat along the Rio de las Vacas drainage. We found this entire stream section would provide further connectivity to the adjacently occupied habitat within Subunit 3B and increase the length and size of the suitable habitat. All of the areas within Subunit 3C are considered essential to the conservation of the jumping mouse (as described under the heading *Unit Descriptions*, above).

Unit 4—Sacramento Mountains

Unit 4 consists of 777 ha (1,920 ac) along 36.2 km (22.5 mi) of streams within five subunits on private lands and areas owned by the Forest Service within Otero County, New Mexico. Areas designated as critical habitat for the jumping mouse in this unit incorporate the only habitat known to be occupied by the species since 2005 within the Sacramento Mountains with the capability to support the breeding and reproduction of the species.

Subunit 4A—Silver Springs: Subunit 4A consists of 105 ha (260 ac) along 5.2 km (3.2 mi) of Silver Springs Creek on private lands and areas owned by the Forest Service. This subunit begins about 0.3 km (0.2 mi) north of the intersection of Forest Road 162 and New Mexico Highway 244 and follows Silver Springs Creek downstream to the boundary of Forest Service and Mescalero Apache lands.

Based upon the capture of one jumping mouse since 2005 (Frey 2005a, p. 31), approximately 5.4 ha (13.3 ac) within Subunit 4A are considered occupied at the time of listing. The occupied area is located on Forest Service lands in New Mexico within a grazing enclosure containing well-developed riparian habitat about 7.4 km (4.6 mi) north of Cloudcroft along middle Silver Springs Creek, at Junction of Turkey Pen Canyon and Forest Road 405 (Frey 2005a, pp. 31, 38). The features essential to the conservation of this subspecies may require special management considerations or protection to reduce the following threats: Severe wildland fires, grazing, floods, and the reduction in the distribution and abundance of beaver

ponds. The occupied area is centered around one capture location plus an additional 0.8-km (0.5-mi) segment upstream and downstream of this area where the physical and biological features of critical habitat are found. The remaining unoccupied areas within Subunit 4A are found both upstream and downstream of the occupied area, and are considered essential to the conservation of the jumping mouse (as described under the heading *Unit Descriptions*, above).

Subunit 4B—Upper Peñasco: Subunit 4B consists of 136 ha (335 ac) along 6.4 km (4.0 mi) of the Rio Peñasco on private lands and areas owned by the Forest Service. This subunit begins at the junction of Forest Service Road 164 and New Mexico Highway 6563 and follows the Rio Peñasco drainage downstream to about 2.4 km (1.5 mi) below Bluff Spring at the boundary of private and Forest Service lands.

Although much of the habitat was historically occupied with individuals detected as recently as 1988 (Morrison 1989, pp. 7–10, Frey 2005a, pp. 30–31), no New Mexico meadow jumping mice were captured during surveys in 2005 (Frey 2005a, pp. 19–20, 32–34). The entire subunit is considered unoccupied at the time of listing. This subunit contains perennial flowing water with saturated soils and has a high potential of being restored to suitable habitat. It would augment the current size and connectivity of suitable habitat to increase the distribution of the jumping mouse in the Sacramento Mountains and provide population redundancy and resiliency. All of the areas within Subunit 4B are considered essential to the conservation of the jumping mouse (as described under the heading *Unit Descriptions*, above).

Subunit 4C—Middle Peñasco: Subunit 4C consists of 264 ha (652 ac) along 11.4 km (7.1 mi) of the Rio Peñasco on private lands and areas owned by the Forest Service. This subunit begins at the junction of Wills Canyon and Forest Service Road 169 and follows the Rio Peñasco drainage downstream to the junction of Forest Road 212.

Based upon the capture of two jumping mice in 2012, following the cessation of grazing for 2 years (Forest Service 2012a, entire; 2012c, entire; Forest Service 2012h, pp. 2–4; Service 2012d; U.S. Army Corps of Engineers 2012, entire; 2012a, entire), approximately 0.3 ha (0.75 ac) within Subunit 4C are considered occupied at the time of listing. The occupied area is located on Forest Service lands in New Mexico within a wetland at the junction of Cox Canyon and the Rio Peñasco (Forest Service 2012h, pp. 2–4). The

features essential to the conservation of this subspecies may require special management considerations or protection to reduce the following threats: Severe wildland fires, recreation, grazing, floods, and the reduction in the distribution and abundance of beaver ponds. The occupied area is centered around one capture location plus an additional 0.8-km (0.5-mi) segment upstream and downstream of this area where the physical and biological features of critical habitat are found. The remaining unoccupied areas within Subunit 4C are found both upstream and downstream of the occupied area, and are considered essential to the conservation of the jumping mouse (as described under the heading *Unit Descriptions*, above).

Subunit 4D—Wills Canyon: Subunit 4D consists of 111 ha (275 ac) along 5.5 km (3.4 mi) of streams on private lands and areas owned by the Forest Service. This subunit begins at upper Mauldin Spring, the head of the Wills Canyon, and follows the drainage downstream along Forest Service Road 169 to the boundary of Forest Service and private lands in the vicinity of Bear Spring.

Based upon the capture of jumping mice in 2012 and 2013 (Forest Service 2012a, entire; 2012h, pp. 2–5; 2013a, entire; Service 2012d, pp. 2, 8), approximately 0.8 ha (1.9 ac) within Subunit 4D are considered occupied at the time of listing. The occupied area is located on Forest Service lands in New Mexico within the grazing exclosures at Mauldin Spring in Wills Canyon (Forest Service 2012a, entire; 2012h, pp. 2–5; 2013a, entire; Service 2012d, pp. 2, 8). The features essential to the conservation of this subspecies may require special management considerations or protection to reduce the following threats: severe wildland fires, grazing, floods, and the reduction in the distribution and abundance of beaver ponds. The occupied area is centered around the capture locations plus an additional 0.8-km (0.5-mi) segment upstream and downstream of this area where the physical and biological features of critical habitat are found. The remaining unoccupied areas within Subunit 4D are found both upstream and downstream of the occupied area, and are considered essential to the conservation of the jumping mouse (as described under the heading *Unit Descriptions*, above).

Subunit 4E—Agua Chiquita Canyon: Subunit 4E consists of 161 ha (398 ac) along 7.7 km (4.8 mi) of Agua Chiquita Creek on areas owned by the Forest Service. This subunit begins about 0.8 km (0.5 mi) upstream of the livestock enclosure around Barrel and Sand

Springs along Agua Chiquita Creek and follows the canyon downstream along Forest Service Road 64 to Crisp, a Forest Service riparian pasture.

Based upon multiple captures of jumping mice since 2005 (Frey 2005a, p. 34; Forest Service 2010, entire; Service 2012d, pp. 1–2), approximately 4.9 ha (12.0 ac) within Subunit 4E are considered occupied at the time of listing. The occupied areas are located on Forest Service lands in New Mexico within two of four fenced livestock exclosures, which includes the exclosure surrounding Sand and Barrel Springs and the most downstream section of the second in the series of four exclosures (Frey 2005a, p. 34; Forest Service 2010, entire; Service 2012d, pp. 1–2). The features essential to the conservation of this subspecies may require special management considerations or protection to reduce the following threats: Severe wildland fires, recreation, grazing, floods, and the reduction in the distribution and abundance of beaver ponds. The occupied areas are centered around the two capture locations plus an additional 0.8-km (0.5-mi) segment upstream and downstream of these areas where the physical and biological features of critical habitat are found. The remaining unoccupied areas within Subunit 4E are found both upstream and downstream of the occupied areas, and are considered essential to the conservation of the jumping mouse (as described under the heading *Unit Descriptions*, above).

Unit 5—White Mountains

Unit 5 consists of 2,448 ha (6,046 ac) along 116.6 km (72.4 mi) of streams within eight subunits on private lands and areas owned by the Forest Service and the State of Arizona within Greenlee and Apache Counties, Arizona. Areas designated as critical habitat for the jumping mouse in this unit incorporate the only habitat known to be occupied by the species since 2005 within the White Mountains with the capability to support the breeding and reproduction of the species.

Subunit 5A—Little Colorado: Subunit 5A consists of 478 ha (1,181 ac) along 22.6 km (14.0 mi) of the Little Colorado River on private lands and areas owned by the Forest Service. This subunit encompasses the East and West Forks of the Little Colorado River. The East Fork Segment begins 0.8 km (0.5 mi) upstream of the Phelps Research Natural Area and follows the drainage downstream about 3.2 km (2.0 mi) to the confluence of Lee Valley Creek and then runs upstream about 1.6 km (1.0 mi) to the dam of Lee Valley Reservoir. The

subunit continues from the confluence of Lee Valley Creek and the East Fork, downstream to the confluence of the West Fork of the Little Colorado River, continuing to about 8.9 km (5.5 mi) upstream along the drainage to about 0.8 km (0.5 mi) past Sheep's Crossing.

Based upon multiple captures of jumping mice since 2008 (Frey 2011, pp. 29, 87; AGFD 2012a, p. 3), approximately 0.6 ha (1.5 ac) within Subunit 5A are considered occupied at the time of listing. The occupied area is located on Forest Service lands in Arizona within a livestock exclosure along a short 0.4-km (0.25-mi) stream reach that is 1.8 km (1.1 mi) south of Greer, below Montlure Camp (Frey 2011, pp. 29, 87; AGFD 2012a, p. 3). In 2011, the Wallow Fire burned much of this area, and surveys during 2012 continued to detect New Mexico meadow jumping mice (AGFD 2012a, p. 3). The features essential to the conservation of this subspecies may require special management considerations or protection to reduce the following threats: Severe wildland fires, recreation, grazing, floods, the reduction in the distribution and abundance of beaver ponds, and development. The occupied areas are centered around the capture locations plus an additional 0.8-km (0.5-mi) segment upstream and downstream of this area where the physical and biological features of critical habitat are found. The remaining unoccupied areas within Subunit 5A are found both upstream and downstream of the occupied area, and are considered essential to the conservation of the jumping mouse (as described under the heading *Unit Descriptions*, above).

Subunit 5B—Nutrioso: Subunit 5B consists of 413 ha (1,021 ac) along 20.4 km (12.7 mi) of Nutrioso Creek on private lands and areas owned by the Forest Service. This subunit begins at the confluence of Paddy Creek about 4.8 km (3 mi) south of the town of Nutrioso and follows the drainage downstream about 16 km (10 mi) to Nelson Reservoir.

Based upon multiple captures of jumping mice since 2008 (Frey 2011, pp. 29, 35, 89, 95; AGFD 2012a, p. 3), approximately 1.9 ha (4.9 ac) within Subunit 5B are considered occupied at the time of listing. The occupied area is located on Forest Service lands in Arizona along a short 1.3-km (0.8-mi) stream reach 3.9 km (2.4 mi) south of the town of Nutrioso. In 2011, the Wallow Fire burned much of this area, and surveys during 2012 continued to detect New Mexico meadow jumping mice (AGFD 2012a, p. 3). The features essential to the conservation of this

subspecies may require special management considerations or protection to reduce the following threats: Severe wildland fires, grazing, floods, the reduction in the distribution and abundance of beaver ponds, highway reconstruction, and development. The occupied area is centered around the capture locations plus an additional 0.8-km (0.5-mi) segment upstream and downstream of this area where the physical and biological features of critical habitat are found. The remaining unoccupied areas within Subunit 5B are found both upstream and downstream of the occupied area, and are considered essential to the conservation of the jumping mouse (as described under the heading *Unit Descriptions*, above).

Subunit 5C—San Francisco: Subunit 5C consists of 252 ha (622 ac) along 11.8 km (7.3 mi) of the San Francisco River and its tributary Turkey (=Talwiwi) Creek on private lands and areas owned by the Forest Service. This subunit begins about 0.6 km (0.4 mi) west of Forest Road 8854 along the San Francisco River and follows the drainage downstream about 10.5 km (6.5 mi), including a 1.3-km (0.8-mi) segment of Turkey (=Talwiwi) Creek that is south of Arizona Highway 180, then continues downstream to the headwaters of Luna Lake.

Based upon multiple captures of jumping mice since 2008 (Frey 2011, pp. 29, 97, 100), approximately 0.9 ha (2.3 ac) within Subunit 5C are considered occupied at the time of listing. There are two occupied areas within this unit located on Forest Service lands in Arizona including: (1) A small livestock exclosure along a 0.2-km (0.1-mi) stream reach of upper Turkey Creek at the junction of Highway 80 and Forest Road 289; and (2) two fenced livestock exclosures along a 0.4-km (0.2-mi) stream reach at the junction of the San Francisco River and Forest Road 8854 (Frey 2011, p. 97). In 2011, the Wallow Fire burned much of this area, and surveys during 2012 did not detect New Mexico meadow jumping mice (AGFD 2012, entire, 2012a, p. 2). However, until multiple years of surveys determine that the population has been extirpated, we consider this area within the geographical area occupied by the jumping mouse at the time of listing. The features essential to the conservation of this subspecies may require special management considerations or protection to reduce the following threats: Severe wildland fires, grazing, floods, the reduction in the distribution and abundance of beaver ponds, highway reconstruction, and development. The occupied areas

are centered around the two capture locations plus an additional 0.8-km (0.5-mi) segment upstream and downstream of these areas where the physical and biological features of critical habitat are found. The remaining unoccupied areas within Subunit 5C are found both upstream and downstream of the occupied areas, and are considered essential to the conservation of the jumping mouse (as described under the heading *Unit Descriptions*, above).

Subunit 5D—East Fork Black: Subunit 5D consists of 421 ha (1,040 ac) along 20.3 km (12.6 mi) of the East Fork of the Black River areas owned by the Forest Service. This subunit begins 0.8 km (0.5 mi) north of the intersection of Three Forks Road and Route 285 and follows the drainage downstream about 20.3 km (12.6 mi), where it abuts Subunit 5E.

Based upon multiple captures of jumping mice since 2008 (Frey 2011, p. 97; AGFD 2012, entire, 2012a, p. 2), approximately 6.9 ha (16.9 ac) within Subunit 5D are considered occupied at the time of listing. The occupied area is located on Forest Service lands in Arizona along the headwaters of the East Fork Black River near the intersection of Three Forks Road and Route 285 (Frey 2011, p. 29, 35, 40, 104; AGFD 2012, entire, 2012a, p. 2). In 2011, the Wallow Fire burned much of this area, and surveys during 2012 continued to detect New Mexico meadow jumping mice (AGFD 2012a, p. 2). The features essential to the conservation of this subspecies may require special management considerations or protection to reduce the following threats: Severe wildland fires, grazing, floods, the reduction in the distribution and abundance of beaver ponds, and highway reconstruction. The occupied area is centered around the capture location plus an additional 0.8-km (0.5-mi) segment upstream and downstream of this area where the physical and biological features of critical habitat are found. The remaining unoccupied areas within Subunit 5D are found both upstream and downstream of the occupied area, and are considered essential to the conservation of the jumping mouse (as described under the heading *Unit Descriptions*, above).

