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## DEPARTMENT OF THE INTERIOR

### Fish and Wildlife Service

#### 50 CFR Part 17

[Docket No. FWS–R2–ES–2013–0023; 4500030113]

RIN 1018–AY50

### Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for the New Mexico Meadow Jumping Mouse Throughout Its Range

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

**ACTION:** Final rule.

**SUMMARY:** We, the U.S. Fish and Wildlife Service (Service), determine endangered species status under the Endangered Species Act of 1973 (Act), as amended, for the New Mexico meadow jumping mouse (*Zapus hudsonius luteus*) found in Arizona, New Mexico, and Colorado. The effect of this regulation will be to add this species to the List of Endangered and Threatened Wildlife. We have also determined that critical habitat for the New Mexico meadow jumping mouse is prudent and determinable and will soon

publish in the **Federal Register** our final designation of critical habitat for the New Mexico meadow jumping mouse.

**DATES:** This rule becomes effective [**INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**].

**ADDRESSES:** This final rule is available on the internet at

*http://www.fws.gov/southwest/es/NewMexico/index.cfm*, and *http://www.regulations.gov* at Docket No. FWS–R2–ES–2013–0023. Comments and materials received, as well as some supporting documentation used in the preparation of this final rule, are available for public inspection at *http://www.regulations.gov*. Some supporting documentation is also available at *http://www.fws.gov/southwest/es/NewMexico/index.cfm*. All of the comments, materials, and documentation that we considered in this rulemaking are available by appointment, during normal business hours at: 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.

**FOR FURTHER INFORMATION CONTACT:** Wally 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.* Under the Act, a species or subspecies may warrant protection through listing if it is endangered or threatened throughout all or a significant portion of its range. Listing a species as an endangered or threatened species can only be completed by issuing a rule. On June 20, 2013 (78 FR 37363; 78 FR 37328), we proposed to list the New Mexico meadow jumping mouse under the Act as an endangered species and proposed to designate critical habitat. We found that the species currently faces numerous threats of high magnitude, and, therefore, qualifies for listing, and we requested additional information and comments on the proposed listing. This final rule considers all comments received by peer reviewers, tribes, State agencies, Federal agencies, and the public regarding the proposed rule to list the New Mexico meadow jumping mouse.

*This rule will* finalize the listing of the New Mexico meadow jumping mouse as endangered.

*The basis for our action.* Under the Act, a species may be determined to be an endangered or threatened species based on any of five factors: (A) The present or threatened destruction, modification, or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C)

disease or predation; (D) the inadequacy of existing regulatory mechanisms; and (E) other natural or manmade factors affecting its continued existence. We have determined that the New Mexico meadow jumping mouse meets the definition of an endangered species primarily because of the present or threatened destruction, modification, or curtailment of its habitat or range; the inadequacy of existing regulatory mechanisms; and other natural and manmade factors affecting its continued existence. Our consideration of these factors is described in section 5.1 “Habitat Loss” and section 5.3 “Protective Regulations” of the SSA Report. The other two of the five factors are not contributing to the current status of the species. See section 5.2 “Other Factors” in the SSA Report for our consideration of these factors.

*Peer review and public comment.* We sought comments from independent specialists to ensure that our designation is based on scientifically sound data, assumptions, and analyses. We invited these peer reviewers to comment on our listing proposal. We also considered all comments and information received during the comment period.

### **Previous Federal Actions**

Please refer to the proposed listing rule for the New Mexico meadow jumping mouse (78 FR 37363, June 20, 2013) for a detailed description of previous Federal actions concerning this species.

We determined that critical habitat for the New Mexico meadow jumping mouse

is prudent and determinable and will soon publish in the **Federal Register** our final determination designating critical habitat for the New Mexico meadow jumping mouse.

## **Background**

### *Species Information*

The Final New Mexico Meadow Jumping Mouse Species Status Assessment Report (SSA Report; Service 2014, entire), available online at [www.regulations.gov](http://www.regulations.gov), Docket No. FWS–R2–ES–2013–0023, provides a thorough assessment of New Mexico meadow jumping mouse biology and natural history, and assesses demographic risks (such as small population sizes), threats, and limiting factors in the context of determining viability and risk of extinction for the New Mexico meadow jumping mouse. In the SSA Report, we compile biological data and a description of past, present, and likely future threats (causes and effects) facing the species. Because data in these areas of science are limited, some uncertainties are associated with this assessment. Where we have substantial uncertainty, we have attempted to make our necessary assumptions explicit in the SSA Report. We base our assumptions in these areas on the best available information. Importantly, the SSA Report does not represent a decision by the Service on whether this taxon should be listed as a threatened or endangered species under the Act. The SSA Report does however, provide the scientific basis that informs our regulatory decision (see *Summary of Biological Status and Threats*), which involves the application

of standards within the Act and its implementing regulations, and Service policies (see **Determination**).

*Summary of Biological Status and Threats*

Our SSA Report documents the results of the comprehensive biological status review for the New Mexico meadow jumping mouse and provides a thorough account of the species' overall viability and, conversely, extinction risk (Service 2014, entire). The SSA Report contains the data on which this final rule is based. The following is a summary of the results and conclusions from the SSA Report.

The New Mexico meadow jumping mouse is a small mammal whose historical distribution likely included riparian wetlands along streams in the Sangre de Cristo and San Juan Mountains from southern Colorado to central New Mexico, including the Jemez and Sacramento Mountains and the Rio Grande Valley from Espanola to Bosque del Apache National Wildlife Refuge, and into parts of the White Mountains in eastern Arizona.

In conducting our status assessment we first considered what the New Mexico meadow jumping mouse needs to ensure viability. We generally define viability as the ability of the species to persist over the long term and, conversely, to avoid extinction. We next evaluated whether the identified needs of the New Mexico meadow jumping mouse are currently available and the repercussions to the subspecies when provision of

those needs is missing or diminished. We then consider the factors that are causing the species to lack what it needs, including historical, current, and future factors. Finally, considering the information reviewed, we evaluate the current status and future viability of the species in terms of resiliency, redundancy, and representation.

Resiliency is the ability of the species to withstand stochastic events (arising from random factors such as drought, flooding, or wildfire) and, in the case of the New Mexico meadow jumping mouse, is best measured by habitat size. Redundancy is the ability of a species to withstand catastrophic events within part of its range, and can be provided by the duplication and distribution of resilient populations across the range of the New Mexico meadow jumping mouse. Representation is the ability of a species to adapt to changing environmental conditions and can be measured by the breadth of genetic diversity within and among populations, and the ecological diversity of populations across the species' range. In the case of the New Mexico meadow jumping mouse, we evaluate representation based on the extent of the geographical range as an indicator of genetic and ecological diversity. The main areas of uncertainty in our analysis include the minimum amount of suitable habitat needed to support resilient populations and the number of redundant populations needed to provide for adequate redundancy and representation.

Our assessment concluded that the New Mexico meadow jumping mouse has an overall low viability (probability of persistence) in the near term (between now and the next 10 years) and a decreasing viability in the long-term future (beyond 10 years). The

New Mexico meadow jumping mouse occurs within eight geographic management areas, which 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. For the subspecies to be viable, the New Mexico meadow jumping mouse needs to have multiple resilient populations distributed throughout different drainages within the eight geographic management areas. In this summary, we present an overview of the comprehensive biological status review. A detailed discussion of the information supporting this overview can be found in the SSA Report (Service 2014, entire).

For the New Mexico meadow 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 New Mexico meadow jumping mouse's life history is that it hibernates about 8 or 9 months out of the year, which is longer than most other mammals. Conversely, it is only active 3 or 4 months during the summer. Within this short timeframe, it must breed, birth and raise young, and store up sufficient fat reserves to survive the next year's hibernation period. In addition, jumping mice only live 3 years or less, and have one small litter annually, with seven or fewer young, so the subspecies has limited capacity for high population growth rates due to this low fecundity (reproductive potential). As a result, if resources are not available in a single season, jumping mice populations would be greatly stressed and would likely have lower reproduction and over-winter survival during hibernation.

The New Mexico meadow 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 centimeters (cm) (24 inches (in)), dense riparian herbaceous vegetation (plants with no woody tissue) primarily composed of sedges (plants in the Cyperaceae Family that superficially resemble grasses but usually have triangular stems) and forbs (broad-leafed herbaceous plants). This suitable habitat is found only when wetland vegetation achieves full growth potential associated with perennial flowing water. This vegetation is an important resource need for the New Mexico meadow 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. New Mexico meadow jumping mice must have rich, abundant food sources during the summer so they can accumulate sufficient fat reserves to survive their long hibernation period. In addition, individual jumping mice also need intact upland areas (areas up gradient and beyond the floodplain of rivers and streams) 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. Some uncertainty exists about the particular location of hibernation sites relative to riparian areas.

These suitable habitat conditions need to be in appropriate locations and of adequate sizes to support healthy populations of the New Mexico meadow jumping mouse. Historically, these wetland habitats would have been in large patches (movements of 200 to 700 meters (m) (656 to 2,297 feet (ft)) to disperse to other habitat patches within stream segments) located intermittently along long stretches of streams.

Connectivity between patches of suitable habitat is necessary to facilitate daily and seasonal movements, and dispersal to increase the likelihood of long-term viability of jumping mouse populations. The ability of New Mexico meadow 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 (the loss of a population or a species from a particular geographic region). Counting individual mice to assess population sizes is very difficult because the subspecies is trap-wary and hibernates for an extended time; thus, data are unavailable. We can best measure population health by the size of the intact, suitable habitat available.

Our assessment uses the best available information to estimate the minimum length of specific stream reaches or segments of ditches and canals, and the corresponding suitable habitat patch sizes that we think will provide a high likelihood of long-term persistence for the New Mexico meadow jumping mouse. Because the subspecies has limited daily and seasonal movements, dense riparian herbaceous habitat along streams, ditches, and canals needs to be of sufficient length to support large population sizes and multiple local populations dispersed throughout specific waterways. This continuous spatial arrangement is necessary to support breeding, nonbreeding, and daily and seasonal movements of New Mexico meadow jumping mice.

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 about 27.5 to 73.2 hectares (ha) (68 to 181 acres (ac)), along 9 to 24 kilometers (km) (6 to 15 miles (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. This distribution and amount of suitable habitat would allow for multiple subpopulations of New Mexico meadow jumping mice to exist along drainages and would provide for sources of recolonization if some areas were extirpated due to disturbances. The suitable habitat patches must be relatively close together, no more than about 100 m (330 ft) apart, because the New Mexico meadow jumping mouse has limited movement and dispersal capacity for natural recolonization. Rangewide, we determined that the New Mexico meadow 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.

The New Mexico meadow jumping mouse life history (short active period, short lifespan, low fecundity, specific habitat needs, and low movement and dispersal ability) makes populations highly vulnerable to extirpations when habitat is lost and fragmented. Based on historical (1980s and 1990s) and current (from 2005 to 2012) data, the distribution and abundance of the New Mexico meadow jumping mouse has declined significantly rangewide. The majority of local extirpations have occurred since the late 1980s to early 1990s, as we found about 70 formerly occupied locations are now considered to be extirpated.

Since 2005, researchers have documented 29 remaining populations spread across the 8 geographic management areas (2 in Colorado, 15 in New Mexico, and 12 in Arizona). Nearly all of the current populations are isolated and widely separated, and all of the 29 populations located since 2005 have patches of suitable habitat that are too small to support resilient populations of New Mexico meadow jumping mouse. None of them are larger than the needed 27.5 to 73.2 ha (68 to 181 ac), and over half of them are only a few acres in size. In addition, 11 of the 29 populations documented as extant since 2005 have been substantially compromised since 2011 (due to water shortages, excessive grazing, or wildfire and postfire flooding), and these populations could already be extirpated. Seven additional populations in Arizona may also be compromised due to postfire flooding following recent large wildfires. For example, the population at Sugarite Canyon State Park has been significantly impacted since the 2011 Track Wildfire (Frey and Kopp 2013, entire; Service 2013c, entire). Additionally, no New Mexico meadow jumping mice were captured at Bosque del Apache National Wildlife Refuge in 2013, despite intensive surveys within suitable habitat (Frey 2013, entire; Service 2013, entire; 2013a, entire; 2013b, entire). At this rate of population extirpation (based on known historical population losses and possible recent population losses) the probability of persistence of the subspecies as a whole is severely compromised in the near term.

Four of the eight geographic management areas have two or more locations known to be occupied by the New Mexico meadow jumping mouse since 2005, but all

are insufficient (too small) to support resilient populations. The remaining four geographic management areas each have only one location of the New Mexico meadow jumping mouse known to be occupied since 2005, and each population is insufficient (too small) to be resilient. Therefore, although researchers have some uncertainty about population sizes of extant localities, the New Mexico meadow jumping mouse does not currently have the number and distribution of resilient populations needed to provide the needed levels of redundancy and representation (genetic and ecological diversity) for the subspecies to demonstrate viability.

We next analyzed the past, present, and likely future threats (causes and effects) that may put New Mexico meadow jumping mouse populations at risk of future extirpation. Because the New Mexico meadow jumping mouse requires such specific suitable habitat conditions, populations have a high potential for extirpation when habitat is altered or eliminated. In addition, because of the current conditions of isolated populations, when localities are extirpated, there is little or no opportunity for natural recolonization of the area due to the subspecies' limited movement and dispersal capacity.

We found a significant reduction in occupied localities likely due to cumulative habitat loss and fragmentation across the range of the New Mexico meadow jumping mouse. The past and current habitat loss has resulted in the extirpation of historical populations, reduced the size of existing populations, and isolated existing small populations. Ongoing and future habitat loss is expected to result in additional

extirpations of more populations. The primary sources of current and future habitat losses include grazing pressure (which removes the needed vegetation) and water management and use (which causes vegetation loss from mowing and drying of soils), lack of water due to drought (exacerbated by climate change), and wildfires (also exacerbated by climate change). Additional sources of habitat loss are likely to occur from scouring floods, loss of beaver, highway reconstruction, residential and commercial development, coalbed methane development, and unregulated recreation.

These multiple sources of habitat loss are not acting independently, but produce cumulative impacts that magnify the effects of habitat loss on New Mexico meadow jumping mouse populations. Historically, larger connected populations of New Mexico meadow 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 small populations makes local extirpations likely more common. In addition, the isolated state of existing populations makes natural recolonization of impacted areas highly unlikely or impossible in most areas.

Considering the subspecies' biological status now and its likely status into the future, without active conservation (i.e., grazing management and water management) existing populations are vulnerable to extirpation (at least 11 have already undergone substantial impacts since 2011) and, therefore, the subspecies as a whole is currently at an elevated risk of extinction. None of the 29 populations known to exist since 2005 are of sufficient size to be resilient. Assuming this rate of population loss continues similar to

recent years, the number of populations could be severely curtailed in the near term, eliminating the level of redundancy needed to withstand catastrophic drought and wildfire, along with the additive impacts of multiple threats. In addition to past sources of habitat loss, ongoing grazing, water shortages, and high-impact wildfire (the latter two exacerbated by climate change) will continue to put all of the remaining locations at considerable risk of extirpation in the near-term (between now and the next 10 years) and increasing over the long term. In considering the needed level of representation, while sufficient diversity likely still exists across the eight geographic management areas, the subspecies representation is relatively low because none of these geographic management areas currently have resilient populations. Therefore, we conclude that the overall probability of persistence is low in the near term and decreasing in the future due to the lack of adequate resiliency, redundancy, and representation.

### **Summary of Comments and Recommendations**

We requested written comments from the public on the proposed rule during a comment period that opened on June 20, 2013 (78 FR 37363), and closed on August 19, 2013. We contacted appropriate Federal and State agencies, tribes, scientific experts and organizations, and other interested parties and invited them to comment on the proposal. During the comment period, a newspaper notice inviting general public comment was published in the Albuquerque Journal. On August 15, 2013, we also held an informational meeting in Durango, Colorado, after receiving requests from interested parties. We did not receive any requests for a public hearing.

During the comment period, we received 24 comment letters, including 3 peer review comment letters, addressing the proposed listing of the New Mexico meadow jumping mouse. In this final rule, we address only the comments regarding the proposed listing of the New Mexico meadow jumping mouse. Comments addressing the proposed critical habitat designation will be fully addressed in a separate rulemaking action, and published in the **Federal Register** at a later date. All substantive information provided during the comment period has either been incorporated directly into this final determination, the SSA Report, or addressed below.

#### *Comments from Peer Reviewers*

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 that are familiar 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.

We reviewed all comments received from the peer reviewers for substantive issues and new information regarding the listing of the New Mexico meadow jumping mouse. All three of the peer reviewers agreed that the information presented in the proposed rule to list the New Mexico meadow jumping mouse as an endangered species is scientifically sound; that the assumptions, analyses, and conclusions are well reasoned;

and that the information is complete and the best available, and the risks or threats to the subspecies are not undervalued. In addition, two of the three peer reviewers provided clarifications and suggestions to improve the final rule to list the New Mexico meadow jumping mouse as endangered. These comments are addressed in the following summary and incorporated into the final rule as appropriate.

(1) *Comment:* New information documents the possible extirpation of the Bosque del Apache National Wildlife Refuge population (Frey 2013, entire); the continued loss of New Mexico meadow jumping mice and habitat from the 2011 Track Wildfire in Sugarite Canyon (Frey and Kopp 2013, entire); additional survey efforts within the Sacramento Mountains that failed to document any new populations (Frey 2013c, entire); and new genetic data that continues to support the validity of the New Mexico meadow jumping mouse as a subspecies and its imperiled status (Malaney *et al.* 2012, entire; Malaney and Cook 2013, entire).

*Our Response:* We have incorporated this new information in the SSA Report (see **4.3 Population Estimates and Status** in the SSA Report; Service 2014, entire). The data continue to support our determination that the subspecies is endangered.

(2) *Comment:* We received comments pertaining to dispersal distances. One suggestion, to plan for the interconnectivity of populations, was that the Service should consider dispersal distances from studies on the Preble's meadow jumping mouse (*Zapus hudsonius preblei*) of up to 4.3 km (2.7 mi), whereas another suggestion found our

characterization of dispersal distances and home range sizes of the New Mexico meadow jumping mouse appropriate.

*Our Response:* Schorr (2003, p. 10; 2012, p. 1279) did report the Preble's meadow jumping mouse can move up to 4.3 km (2.7 mi). However, as stated in the SSA Report (Service 2014, entire), studies indicate that the New Mexico meadow jumping mouse does not appear to travel as great a distance as the Preble's meadow jumping mouse. Further, movement data is available on the New Mexico meadow jumping mouse. The maximum distance travelled between two successive points by all radio-collared jumping mice on Bosque del Apache National Wildlife Refuge 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 **2.6 Movements and Home Range** in the SSA Report for additional information.

The conservation of New Mexico meadow jumping mice should plan for interconnectivity between populations using movement distances that are likely more common, rather than the maximum possible distance (see Trakhtenbrot *et al.* 2005, p. 175). As opposed to using the phrase, "maximum dispersal distance" in the draft SSA Report, we have clarified this as the distance between patches of suitable habitat to provide for population connectivity for the New Mexico meadow jumping mouse. In the SSA Report, we found that appropriately sized patches of suitable habitat should be no more than about 200 m (656 ft) apart within waterways, which would encompass the majority of regular (daily and seasonal) movements of individuals.

(3) *Comment:* The proposed rule and SSA Report provide virtually no information on the historical (pre-1980) distribution of the New Mexico meadow jumping mouse. These reports use only two time periods, historical (1980 to 1999) and current records (2005 forward). Almost no records of the subspecies obtained prior to 1980 were included in the SSA Report. The distribution and status of the 1980 to 1999 period was likely already significantly compromised.

*Our Response:* While the historical and current distributional data for the New Mexico meadow jumping mouse is categorized into two time periods in the SSA Report (Service 2014, entire), we did include all known distribution records. While we did not provide a map or table detailing the pre-1980 distribution of the subspecies in the SSA Report, we summarized the comprehensive reports of the New Mexico meadow jumping mouse's historical range and distribution (i.e., Frey 2008c, entire; Hafner *et al.* 1981). These authors (Frey 2008c, pp. 35, 46; Hafner *et al.* 1981, pp. 501–502) reported that the historical range and distribution of the New Mexico meadow jumping mouse likely included riparian wetlands along the Sangre de Cristo and San Juan Mountains from southern Colorado to central New Mexico and into parts of the White Mountains of Arizona.

We found no capture records of jumping mice between 1996 and 2005. Surveys conducted since 2005 documented locations where the subspecies was historically present, but is now apparently absent or at levels too low for detection. Based on this

information and previous reviews, we continue to find that the comparison between historical (1980 to 1999) and current New Mexico meadow jumping mouse records (2005 forward) is appropriate and the pre-1980 records were sufficiently considered and incorporated in the SSA Report.

The Service agrees that the distribution and status of the subspecies was compromised by 1999. However, the Service's analysis of the five factors threat analysis listed in section 4(a)(1) of the Act includes the consideration of present threats and threats anticipated into the near future. We evaluated whether the subspecies is in danger of extinction throughout all or a significant portion of its range (endangered) or is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range (threatened).

#### *Comments From Federal Agencies*

(4) *Comment:* Snap traps have a higher capture success rate than live traps. As such, historical data collected by Morrison should not be compared with current data collected using nonlethal means.

*Our Response:* As noted in the SSA Report, use of live traps for inventory and monitoring are preferable, because some New Mexico meadow jumping mouse populations are likely extremely small, and killing and removal of even a few individuals from the population using snap traps could be detrimental. Further, the Service is

required to use the best available scientific and commercial data. Data collected using live traps were not designed to estimate population size, but, to locate populations (Morrison 1988, pp. 47, 52; 1989, p. 3; 1990, p. 138; 1991, pp. 3–4). Frey (2005a, p. 68; 2011, p. 9; 2013d, pp. 24, 28) recommended targeted survey efforts to determine presence or absence of jumping mice should be 400 to 700 trap-nights over 3 consecutive nights using Sherman live traps baited with sweet grain mixture. Although Morrison used both Sherman and snap traps, these efforts resulted in locating populations (1988, pp. 47, 52; 1991, pp. 3–4). Consequently, we believe comparing data from Morrison’s studies to current information on population presence is valid.

(5) *Comment:* Some surveys have not been completed on areas that contained suitable habitat because they were deemed too small or disjunct; yet, the Lincoln National Forest recently documented presence of the New Mexico meadow jumping mouse in areas that were thought to be “too small.”

*Our Response:* The Service does not have any records documenting the presence of the New Mexico meadow jumping mouse in areas that were considered too small or disjunct on the Lincoln National Forest or other areas. The information the Service has indicates the Lincoln National Forest has only documented the New Mexico meadow jumping mouse in two new areas, Cox Canyon and Mauldin Spring in Wills Canyon (United States Forest Service (USFS) 2012h, pp. 2–3, 2013a, entire), since Frey (2005, entire) completed surveys. The Cox Canyon site was surveyed in 2005 by Frey (2005, pp. 9, 20, 33), with no New Mexico meadow jumping mice captured at the time, likely

because no suitable habitat was present. However, in 2012, New Mexico meadow jumping mice were captured at Cox Canyon, following the cessation of grazing for 2 years (USFS 2012h, pp. 2–4; Service 2012d, p. 2; U.S. Army Corps of Engineers 2012, entire; 2012a, entire). The Mauldin Spring area was not deemed to be too small during Frey’s 2005 surveys, but is located in a remote area over 0.4 mi (0.6 km) from a road.