Subunit 5E—West Fork Black: Subunit 5E consists of 481 ha (1,188 ac) along 23.0 km (14.3 mi) of the West Fork of the Black River on private lands and areas owned by the Forest Service and the State of Arizona. The subunit begins at the confluence of the West Fork of the Black River and Burro Creek and follows the drainage downstream where it abuts Subunit 5D.

Based upon multiple captures of jumping mice since 2007 (Underwood, 2007, entire; Frey 2011, pp. 29, 40, 104; AGFD 2012, p. 2), approximately 13.7 ha (33.9 ac) within Subunit 5E are considered occupied at the time of listing. The occupied areas occur on Forest Service lands in Arizona at four locations: (1) Along the upper West Fork Black River just north of Forest Road 116; (2) immediately adjacent to the campground along the middle Fork of the Black River; (3) at the junction of Forest Road 68 and the middle Fork of the Black River; and (4) near the junction of the lower Fork of the Black River and Home Creek (Underwood 2007, entire; Frey 2011, pp. 29, 40, 104; AGFD 2012, p. 2012a, pp. 2–3). In 2011, the Wallow Fire burned much of this area, and surveys during 2012 continued to detect New Mexico meadow jumping mice at the lower and middle sections of the West Fork Black River (AGFD 2012a, pp. 2–3). Although New Mexico meadow jumping mice were not detected at the upper West Fork Black River location, until multiple years of surveys determine that the population has been extirpated, we consider this area within the geographical area occupied by the jumping mouse at the time of listing. The features essential to the conservation of this subspecies may require special management considerations or protection to reduce the following threats: Severe wildland fires, grazing, floods, the reduction in the distribution and abundance of beaver ponds, and highway reconstruction. The occupied areas are centered around the four capture locations plus an additional 0.8-km (0.5-mi) segment upstream and downstream of these areas where the physical and biological features of critical habitat are found. The remaining unoccupied areas within Subunit 5E are found both upstream and downstream of the occupied areas, and are considered essential to the conservation of the jumping mouse (as described under the heading *Unit Descriptions*, above).

Subunit 5F—Boggy and Centerfire: Subunit 5F consists of 197 ha (485 ac) along 8.9 km (5.5 mi) of Boggy Creek and Centerfire Creek on areas owned by the Forest Service. The east segment of the subunit begins 0.8 km (0.5 mi) north of the intersection of Route 25 and Boggy Creek and follows the drainage downstream to the confluence with Centerfire Creek. The west segment begins 0.8 km (0.5 mi) north of the intersection of Route 25 and Centerfire Creek, and follows the drainage downstream to the confluence with

Boggy Creek, then continues downstream to the confluence with the Black River.

Based upon multiple captures of jumping mice since 2008 (Frey 2011, pp. 29, 104–105; AGFD 2012, pp. 3–4; 2012a, p. 3), approximately 3.0 ha (7.5 ac) within Subunit 5F are considered occupied at the time of listing. The occupied areas are located on Forest Service lands in Arizona within fenced livestock enclosures at the junction of Forest Road 25 and Boggy Creek; and within a fenced livestock enclosure at the junction of Forest Road 25 and Centerfire Creek (Frey 2011, pp. 29, 104–105; AGFD 2012, pp. 3–4; 2012a, p. 3). In 2011, the Wallow Fire burned much of this area, and surveys during 2012 continued to detect New Mexico meadow jumping mice (AGFD 2012a, p. 3). The features essential to the conservation of this subspecies may require special management considerations or protection to reduce the following threats: Severe wildland fires, grazing, floods, and the reduction in the distribution and abundance of beaver ponds. The occupied areas are centered around the capture locations plus an additional 0.8-km (0.5-mi) segment upstream and downstream of these areas where the physical and biological features of critical habitat are found. The remaining unoccupied areas within Subunit 5F are found both upstream and downstream of the occupied areas, and are considered essential to the conservation of the jumping mouse (as described under the heading *Unit Descriptions*, above).

Subunit 5G—Corduroy: Subunit 5G consists of 104 ha (256 ac) along 4.8 km (3.0 mi) of Corduroy Creek on lands owned by the Forest Service. The subunit begins at the headwaters about 0.8 km (0.5 mi) south of the intersection of County Road 24 and County Road 8184A and follows the drainage downstream to the confluence with Fish Creek.

Based upon multiple captures of jumping mice since 2009 (Frey 2011, pp. 104–105; AGFD 2012, entire, 2012a, p. 4), approximately 0.4 ha (1.1 ac) within Subunit 5G are considered occupied at the time of listing. The occupied area is located on Forest Service lands in Arizona within fenced livestock enclosures at the junction of Forest Road 8184A and Corduroy Creek (Frey 2011, pp. 104–105; AGFD 2012, entire, 2012a, p. 4). In 2011, the Wallow Fire burned much of this area, and surveys during 2012 continued to detect New Mexico meadow jumping mice (AGFD 2012a, p. 4). The features essential to the conservation of this subspecies may require special

management considerations or protection to reduce the following threats: Severe wildland fires, grazing, floods, and the reduction in the distribution and abundance of beaver ponds. The occupied area is centered around the capture location plus an additional 0.8-km (0.5-mi) segment upstream and downstream of this area where the physical and biological features of critical habitat are found. The remaining unoccupied areas within Subunit 5G are found both upstream and downstream of the occupied area, and are considered essential to the conservation of the jumping mouse (as described under the heading *Unit Descriptions*, above).

Subunit 5H—Campbell Blue: Subunit 5H consists of 102 ha (253 ac) along 4.8 km (3.0 mi) of Campbell Blue Creek on private lands and areas owned by the Forest Service. The subunit begins at the confluence with Cat Creek along Forest Road 281 and extends downstream to the confluence with Turkey Creek.

Based upon multiple captures of jumping mice since 2008 (Frey 2011, pp. 29, 101), approximately 0.008 ha (0.02 ac) within Subunit 5H are considered occupied at the time of listing. The occupied area is located on Forest Service lands in Arizona within a livestock enclosure 13 km (8 mi) north of the community of Blue (Frey 2011, pp. 29, 101). In 2011, the Wallow Fire burned much of this area, and surveys during 2012 did not detect New Mexico meadow jumping mice (AGFD 2012, entire, 2012a, p. 2). However, until multiple years of surveys determine that the population has been extirpated, we consider this area within the geographical area occupied by the jumping mouse at the time of listing. The features essential to the conservation of this subspecies may require special management considerations or protection to reduce the following threats: Severe wildland fires, grazing, floods, and the reduction in the distribution and abundance of beaver ponds. The occupied area is centered around the capture location plus an additional 0.8-km (0.5-mi) segment upstream and downstream of this area where the physical and biological features of critical habitat are found. The remaining unoccupied areas within Subunit 5H are found both upstream and downstream of the occupied area, and are considered essential to the conservation of the jumping mouse (as described under the heading *Unit Descriptions*, above).

Unit 6—Bosque del Apache National Wildlife Refuge (NWR)

Unit 6 consists of 403 ha (995 ac) along 21.1 km (13.1 mi) of ditches and canals on the Service's Bosque del Apache NWR, Socorro County, New Mexico. This unit includes parts of a complex ditch system with associated irrigation of NWR management units, making habitat within this area unique. This unit begins in the northern part of the NWR and generally follows the Riverside Canal to the southern end. The NWR is the only locality within the middle Rio Grande considered still in existence (Frey and Wright 2012; Service 2014a, entire).

Based upon multiple captures of the jumping mouse since 2009 (Frey and Wright 2012, entire; Service 2014a, entire), approximately 4.1 ha (10.1 ac) within Unit 6 are considered occupied at the time of listing. The occupied area is located on NWR lands in New Mexico along a 2.7-km (1.7-mi) segment of the Riverside Canal (Frey and Wright 2012, entire; Service 2014a, entire). The features essential to the conservation of this subspecies may require special management considerations or protection to reduce the following threats: Water use and management; severe wildland fires; and thinning, mowing, or removing tamarisk (also known as saltcedar, *Tamarix ramosissima*), decadent stands of willow that are greater than 3 years old or 1.5 m (4.9 ft) tall. The occupied area is centered around the capture locations plus an additional 0.8-km (0.5-mi) segment upstream and downstream of this area where the physical and biological features of critical habitat are found. The remaining unoccupied areas within Unit 6 are found both upstream and downstream of the occupied area, and are considered essential to the conservation of the jumping mouse (as described under the heading *Unit Descriptions*, above).

Unit 7—Florida

Unit 7 consists of 253 ha (626 ac) along 13.6 km (8.4 mi) of the Florida River on private lands and an area owned by the Bureau of Land Management, La Plata County, Colorado. The unit begins at the irrigation diversion structure (Florida Ditch main headgate) of the Florida Water Conservancy District about 0.8 km (0.5 mi) northeast of the intersection of La Plata County Road 234 and 237 and follows the drainage downstream to about 0.16 km (0.1 mi) north of Ranchos Florida Road.

Based upon the capture of two jumping mice since 2007 (Museum of

Southwestern Biology 2007; 2007a; Frey 2008c, pp. 42–45, 56; 2011a, pp. 19, 33), approximately 0.15 ha (0.37 ac) within Unit 7 are considered occupied at the time of listing. The occupied area is located on private lands in Colorado 0.9 km (0.6 mi) north of Highway 160 along the Florida River (Museum of Southwestern Biology 2007; 2007a; Frey 2008c, pp. 42–45, 56; 2011a, pp. 19, 33). The features essential to the conservation of this subspecies may require special management considerations or protection to reduce the following threats: Floods, water use and management, development, and coalbed methane. The occupied area is centered around the capture location plus an additional 0.8-km (0.5-mi) segment upstream and downstream of this area where the physical and biological features of critical habitat are found. The remaining unoccupied areas within Unit 7 are found both upstream and downstream of the occupied area, and are considered essential to the conservation of the jumping mouse (as described under the heading *Unit Descriptions*, above).

Unit 8—Sambrito Creek

Unit 8 consists of 75 ha (185 ac) along 4.6 km (2.9 mi) of Sambrito Creek on private lands and areas owned by the State of Colorado within Navajo State Park, near Arboles, Archuleta County, Colorado. There are two segments within this unit. One segment begins at Archuleta County Road 977, following Sambrito Creek downstream to the headwaters of Navajo Reservoir. The second segment starts about 0.3 km (0.2 mi) west of the intersection of Colorado Road 977 and 988 and follows the drainage about 3.9 km (2.1 mi) through the Sambrito Wetlands Area downstream about to the headwaters of Navajo Reservoir.

Based upon multiple captures of jumping mice since 2012 (Colorado Parks and Wildlife 2012, entire, 2013, entire; Ecosphere 2014, entire), approximately 0.9 ha (2.3 ac) within Unit 8 are considered occupied at the time of listing. The occupied area is located on State of Colorado lands immediately south of Archuleta County Road 977 along the unnamed drainage through the Sambrito Wetlands Areas about 1.8 km (1.1 mi) due west of Sambrito Creek (Colorado Parks and Wildlife 2012, entire). The features essential to the conservation of this subspecies may require special management considerations or protection to reduce the following threats: Floods, grazing, water use and management, the reduction in the distribution and abundance of beaver

ponds, development, recreation, and coalbed methane. The occupied area is centered around the capture location that is about 0.5 km (0.3 mi) south of Archuleta County Road 977 plus an additional 0.8-km (0.5-mi) segment upstream and downstream of this area where the physical and biological features of critical habitat are found. The remaining unoccupied areas within Unit 8 are found both upstream and downstream of the occupied area, and are considered essential to the conservation of the jumping mouse (as described under the heading *Unit Descriptions*, above).

Effects of Critical Habitat Designation**Section 7 Consultation**

Section 7(a)(2) of the Act requires Federal agencies, including the Service, to ensure that any action they fund, authorize, or carry out is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of designated critical habitat of such species. In addition, section 7(a)(4) of the Act requires Federal agencies to confer with the Service on any agency action that is likely to jeopardize the continued existence of any species proposed to be listed under the Act or result in the destruction or adverse modification of proposed critical habitat.

Decisions by the 5th and 9th Circuit Courts of Appeals have invalidated our regulatory definition of "destruction or adverse modification" (50 CFR 402.02) (see *Gifford Pinchot Task Force v. U.S. Fish and Wildlife Service*, 378 F. 3d 1059 (9th Cir. 2004) and *Sierra Club v. U.S. Fish and Wildlife Service et al.*, 245 F.3d 434, 442 (5th Cir. 2001)), and we do not rely on this regulatory definition when analyzing whether an action is likely to destroy or adversely modify critical habitat. Under the statutory provisions of the Act, we determine destruction or adverse modification on the basis of whether, with implementation of the proposed Federal action, the affected critical habitat would continue to serve its intended conservation role for the species.

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. Examples of actions that are subject to the section 7 consultation process are actions on State, tribal, local, or private lands that require a Federal permit (such as a permit from the U.S. Army Corps of Engineers under section 404 of the Clean Water Act (33 U.S.C. 1251 *et seq.*) or a permit from the

Service under section 10 of the Act) or that involve some other Federal action (such as funding from the Federal Highway Administration, Federal Aviation Administration, or the Federal Emergency Management Agency). Federal actions not affecting listed species or critical habitat, and actions on State, tribal, local, or private lands that are not federally funded or authorized, do not require section 7 consultation.

As a result of section 7 consultation, we document compliance with the requirements of section 7(a)(2) through our 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, or are likely to adversely affect, listed species or critical habitat.

When we issue a biological opinion concluding that a project is likely to jeopardize the continued existence of a listed species and/or destroy or adversely modify critical habitat, we provide reasonable and prudent alternatives to the project, if any are identifiable, that would avoid the likelihood of jeopardy and/or destruction or adverse modification of critical habitat. We define “reasonable and prudent alternatives” (at 50 CFR 402.02) as alternative actions identified during consultation that:

(1) Can be implemented in a manner consistent with the intended purpose of the action,

(2) Can be implemented consistent with the scope of the Federal agency’s legal authority and jurisdiction,

(3) Are economically and technologically feasible, and

(4) Would, in the Director’s opinion, avoid the likelihood of jeopardizing the continued existence of the listed species and/or avoid the likelihood of destroying or adversely modifying critical habitat.

Reasonable and prudent alternatives can vary from slight project modifications to extensive redesign or relocation of the project. Costs associated with implementing a reasonable and prudent alternative are similarly variable.

Regulations at 50 CFR 402.16 require Federal agencies to reinstate consultation on previously reviewed actions in instances where we have listed a new species or subsequently designated critical habitat that may be affected and the Federal agency has retained discretionary involvement or control over the action (or the agency’s discretionary involvement or control is

authorized by law). Consequently, Federal agencies sometimes may need to request reinitiation of consultation with us on actions for which formal consultation has been completed, if those actions with discretionary involvement or control may affect subsequently listed species or designated critical habitat.

Application of the “Adverse Modification” Standard

The key factor related to the adverse modification determination is whether, with implementation of the proposed Federal action, the affected critical habitat would continue to serve its intended conservation role for the species. Activities that may destroy or adversely modify critical habitat are those that alter the physical or biological features to an extent that they appreciably reduce the conservation value of critical habitat for the jumping mouse. As discussed above, the role of critical habitat is to support life-history needs of the subspecies and provide for the conservation of the subspecies.

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

Activities that may affect critical habitat, when carried out, funded, or authorized by a Federal agency, should result in consultation for the jumping mouse. These activities include, but are not limited to:

(1) Any activity that destroys, modifies, alters, or removes the herbaceous riparian vegetation that comprises the subspecies’ habitat, as described in this final rule or within the SSA Report (Service 2014), especially if these activities occur during the jumping mouse’s active season. Such activities could include, but are not limited to: Domestic livestock grazing; land clearing or mowing; activities associated with construction for roads, bridges, pipelines, or bank stabilization; residential or commercial development; channel alteration; timber harvest; prescribed fires; off-road vehicle activity; recreational use; the removal of beaver (excluding irrigation ditches and canals); and other alterations of watersheds and floodplains. These activities may affect the physical or biological features of critical habitat for the jumping mouse, by removing sources of food, shelter, nesting or hibernation sites, or by otherwise impacting habitat essential for completion of its life history.

(2) Any activity that results in changes in the hydrology of the critical habitat unit, including modification to any stream or water body that results in the removal or destruction of herbaceous riparian vegetation in any stream or water body. Such activities that could cause these effects include, but are not limited to, water diversions, groundwater pumping, watershed degradation, construction or destruction of dams or impoundments, developments or ‘improvements’ at a spring, channelization, dredging, road and bridge construction, destruction of riparian or wetland vegetation, and other activities resulting in the draining or inundation of a unit.

(3) Any activity (e.g., instream dredging, impoundment, water diversion or withdrawal, channelization, discharge of fill material) that detrimentally alters natural processes in a unit, including changes to inputs of water, sediment, and nutrients, or any activity that significantly and detrimentally alters water quantity in the unit.

(4) Any activity that could lead to the introduction, expansion, or increased density of an exotic plant or animal species that is detrimental to the jumping mouse and to its habitat.

Exemptions

Application of Section 4(a)(3) of the Act

Section 4(a)(3)(B)(i) of the Act (16 U.S.C. 1533(a)(3)(B)(i)) provides that: “The Secretary shall not designate as critical habitat any lands or other geographic areas owned or controlled by the Department of Defense, or designated for its use, that are subject to an integrated natural resources management plan [INRMP] prepared under section 101 of the Sikes Act (16 U.S.C. 670a), if the Secretary determines in writing that such plan provides a benefit to the species for which critical habitat is proposed for designation.” There are no Department of Defense lands within the critical habitat designation for the jumping mouse; therefore, we are not exempting any areas under section 4(a)(3)(B)(i) of the Act.

Consideration of Impacts Under Section 4(b)(2) of the Act

Section 4(b)(2) of the Act states that the Secretary shall designate and make revisions to critical habitat 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 he determines that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless she 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 statute on its face, as well as the legislative history, are clear that the Secretary has broad discretion regarding which factor(s) to use and how much weight to give to any factor.

When identifying the benefits of inclusion for an area, we consider the additional regulatory benefits that area would receive from the protection from adverse modification or destruction as a result of actions with a Federal nexus; the educational benefits of mapping essential habitat for recovery of the listed species; and any benefits that may result from a designation due to State or Federal laws that may apply to critical habitat.

When identifying the benefits of exclusion, we consider, among other things, whether exclusion of a specific

area is likely to result in conservation; the continuation, strengthening, or encouragement of partnerships; or implementation of a management plan that provides equal to or more conservation than a critical habitat designation would provide.

In the case of the jumping mouse, the benefits of critical habitat include promotion of public awareness of the presence of the jumping mouse and the importance of habitat protection, and in cases where a Federal nexus exists, potentially greater habitat protection for the jumping mouse due to the protection from adverse modification or destruction of critical habitat.

When we evaluate the existence of a conservation plan when considering the benefits of exclusion, we consider a variety of factors, including but not limited to, whether the plan is finalized; how it provides for the conservation of the essential physical or biological features; whether there is a reasonable expectation that the conservation management strategies and actions contained in a management plan will be implemented into the future; whether

the conservation strategies in the plan are likely to be effective; and whether the plan contains a monitoring program or adaptive management to ensure that the conservation measures are effective and can be adapted in the future in response to new information.

After identifying the benefits of inclusion and the benefits of exclusion, we carefully weigh the two sides to evaluate whether the benefits of exclusion outweigh those of inclusion. If our analysis indicates that the benefits of exclusion outweigh the benefits of inclusion, we then determine whether exclusion would result in extinction. If exclusion of an area from critical habitat will result in extinction, we will not exclude it from the designation.

Based on the information provided by entities seeking exclusion, as well as any additional public comments we received, we evaluated whether certain lands in the proposed critical habitat were appropriate for exclusion from this final designation pursuant to section 4(b)(2) of the Act. We are excluding the following areas from critical habitat designation for the jumping mouse:

TABLE 3—AREAS EXCLUDED FROM CRITICAL HABITAT DESIGNATION BY CRITICAL HABITAT UNIT

Proposed subunit	Specific area	Areas meeting the definition of critical habitat, in hectares (acres)	Areas excluded from critical habitat, in hectares (acres)
6A	Isleta Pueblo	43 ha (105 ac)	43 ha (105 ac).
6B	Ohkay Owingeh	51 ha (125 ac)	51 ha (125 ac).

Consideration of Economic Impacts

Under section 4(b)(2) of the Act, we consider the economic impacts of specifying any particular area as critical habitat. In order to consider economic impacts, we prepared an incremental effects memorandum and screening analysis, which together with our narrative and interpretation of effects, we consider our draft economic analysis of the proposed critical habitat designation and related factors (IEc 2014a, entire).

The analysis, dated April 8, 2014, was made available for public review from April 8, 2014, through May 8, 2014 (79 FR 19307). The draft economic analysis addressed potential economic impacts of critical habitat designation for jumping mouse. Following the close of the comment period, we reviewed and evaluated all information submitted during the comment period that may pertain to our consideration of the probable incremental economic impacts of this critical habitat designation. Additional information relevant to the probable incremental economic impacts of critical habitat designation for the

jumping mouse is summarized below and available in the screening analysis for the jumping mouse (IEc 2014, entire), available at <http://www.regulations.gov>.

The economic screening memorandum is our economic analysis of the proposed critical habitat designation (IEc 2014, entire). The purpose of the economic analysis is to provide us with the information on the potential for the proposed critical habitat rule to result in costs exceeding \$100 million in a single year. The draft economic analysis addressed potential economic impacts of critical habitat designation for the jumping mouse. To that end, the analysis estimates impacts to activities, including grazing, water use, and recreation, that may experience the greatest impacts in compliance with section 4(b)(2) of the Act. The draft screening memo is provided to the public for review and comment. Following the close of the comment period, we reviewed and evaluated all information submitted during the comment period that may pertain to our consideration of the probable economic impacts of this critical habitat

designation. We conclude that critical habitat designation for the jumping mouse is unlikely to generate costs exceeding \$100 million in a single year.

Exclusions Based on Economic Impacts

Our economic analysis did not identify any disproportionate costs that are likely to result from the designation. Consequently, the Secretary is not exercising her discretion to exclude any areas from this designation of critical habitat for the jumping mouse based on economic impacts.

A copy of the IEM and screening analysis with supporting documents may be obtained by contacting the New Mexico Ecological Services Field Office (see ADDRESSES) or by downloading from the Internet at <http://www.regulations.gov>.

Critical habitat designation for the jumping mouse is unlikely to generate costs exceeding \$100 million in a single year. In occupied areas, the economic impacts of implementing the rule through section 7 of the Act will most likely be limited to additional administrative effort to consider adverse

modification. This finding is based on the following factors:

- Any activities with a Federal nexus occurring within occupied habitat will be subject to section 7 consultation requirements regardless of critical habitat designation, due to the presence of the listed species; and
- In most cases, project modifications requested to avoid adverse modification are likely to be the same as those needed to avoid jeopardy in occupied habitat.

This analysis forecasts the total number and administrative cost of future consultations likely to occur for grazing, transportation, recreation, water management, and species and habitat management undertaken by or permitted by Federal agencies within the study area. In addition, the analysis forecasts costs associated with conservation efforts that may be recommended in consultation for those activities occurring in unoccupied areas. The total incremental section 7 costs associated with the proposed designation are estimated to be \$20,000,000 in 2014, for both administrative and conservation effort costs; therefore, the total costs of the proposed rule are unlikely to exceed \$100 million in a given year.

Various economic benefits may result from the incremental conservation efforts identified in this analysis, including: (1) Those associated with the primary goal of species conservation (*i.e.*, direct benefits), and (2) those additional beneficial services that derive from conservation efforts but are not the purpose of the Act (*i.e.*, ancillary benefits). Due to existing data limitations, we are unable to assess the likely magnitude of these benefits.

Exclusions Based on National Security Impacts

Under section 4(b)(2) of the Act, we consider whether there are lands owned or managed by the Department of Defense where a national security impact might exist. In preparing this final rule, we have determined that no lands within the designation of critical habitat for the jumping mouse are owned or managed by the Department of Defense or Department of Homeland Security, and, therefore, we anticipate no impact on national security or homeland security. Consequently, the Secretary is not exerting her discretion to exclude any areas from this final designation based on impacts on national security.

Exclusions Based on Other Relevant Impacts

Under section 4(b)(2) of the Act, we also consider any other relevant impacts

resulting from the designation of critical habitat. We consider a number of factors including whether the landowners have developed any habitat conservation plans or other management plans for the area, or whether there are conservation partnerships that would be encouraged by designation of, or exclusion from, critical habitat. In addition, we look at any tribal issues and consider the government-to-government relationship of the United States with tribal entities.

Tribal Lands—Exclusions Under Section 4(b)(2) of the Act

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 relevant provision of the Departmental Manual of the Department of the Interior (512 DM 2), we coordinate with federally-recognized tribes on a government-to-government basis. Further, Secretarial Order 3206, "American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act" (1997) states that (1) critical habitat shall not be designated in areas that may impact tribal trust resources, may impact tribally-owned fee lands, or are used to exercise tribal rights unless it is determined essential to conserve a listed species; and (2) in designating critical habitat, the Service shall evaluate and document the extent to which the conservation needs of the listed species can be achieved by limiting the designation to other lands.

Land and Resource Management Plans, Conservation Plans, or Agreements Based on Conservation Partnerships

We indicated in the proposed rule that our final decision regarding the exclusions of tribal lands under section 4(b)(2) of the Act would consider tribal management and the recognition of their capability to appropriately manage their own resources, and the government-to-government relationship of the United States with tribal entities (79 FR 37328; June 20, 2013). We also acknowledged our responsibilities to work directly with tribes in developing programs for healthy ecosystems, that tribal lands are not subject to the same controls as Federal public lands, our need to remain sensitive to Indian culture, and to make information available to tribes (79 FR 37328; June 20, 2013). We identified the tribal lands of Isleta Pueblo and Ohkay Owingeh included within the proposal as areas we were considering for exclusion (79 FR 37328; June 20, 2013).

Isleta Pueblo

On Isleta Pueblo (within Subunit 6A in the proposed rule), we proposed 43 ha (105 ac) of critical habitat along 3.7 km (2.3 mi) of ditches, canals, and marshes within Bernalillo County, New Mexico. Much of the habitat was historically occupied with individuals detected as recently as 1988 (Morrison 1988, pp. 22–27; Frey 2006c, entire); however, surveys within parts of the two proposed critical habitat segments during 2014 did not detect New Mexico meadow jumping mice (Bureau of Reclamation 2014, entire). The entire area is considered unoccupied at the time of listing.

As analyzed below, we have excluded Isleta Pueblo from critical habitat based on their Riverine Management Plan and our ongoing conservation partnership where the benefits of exclusion from critical habitat outweigh the benefits of including an area within critical habitat. We believe that the Isleta Riverine Management Plan fulfills our criteria described below, and these benefits outweigh the benefits from inclusion as critical habitat. Moreover, Isleta Pueblo has a demonstrated productive working relationship on a Government-to-Government basis with us. The designation of critical habitat on Isleta Pueblo would be expected to adversely impact our working relationship. During our discussions with Isleta Pueblo and from comments we received on the proposed designation of critical habitat for the jumping mouse, they informed us that critical habitat would be viewed as an intrusion on their sovereign abilities to manage natural resources in accordance with their own policies, customs, and laws. The perceived restrictions of a critical habitat designation could have a more damaging effect to coordination efforts, possibly preventing actions that might maintain, improve, or restore habitat for the jumping mouse and other endangered or threatened species like the southwestern willow flycatcher (*Empidonax traillii extimus*) (flycatcher) and Rio Grande silvery minnow (*Hybognathus amarus*) (silvery minnow). As a result, we found Isleta Pueblo would prefer to work with us on a government-to-government basis.

The Pueblo of Isleta has developed and maintained a Riverine Management Plan that includes the flycatcher and silvery minnow (Service 2005; 70 FR 60955, October 19, 2005; Pueblo of Isleta 2005, entire; 2014, entire). The objective of this plan is to protect, conserve, and promote the management of the flycatcher and silvery minnow and their associated habitats within the

Pueblo's boundaries. The Pueblo recently updated and Tribal Council subsequently approved, the Riverine Management Plan to specifically include management of the jumping mouse and its habitat by: (1) Evaluating jumping mouse populations within their management areas; (2) developing science-based management actions that address and mitigate potential threats to the subspecies on the Pueblo; (3) prescribing appropriate measures to sustain existing habitat; and (4) promoting a comprehensive, integrated, and adaptive resource management approach for the riverine ecosystem administered by the Pueblo (Pueblo of Isleta 2014, entire). The Pueblo will continue to protect its bosque and does not intend to develop the areas we proposed as jumping mouse critical habitat. Moreover, under the comprehensive Riverine Management Plan, the Isleta Pueblo has conducted a variety of voluntary measures, restoration projects, and management actions to conserve riparian vegetation, including not allowing cattle to graze within the bosque, protecting riparian habitat from fire, maintaining native vegetation, and preventing habitat fragmentation (Service 2005; 70 FR 60955, October 19, 2005; Pueblo of Isleta 2005, entire).