(6) *Comment:* Some sites on the Lincoln National Forest that had New Mexico meadow jumping mice in the 1980s (Morrison 1989, entire) have not been surveyed recently. The presence of New Mexico meadow jumping mice was confirmed in these areas in the 1990s by Ward (2001) and there is still a high potential for New Mexico meadow jumping mice to be present. The most recent trapping efforts conducted on the Lincoln National Forest have demonstrated that the New Mexico meadow jumping mouse is present.

*Our Response:* Since 2005, all of the previously occupied sites on USFS lands from the 1980s have been resurveyed. The USFS did not provide information on who conducted the recent trapping efforts or the specific sites from the 1980s that were not surveyed. However, since 2005, we are aware of the following survey efforts on the Lincoln National Forest: (1) Frey (2005a, entire (2,375 trap nights of effort) and 2013c, entire (1,280 trap nights of effort)); and (2) USFS (2010, entire (1,310 trap nights of effort); 2012h, entire (3,480 trap nights of effort); and 2013, entire (2,494 trap nights of effort)). Through these surveys, all of the historical Morrison (1989, entire) sites on public lands and other areas that contained potentially suitable habitat were surveyed

(Frey and Malaney 2009, p. 33; USFS 2010, entire; 2012h, entire; 2013, entire). Frey (2005, p. 38) only found the New Mexico meadow jumping mouse present at two historical locations, Silver Springs and Agua Chiquita. The Lincoln National Forest (2012h, entire; 2013a, entire) found the New Mexico meadow jumping mouse present at two additional locations, Cox Canyon and Mauldin Spring. Only the Cox Canyon population found by the USFS was a historical location reported by Morrison (1989, entire). Ward ((2005, entire) cited by Frey 2005a, pp. 9, 22, 73; Frey and Malaney 2009, p. 44)) confirmed New Mexico meadow jumping mice at only one location (Mauldin Spring) in the 1990s, and there is no longer suitable habitat present at this location. Consequently, all sites with suitable habitat on the Lincoln National Forest have been surveyed since 2005, and only 4 locations (3 historical and 1 new) have been confirmed as extant.

(7) *Comment:* What will the delisting factors be for the New Mexico meadow jumping mouse?

*Our Response:* We have not developed delisting criteria yet for the New Mexico meadow jumping mouse. Now that the subspecies is listed as endangered, a draft and final recovery plan will be prepared. The recovery plan will identify site-specific management actions, including measurable criteria that determine when the subspecies may be downlisted or delisted, and methods for monitoring recovery progress.

(8) *Comment:* The term “excessive grazing” is never clearly defined in the SSA

Report or proposed rules.

*Our Response:* Our use of the phrase excessive grazing is in the context of suitable New Mexico meadow jumping mouse habitat. Excessive ungulate grazing in this context occurs when there is an inadequate amount of tall dense herbaceous riparian vegetation to support the New Mexico meadow jumping mouse (see “Specific Microhabitat Requirements” section in the SSA Report; Service 2014, entire).

Indications of excessive grazing are: trampling of streambanks, loss of riparian cover, soil compaction, modification of riparian plant communities, lowering water tables, and the resulting changes to New Mexico meadow jumping mouse microhabitat. Excessive grazing in riparian areas can result in changes to the hydrology and soils, leading to downcutting or headcutting, which can further degrade New Mexico meadow jumping mouse habitat.

(9) *Comment:* There is no mention of whether feral hogs or wild horses are considered threats to the New Mexico meadow jumping mouse. What would be expected and allowed for trapping and removal of these animals?

*Our Response:* The USFS did not provide any specific information on feral hogs or wild horses for us to consider and we did not receive any information regarding this topic during the public comment period. We have no information concerning feral hogs or wild horses currently occurring within New Mexico meadow jumping mouse habitat. There are confirmed feral hog populations in Otero and Socorro Counties, New Mexico,

but there is no information indicating their presence in New Mexico meadow jumping mouse habitat or of impacts to the subspecies (APHIS 2010, p. 10; USFS 2011d). We acknowledge that both animals have the potential to impact riparian areas and New Mexico meadow jumping mouse habitat, but have no data on if or where this is occurring or how much habitat may be affected now or in the future.

Under Section 7(a)(1) of the Act, Federal agencies, such as the USFS, could utilize their existing authorities by carrying out programs such as the removal of feral hogs or wild horses for the conservation of the New Mexico meadow jumping mouse.

(10) *Comment:* What will the herbicide use or non-use expectation be for non-native invasive plant control?

*Our Response:* Section 7(a)(2) of the Act requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of the species or destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into consultation with the Service. If a Federal agency proposes to use herbicide to control nonnative plants and it may affect the New Mexico meadow jumping mouse or its critical habitat, the responsible Federal agency must enter into consultation with the Service.

The prohibitions of section 9(a)(2) of the Act make it illegal for any person to take (includes harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect; or to attempt any of these), import, export, ship in interstate commerce in the course of commercial activity, or sell or offer for sale in interstate or foreign commerce any listed species. We may issue permits to carry out otherwise prohibited activities involving endangered and threatened wildlife species under certain circumstances. A list of activities that could potentially result in a violation of section 9 of the Act is in this final rule under **Available Conservation Measures** section. This list is not comprehensive. The Service can also work with private landowners to provide technical assistance or we may issue permits for incidental take of a species in connection with otherwise lawful activities.

(11) *Comment:* What will be allowable for piping water from streams or springs to water troughs for wildlife or cattle? Will travel corridors that assist in moving cattle from winter to summer pastures be allowed across streams so that cattle can move and access water troughs?

*Our Response:* If a Federal agency implements, authorizes, or funds water use or livestock grazing activities that may affect the New Mexico meadow jumping mouse, then they must enter into consultation with the Service. Consultation would analyze and determine to what degree the subspecies is impacted by the proposed action. Each consultation is evaluated on a case-by-case basis following our regulations (50 CFR part 402). See our response to comment (10) above regarding the prohibitions of section

9(a)(2) of the Act.

(12) *Comment:* How does the Service intend to manage livestock grazing and associated actions such as fencing riparian areas and providing water points?

*Our Response:* The Service does not intend to manage livestock grazing or associated actions. Rather the Service will work with Federal agencies during consultation under section 7 of the Act, to ensure that any actions they fund, authorize, or carry out would not jeopardize the continued existence of the New Mexico meadow jumping mouse. These section 7 consultations will determine whether the management of a Federal livestock permit jeopardizes the continued existence of the New Mexico meadow jumping mouse. Our regulations require that we use the best scientific and commercial data available for consultations (50 CFR 402.14(d)). This information is used to update and analyze the effects of past and ongoing human and natural activities or events that have led up to the current status of the subspecies and its habitat. Consequently, any requirements to minimize the effects of livestock grazing and associated activities will be appropriately applied through section 7 provisions 7(a)(1) and 7(a)(2), which can be changed if new information reveals effects to the subspecies or critical habitat in a manner or extent not previously considered (see 50 CFR 402.16(b)).

The Service can also work with private landowners to provide technical assistance or we may issue permits for incidental take of a species in connection with otherwise lawful activities.

(13) *Comment:* Roads are not listed as a factor affecting the New Mexico meadow jumping mouse; however, dirt roads can cause indirect effects through sedimentation or by impeding spring flows.

*Our Response:* We acknowledge that it is possible for roads to indirectly or directly impact riparian areas, springs, or New Mexico meadow jumping mouse habitat. However, the USFS did not provide any specific information for us to consider and the best available scientific and commercial data does not indicate how or where dirt roads may be causing indirect effects to New Mexico meadow jumping mouse habitat through sedimentation or by impeding spring flows now or in the future.

#### *Comments From States*

(14) *Comment:* A lack of probabilistic sampling designs and estimation of detection probabilities for New Mexico meadow jumping mouse survey efforts prevents using occupancy data in determining distribution and populations trends through time.

*Our Response:* Counting individual mice to estimate population sizes is very difficult and data are currently unavailable. Recent surveys have relied on detection or nondetection (sometimes called presence or absence) data to determine whether New Mexico meadow jumping mice persist in areas that contained historical populations or areas that currently contain suitable habitat. As we found in the SSA Report, species-

specific surveys have been useful for determining occupancy, but are limited in their usefulness for capture probabilities and, therefore, estimating population size. We recognize that detection or nondetection data may not provide conclusive evidence of the true population status at each of the 29 locations found since 2005; however, the failure to detect New Mexico meadow jumping mice in areas where they were located in the 1980s and loss of previously suitable habitat at over 70 historical sites since this period are likely representative of real population extirpations.

As a result, detection or nondetection surveys represent the best scientific and commercial data we have regarding the rangewide distribution and persistence of populations. Based on these data, we find that the New Mexico meadow jumping mouse has declined sharply due to the extirpation of populations and is generally restricted to small, isolated patches of suitable habitat. We acknowledge that research is needed to determine the size and demographics of remaining populations, but the best scientific and commercial data available on the threats to this subspecies is sufficient to make a listing determination (For a full discussion, see **Summary of Factors Affecting the Species** and **Determination** sections, below).

(15) *Comment:* Without conducting rigorous experiments, it is scientifically indefensible and speculative to attribute the loss of New Mexico meadow jumping mouse habitat to livestock grazing and recreation. There were no experimental controls used to make comparisons and too many extraneous variables to conclude that these activities were the cause of habitat and population loss.

*Our Response:* We agree that it would be useful to have more information on the New Mexico meadow jumping mouse. However, the best available scientific and commercial data indicate what the habitat requirements of the mouse are, including vegetation type and size. Further, it is evident that livestock grazing and recreational activities can negatively impact the required vegetation for mouse habitat, without doing further experimentation. In fact, such experimentation with a scarce, potentially endangered species may further imperil the species. In the SSA Report (Service 2014, entire), we present the best commercial and scientific data available, albeit observational evidence, to conclude that livestock grazing, recreation, and other causal factors have resulted in the alteration and destruction of New Mexico meadow jumping mouse habitat.

(16) *Comment:* The Service assumed a correlation between habitat patch size and New Mexico meadow jumping mouse populations without providing documentation.

*Our Response:* We acknowledge that the best available information regarding New Mexico meadow jumping mouse population abundance is not complete. However, because the New Mexico meadow jumping mouse requires specialized habitat requirements to support its life-history needs, they would not be found in areas that lack suitable habitat. Consequently, we estimated the size of intact, suitable habitat surrounding capture locations of jumping mice found since 2005 as a the best proxy to evaluate population viability. We think this is a reasonable approach, because it is probable that small areas of suitable habitat can support only a limited number of New

Mexico meadow jumping mice, and small population sizes are more vulnerable to extirpation than large population sizes. Moreover, studies conducted on the similar Preble's meadow jumping mouse found smaller patches of habitat are unable to support as many Preble's as larger patches of habitat (Service 2003, p. 11). Schorr (2012, p. 1279) suggested that habitat connectivity and the incorporation of immigrants may be vital to the persistence of Preble's meadow jumping mouse populations, indicating that degradation of surrounding habitat and geographic isolation likely increase the vulnerability of some populations. Therefore, our conclusion that small isolated areas of New Mexico meadow jumping mouse habitat are expected to have small populations with a high risk of extinction is based upon Preble's meadow jumping mouse studies, general conservation biology principles, and metapopulation theory (Hanski 1999, entire; Service 2003, entire).

(17) *Comment:* A lack of knowledge about New Mexico meadow jumping mouse population sizes and dynamics should be a concern to the Service. Determinations of endangered or threatened status should use the best available scientific and commercial information and should not be based upon conjecture.