We considered their current conservation plan to provide adequate management or protection because it meets the following criteria:

(1) The plan is complete and provides the same or better level of protection from adverse modification or destruction than that provided through a consultation under section 7 of the Act;

(2) There is a reasonable expectation that the conservation management strategies and actions will be implemented for the foreseeable future, based on past practices, written guidance, or regulations; and

(3) The plan provides conservation strategies and measures consistent with currently accepted principles of conservation biology.

For these reasons, we believe that our working relationship will be better maintained if Isleta Pueblo was excluded from the designation of jumping mouse critical habitat. We view this as a substantial benefit since we have developed a cooperative working relationship for the mutual benefit of endangered and threatened species, including the jumping mouse.

Benefits of Inclusion—Isleta Pueblo

Through application of Section 4(b)(2) of the Act, Federal agencies, in consultation with the Service, must

ensure that their actions are not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of any designated critical habitat of such species. The difference in the outcomes of the jeopardy analysis and the adverse modification analysis represents the regulatory benefit and costs of critical habitat.

Proposed Subunit 6A is unoccupied by the jumping mouse (Bureau of Reclamation 2014, entire); therefore, if a Federal action or permitting occurs, there may not be a consultation under section 7 of the Act unless critical habitat is designated. Our draft economic analysis found that if we designate critical habitat on Isleta Pueblo, it is expected that consultation would occur with the Bureau of Indian Affairs (for actions such as riparian habitat restoration, fire management plans, fire suppression, and fuel reduction treatments). Federal agencies would be required to ensure their actions do not destroy or adversely modify that critical habitat.

Our economic analysis found that the incremental costs in proposed Subunit 6A would be limited to the administrative costs of consultation and none related to project modifications recommended by the Service during section 7 consultation. We also do not anticipate any formal consultations from grazing or recreation if critical habitat were designated, primarily because these activities do not occur in the proposed unit. Moreover, the types of projects we might anticipate (riparian habitat restoration, fire management plans, fire suppression, and fuel reduction treatments) would all provide long-term benefits to jumping mouse habitat, suggesting that effects to the jumping mouse from Federal projects would likely result in insignificant and discountable conclusions because conservation measures would be focused on habitat improvement and management. Because of how Isleta Pueblo manages and conserves their lands, we do not anticipate that Isleta Pueblo's actions would considerably change in the future. Therefore, the regulatory benefit of critical habitat designation on these lands is minimized.

Another important benefit of including lands in a critical habitat designation is that the designation can serve to educate landowners, agencies, tribes, and the public regarding the potential conservation value of an area, and may help focus conservation efforts on areas of high conservation value for certain species. Any information about the jumping mouse that reaches a wide

audience, including parties engaged in conservation activities, is valuable. The designation of critical habitat may also strengthen or reinforce some Federal laws such as the Clean Water Act. These laws analyze the potential for projects to significantly affect the environment. Critical habitat may signal the presence of sensitive habitat that could otherwise be missed in the review process for these other environmental laws.

Isleta Pueblo is familiar with the jumping mouse and its habitat needs, and has a demonstrated commitment to address management and recovery of the flycatcher, silvery minnow, and jumping mouse through their revision of the Riverine Management Plan (Pueblo of Isleta 2014, entire). Isleta Pueblo lands and the former jumping mouse population on those lands has been widely known since the 1980s (Hink and Ohmart 1984, p. 97; Morrison 1988, pp. 22–27; Frey 2006c, entire). Thus, the educational benefits that might follow critical habitat designation, such as providing information to Isleta Pueblo on areas that are important for the long-term survival and conservation of the subspecies, have already been provided. For these reasons, we believe there is little educational benefit or support for other laws and regulations attributable to critical habitat beyond those benefits already achieved from listing the jumping mouse under the Act (79 FR 33119; June 10, 2014).

Benefits of Exclusion—Isleta Pueblo

The benefits of excluding Isleta Pueblo from designated critical habitat include: (1) The advancement of our Federal Indian Trust obligations and our deference to tribes to develop and implement tribal conservation and natural resource management plans for their lands and resources, which includes the jumping mouse; (2) the conservation benefits to the jumping mouse and its habitat through the management plan that might not otherwise occur; and (3) the maintenance of effective collaboration and cooperation to promote the conservation of the jumping mouse and its habitat, and other species.

We have an effective working relationship with Isleta Pueblo, which was established when we proposed critical habitat for the silvery minnow (67 FR 39206; June 6, 2002) and has evolved through consultations on the flycatcher (69 FR 60706; October 12, 2004) and other riparian restoration. During the comment periods, we received input from Isleta Pueblo expressing the view that designating jumping mouse critical habitat on tribal land would adversely affect the

Service's working relationship with the Pueblo. They noted that the beneficial cooperative working relationship has assisted in the conservation of listed species and other natural resources. They indicated that critical habitat designation would amount to additional Federal regulation of sovereign lands, and would be viewed as an unwarranted and unwanted intrusion. Consequently, the development of future voluntary management actions for the jumping mouse and other listed species may be compromised if these lands are designated as critical habitat for the jumping mouse. Thus, a benefit of excluding these lands is future conservation efforts that would benefit listed species, including the jumping mouse.

During development of the jumping mouse critical habitat proposal (and coordination for other critical habitat proposals such as flycatcher and silvery minnow) and other efforts such as development of the flycatcher recovery plan, formal consultations, and during emergency fire suppression, we have met and communicated with the Pueblo to discuss how they might be affected by the regulations associated with endangered species management, recovery, the designation of critical habitat, and measures to minimize any impacts from planned projects as well as emergency actions such as fire suppression. As such, we established relationships for the management and conservation of endangered species and their habitats. As part of our relationship, we have provided technical assistance to develop measures to conserve endangered and threatened species and their habitats; we expect that the Pueblo will request similar assistance for the jumping mouse.

All of these proactive actions were conducted in accordance with Secretarial Order 3206, "American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act" (June 5, 1997); the relevant provision of the Departmental Manual of the Department of the Interior (512 DM 2); and Secretarial Order 3317, "Department of Interior Policy on Consultation with Indian Tribes" (December 1, 2011). During our communications with Isleta Pueblo, we recognized and endorsed their fundamental right to provide for tribal resource management activities, including those relating to riparian habitat where the jumping mouse existed historically.

The updated Riverine Management Plan will continue to provide guidance and oversight on the management of

endangered species on Isleta Pueblo. We find that the Isleta Pueblo's Riverine Management Plan is complete and the commitment to implement conservation activities described provides significant conservation benefit to the jumping mouse, which might not otherwise occur. We believe that the resolution passed by the Tribal Council of the Pueblo of Isleta concerning the Riverine Management Plan demonstrates that the management plan will be implemented. The Riverine Management Plan specifically provides periodic updates as appropriate, including species updates for the flycatcher, silvery minnow, and jumping mouse.

Benefits of Exclusion Outweigh the Benefits of Inclusion—Isleta Pueblo

The benefits of including Isleta Pueblo in the critical habitat designation are limited to the administrative costs of consultation, agency and educational awareness, and the implementation of other law and regulations. However, as discussed in detail above, we believe these benefits are minimized because they are provided for through other mechanisms, such as (1) The advancement of our Federal Indian Trust obligations; (2) the conservation benefits to jumping mouse, other riparian habitats, and other endangered species from implementation of the Riverine Management Plan; and (3) the maintenance of effective collaboration and cooperation to promote the conservation of the jumping mouse and its habitat.

The benefits of excluding Isleta Pueblo from being designated as jumping mouse critical habitat are more significant and include encouraging the continued implementation of the Riverine Management Plan, which contains conservation actions for the flycatcher, silvery minnow, and jumping mouse. Overall, these conservation actions, including management of these endangered and threatened species and their habitat accomplishes greater conservation than would be available through the implementation of a designation of critical habitat on a project-by-project basis. Excluding the Pueblo from critical habitat will allow Isleta Pueblo to manage their natural resources to benefit riparian habitat for the jumping mouse, without the perception of Federal Government intrusion. This philosophy is also consistent with our published policies on Native American natural resource management. The exclusion of these areas will likely also provide additional benefits to other listed species that would not otherwise

be available without the Service maintaining a cooperative working relationship and the Riverine Management Plan. In conclusion, we find that the benefits of excluding Isleta Pueblo from critical habitat designation outweigh the benefits of including these areas. As a result of the assurances, protections, and conservation benefit to the Rio Grande ecosystem, the flycatcher, the silvery minnow, and the New Mexico meadow jumping mouse and their habitats on Pueblo lands, we are excluding this area from jumping mouse critical habitat.

Exclusion Will Not Result in Extinction of the Species—Isleta Pueblo

We have determined that exclusion of Isleta Pueblo will not result in extinction of the species. First, the jumping mouse is currently extirpated from these areas (Bureau of Reclamation 2014, entire). Second, Isleta Pueblo is committed to protecting and managing their lands and species found on those lands according to the Riverine Management Plan and their tribal, cultural, and natural resource management objectives, which provide conservation benefits for the jumping mouse and its habitat as well as other listed species. Therefore, Isleta Pueblo is committed to greater conservation measures on their land than would be available through the designation of critical habitat. Accordingly, we have excluded Isleta Pueblo from the designation of critical habitat under section 4(b)(2) of the Act because the benefits of exclusion outweigh the benefits of inclusion and will not cause the extinction of the species.

Ohkay Owingeh

Ohkay Owingeh Pueblo is located along the Rio Grande just north of Espanola in Rio Arriba County, New Mexico, and adjoins the lands of Santa Clara Pueblo. The Ohkay Owingeh Pueblo includes the southern or downstream end of the Velarde reach of the Rio Grande, and comprises the largest contiguous area of generally intact riparian woodland, as well as the largest riparian area under the control of a single landowner within the Velarde reach. A total of about 16.6 km (10.3 mi) of the Rio Grande are located within the Pueblo and over 450 ha (1,100 acres) of riparian habitat are still extant within the Pueblo boundaries. On Ohkay Owingeh (within Subunit 6B in the proposed rule), we proposed 51 ha (125 ac) of critical habitat along 4.8 km (3.0 mi) of ditches, canals, and marshes within Rio Arriba, County, New Mexico. Much of the habitat was historically occupied with individuals detected as

recently as 1988 (Morrison 1988, pp. 28–35; Frey 2006c, entire); however, no New Mexico meadow jumping mice were captured during surveys conducted recently (Morrison 2012, entire). The entire unit is considered unoccupied at the time of listing.

As analyzed below, we have excluded Ohkay Owingeh from critical habitat based on our ongoing conservation partnership where the benefits of exclusion from critical habitat outweigh the benefits of including an area within critical habitat. We believe that Ohkay Owingeh has a demonstrated productive working relationship on a Government-to-Government basis with us. The designation of critical habitat on Ohkay Owingeh would be expected to adversely impact our working relationship. During our discussions with Ohkay Owingeh and from comments we received on the proposed designation of critical habitat for the jumping mouse, they informed us that critical habitat would be viewed as an intrusion on their sovereign abilities to manage natural resources. The perceived restrictions of a critical habitat designation could have a more damaging effect to coordination efforts, possibly preventing actions that might maintain, improve, or restore habitat for the jumping mouse and other endangered or threatened species like the flycatcher. Therefore, we are excluding Ohkay Owingeh based on a variety of voluntary measures, restoration projects, and management actions to conserve the jumping mouse and its habitat on their lands and their demonstrated productive working relationship on a Government-to-Government basis with us.

Benefits of Inclusion—Ohkay Owingeh

Through application of Section 4(b)(2) of the Act, Federal agencies, in consultation with the Service, must ensure that their actions are not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of any designated critical habitat of such species. The difference in the outcomes of the jeopardy analysis and the adverse modification analysis represents the regulatory benefit and costs of critical habitat.

Proposed Subunit 6B is unoccupied by the jumping mouse (Ohkay Owingeh 2014, entire); therefore, if a Federal action or permitting occurs, there may not be a consultation under section 7 of the Act unless critical habitat is designated. Our draft economic analysis found that if we designate critical habitat on Ohkay Owingeh, it is expected that consultation would occur

with the Bureau of Indian Affairs (for actions such as riparian habitat restoration, fire management plans, fire suppression, and fuel reduction treatments). Federal agencies would be required to ensure their actions do not destroy or adversely modify that critical habitat.

Our section 7 consultation history for another riparian species, the flycatcher, shows that since listing in 1995, no formal section 7 consultations addressing the flycatcher have occurred as a result of implementing Federal actions on Ohkay Owingeh. We have conducted informal consultations on the flycatcher with agencies implementing actions or providing funding and provided the technical assistance on project implementation. Effects to the flycatcher from Federal projects have all resulted in insignificant and discountable impacts due to conservation measures that focused on habitat improvement and management for the flycatcher. It would likely be the same scenario for the jumping mouse, which has even more restricted habitat than the flycatcher on Ohkay Owingeh.

If we designate critical habitat on Ohkay Owingeh, our previous section 7 consultation history for the flycatcher in riparian habitat indicates that there could be some, but likely few, regulatory benefits to the jumping mouse. Even with flycatchers occurring on Ohkay Owingeh, no formal flycatcher-related section 7 consultations have occurred. Because no jumping mice currently occur on Ohkay Owingeh, it is even more likely that no formal jumping mouse-related section 7 consultations would occur. Projects initiated by Federal agencies in the future would likely only be associated with actions pertaining to the implementation of grants or funding of habitat improvement projects that would benefit the jumping mouse. Because of how Ohkay Owingeh has chosen to manage and conserve their lands and the lack of a past formal section 7 consultation history for the flycatcher, we do not anticipate that Ohkay Owingeh's actions would considerably change in the future, generating a noticeable increase in section 7 consultations that would cause impacts to the jumping mouse or its habitat. Therefore, the effect of a critical habitat designation on these lands is minimized.

Our economic analysis found that the incremental costs in proposed Subunit 6B would be limited to the administrative costs of consultation and none related to project modifications recommended by the Service during section 7 consultation. We also do not

anticipate any formal consultations from grazing or recreation if critical habitat were designated, primarily because these activities do not occur in the proposed unit. Moreover, the types of projects we might anticipate (riparian habitat restoration, fire management plans, fire suppression, and fuel reduction treatments) would all provide long-term benefits to jumping mouse habitat, suggesting that effects to the jumping mouse from Federal projects would likely result in insignificant and discountable impacts because conservation measures would be focused on habitat improvement and management. Because of how Ohkay Owingeh manages and conserves their lands, we do not anticipate that Ohkay Owingeh's actions would considerably change in the future. Therefore, the regulatory benefit of critical habitat designation on these lands is minimized.