*Our Response:* It is often the case that data is limited for rare species, but we have used the best available scientific and commercial data. As we found in the SSA Report (Service 2014, entire), jumping mice population sizes are assumed to be naturally regulated by the amount of suitable habitat available to support them. Jumping mice populations probably expand and contract in response to fluctuations in riparian

vegetation from flooding, inundation, drought, and the resulting changes in the extent and location of floodplains and river channels (Service 2002, pp. D13–D15). For populations to persist over the long term, habitat patches need to be of sufficient size and configuration to accommodate these fluctuations in habitat availability. When the suitable habitat patches are small and isolated, periods of drought or other disturbances can cause New Mexico meadow jumping mouse habitats to shrink or become fragmented and lead to reductions in population sizes or even extirpation of New Mexico meadow jumping mouse populations. Therefore, New Mexico meadow jumping mice need suitable habitat sufficient in size to support the natural fluctuations of populations as they expand and contract, to reduce the risk of local extirpation and extinction, and to attain the densities necessary to persist through catastrophic events and seasonal fluctuations of food resources (i.e., maintain healthy resilient populations). Based on our review of the best available scientific and commercial data, we conclude that the New Mexico meadow jumping mouse is currently in danger of extinction throughout all of its range, and therefore, meets the definition of an endangered species (see **Determination**, below). The analysis used to make this decision was subject to peer-review to ensure sound science and decisionmaking. See **2.7.2 Habitat Patch and Population Sizes** in the SSA Report for additional information on this subject.

(18) *Comment:* The SSA Report contains “substantial areas of uncertainty” and is not a “thorough assessment.” The Service should not make assumptions; assumptions are not scientific data and should not be used in a listing determination.

*Our Response:* We did not base our listing decision on the areas of uncertainty. The main areas of uncertainty in our analysis include the minimum amount of suitable habitat needed to support resilient populations and the number of redundant populations needed to provide for adequate redundancy and representation. The proposed rule and SSA Report (Service 2014, entire) were peer reviewed, and found to be an accurate representation of the status of the New Mexico meadow jumping mouse. The peer reviewers agreed that the scientific and commercial data available on the threats to this subspecies is adequate to make a listing determination. As a result, we have found that the New Mexico meadow jumping mouse is presently in danger of extinction throughout all of its range based on the severity of threats.

(19) *Comment:* The SSA Report lists livestock grazing as a threat to the New Mexico meadow jumping mouse within Lake Dorothea State Wildlife Area in Colorado; however, the area is not grazed by domestic livestock and there are no plans to begin such a use.

*Our Response:* We understand that the Lake Dorothea State Wildlife Area in Colorado is closed to domestic livestock grazing, but unauthorized livestock use has occurred. The Lake Dorothea State Wildlife Area is in the Sugarite Canyon in Colorado and New Mexico, which burned in the 2011 Track Wildfire. The Lake Dorothea State Wildlife Area borders Sugarite Canyon State Park in New Mexico. The fire resulted in downed fences between private lands and Sugarite Canyon State Park, allowing cattle to access the area. Trespass cattle that entered Sugarite Canyon State Park in New Mexico

accessed the Lake Dorothea State Wildlife Area. Employees of Sugarite Canyon State Park noted at least 30 trespass cattle within their park (Service 2013, pp. 1–2; Wildermuth 2012, entire). Trespass cattle have been consistently observed within Soda Pocket Creek Campground and Segerstrom Creek of the Sugarite Canyon State Park, sites that were previously occupied by the New Mexico jumping mouse (Service 2012c, pp. 2, 10; 2013, pp. 1–2). We have clarified this information in the SSA Report.

(20) *Comment:* The SSA Report lists livestock grazing and development as threats within the Sambrito Creek Geographic Management Area in Colorado. This area is within Navajo State Park and is not grazed by domestic livestock and unlikely to be developed due to ownership by the Bureau of Reclamation and management by Colorado Parks and Wildlife.

*Our Response:* We understand that Navajo State Park is closed to domestic livestock grazing, but unauthorized livestock use has occurred repeatedly at several locations within the geographic management area (Bureau of Reclamation 2008, p. 3-62; Colorado Natural Heritage Program 2006, p. 261). This unauthorized use is due to the lack of fences, incomplete fences, and poorly constructed or maintained fences. Areas with high incidences of livestock trespass include the Miller Mesa–Sambrito area, and the upper river arms (Bureau of Reclamation 2008, p. 3-62), which also includes New Mexico meadow jumping mouse locations and proposed critical habitat.

Sambrito Creek is surrounded on three sides by privately owned lands that are

partially developed, including agricultural fields, pastures, residences, and oil and gas wells (Colorado Natural Heritage Program 2006, p. 261). We acknowledge that the occupied area of Sambrito Creek is within Navajo State Park; however, the potential for further residential or oil and gas development on the surrounding private lands is high, which would likely result in less hydrologic input, and, therefore, shrinking and drying of the wetland area (Colorado Natural Heritage Program 2006, p. 261) and New Mexico meadow jumping mouse habitat.

(21) *Comment:* The description of activities that could result in take under section 9 is too vague. The Service should provide specific dates for the active season of the jumping mouse. Further, the Service should clarify whether destruction of habitat by any means is illegal, which implies that a land owner would be responsible for controlling against natural modifications such as browsing by native wildlife, flooding, drought, wildfire, or the diversion of water rights, wildfire restoration, grazing, and spread of invasive plants, even if these actions were occurring on other properties within the watershed.

*Our Response:* The prohibitions of section 9(a)(2) of the Act, codified at 50 CFR 17.21 for endangered wildlife, in part, make it illegal for any person subject to the jurisdiction of the United States to take (includes harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect; or to attempt any of these), import, export, ship in interstate commerce in the course of commercial activity, or sell or offer for sale in interstate or foreign commerce any listed species. Under the Lacey Act (18 U.S.C. 42–

43; 16 U.S.C. 3371–3378), it is also illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that has been taken illegally. Section 9 applies to persons that carry out or attempt to carry out the actions listed above, not actions such as weather events and native wildlife foraging.

The intent of describing potential section 9 violations is to increase public awareness of the effect of a listing on proposed and ongoing activities within the range of a listed species. We have clarified the list of potential section 9 violations below (see **Available Conservation Measures**). These may include, but are not limited to, the alteration or removal of specific microhabitat components (as described in this rule or within the May 2013 SSA Report (Service 2013) through new construction, livestock grazing, or dredging or filling in streams or wetlands.

We may issue permits to carry out otherwise prohibited activities involving endangered and threatened wildlife species under certain circumstances. With regard to endangered wildlife, a permit must be issued for the following purposes: for scientific purposes, to enhance the propagation or survival of the species, and for incidental take in connection with otherwise lawful activities (including but not limited to grazing, construction, and wetland alterations). Questions regarding whether specific activities would constitute a violation of section 9 of the Act should be directed to the Service's Ecological Services Field Office in the State where the proposed activities will occur.

We have generally defined the active season of the New Mexico meadow jumping

mouse in the SSA Report (Service 2014, entire) as May through October.

(22) *Comment:* The size and stream length range of estimates for resilient populations of New Mexico meadow jumping mice have no citations, or justification of how these were determined.

*Our Response:* In the SSA Report (Service 2014, entire), we estimate how much suitable habitat is likely necessary to support healthy, resilient populations of the New Mexico meadow jumping mouse by considering information regarding the Preble's meadow jumping mouse and information from Frey (2006d, pp. 18–21; 2011, p. 29; 2012b, p. 16) for the New Mexico meadow jumping mouse. For examples, 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 ( to 16-mi) network of connected streams whose hydrology supports riparian vegetation (Service 2003, pp. 24–25). Following fires, we found that, depending on fire intensity and the subsequent ash and debris flow within stream reaches, New Mexico meadow jumping mouse populations can be significantly affected and likely extirpated, even when 15 km (9 mi) of continuous suitable habitat existed prior to the fire (Sugarite Canyon; Frey 2006d, pp. 18–21; 2012b, p. 16). Therefore, we estimate that stream lengths should be at least two to three times of those characterized by Frey (2011, p. 29) in order to have adequate population sizes necessary to persist through these types of stochastic and catastrophic events. After reviewing this information, we conclude that current New Mexico meadow 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. See **2.7.2 Habitat Patch and Population Sizes** in the SSA Report for additional information on this subject.

*Comments From the Public*

(23) *Comment:* Is there observer bias associated with using primarily information from the Frey surveys and conclusions? Have there been any other groups or individuals providing data or information on the New Mexico meadow jumping mouse?

*Our Response:* The Act requires that we identify species of wildlife and plants that are endangered or threatened based on the best scientific and commercial data available. We did not primarily use information from Frey, but relied on a variety of information including State wildlife agencies, other researchers, and Federal agencies (e.g., see Museum of Southwestern Biology 1960, entire; 2007, entire; 2007a, entire; Findley *et al.* 1975, pp. 271–272; Hafner *et al.* 1981, pp. 501–502; Hink and Ohmart 1984, p. 96; Dodd 1987, entire; Morrison 1988, pp. 9–28; 1991, pp. 14–16; 1992, pp. 308–310; 2012, entire; VanPelt 1993, p. 8; Najera 1994, entire; Jones 1999, entire; Frey 2003, pp. 38–39; 2005a, pp. 6–10, 58–59; 2006, p. 54; 2006c pp. 1–2; 2006d, pp.65–78; 2007b, pp. 9–13, 25–27; 2008, p. 3; 2008c, entire; 2010, entire; 2011, entire; 2012a, entire; 2012, entire; 2012e, entire; 2013, entire; 2013a, entire; Frey *et al.* 2007a p. 1; Frey and Malaney 2009, pp. 33–34; Frey and Kopp 2013, entire; Frey and Wright 2012, pp.

22–23; Underwood 2007, pp. 1–4; USFS 2009, entire; 2012h, entire; 2013a, entire; AGFD 2012a, p. 3; Colorado Parks and Wildlife 2012, entire; 2013, entire; 2013a, entire; Malaney *et al.* 2012, entire; Service 2013, entire; 2013a, entire; 2013b, entire). Based on this information, we find there is unbiased and sound scientific and commercial data to reach our final determination that the species is endangered.

(24) *Comment:* The SSA Report indicates that the New Mexico meadow jumping mouse is difficult to capture because individuals are trap wary, but then uses the recent survey information to justify listing as endangered. This seems contradictory.

*Our Response:* Please see our responses to comments (4) and (14) above.

Although the subspecies is difficult to capture, surveyors (Jones 1999, entire; Frey 2005a, pp. 6–10, 58–59; 2006d, pp. 65–78; 2007b, pp. 9–13, 25–27; 2008, p. 3; 2008c, pp. 36, 42; 2010, entire; 2011, entire; 2012, entire; Frey *et al.* 2007a, p. 1; Frey and Malaney 2009, entire; Museum of Southwestern Biology 2007, entire; 2007a, entire; Underwood 2007, entire; Frey and Wright 2012, pp. 22–23; Forest Service 2009, entire; 2010, p. 2; 2012a, entire; 2012b, entire; 2012h, entire; Colorado Parks and Wildlife 2012, entire, 2013, p. 1) have been able to provide information on presence or absence in specific areas, and using this best available information, we are able to make a status determination for the New Mexico meadow jumping mouse. Since 2003, New Mexico meadow jumping mouse surveys in New Mexico, Arizona, and Colorado involved 200 localities and 68,102 trap nights (over 100 historically occupied sites plus 136 localities that appeared to have the highest quality potentially suitable habitat) (see “Current

Records of Localities Found Since 2005” in the SSA Report; Service 2014).

(25) *Comment:* Information is insufficient or lacking on the New Mexico meadow jumping mouse, and more research is needed prior to listing, including more surveys. The proposed rule and SSA Report are based on assumptions rather than the best scientific information available as required. Peer reviewing the information would ensure the listing decision and critical habitat determination are based on scientifically sound data, assumptions, and analyses.

*Our Response:* We acknowledge that additional study on some life-history aspects of the New Mexico meadow jumping mouse would be helpful, but as required by the Act, we based our proposal and this final rule on the best available scientific and commercial data. We requested new information on our June 20, 2013 (78 FR 37363; 78 FR 37328) proposed rule during the open public comment period. We reviewed information in our files and other available published and unpublished information, and we consulted with recognized species experts, State agencies, tribes, and other Federal agencies. Peer reviewers indicated that we used the best available science and our assessment correctly concluded the New Mexico meadow jumping mouse should be classified as an endangered species. We must make listing determinations on the basis of the best scientific and commercial information available at this time, and we may not delay our decision until more information about the subspecies and its habitat are available (see *Southwest Center for Biological Diversity v. Babbitt*, 215 F.3d 58 (D.C. Cir. 2000)).

(26) *Comment:* Livestock grazing has been reduced over the last 20 years on many areas of the Apache–Sitgreaves National Forest, Arizona, due to listing the southwestern willow flycatcher (*Empidonax traillii extimus*), loach minnow (*Tiaroga cobitis*), Little Colorado spinedace (*Lepidomeda vittata*), and spikedace (*Meda fulgida*); however, the New Mexico meadow jumping mouse has declined during this same period. What other actions could have caused its decline?

*Our Response:* Please refer to the SSA Report (Service 2014, entire) for review of the past, present, and likely future threats (causes and effects) to New Mexico meadow jumping mouse populations in Arizona and throughout its range. We found the primary sources of past and future habitat losses are from grazing pressure, water management and use, lack of water due to drought, and wildfires. Current USFS forage utilization guidelines are 30 to 40 percent, meaning 60 to 70 percent of forage should not be removed by livestock (USFS 2005, p. 4; 2013, entire; Service 2005a, entire). This amount of utilization has limited the availability of adequate vertical cover of herbaceous vegetation and significantly affected New Mexico meadow jumping mouse habitat in areas that are not protected from livestock (i.e., outside of livestock exclosures). Current grazing practices in many areas of the Apache–Sitgreaves National Forest, Arizona, have resulted in the removal of dense riparian herbaceous vegetation that historically provided New Mexico meadow jumping mouse habitat and caused the loss of historical populations (Frey 2011, entire). Additional sources of habitat loss are likely to occur from scouring floods, loss of beaver, highway reconstruction, and unregulated recreation.

(27) *Comment:* Recreation is a greater threat to the New Mexico meadow jumping mouse populations within the Jemez Mountains, New Mexico than livestock grazing as it is practiced on the San Diego Allotment along the Rio Cebolla and Rio de las Vacas within the Jemez Mountains.

*Our Response:* Throughout the Rio Cebolla and Rio de las Vacas drainages, riparian habitat is fragmented and isolated as a result of both livestock grazing and recreation (USFS 2003, entire; 2004a, entire; Frey 2005a, pp. 25–29, 58–63, 67; Service 2012a, entire). Current grazing practices in many areas have resulted in the removal of dense riparian herbaceous vegetation that historically provided New Mexico meadow jumping mouse habitat and caused the loss of historical populations. For example, the New Mexico meadow jumping mouse has been extirpated entirely from 3 of 13 (Jemez Mountains, New Mexico) historical montane riparian sites over the last 2 decades (Frey 2003, entire; 2005a, entire; 2011, entire; 2012a, pp. 42, 46, 52; Frey and Malaney 2009, entire; USFS 2012h, entire; Figure 15). Importantly, the presence of a functioning livestock exclosure has been reported as the best predictor of New Mexico meadow jumping mouse occupancy in montane riparian areas (Frey 2005a, pp. 59–60; Frey and Malaney 2009, pp. 35, 37). However, livestock grazing continues to be documented within many of the fenced exclosures surrounding the recently documented New Mexico meadow jumping mouse populations when fencing was cut or not maintained, gates were open, or wildfire burned and eliminated fences, and cattle entered the area (Frey 2005a, pp. 25–26, 29, 36; 2006, p. 1; 2011, pp. 41–42; Colorado Natural Heritage Program 2006,

p. 260; U.S. Bureau of Reclamation 2008, pp. 3–62; USFS 2007, p. 1; 2010, p. 2; 2011c, pp. 1–5; 2012h, p. 2; ADGF 2012a, entire; Service 2012a, pp. 1–2; 2012c, pp. 1, 6–8; 2012d, p. 2). See **5.1.1 Livestock Grazing** and **5.1.10 Recreation** in the SSA Report (Service 2014, entire) for additional detail on these threats.

Within the Jemez Mountains Geographic Management Area for the New Mexico meadow jumping mouse, specific forms of management (e.g., fencing of riparian areas) may be required through formal consultation with the Forest Service to provide areas containing functionally connected patches of currently suitable or restorable habitat. Management may also be needed to address livestock use, the reduction in the distribution and abundance of beaver, and recreational use.

(28) *Comment:* The SSA Report (Service 2014, entire) indicates that climate change and drought affect the New Mexico meadow jumping mouse. How would listing the subspecies affect these threats?

*Our Response:* The Service acknowledges that listing the subspecies as endangered cannot fully address some of the natural threats facing the subspecies (e.g., climate change and drought). However, climate change and drought can exacerbate other threats such as wildfire and grazing, and can lower the resiliency of populations to withstand other threats. Listing of species can focus attention on these other threats to improve the overall status and increase the likelihood that the New Mexico meadow jumping mouse can be recovered.

Once a species is listed as either endangered or threatened, the Act provides many tools to advance the conservation of listed species; available tools include recovery planning under section 4 of the Act, interagency cooperation and consultation under section 7, grants to the States under section 6, and safe harbor agreements and habitat conservation plans under section 10. In addition, recovery funds may become available, which could facilitate recovery actions (e.g., funding for additional surveys, management needs, research, captive propagation and reintroduction, monitoring) (see Available Conservation Measures, below). Because we are listing the New Mexico meadow jumping mouse as endangered, funding for recovery actions will be available from a variety of sources, including Federal budgets, State programs, and cost share grants for non-Federal landowners, the academic community, and nongovernmental organizations. In addition, under to section 6 of the Act, the States of Arizona, Colorado, and New Mexico would be eligible for Federal funds to implement management actions that promote the protection and recovery of this subspecies. Information on our grant programs that are available to aid species recovery can be found at <http://www.fws.gov/grants>.

(29) *Comment:* A plan in the 1990s removed dispersed recreation and limited campsites along the East Fork of the Black River, Arizona. Is the subspecies threatened by other activities in this area?

*Our Response:* The commenter does not identify a specific plan for us to

reference. As noted in the SSA Report (Service 2014, entire), the New Mexico meadow jumping mouse is also threatened by climate change, wildfire, flooding, loss of beaver, and recreation in this area (Please see the SSA Report, Table 3).

(30) *Comment:* Contrary to what is presented in the SSA Report (Service 2014, entire), the adverse impacts from livestock grazing, water diversion, and recreation were halted in Arizona in 1980s and 1990s when other species were listed as endangered.

*Our Response:* The commenter did not provide information demonstrating that livestock grazing, water diversion, and recreation are not threats to the New Mexico meadow jumping mouse in Arizona. The best scientific and commercial information demonstrates the continuing threats of livestock grazing, recreation, and other sources of past and future habitat losses in Arizona. See the SSA Report for additional information.

We did identify water diversion as a threat to the New Mexico meadow jumping mouse in Arizona. However, reliance on such water sources for development and maintenance of suitable herbaceous riparian vegetation may be problematic because the availability (in quantity, timing, and quality) is often subject to dramatic changes based on precipitation and irrigation use patterns associated with water rights. Other recently located populations (e.g., Florida River, Sugarite Canyon, Coyote Creek in New Mexico) are located in areas where surface water is diverted into irrigation canals and ditches, rather than the natural flow remaining within the stream drainage (ADGF 2006, p. 473; Frey 2005a, p. 63; 2006d, p. 55; 2011, p. 19; U.S. Bureau of Reclamation 1995, entire).

The suitable habitat along Sambrito Creek in Colorado is associated with wetlands that are fed by irrigation water return flows (Colorado Natural Heritage Program 2006, p. 261; U.S. Bureau of Reclamation 2008, pp. 3–23). These changes in hydrology degrade and eliminate potentially suitable New Mexico meadow jumping mouse habitat, to the point that so much water is being diverted in some streams that they no longer support an herbaceous zone of riparian habitat (Frey 2005a, p. 63; 2006d, p. 55).

(31) *Comment:* In the SSA Report, Figure 13 compares a grazed area to an ungrazed area. If a fire were to burn in the ungrazed area during drought conditions, the tall dense vegetation would burn completely, eliminating the riparian habitat and killing all of the New Mexico meadow jumping mice. Alternatively, the grazed area that lacks tall dense grass would not burn completely, suggesting grazing may be beneficial for the New Mexico meadow jumping mouse.

*Our Response:* Although the grazed area in Figure 13 is unlikely to burn completely, it does not provide suitable habitat for the New Mexico meadow jumping mouse, because grazing eliminated dense riparian vegetation. So, whether the grazed area burns or not, the subspecies will not be able to use this grazed area. Excessive livestock grazing has not only eliminated the fine fuel load that historically contributed to frequent low-intensity fires (see discussion in the SSA Report under “Livestock Grazing” section; Service 2014, entire)), but has also altered the suitability of habitat for the New Mexico meadow jumping mouse, which is a significant threat to the subspecies, demonstrated by Figure 13. Further, if the ungrazed portion burns and remains ungrazed

this area will return to pre-burn vegetation conditions depicted in Figure 13, generally within a year.

(32) *Comment:* How would listing the New Mexico meadow jumping mouse complement or contradict consultation or recovery actions of other threatened or endangered species such as the southwestern willow flycatcher or Rio Grande silvery minnow (*Hybognathus amarus*)?

*Our Response:* Some native species that share ecosystems often face a suite of common factors that may be a threat to them, and ameliorating or eliminating these threats for one species will benefit multiple species, often with the implementation of similar management actions. Effective management of these threats often requires implementation of complementary conservation actions to enhance or restore critical ecological processes and native habitat, and provide for long-term viability of those species in their native environment. In some of the geographic management areas, we will likely consider the need to address other listed species in our future recovery planning efforts for the New Mexico meadow jumping mouse. This will also be the case for section 7 consultations when a proposed action affects multiple species.

(33) *Comment:* Trapping and livestock grazing are not contributing factors to loss of beaver ponds.

*Our Response:* Baker and Hill (2003, p. 303) indicated that beaver are highly

vulnerable to overharvest from trapping because their slow rate of reproduction and delayed sexual maturity preclude reproduction as a means to offset intensive annual harvest. As noted in the SSA Report (see **5.1.6 Loss of Beaver** of the SSA Report; Service 2014, entire), the decline and near elimination of beaver due to overharvesting is well documented (Naiman *et al.* 1988, entire; Baker and Hill 2003, p. 288; Crawford *et al.* 1993, p. 39). Moreover, beaver continue to be subject to extensive management and removal (U.S. Department of Agriculture, Animal and Plant Health Inspection Service 2011, entire; Wild 2011, p. 5).

Limiting factors for beaver populations are typically related to the availability of food resources (e.g., trees, tubers, roots, shoots, and many herbaceous plants) (Boyle and Owens 2007, p. 21). Intense herbivory by ungulates or livestock can disrupt beaver populations (Baker *et al.* 2005, p. 117) because grazing can reduce or eliminate adequate herbaceous and riparian plants that are required for beaver food. Sufficient food is necessary to sustain beaver populations. Beaver continue to be lost from across the range of the New Mexico meadow jumping mouse; therefore, we consider this another causative factor in the ongoing loss of suitable New Mexico meadow jumping mouse habitat now and into the future (Please see the SSA Report for further information).

(34) *Comment:* If the New Mexico meadow jumping mouse is listed as endangered, are private landowners obliged to follow the Act? Is this a taking of private property rights?

*Our Response:* Section 9 of the Act makes it illegal for anyone to “take” (defined as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt any of these actions) an endangered species (see section 9 of Available Conservation Measures, below). However, the mere promulgation of a regulation, like listing a species under the Act, 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 the listing of this subspecies. Programs are available to private landowners for managing habitat for listed species, as well as permits that can be obtained to protect private landowners from the take prohibition when such taking is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Private landowners may contact their local Service field office to obtain information about these programs and permits.