Another important benefit of including lands in a critical habitat designation is that the designation can serve to educate landowners, agencies, tribes, and the public regarding the potential conservation value of an area, and may help focus conservation efforts on areas of high conservation value for certain species. Any information about the jumping mouse that reaches a wide audience, including parties engaged in conservation activities, is valuable. The designation of critical habitat may also strengthen or reinforce some Federal laws such as the Clean Water Act. These laws analyze the potential for projects to significantly affect the environment. Critical habitat may signal the presence of sensitive habitat that could otherwise be missed in the review process for these other environmental laws.

Ohkay Owingeh is familiar with the jumping mouse and its habitat needs, and has successfully worked with the Service to address jumping mouse management and recovery. Further, Ohkay Owingeh lands and the former jumping mouse population that once inhabited them has been widely known since the 1980s (Morrison 1988, pp. 28–35; Frey 2006c, entire). Thus, the educational benefits that might follow critical habitat designation, such as providing information to Ohkay Owingeh on areas that are important for the long-term survival and conservation of the subspecies, have already been provided. For these reasons, we believe there is little educational benefit or support for other laws and regulations attributable to critical habitat beyond those benefits already achieved from listing the jumping mouse under the Act (79 FR 33119; June 10, 2014).

Benefits of Exclusion—Ohkay Owingeh

The benefits of excluding the Pueblo of Ohkay Owingeh from designated critical habitat include: (1) The advancement of our Federal Indian Trust obligations and our deference to tribes to develop and implement tribal conservation and natural resource management plans for their lands and resources, which includes the jumping mouse; (2) the conservation benefits to the jumping mouse and its habitat that might not otherwise occur; and (3) the maintenance of effective collaboration and cooperation to promote the conservation of the jumping mouse and its habitat, and other species.

We have an effective working relationship with Ohkay Owingeh, which has evolved through consultations on the flycatcher (69 FR 60706; October 12, 2004) and other riparian restoration. As part of our relationship, we have provided technical assistance to develop measures to conserve the flycatcher and its habitat on their lands, as well as provided funding for managing jumping mouse habitat and conducting surveys. These proactive actions were conducted in accordance with Secretarial Order 3206, “American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act” (June 5, 1997); the relevant provision of the Departmental Manual of the Department of the Interior (512 DM 2); and Secretarial Order 3317, “Department of Interior Policy on Consultation with Indian Tribes” (December 1, 2011). During our communication with Ohkay Owingeh, we recognized and endorsed their fundamental right to provide for tribal resource management activities, including those relating to riparian habitat.

During the comment periods, we received input from Ohkay Owingeh expressing the view that designating jumping mouse critical habitat on tribal land would adversely affect the Service’s working relationship. They noted that the positive cooperative working relationship has assisted in the conservation of listed species and other natural resources. They indicated that critical habitat designation would amount to additional Federal regulation of sovereign lands, and would be viewed as an unwarranted and unwanted intrusion. Consequently, the development of future voluntary management actions for the jumping mouse and other listed species may be compromised if these lands are designated as critical habitat for the jumping mouse. To this end, we found Ohkay Owingeh would prefer to work

with us on a Government-to-Government basis. For these reasons, we believe that our working relationship would be better maintained if they were excluded from the designation of jumping mouse critical habitat. We view this as a substantial benefit since we have developed a cooperative working relationship that benefits the conservation of endangered and threatened species.

We have coordinated and collaborated with Ohkay Owingeh on the management and recovery of the flycatcher, jumping mouse, and their habitats and have established a conservation partnership. Many tribes and pueblos recognize that their management of riparian habitat and conservation of these endangered species are common goals they share with the Service. Ohkay Owingeh’s management actions are evidence of their commitment toward measures to improve riparian habitat for endangered species. Some of the common management strategies are maintaining riparian conservation areas, preserving habitat, improving habitat, reducing occurrence of fire, and conducting surveys (Ohkay Owingeh 2005, entire; 2014, entire). Ohkay Owingeh’s Environmental Affairs Department implements conservation measures to improve riparian habitat conditions.

Ohkay Owingeh is willing to work cooperatively with us and others to benefit other listed species, but only if they view the relationship as mutually beneficial. Consequently, the development of future voluntary management actions for the jumping mouse and other listed species may be compromised if these lands are designated as critical habitat for the jumping mouse. As a result of the cooperative working relationship, we are excluding this area from jumping mouse critical habitat.

Benefits of Exclusion Outweigh the Benefits of Inclusion—Ohkay Owingeh

The benefits of including Ohkay Owingeh in the critical habitat designation are limited to the incremental benefits gained through the regulatory requirement to consult under section 7 and consideration of the need to avoid adverse modification of critical habitat, agency and educational awareness, and the improved implementation of other laws and regulations. However, as discussed in detail above, we believe these benefits are minimized because they are provided for through other mechanisms, such as (1) The advancement of our Federal Indian Trust obligations; (2) the conservation benefits to jumping mouse

and other endangered species and riparian habitats from implementation of conservation actions; and (3) the maintenance of effective collaboration and cooperation to promote the conservation of the jumping mouse and its habitat.

The benefits of excluding Ohkay Owingeh from being designated as jumping mouse critical habitat are more significant and include encouraging the continued implementation of tribal management and conservation measures such as monitoring, surveying, habitat management and protection, and fire-risk reduction activities that are planned for the future or are currently being implemented. Overall, these conservation actions and management of riparian habitat likely accomplish greater conservation than would be available through the implementation of a designation of critical habitat on a project-by-project basis (especially when formal section 7 consultations rarely occur). These programs will allow Ohkay Owingeh to manage their natural resources to benefit riparian habitat for the jumping mouse, without the perception of Federal Government intrusion. This philosophy is also consistent with our published policies on Native American natural resource management. The exclusion of these areas will likely also provide additional benefits to other listed species that would not otherwise be available without the Service’s maintaining a cooperative working relationship. In conclusion, we find that the benefits of excluding Ohkay Owingeh from critical habitat designation outweigh the benefits of including these areas.

Exclusion Will Not Result in Extinction of the Species—Ohkay Owingeh

We have determined that exclusion of Ohkay Owingeh will not result in extinction of the species. First, the jumping mouse is currently extirpated from these areas. Second, Ohkay Owingeh is committed to protecting and managing their lands and species found on those lands according to their tribal, cultural, and natural resource management objectives, which provide conservation benefits for the jumping mouse and its habitat as well as other listed species. In short, Ohkay Owingeh is committed to greater conservation measures on their land than would be available through the designation of critical habitat. Accordingly, we have determined that Ohkay Owingeh should be excluded under section 4(b)(2) of the Act because the benefits of exclusion outweigh the benefits of inclusion and will not cause the extinction of the species.

Required Determinations

Regulatory Planning and Review (Executive Orders 12866 and 13563)

Executive Order 12866 provides that the Office of Information and Regulatory Affairs (OIRA) will review all significant rules. The Office of Information and Regulatory Affairs has determined that this rule is not significant.

Executive Order 13563 reaffirms the principles of E.O. 12866 while calling for improvements in the nation's regulatory system to promote predictability, to reduce uncertainty, and to use the best, most innovative, and least burdensome tools for achieving regulatory ends. The executive order directs agencies to consider regulatory approaches that reduce burdens and maintain flexibility and freedom of choice for the public where these approaches are relevant, feasible, and consistent with regulatory objectives. E.O. 13563 emphasizes further that regulations must be based on the best available science and that the rulemaking process must allow for public participation and an open exchange of ideas. We have developed this rule in a manner consistent with these requirements.

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

Under the Regulatory Flexibility Act (RFA; 5 U.S.C. 601 *et seq.*), as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA; 5 U.S.C. 801 *et seq.*), 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 effects 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 the 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 certification statement of the factual basis for certifying that the rule will not have a significant economic impact on a substantial number of small entities.

According to the Small Business Administration, 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; and small businesses (13 CFR 121.201). 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 considered the types of activities that might trigger regulatory impacts under this designation as well as 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.

The Service's current understanding of the requirements under the RFA, as amended, and following recent court decisions, is that Federal agencies are only required to evaluate the potential incremental impacts of rulemaking only on those entities directly regulated by the rulemaking itself and, therefore, not required to evaluate the potential impacts to indirectly regulated entities. The regulatory mechanism through which critical habitat protections are realized is section 7 of the Act, which requires Federal agencies, in consultation with the Service, to ensure that any action authorized, funded, or carried out by the agency is not likely to adversely modify critical habitat. Therefore, under section 7, only Federal action agencies are directly subject to the specific regulatory requirement (avoiding destruction and adverse modification) imposed by critical habitat designation. Consequently, it is our position that only Federal action agencies will be directly regulated by this designation. There is no requirement under RFA to evaluate the potential impacts to entities not directly regulated. Moreover, Federal agencies are not small entities. Therefore, because no small entities are directly regulated by this rulemaking, the Service certifies that the critical habitat designation will not have a significant economic impact on a substantial number of small entities.

During the development of this final rule, we reviewed and evaluated all information submitted during the comment period that may pertain to our consideration of the probable incremental economic impacts of this critical habitat designation. Based on this information, we affirm our certification that this final critical habitat designation will not have a significant economic impact on a

substantial number of small entities, and a regulatory flexibility analysis is not required.

Energy Supply, Distribution, or Use— *Executive Order 13211*

Executive Order 13211 (Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use) requires agencies to prepare Statements of Energy Effects when undertaking certain actions. The OMB has provided guidance for implementing this Executive Order that outlines nine outcomes that may constitute "a significant adverse effect" when compared to not taking the regulatory action under consideration.

The economic analysis finds that none of these criteria is relevant to this analysis. Thus, based on information in the economic analysis, energy-related impacts associated with the jumping mouse conservation activities within critical habitat are not expected. As such, the designation of critical habitat 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:

(1) This rule will not produce a Federal mandate. In general, a Federal mandate is a provision in legislation, statute, or regulation that would impose an enforceable duty upon State, local, or tribal governments, or the private sector, and includes both "Federal intergovernmental mandates" and "Federal private sector mandates." These terms are defined in 2 U.S.C. 658(5)–(7). "Federal intergovernmental Mandate" includes a regulation that "would impose an enforceable duty upon State, local, or tribal governments" with two exceptions. It excludes "a condition of Federal assistance." It also excludes "a duty arising from participation in a voluntary Federal program," unless the regulation "relates to a then-existing Federal program under which \$500,000,000 or more is provided annually to State, local, and tribal governments under entitlement authority," if the provision would "increase the stringency of conditions of assistance" or "place caps upon, or otherwise decrease, the Federal Government's responsibility to provide funding," and the State, local, or tribal governments "lack authority" to adjust accordingly. At the time of enactment, these entitlement programs were:

Medicaid; Aid to Families with Dependent Children work programs; Child Nutrition; Food Stamps; Social Services Block Grants; Vocational Rehabilitation State Grants; Foster Care, Adoption Assistance, and Independent Living; Family Support Welfare Services; and Child Support Enforcement. “Federal private sector mandate” includes a regulation that “would impose an enforceable duty upon the private sector, except (i) a condition of Federal assistance or (ii) a duty arising from participation in a voluntary Federal program.”

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

(2) We do not believe that this rule will significantly or uniquely affect small governments because most of the lands within the designated critical habitat do not occur within the jurisdiction of small governments. This rule will not produce a Federal mandate of \$100 million or greater in any year. Therefore, 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. Consequently, we do not believe that the critical habitat designation would significantly or uniquely affect small government entities. As such, a Small Government Agency Plan is not required.

Takings—Executive Order 12630

In accordance with E.O. 12630 (Government Actions and Interference with Constitutionally Protected Private Property Rights), we have analyzed the potential takings implications of designating critical habitat for the

jumping mouse in a takings implications assessment. As discussed above, the designation of critical habitat affects only Federal actions. Although private parties that receive Federal funding or assistance or 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.

The economic analysis found that no significant economic impacts are likely to result from the designation of critical habitat for the jumping mouse. Because the Act’s critical habitat protection requirements apply only to Federal agency actions, few conflicts between critical habitat and private property rights should result from this designation. Based on information contained in the economic analysis and described within this document, economic impacts to a property owner are unlikely to be of a sufficient magnitude to support a takings action. Therefore, the takings implications assessment concludes that this designation of critical habitat for the jumping mouse does not pose significant takings implications for lands within or affected by the designation. Based on the best available information, the takings implications assessment concludes that this designation of critical habitat for the jumping mouse does not pose significant takings implications.

Federalism—Executive Order 13132

In accordance with Executive Order 13132 (Federalism), this rule does not have significant Federalism effects. A federalism impact summary statement is not required. In keeping with Department of the Interior and Department of Commerce policy, we requested information from, and coordinated development of, this critical habitat designation with appropriate State resource agencies in Arizona, Colorado, and New Mexico. We received comments from State wildlife agencies of Arizona, Colorado, and New Mexico. We have addressed them in the Summary of Comments and Recommendations section of this rule. From a federalism perspective, the designation of critical habitat directly affects only the responsibilities of Federal agencies. The Act imposes no other duties with respect to critical habitat, either for States and local governments, or for anyone else. As a result, the rule does not have substantial direct effects either on the States, or on the relationship between the national

government and the States, or on the distribution of powers and responsibilities among the various levels of government. The designation may have some benefit to these governments in that the areas that contain the physical or biological features essential to the conservation of the species are more clearly defined, and the elements of the features of the habitat necessary to the conservation of the species are specifically identified. This information does not alter where and what federally sponsored activities may occur. However, it may assist local governments in long-range planning (rather than having them wait for case-by-case section 7 consultations to occur).

Where State and local governments require approval or authorization from a Federal agency for actions that may affect critical habitat, consultation under section 7(a)(2) of the Act will be required. While non-Federal entities that receive Federal funding, assistance, or permits, or that otherwise require approval or authorization from a Federal agency for an action, may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency.

Civil Justice Reform—Executive Order 12988

In accordance with Executive Order 12988 (Civil Justice Reform), the Office of the Solicitor has determined that the rule does not unduly burden the judicial system and that it meets the applicable standards set forth in sections 3(a) and 3(b)(2) of the Executive Order. We are designating critical habitat in accordance with the provisions of the Act. To assist the public in understanding the habitat needs of the subspecies, the rule identifies the elements of physical or biological features essential to the conservation of the jumping mouse. The designated areas of critical habitat are presented on maps, and the rule provides several options for the interested public to obtain more detailed location information, if desired.

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 the OMB under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). 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 (42 U.S.C. 4321 et seq.)