(35) *Comment:* There is a fixation on livestock grazing in the proposed rule and no consideration of other types of ungulate grazing such as feral horses or elk.

*Our Response:* In the SSA Report (Service 2014, entire, we found that livestock and elk grazing within New Mexico meadow 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). Cattle and sometimes elk, have contributed substantially to alterations of riparian ecosystems throughout the range of the New Mexico meadow jumping mouse. However, there is a strong tendency for livestock to congregate in riparian habitat, whereas elk may range farther from water sources and

riparian areas than cattle (USFS 2006, pp. 76–77). Timing of livestock grazing also coincides with the active season of the New Mexico meadow jumping mouse. We note that grazing is only one of several concerns for the New Mexico meadow jumping mouse. Please see the SSA Report for further information. See our response to comment (9) above for additional information on feral horses.

(36) *Comment:* Some of the information used in the SSA Report comes from documents that indicate the New Mexico meadow jumping mouse is “endangered” (e.g., Frey, J.K. 2006. Capture of the endangered New Mexico meadow jumping mouse (*Zapus hudsonius luteus*) at Coyote Creek State Park, New Mexico. Frey Biological Research, Radium Springs, New Mexico). This report was produced prior to the Service considering the animal for endangered status. Because “endangered” was used in the title of the report, is there a potential for bias?

*Our Response:* Use of the term “endangered” in the Frey (2006) report does not indicate bias. The New Mexico meadow jumping mouse is classified as an endangered species under the New Mexico Wildlife Conservation Act of 1974 (i.e., State Endangered Species Act) (19 New Mexico Administrative Code 33.6.8). This is an entirely different process and statute than the Act. We adhered to the requirements of the Act in order to determine whether the New Mexico meadow jumping mouse meets the definition of an endangered species under the Act, based on our assessment of the five listing factors and using the best available scientific and commercial data.

(37) *Comment:* If the New Mexico meadow jumping mouse is listed as endangered, fuels treatments to reduce the risk of fire may be inhibited due to the complexity and additional time required to complete consultation with the Service. In this example, the Federal agency would likely reduce the size of the forest treatment (e.g., prescribed burn), or the project would be stopped altogether when the subspecies is listed.

*Our Response:* Listing the New Mexico meadow jumping mouse is unlikely to reduce proactive treatments necessary to alleviate the risk of catastrophic wildfire because the majority of treatments are likely to be confined to forested lands and not within riparian and adjacent upland habitat used by the species. However, the USFS or other Federal agency will need to determine whether any fuels treatments may affect the subspecies in accordance with section 7 of the Act. If a Federal agency funds, authorizes, or carries out an action that may affect the New Mexico meadow jumping mouse, the agency is required to consult with the Service. The regulatory requirements under the Act were determined by Congress to ensure that otherwise lawful actions that affect species listed under the Act are not likely to jeopardize the continued existence of those listed species. Consultations analyze and determine to what degree the species is impacted by a proposed action. Each consultation is evaluated on a case-by-case basis following our regulations (50 CFR part 402). In the SSA Report (Service 2014, entire), we identify opportunities for habitat improvement, which includes reducing fuels to minimize the risk of severe wildland fire.

(38) *Comment:* New Mexico meadow jumping mouse habitat has been lost in

some areas following the Wallow Wildfire, but habitat for the subspecies has been gained in other areas. Although the Wallow Wildfire had a huge impact on the landscape, the New Mexico meadow jumping mouse continues to be found in areas following the fire. In fact, post-fire flooding carried sediments to some areas where herbaceous vegetation now meets 60-cm (24-in) stubble height.

*Our Response:* The commenter did not provide any specific information on areas where jumping mouse habitat may have been gained following the Wallow Wildfire. We also did not receive any information regarding this topic from the Arizona Game and Fish Department (AGFD 2012, entire; 2014, entire). New Mexico meadow jumping mouse habitat is located within riparian areas that are subject to dynamic changes from flooding such as the loss and regrowth in the quantity and location of dense riparian herbaceous vegetation over time. If suitable habitat has been gained or restored in some areas and the habitat is beyond the movement or dispersal capabilities of the New Mexico meadow jumping mouse, it is unlikely to become occupied. New Mexico meadow jumping mice are generally believed to have limited vagility (ability to move) and possibly limited dispersal capabilities (Morrison 1988, p. 13; Frey and Wright 2012, pp. 43, 109). Consequently, suitable habitat should be no more than about 200 m (656 ft) from existing populations, which would increase the likelihood of emigrating individuals repopulating sites that have been extirpated due to natural or manmade events or moving into areas where suitable habitat has been restored.

Severe wildland fires, such as the Wallow Wildfire, can have dramatic, long-

lasting impacts on jumping mice and their habitat (See SSA Report for additional information). We continue to find that the 2011 Wallow and Track Wildfires have significantly impacted the New Mexico meadow jumping mouse, resulting in extirpation of some populations and further loss of habitat, including loss of beaver (AGFD 2012, entire; Colorado Parks and Wildlife 2013a, p. 1; Frey and Kopp 2013, entire; Service 2013c, entire).

(39) *Comment:* More sampling and surveys of the New Mexico meadow jumping mouse need to be completed to determine whether populations are confined to true livestock exclosures.

*Our Response:* Since 2003, New Mexico meadow jumping mouse surveys in New Mexico, Arizona, and Colorado involved 200 localities and 68,102 trap nights (over 100 historically occupied sites plus 136 localities that appeared to have the highest quality potentially suitable habitat) (see “Current Records of Localities Found Since 2005” in the SSA Report; Service 2014). In all but one case where the jumping mouse was found since 2005, livestock were being excluded (Frey 2005a, pp. 58–62; Frey 2006d, pp. 49, 55; Frey and Malaney 2009, p. 37; Frey 2011, pp. 41–42; 2012, entire; Colorado Parks and Wildlife 2012, entire; Service 2012a, pp. 1–2; 2012c, pp. 1, 6–8; 2012d, p. 2). The habitat conditions at this one locality where livestock grazing was occurring were suitable for New Mexico meadow jumping mice occupancy and similar to fenced New Mexico meadow jumping mouse localities because the presence of beaver naturally inhibited livestock grazing (Frey and Malaney 2009, p. 37).

Moreover, additional areas that contained potentially suitable New Mexico meadow jumping mouse habitat were also surveyed, with many of the survey locations outside of livestock enclosures in which no individuals were captured (Frey 2003, entire; 2005a, entire; 2007b, entire; 2011, p. 42; 2013c, entire; Chambers 2012, entire; USFS 2012h, entire). As we found in the SSA Report, the presence of a functioning livestock enclosure has been reported as the best predictor of New Mexico meadow jumping mouse occupancy in montane riparian areas (Frey 2005a, pp. 59–60; Frey and Malaney 2009, pp. 35, 37). However, unauthorized livestock grazing continues to be documented within 15 of 29 existing New Mexico meadow jumping mouse populations when fencing was cut or not maintained, gates were open, or wildfire burned and eliminated fences, and cattle entered the area (ADGF 2012a, entire; USFS 2007, p. 1; 2010, p. 2; 2011c, pp. 1–5; 2012h, p. 2; Frey 2005a, pp. 25–26, 29, 36, 58–62; 2006, p. 1; 2006d, pp. 49, 55; 2011, pp. 41–42; Frey and Malaney 2009, p. 37; Frey 2011, pp. 41–42; 2012, entire; Colorado Natural Heritage Program 2006, p. 260; Colorado Parks and Wildlife 2012, p. entire; Service 2012a, pp. 1–2; 2012c, pp. 1, 6–8; 2012d, p. 2; U.S. Bureau of Reclamation 2008, pp. 3–62) .

(40) *Comment:* Listing a species may reduce beneficial management activities or obstruct or prevent entities from executing conservation agreements and partnerships to protect the species. The Service should recognize ongoing conservation efforts.

*Our Response:* The Service does recognize ongoing conservation efforts. The

Act requires us to make a determination using the best available scientific and commercial data after conducting a review of the status of the species and after taking into account those efforts, if any, being made by any State or foreign nation, or any political subdivision of a State or foreign nation to protect such species, whether by predatory control protection of habitat and food supply, or other conservation practices, within any area under its jurisdiction. The only conservation actions implemented since the species became a candidate for listing in 2007 were the installation of Langemann water control structures and restoration of habitat on Bosque del Apache National Wildlife Refuge, and the replacement of one barbed-wire livestock enclosure with a pipe fence on the Lincoln National Forest. These few actions did not reduce or eliminate threats to the subspecies, and the jumping mouse still meets the definition of an endangered species under the Act.

Further, the listing of a species does not obstruct the development of conservation agreements or partnerships to conserve the species. Once a species is listed as either endangered or threatened, the Act provides many tools to advance the conservation of listed species. Conservation of listed species in many parts of the United States is dependent upon working partnerships with a wide variety of entities, including the voluntary cooperation of non-Federal landowners. Building partnerships and promoting cooperation of landowners are essential to understanding the status of species on non-Federal lands, and may be necessary to implement recovery actions such as reintroducing listed species, habitat restoration, and habitat protection. We promote these private-sector efforts through the Department of the Interior's Cooperative Conservation

philosophy (see <http://www.fws.gov/landscape-conservation/lcc.html> for more information). Once a species is listed, for private or other non-Federal property owners we offer voluntary Safe Harbor Agreements that can contribute to the recovery of species, Habitat Conservation Plans that allows activities (e.g., grazing) to proceed while minimizing effects to species, funding through the Partner's for Fish and Wildlife Program to help promote conservation actions, and grants to the States under section 6 of the Act.

(41) *Comment:* The Service should recognize the economic impact of listing the New Mexico meadow jumping mouse. Listing the mouse could result in short-term, long-term, and cumulative impacts for species on human activities.

*Our Response:* The Act requires us to use the best scientific and commercial data available in our listing determinations. The Act does not allow us to consider the impacts of listing on economics or humans activities whether over the short term, long term, or cumulatively.

(42) *Comment:* Will recreation sites be shut down or Federal land use be greatly restricted if the New Mexico meadow jumping mouse is listed as endangered?

*Our Response:* Section 7(a)(2) of the Act requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of the subspecies or destroy or adversely modify its critical habitat. If a Federal

action may affect a listed species or its critical habitat, the responsible Federal agency must enter into consultation with the Service. During consultation with the Federal agency, we will analyze and determine to what degree the subspecies would be impacted by proposed recreational activities and will work with the Federal agency to determine necessary modification of planned activities, in order to avoid and minimize adverse impacts to the subspecies.

(43) *Comment:* There is no scientific justification for defining the historical (1980s and 1990s) baseline for the subspecies' distribution. There must have been some other challenging environmental changes that the New Mexico meadow jumping mouse survived to reach population levels in the 1980s. Therefore, what scientific basis is there for presuming the species could not survive now without endangered species protection?

*Our Response:* Please see our response to comment number (3), above. While the historical and current distributional data for the New Mexico meadow jumping mouse is categorized into two time periods in the SSA Report (Service 2014, entire), we included all known distribution records and summarized the comprehensive reports regarding the New Mexico meadow jumping mouse (i.e., Frey 2008c, entire; Hafner *et al.* 1981). We found no capture records of New Mexico meadow jumping mice between 1996 and 2005. Surveys conducted since 2005 in locations where the subspecies was historically present indicate that the subspecies is now apparently absent or at levels too low for detection. Based on this information and previous reviews, we continue to find that the comparison between historical (1980 to 1999) and current New Mexico meadow

jumping mouse records (2005 forward) is appropriate, and the pre-1980 records were sufficiently considered and incorporated in the SSA Report.