It is our position that, outside the jurisdiction of the U.S. Court of Appeals for the Tenth Circuit, we do not need to prepare environmental analyses pursuant to NEPA (42 U.S.C. 4321 et seq.) in conjunction 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 position was upheld by the U.S. Court of Appeals for the Ninth Circuit (*Douglas County v. Babbitt*, 48 F.3d 1495 (9th Cir. 1995), cert. denied 516 U.S. 1042 (1996)). However, when the range of the species includes States within the Tenth Circuit, such as that of the jumping mouse, under 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 will undertake a NEPA analysis for critical habitat designation.

We performed the NEPA analysis, and drafts of the environmental assessment were made available for public comment in the **Federal Register** on April 8, 2014 (79 FR 19307). The final environmental assessment has been completed and is available for review with the publication of this final rule. You may obtain a copy of the final environmental assessment and finding of no significant impact at <http://www.regulations.gov> at Docket No. FWS-R2-ES-2013-0014, and at the New Mexico Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

We analyzed the potential impacts of critical habitat designation on the following resources and resource management types: Fish, wildlife, vegetation, floodplains and wetlands, water use and management, agriculture, livestock grazing, fire management, highway construction and reconstruction, development, energy resources, recreation, cultural or historic resources, socioeconomics, and environmental justice.

We found that the designation of critical habitat for the jumping mouse would not have direct impacts on the environment as designation is not expected to impose land use restrictions or prohibit land use activities. However, the designation of critical habitat could increase the administrative effort for section 7 consultations to incorporate critical habitat considerations and add

project modifications to reduce impacts to primary constituent elements.

The primary purpose of preparing an environmental assessment under NEPA is to determine whether a proposed action would have significant impacts on the human environment. If significant impacts may result from a proposed action, then an environmental impact statement is required (40 CFR 1502.3). Whether a proposed action exceeds a threshold of significance is determined by analyzing the context and the intensity of the proposed action (40 CFR 1508.27). Our environmental assessment found that the impacts of the proposed critical habitat designation would be minor and not rise to a significant level, so preparation of an environmental impact statement is not required.

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 (Consultation and Coordination with Indian Tribal Governments), and the Department of the 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. In accordance with Secretarial Order 3206 of June 5, 1997 (American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act), we readily acknowledge our responsibilities to work directly with tribes in developing programs for healthy ecosystems, to acknowledge that tribal lands are not subject to the same controls as Federal public lands, to remain sensitive to Indian culture, and to make information available to tribes.

We sent notification letters in November 2011, to both the Isleta Pueblo and Ohkay Owingeh, describing the exclusion process under section 4(b)(2) of the Act, and we have engaged in conversations with both tribes about the proposed rule to the extent possible without disclosing predecisional information. We sent out notification letters on June 20, 2013, notifying the tribes that the proposed rule had published in the **Federal Register** to allow for the maximum time to submit comments. On April 8, 2014, we also sent letters notifying the tribes that we had made available the draft environmental assessment and draft economic analysis in the **Federal Register**.

Following their invitation, we met with Isleta Pueblo on August 14, 2013, and May 6, 2014, to discuss the proposed rule, and their endangered species management plan. In addition to the letters sent to Ohkay Owingeh and telephone conversations, Ohkay Owingeh did not request Government-to-Government consultations or meetings. In addition, we sent coordination letters to the Bureau of Indian Affairs on September 18, 2013, seeking information for our economic analysis. We considered these tribal areas for exclusion from final critical habitat designation to the extent consistent with the requirements of 4(b)(2) of the Act, and subsequently, excluded Isleta Pueblo and Ohkay Owingeh from this final designation.

References Cited

A complete list of references cited in this rulemaking is available on the Internet at <http://www.regulations.gov>, in the May 2014 version of the New Mexico Meadow Jumping Mouse Species Status Assessment Report (Service 2014), and upon request from the New Mexico Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

Authors

The primary authors of this document are the staff members of the New Mexico Ecological Services Field Office.

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—ENDANGERED AND THREATENED WILDLIFE AND PLANTS

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

Authority: 16 U.S.C. 1361–1407; 1531–1544; 4201–4245, unless otherwise noted.

■ 2. In § 17.11(h), revise the entry for “Mouse, New Mexico meadow jumping” under MAMMALS in the List of Endangered and Threatened Wildlife, to read as follows:

§ 17.11 Endangered and threatened wildlife.

* * * * *
(h) * * *

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
MAMMALS							
*	*	*	*	*	*	*	*
Mouse, New Mexico meadow jumping.	<i>Zapus hudsonius luteus</i> .	U.S. (AZ, CO, NM)	Entire	E	838	17.95(a)	NA
*	*	*	*	*	*	*	*

■ 3. In § 17.95, amend paragraph (a) by adding an entry for “New Mexico Meadow Jumping Mouse (*Zapus hudsonius luteus*),” in the same alphabetical order that the species appears in the table at § 17.11(h), to read as follows:

§ 17.95 Critical habitat—fish and wildlife.

* * * * *

(a) *Mammals.*

* * * * *

New Mexico Meadow Jumping Mouse (*Zapus hudsonius luteus*)

(1) Critical habitat units are depicted for Colfax, Mora, Otero, Sandoval, and Socorro Counties in New Mexico; Las Animas, Archuleta, and La Plata Counties in Colorado; and Greenlee and Apache Counties in Arizona on the maps below.

(2) Within these areas, the primary constituent elements of the physical or biological features essential to the conservation of the New Mexico meadow jumping mouse consist of the following:

(i) Riparian communities along rivers and streams, springs and wetlands, or canals and ditches that contain:

(A) Persistent emergent herbaceous wetlands especially characterized by presence of primarily forbs and sedges (*Carex* spp. or *Schoenoplectus pungens*); or

(B) Scrub-shrub riparian areas that are dominated by willows (*Salix* spp.) or alders (*Alnus* spp.) with an understory of primarily forbs and sedges; and

(ii) Flowing water that provides saturated soils throughout the New Mexico meadow jumping mouse’s active season that supports tall (average stubble height of herbaceous vegetation of at least 61 centimeters (24 inches)) and dense herbaceous riparian vegetation composed primarily of sedges (*Carex* spp. or *Schoenoplectus pungens*) and forbs, including, but not limited to, one or more of the following associated species: Spikerush (*Eleocharis macrostachya*), beaked sedge (*Carex rostrata*), rushes (*Juncus* spp. and *Scirpus* spp.), and numerous species of grasses such as bluegrass (*Poa* spp.), slender wheatgrass (*Elymus trachycaulus*), brome (*Bromus* spp.), foxtail barley (*Hordeum jubatum*), or Japanese brome (*Bromus japonicas*), and forbs such as water hemlock (*Circuta douglasii*), field mint (*Mentha arvensis*), asters (*Aster* spp.), or cutleaf coneflower (*Rudbeckia laciniata*); and

(iii) Sufficient areas of 9 to 24 kilometers (5.6 to 15 miles) along a stream, ditch, or canal that contain suitable or restorable habitat to support movements of individual New Mexico meadow jumping mice; and

(iv) Adjacent floodplain and upland areas extending approximately 100

meters (330 feet) outward from the boundary between the active water channel and the floodplain (as defined by the bankfull stage of streams) or from the top edge of the ditch or canal.

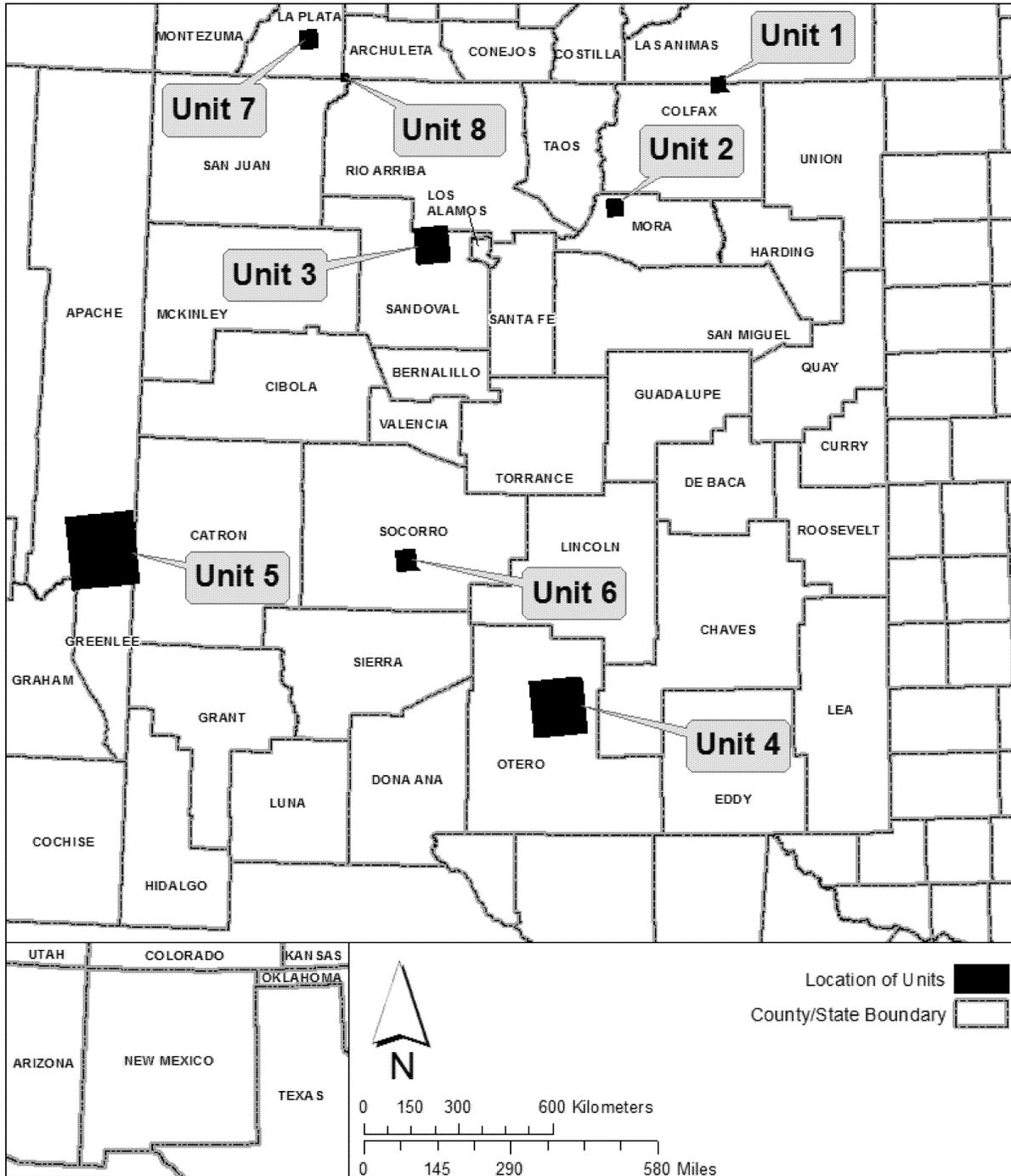
(3) Critical habitat does not include manmade structures (such as buildings, fire lookout stations, runways, roads, and other paved areas) and the land on which they are located existing within the legal boundaries on April 15, 2016.

(4) *Critical habitat map units.* Data layers defining map units were created using the USA Contiguous Albers Equal Area Conic USGS version projection. The maps in this entry, as modified by any accompanying regulatory text, establish the boundaries of the critical habitat designation. The coordinates or plot points or both on which each map is based are available to the public at the Service’s internet site <http://www.fws.gov/southwest/es/NewMexico/>, at <http://www.regulations.gov> at Docket No. FWS–R2–ES–2013–0014, and at the New Mexico Ecological Services Field Office. You may obtain field office location information by contacting one of the Service regional offices, the addresses of which are listed at 50 CFR 2.2.

(5) *Note:* General Locations of Critical Habitat for the New Mexico Meadow Jumping Mouse—Overview, follows:

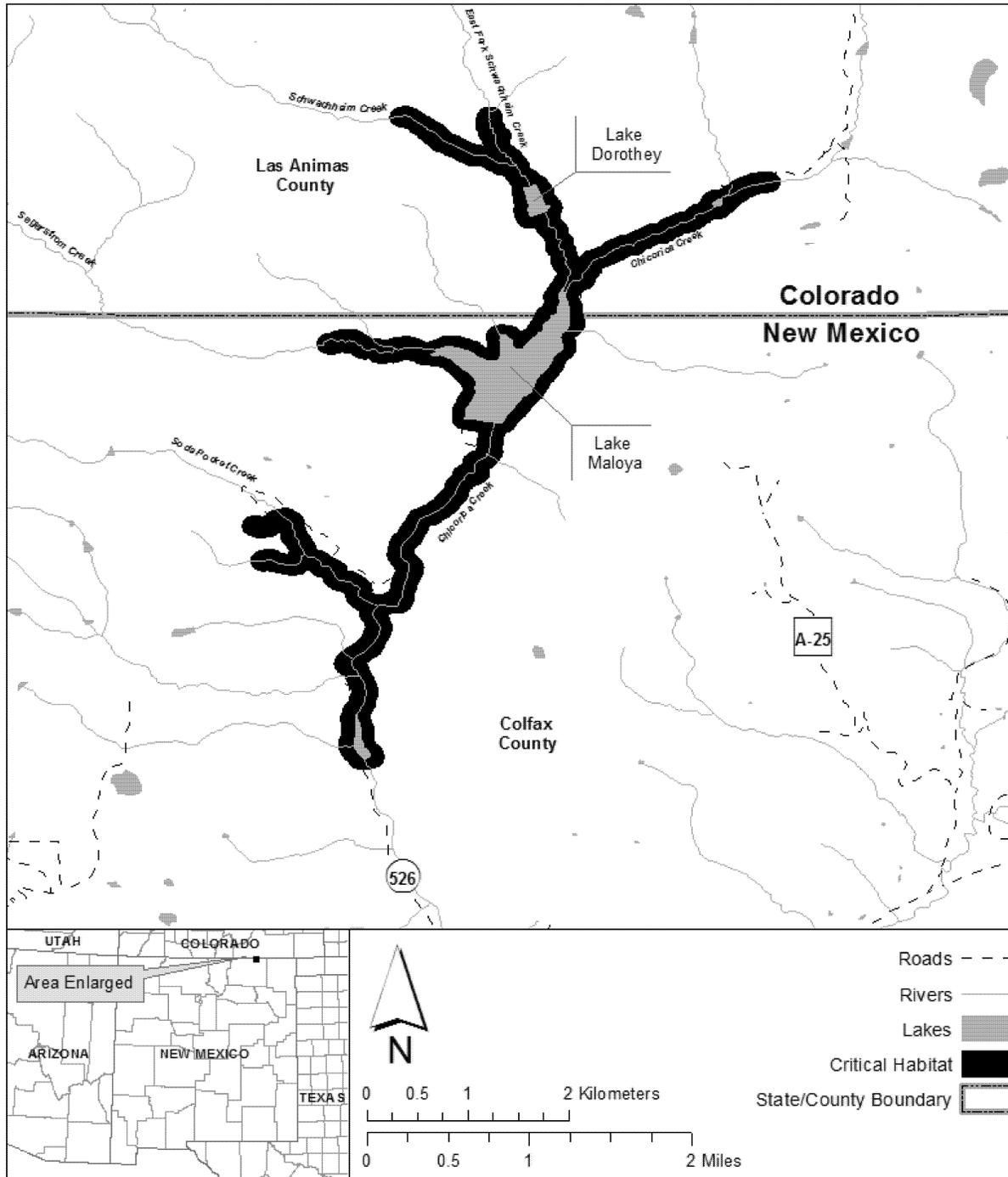
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General Locations of Critical Habitat for the New Mexico Meadow Jumping Mouse - Overview



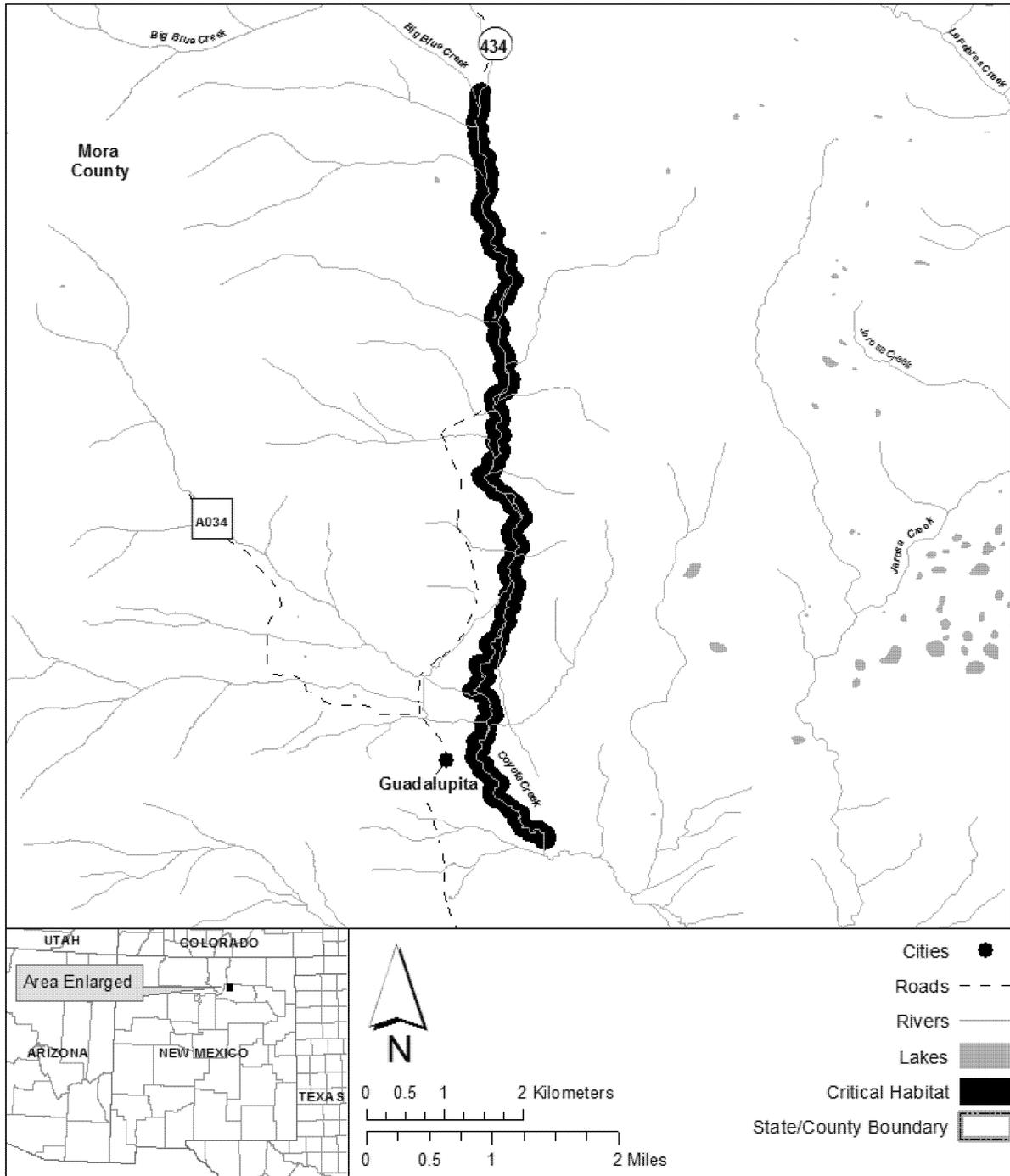
(6) Unit 1—Sugarite Canyon. Map follows:

Locations of Critical Habitat for the New Mexico Meadow Jumping Mouse Unit 1 - Sugarite Canyon



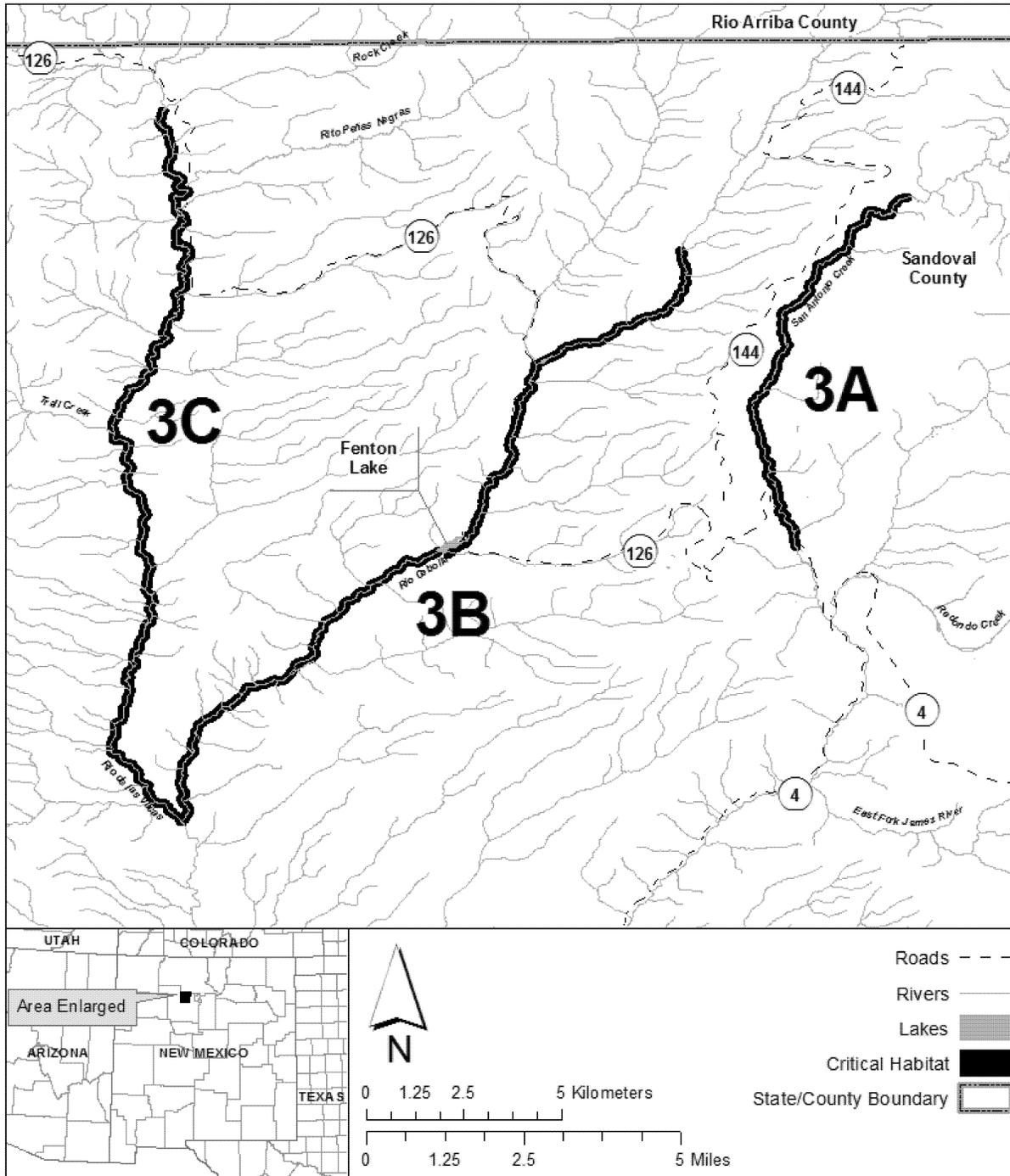
(7) Unit 2—Coyote Creek. Map follows:

Locations of Critical Habitat for the New Mexico Meadow Jumping Mouse Unit 2 - Coyote Creek



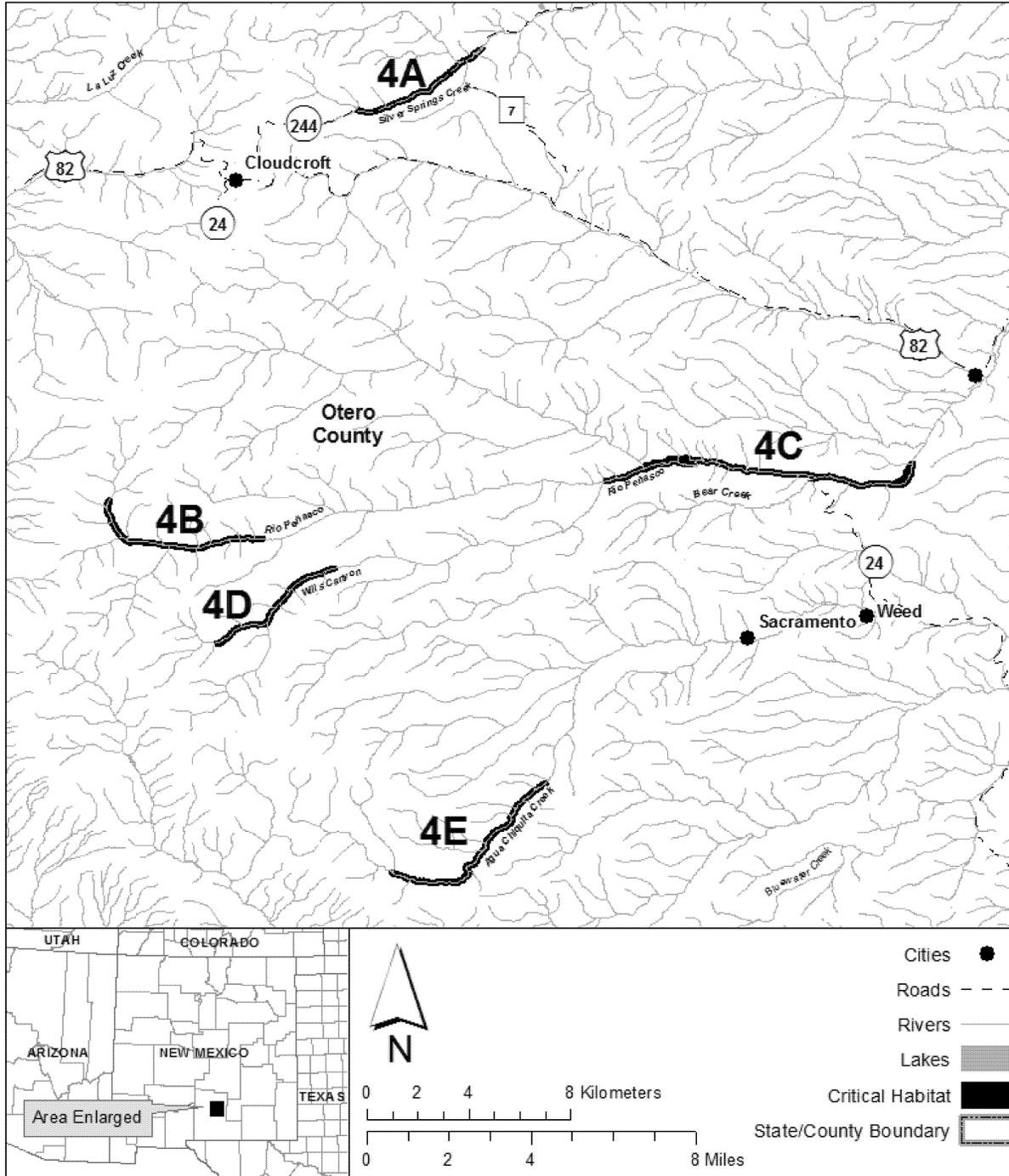
(8) Unit 3—Jemez Mountains. Map follows:

Locations of Critical Habitat for the New Mexico Meadow Jumping Mouse Unit 3 - Jemez Mountains