We evaluated whether the subspecies is in danger of extinction throughout all or a significant portion of its range (endangered), or is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range (threatened). Also, please see our **Determination** section, below for a detailed explanation of why this subspecies meets the definition of an endangered species under the Act. Finally, see the SSA Report for our analysis of long-term viability and extinction risk for the New Mexico meadow jumping mouse. (see **Chapter 6. Viability** of the SSA Report)

(44) *Comment:* The Service should include a special 4(d) rule, similar to Preble's meadow jumping mouse that exempts take of the subspecies under section 9 of the Act for any continued use of water rights.

*Our Response:* Section 4(d) of the Act pertains only to threatened species, not endangered species. Section 4(d) of the Act reads that, whenever any species is listed as a threatened species, the Secretary shall issue such regulations, as she deems necessary and advisable to provide for the conservation of such species. Because we are listing the New Mexico meadow jumping mouse as endangered and not threatened, a 4(d) rule is not applicable.

(45) *Comment:* According to Wikipedia, the jumping mouse is capable of having two to three litters per year.

*Our Response:* Although jumping mice (*Zapus hudsonius*) in Minnesota and New York average two to three litters (Quimby 1951, p. 69; Whitaker 1963, p. 244), the New Mexico meadow jumping mouse only has one litter each year (Morrison 1987, pp. 14–15; 1989, p. 22; Frey 2011, p. 69; 2012b, p. 5).

(46) *Comment:* Over the last few years, mowing along irrigation ditches has ceased and the vegetation grows over the areas, especially along those in the middle Rio Grande.

*Our Response:* The commenter did not provide any information demonstrating mowing has ceased. The information we reviewed indicates that mowing continues to be part of regular maintenance activities along irrigation ditches and canals on Bosque del Apache National Wildlife Refuge and throughout the middle Rio Grande (Bureau of Reclamation 2013, pp. 55–59, 62; Frey and Wright 2012, pp. 6, 35; SSA Report pp. 88–91). Moreover, neither the Florida Water Conservancy District, nor the Middle Rio Grande Conservancy District indicated in their public comments that mowing has ceased as part of their normal maintenance operations (Florida Water Conservancy District 2013, entire; Middle Rio Grande Conservancy District 2013, entire).

(47) *Comment:* Were the jumping mice captured along the Florida River positively identified as New Mexico meadow jumping mice using genetic analyses?

*Our Response:* Yes. The Florida River individuals were confirmed as New Mexico meadow jumping mice using mitochondrial DNA (genetic) analyses (Museum of Southwestern Biology 2007, entire; 2007a, entire; Malaney *et al.* 2012, p. 695, Appendix S1).

(48) *Comment:* The Service fails to provide a scientific basis for the unrealistic vegetation cover requirements.

*Our Response:* Based on the best available scientific evidence, the New Mexico meadow jumping mouse has exceptionally specialized requirements for dense herbaceous riparian habitat as described in the “Specific Microhabitat Requirements” section of our SSA Report (Service 2014).

(49) *Comment:* There is no scientific historical baseline to compare habitat or populations to in order to determine whether New Mexico meadow jumping mouse populations have been impacted. The Service did not use actual population numbers or long-term trends to make a determination to list the New Mexico meadow jumping mouse as endangered.

*Our Response:* In the SSA Report (Service 2014, entire), we used historical and current data to determine that the distribution and number of populations of the New Mexico meadow jumping mouse has declined significantly rangewide with the majority of local extirpations occurring since the late-1980s and early 1990s. At least 70 former locations occupied by the New Mexico meadow jumping mouse are considered no longer occupied (Frey 2005a, pp. 6–10; 2007b, pp. 23–27; 2011, pp. 26–27; 2012e, entire; AGFD 2012, entire; Frey and Kopp, 2013, entire; Frey and Wright 2012, p. 28; Frey 2013, entire). See also our response to comment number 3 above.

(50) *Comment:* High predation rates or disease may cause high mortality and reduce New Mexico meadow jumping mouse populations.

*Our Response:* As we found in **5.2.2 Disease or Predation** of our SSA Report (Service 2014), we did not identify predation and disease as significant risk factors for the New Mexico meadow jumping mouse.

(51) *Comment:* The Service has failed to address the conflict between the New Mexico meadow jumping mouse and already listed predators such as the Mexican spotted owl (*Strix occidentalis lucida*) and Mexican gray wolf (*Canis lupus baileyi*), which could be significant sources of mortality.

*Our Response:* We acknowledge that the Mexican spotted owl and Mexican gray wolf could eat jumping mice, because they can be highly sought-after food sources as

prey for these species. However, the best scientific and commercial data available does not indicate that either of these species are significant predators on the New Mexico meadow jumping mouse. Nevertheless, predation is a naturally occurring event in the life history of the New Mexico meadow jumping mouse, and, as we found in **5.2.2 Disease or Predation** of our SSA Report (Service 2014), predation is not a significant risk factor.

(52) *Comment:* No data are provided for the assumption that only limited portions of New Mexico meadow jumping mouse habitat would be affected by natural disturbances (flood, wildfire, or drought). These natural disturbances operate at the landscape scale, which would decimate habitat patches that are small and localized.

*Our Response:* As we noted in the **5.1 Habitat Loss** section of the SSA Report (Service 2014), natural disturbances can vary from small to large-scale events. Large-scale disturbances can have dramatic, long-lasting impacts on New Mexico meadow jumping mice and their habitat, while small-scale disturbances may help maintain riparian communities in an early seral stage, which would provide suitable habitat for the New Mexico meadow jumping mouse. The New Mexico meadow jumping mouse may exhibit some natural resiliency to small disturbances when populations were larger and well-connected to one another, but there is cause for concern because many of the New Mexico meadow jumping mouse populations are either extremely small or highly fragmented. As a result, we found that these natural disturbances are an important causal factor in the ongoing and future loss of New Mexico meadow jumping mouse suitable

habitat, making all of the remaining small and fragmented populations of the New Mexico meadow jumping mouse more vulnerable to extirpation.

(53) *Comment:* Coal bed methane development should be removed from the list of potential threats to the New Mexico meadow jumping mouse because there are no wellpads or associated non-well facilities near the populations in Colorado (Florida River, Sambrito Creek, or Sugarite Canyon). Moreover, existing regulations at the State (Colorado Oil and Gas Conservation Commission) and local levels (La Plata County land use code, Chapter 90; Archuleta County land use code, Section 9) have resulted in no oil or gas wells or facilities within these areas.

*Our Response:* The areas surrounding the Florida River and Sambrito Creek contain extensive gas fields, and, based on the best available scientific and commercial data, production from coalbed methane is projected to increase (Bureau of Land Management and USFS 2006, entire; Papadopulos and Associates 2006, entire). In 2005, there were about 1,650 production wells in production in the Colorado portion of the San Juan Basin (Papadopulos and Associates 2006, p. 1). Projections are that this number will increase because future gas production wells have already been permitted (Papadopulos and Associates 2006, p. 92, Figure 6–2; Bureau of Reclamation 2007, pp. 3-55–3-60). Similarly, coalbed methane development will likely continue to expand in the Raton Basin, which includes the Sugarite Canyon, New Mexico (Hoffman and Brister 2003, p. 110).

Future impacts may occur to riparian habitat in these watersheds or result in the alteration of hydrological regimes (Bureau of Land Management and USFS 2006, Appendix H, p. 27). For example, recent data indicates that existing coalbed methane development has depleted 80,176 cubic m (65 ac ft) of water per year from the Animas, Florida, and Pine Watersheds (Bureau of Land Management and USFS 2006, Appendix H, p. 27). We also queried the Colorado Oil and Gas Database (<http://cogcc.state.co.us/>) and located at least 10 producing wells within 91 to 221 m (300 to 725 ft) of the active Florida River channel and 5 producing wells within 61 to 609 m (200 to 2,000 ft) of Sambrito Creek (Service 2013d, entire). These distances have the potential to affect New Mexico meadow jumping mouse habitat from ground disturbance for roads, drilling pads, pipelines, and other utilities and infrastructure (e.g., see Bureau of Reclamation 2007, pp. 3-55–3-60, 4-5, 4-26). There may also be longer-term water table issues, irrigation water changes, and nonnative plant infestations in areas that are developed for coal bed methane extraction, which would contribute to further loss of dense herbaceous riparian vegetation that constitutes jumping mouse habitat (National Park Service 2003, p. 2).

We found that La Plata and Archuleta Counties only provide protection to wildlife resources and floodplains, wherever it is reasonably practicable, to avoid, minimize, or mitigate adverse impacts from coal bed methane development (Colorado Oil and Gas Conservation Commission 2008, entire; La Plata County 2001, entire; Archuleta County 2012, entire). For example, the La Plata County land use code requires new development to be located no less than 15 m (50 ft) from wetlands, which may still result in indirect effects to wetland and riparian habitat (2001, pp. 6.7–6.8) that would then impact the

New Mexico meadow jumping mouse and its habitat. Moreover, the regulations are intended to balance oil and gas development with wildlife conservation by incorporating best management practices (Colorado Oil and Gas Conservation Commission 2008, entire) or standard operating procedures (Archuleta County 2012, entire). Consequently, it is unclear whether this will fully or even partially protect the New Mexico meadow jumping mouse and its habitat. Finally, we found no regulations that might provide some protection to the New Mexico meadow jumping mouse population in Sugarite Canyon, New Mexico from coalbed methane development.

Based on this information, development of coalbed methane gas in the Raton and San Juan Basins is projected to continue into the future, potentially impacting the Florida River, Sambrito Creek, and Sugarite Canyon, Colorado, New Mexico meadow jumping mouse populations. All of this information demonstrates that coalbed methane development and related infrastructure have the potential to affect New Mexico meadow jumping mouse populations within the Florida River, Sambrito Creek, and Sugarite Canyon, Colorado.

(54) *Comment:* Rio Arriba County, New Mexico, has taken measures to protect and enhance the habitat required by the New Mexico meadow jumping mouse by adopting the Rio Arriba County Flood Damage Prevention Ordinance 2012□004 (Floodplain Ordinance).

*Our Response:* Although Rio Arriba County's comments indicate that the Floodplain Ordinance aims to foster sound land use activities in federally designated floodplains and riparian areas, we are not aware of any areas that are currently occupied by the New Mexico meadow jumping mouse within Rio Arriba County. The only critical habitat proposed for the New Mexico meadow jumping mouse in the County was located along the Rio Grande within Ohkay Owingeh, which would not be subject to the Floodplain Ordinance.

(55) *Comment:* The comment period was too brief. Local governments and interested individuals were not notified in writing of the proposal to list the New Mexico meadow jumping mouse.

*Our Response:* We provided the normal 60-day comment period associated with the publication of the proposed rule, which opened on June 20, 2013 (78 FR 37363), and closed on August 19, 2013. We sent letters to State congressional representatives, local governments, and interested parties; we published public notices in area newspapers; and we issued a news release on our website.

(56) *Comment:* One commenter encouraged the Service to invest additional resources in public outreach for the Florida River Geographic Management Area because most of the Florida River is under private ownership.

*Our Response:* On August 15, 2013, we held an informational meeting in Durango, Colorado, as part of our public outreach for the Florida River Geographic Management Area, to answer questions about the implications of the potential listing and critical habitat designation of the New Mexico meadow jumping mouse.

(57) *Comment:* The Service should not settle legal actions with activist groups that appear to create arbitrary listings of threatened or endangered species.

*Our Response:* On July 12, 2011, the Service filed a multiyear work plan as part of a settlement agreement with the Center for Biological Diversity and others, in a consolidated case in the U.S. District Court for the District of Columbia. A settlement agreement in *In re Endangered Species Act Section 4 Deadline Litigation*, No. 10-377 (EGS), MDL Docket No. 2165 (D.D.C. May 10, 2011) was approved by the court on September 9, 2011. The settlement enables the Service to systematically, over a period of 6 years, review and address the needs of more than 250 candidate species to determine if they should be added to the Federal Lists of Endangered and Threatened Wildlife and Plants.