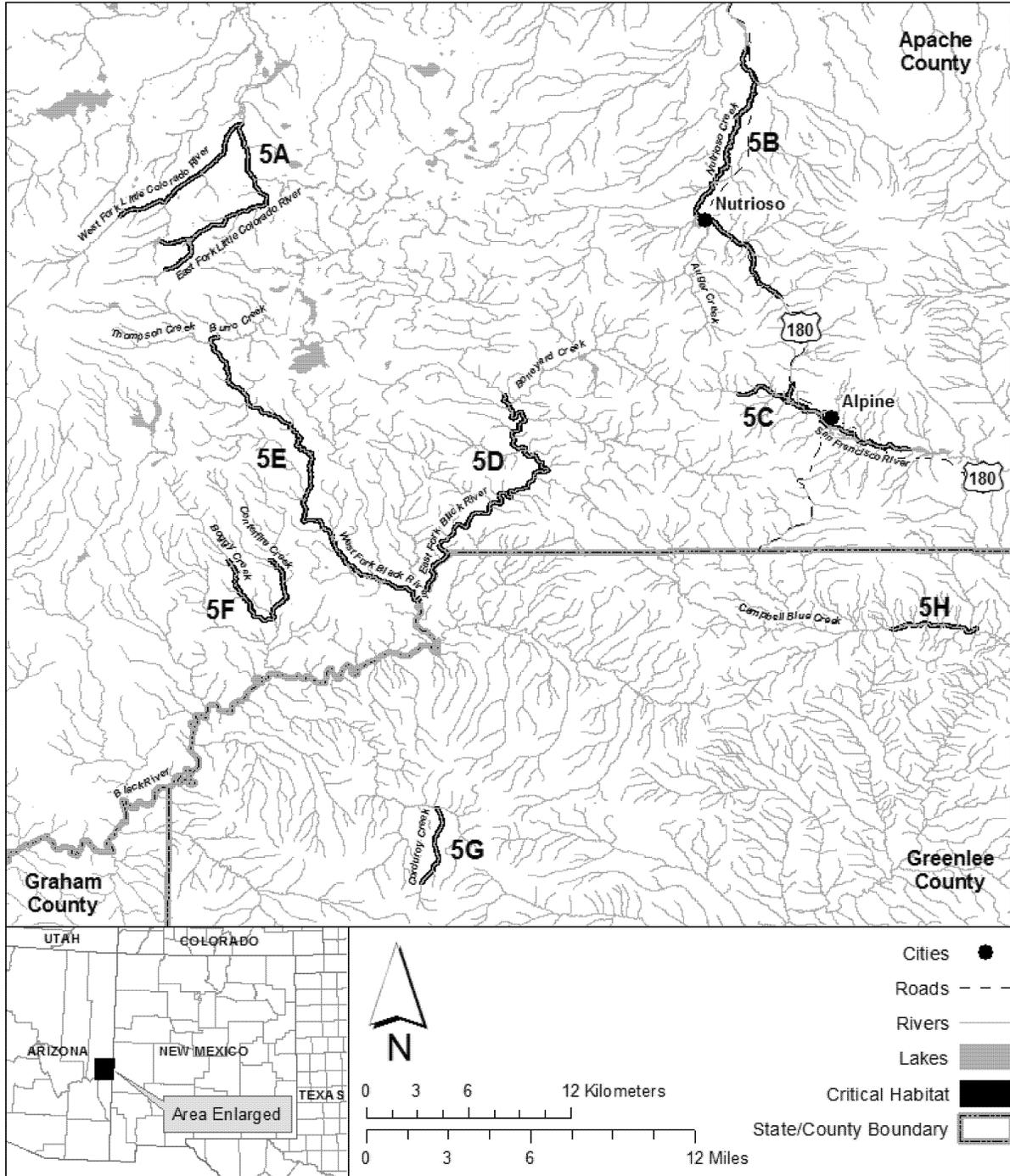
(9) Unit 4—Sacramento Mountains.
Map follows:

Locations of Critical Habitat for the New Mexico Meadow Jumping Mouse Unit 4 - Sacramento Mountains



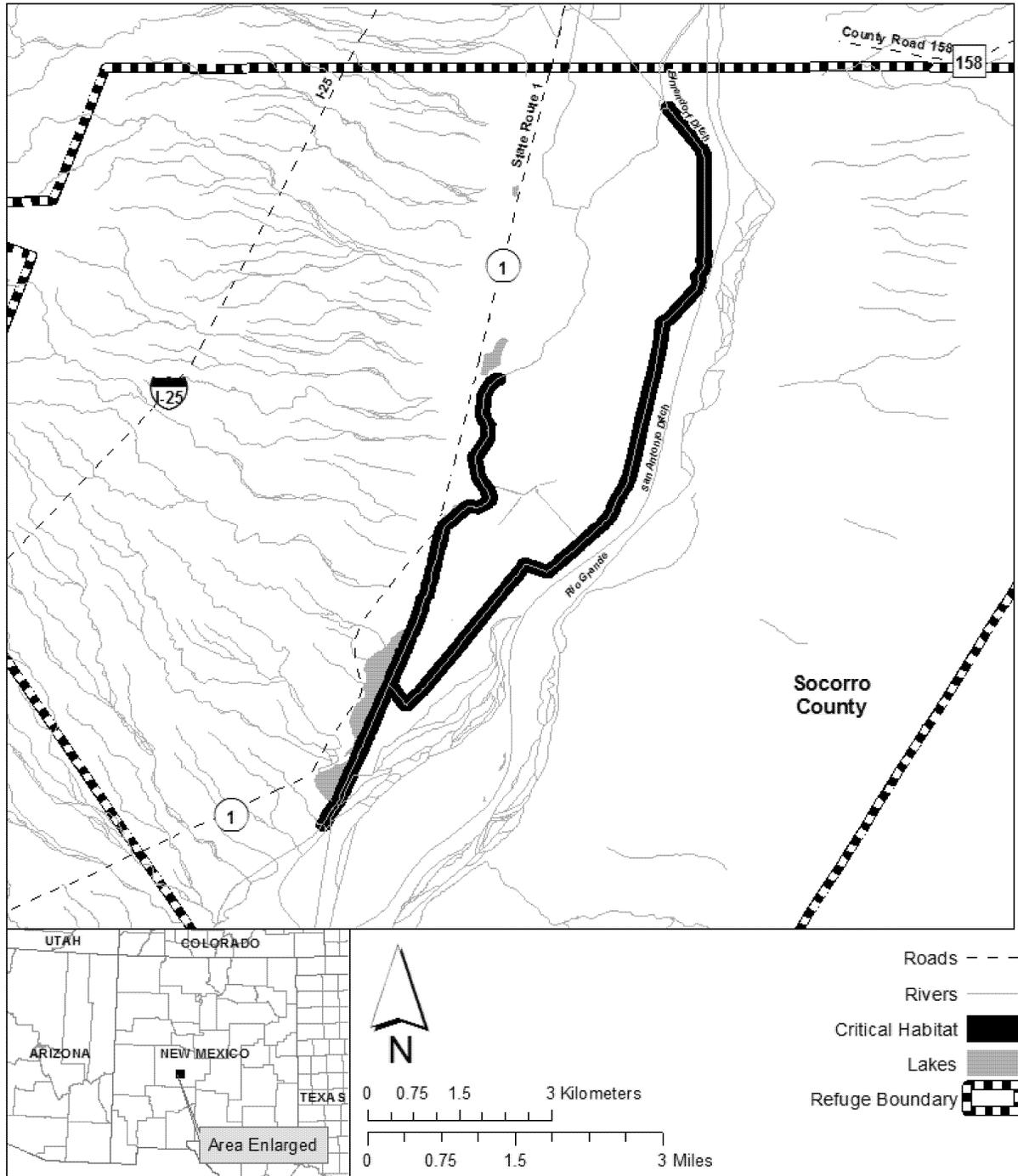
(10) Unit 5—White Mountains. Map follows:

Locations of Critical Habitat for the New Mexico Meadow Jumping Mouse Unit 5 - White Mountains



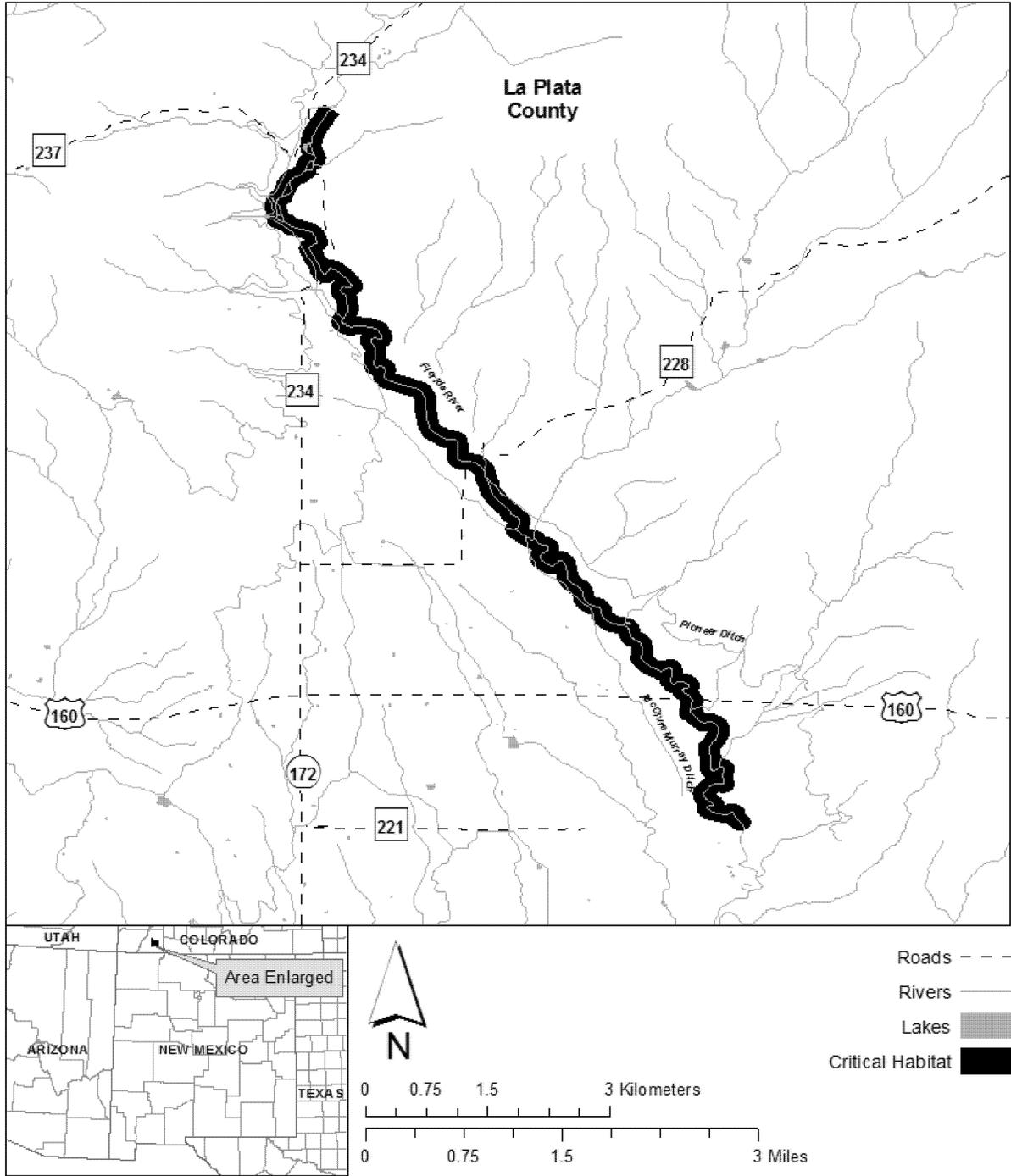
(11) Unit 6—Bosque del Apache National Wildlife Refuge (NWR). Map follows:

Locations of Critical Habitat for the New Mexico Meadow Jumping Mouse Unit 6 - Bosque del Apache NWR



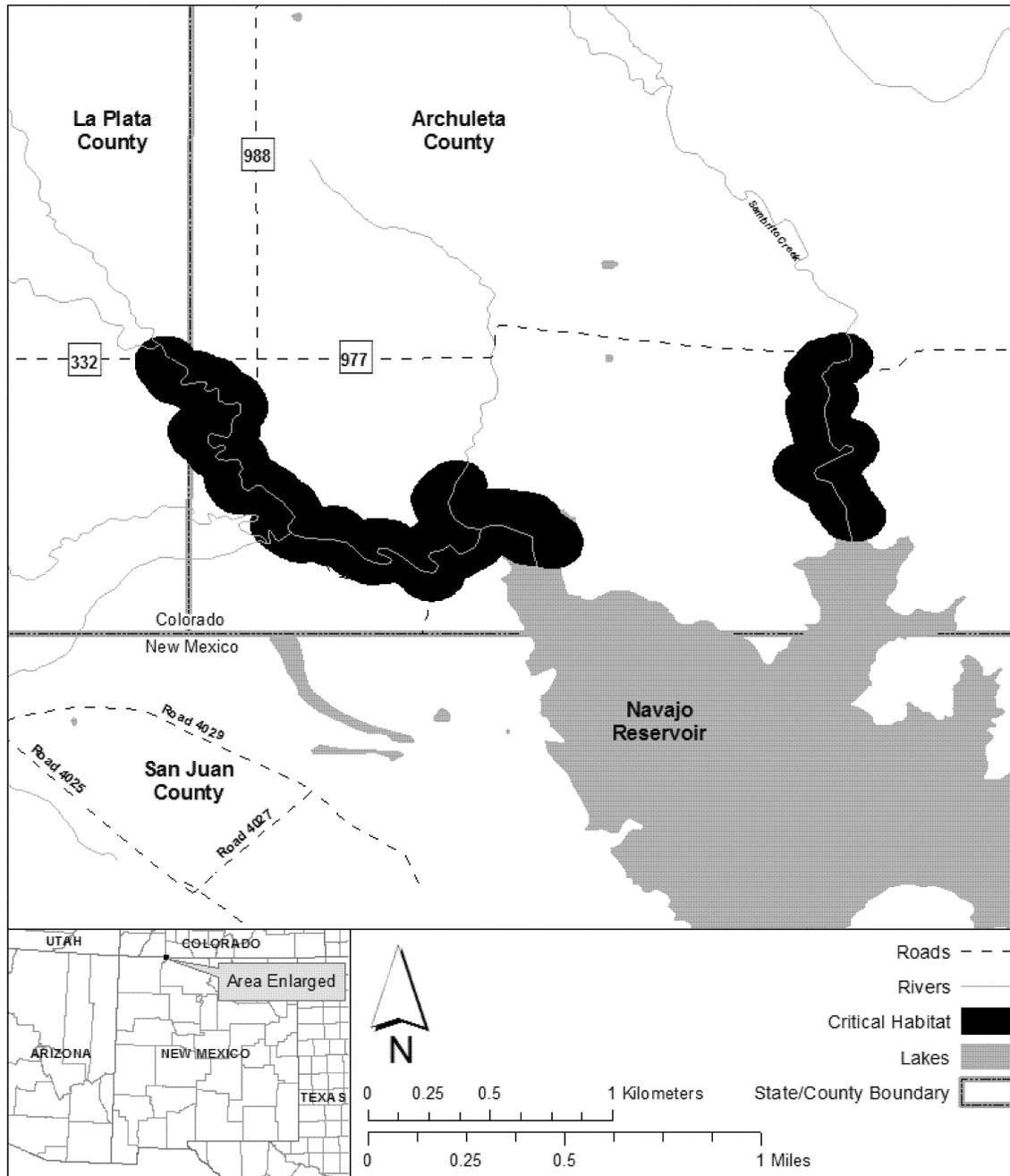
(12) Unit 7—Florida River. Map follows:

Locations of Critical Habitat for the New Mexico Meadow Jumping Mouse Unit 7 - Florida River



(13) Unit 8—Sambrito Creek. Map follows:

Locations of Critical Habitat for the New Mexico Meadow Jumping Mouse Unit 8 - Sambrito Creek



* * * * *

Dated: March 7, 2016.
Karen Hyun,
*Acting Principal Deputy Assistant Secretary
for Fish and Wildlife and Parks.*
[FR Doc. 2016-05912 Filed 3-15-16; 8:45 am]
BILLING CODE 4333-15-P