Section 4 of the Act and its implementing regulations (50 CFR part 424) set forth the procedures for adding species to the Federal Lists of Endangered and Threatened Wildlife and Plants. We adhered to the requirements of the Act, to determine whether a species warrants listing based on our assessment of the five-factor threats analysis using the best available scientific and commercial data. A species may be determined to be an

endangered or threatened species due to one or more of the five factors described in section 4(a)(1) of the Act: (A) The present or threatened destruction, modification, or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; or (E) other natural or manmade factors affecting its continued existence. Listing actions may be warranted based on any of the above threat factors, singly or in combination. We already determined, prior to the court settlement agreement, that the New Mexico meadow jumping mouse warranted listing under the Act, but was precluded by the necessity to commit limited funds and staff to complete higher priority species actions. The New Mexico meadow jumping mouse has been included in our annual Candidate Notices of Review for multiple years, during which time scientific literature and data have and continue to indicate that the subspecies is detrimentally impacted by ongoing threats, and we continued to find that listing was warranted but precluded. The listing process is not arbitrary, but uses the best available scientific and commercial data and peer-review to ensure sound science and sound decisionmaking.

(58) *Comment:* The purpose of listing this highly specialized subspecies is only in support of the preservationists' philosophy of radical environmental organizations. Most often listing has forced land management agencies to totally abandon their missions in favor of a hands-off, do-nothing approach.

*Our Response:* The commenter did not provide any additional information for the Service to consider. Land management agencies continue to provide for multiple use activities on their lands, including the conservation of federally listed species.

## **Determination**

### *Standard for Review*

Section 4 of the Act, and its implementing regulations at 50 CFR part 424, set forth the procedures for adding species to the Federal Lists of Endangered and Threatened Wildlife and Plants. Under section 4(b)(1)(a), the Secretary is to make threatened or endangered determinations required by subsection 4(a)(1) solely on the basis of the best scientific and commercial data available to her after conducting a review of the status of the species and after taking into account conservation efforts by States or foreign nations. The standards for determining whether a species is threatened or endangered are provided in section 3 of the Act. An endangered species is any species that is “in danger of extinction throughout all or a significant portion of its range.” A threatened species is any species that is “likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.” Per section 4(a)(1) of the Act, in reviewing the status of the species to determine if it meets the definitions of threatened or endangered, we determine whether any species is an endangered species or a threatened species because of any of the following five factors:

(A) The present or threatened destruction, modification, or curtailment of its habitat or

range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; and (E) other natural or manmade factors affecting its continued existence.

Until recently, the Service has presented its evaluation of information under the five listing factors in an outline format, discussing all of the information relevant to any given factor and providing a factor-specific conclusion before moving to the next factor. However, the Act does not require findings under each of the factors, only an overall determination as to status (e.g., threatened, endangered, not warranted). Ongoing efforts to improve the efficiency and efficacy of the Service's implementation of the Act have led us to present this information in a different format that we believe leads to greater clarity in our understanding of the science, its uncertainties, and the application of our statutory framework to that science. Therefore, while the presentation of information in this rule differs from past practice, it differs in format only. We have evaluated the same body of information we would have evaluated under the five listing factors outline format, we are applying the same information standard, and we are applying the same statutory framework in reaching our conclusions.

#### *Final Listing Status Determination*

We have carefully assessed the best scientific and commercial information available regarding the past, present, and future threats to the New Mexico meadow jumping mouse. Based on our review of the best available scientific and commercial

information, we conclude that the New Mexico meadow jumping mouse is currently in danger of extinction throughout all of its range and, therefore, meets the definition of an endangered species. This finding, explained below, is based on our conclusions that the subspecies exhibits low viability as characterized by having no resilient populations, resulting in low overall representation across the subspecies' entire range and no redundancy. We found the New Mexico meadow jumping mouse to be at an elevated risk of extinction now and no data indicate that the situation will improve without significant conservation intervention. We, therefore, find that the New Mexico meadow jumping mouse warrants an endangered species listing status determination.

On the basis of our biological review documented in the SSA Report, we found that the subspecies is inherently vulnerable to population extirpations due to its short active period, short lifespan, low fecundity, specific habitat needs, and low movement and dispersal ability (Factor E). The subspecies is currently known to be limited to, at most, 29 small, isolated populations, all of which are incapable of withstanding adverse events, and, therefore, are not resilient (Factor E). This total is reduced from nearly 70 locations known historically. Of these 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 7 others may have been affected by recent wildfires. Because these populations have been compromised, the actual current number of extant populations may already be less than 29, placing the subspecies at a higher risk of extinction. At this rate of population extirpation (based on known

historical population losses and possible recent population losses) the probability of persistence of the subspecies as a whole is severely compromised in the near term.

The remaining small, isolated New Mexico meadow jumping mouse populations are particularly threatened with extirpation from habitat loss and modifications (Factor A). The main sources of habitat loss, degradation, and modification, include grazing pressure (which removes the needed vegetation), water management and use (which causes vegetation loss from mowing and drying of soils), lack of water due to drought (exacerbated by climate change), and wildfires (also exacerbated by climate change). Additional sources of habitat loss are likely to occur from floods, loss of beaver, highway reconstruction, residential and commercial development, coalbed methane development, and unregulated recreation.

Each of the 29 remaining locations where the jumping mouse has been found recently is vulnerable to at least 4 of these 10 sources of habitat loss. Some populations are at risk from as many as 8 of these sources (Service 2014, Table 3). As a result, 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 small populations makes local extirpations more common. Further, the isolated state of existing populations makes natural recolonization of impacted areas highly unlikely or impossible in most areas. With each

of these sources of habitat loss, the probability increases of the future reduction in size of existing populations of jumping mice and eventual additional losses of additional populations. With each population lost in the future, a decrease in viability of the subspecies will occur as species redundancy and representation are reduced.

The Act defines an endangered species as any species that is “in danger of extinction throughout all or a significant portion of its range” and a threatened species as any species “that is likely to become endangered throughout all or a significant portion of its range within the foreseeable future.” We evaluated whether the New Mexico meadow jumping mouse is an endangered species or a threatened species. The foreseeable future refers to the extent to which the Secretary can reasonably rely on predictions about the future in making determinations about the future conservation status of the species. A key statutory difference between a threatened species and an endangered species is the timing of when a species may be in danger of extinction, either now (endangered species) or in the foreseeable future (threatened species).

Because of the fact-specific nature of listing determinations, there is no single metric for determining if a species is “in danger of extinction” now. In the case of the New Mexico meadow jumping mouse, the best available information indicates that, while major range reductions (that is the overall geographic extent of the subspecies occurrences) have not happened, habitat destruction and isolation have resulted in significant loss of populations and reductions in total numbers of individuals. These losses are ongoing as at least 11 of the 29 known populations have been significantly

compromised since 2011. Without substantial conservation efforts, this trend of population loss is expected to continue and result in an elevated risk of extinction of the subspecies. Many of the threats faced by the subspecies would not have historically been significant, but past reductions in population size and fragmentation (mainly due to habitat loss from grazing) causing isolation of populations makes the current threats particularly severe. As a result, the subspecies is currently at an elevated risk that stochastic events (e.g., drought, wildfire, and floods) will affect all known extant populations putting the New Mexico meadow jumping mouse at a high risk of extinction. Therefore, because no resilient populations currently exist to support persistence of the New Mexico meadow jumping mouse, it is in danger of extinction throughout all of its range now, and appropriately meets the definition of an endangered species (i.e., in danger of extinction). Therefore, on the basis of the best available scientific and commercial information, we determine endangered status for the New Mexico meadow jumping mouse in accordance with sections 3(6) and 4(a)(1) of the Act.

Under the Act and our implementing regulations, a species may warrant listing if it is threatened or endangered throughout all or a significant portion of its range. The threats to the survival of this species occur throughout its range and are not restricted to any particular significant portion of its range. Accordingly, our assessments and determinations apply to this species throughout its entire range.

In conclusion, as described above, the New Mexico meadow jumping mouse has experienced significant reductions in populations (based on habitat reductions and

fragmentation), is especially vulnerable to impacts due to its life history and ecology, and is subject to significant current and ongoing threats now. After a review of the best available scientific information as it relates to the status of the subspecies and the five listing factors, we find the New Mexico meadow jumping mouse is in danger of extinction now. Therefore, on the basis of the best available scientific and commercial information, we determine endangered status for New Mexico meadow jumping mouse, in accordance with section 3(6) of the Act. We find that a threatened species status is not appropriate for the New Mexico meadow jumping mouse because the overall risk of extinction is high at this time because none of the existing populations are sufficiently resilient to support viable populations, and this subspecies is currently in danger of extinction.

### **Available Conservation Measures**

Regulations at 50 CFR 424.18 require final rules to include a description of conservation measures available under the rule. Following is an explanation of the measures which may be implemented for the conservation of the jumping mouse under this final rule.

Conservation measures provided to species listed as endangered or threatened species under the Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing results in public awareness and conservation by Federal, State, tribal, and local agencies, private

organizations, and individuals. The Act encourages cooperation with the States and requires that recovery actions be carried out for all listed species. The protection required by Federal agencies and the prohibitions against certain activities are discussed, in part, below.

The primary purpose of the Act is the conservation of endangered and threatened species and the ecosystems upon which they depend. The ultimate goal of such conservation efforts is the recovery of these listed species, so that they no longer need the protective measures of the Act. Subsection 4(f) of the Act requires the Service to develop and implement recovery plans for the conservation of endangered and threatened species. The recovery planning process involves the identification of actions that are necessary to halt or reverse the species' decline by addressing the threats to its survival and recovery. The goal of this process is to restore listed species to a point where they are secure, self-sustaining, and functioning components of their ecosystems.

Recovery planning includes the development of a recovery outline shortly after a species is listed, preparation of a draft and final recovery plan, and revisions to the plan as significant new information becomes available. The recovery outline guides the immediate implementation of urgent recovery actions and describes the process to be used to develop a recovery plan. The recovery plan identifies site-specific management actions that will achieve recovery of the species, measurable criteria that determine when a species may be downlisted or delisted, and methods for monitoring recovery progress. Recovery plans also establish a framework for agencies to coordinate their recovery

efforts and provide estimates of the cost of implementing recovery tasks. Recovery teams (comprising species experts, Federal and State agencies, nongovernmental organizations, and stakeholders) are often established to develop recovery plans. When completed, the draft recovery plan and the final recovery plan will be available on our website (<http://www.fws.gov/endangered>), or from our New Mexico Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**). We have completed a Recovery Outline that provides an interim strategy to guide the conservation and recovery of the New Mexico meadow jumping mouse until a final recovery plan is finalized. The Recovery Outline is based on the SSA Report, as well as preliminary objectives and actions needed for recovery. The Recovery Outline can be downloaded at: <http://www.fws.gov/southwest/es/NewMexico/index.cfm>, <http://www.fws.gov/endangered>, or <http://www.regulations.gov>.

Implementation of recovery actions generally requires the participation of a broad range of partners, including other Federal agencies, States, Tribe, nongovernmental organizations, businesses, and private landowners. Examples of recovery actions include habitat restoration (e.g., restoration of native vegetation), research, captive propagation and reintroduction, and outreach and education. The recovery of many listed species cannot be accomplished solely on Federal lands because their range may not occur primarily or solely on non-Federal lands. To achieve recovery of these species requires cooperative conservation efforts on private, State, and Tribal lands.

Because this subspecies is listed as endangered, funding for recovery actions will be available from a variety of sources, including Federal budgets, State programs, and cost-share grants for non-Federal landowners, the academic community, and nongovernmental organizations. In addition, pursuant to section 6 of the Act, the States of Colorado, New Mexico, and Arizona would be eligible for Federal funds to implement management actions that promote the protection and recovery of the New Mexico meadow jumping mouse. Information on our grant programs that are available to aid species recovery can be found at: <http://www.fws.gov/grants>.

Please let us know if you are interested in participating in recovery efforts for this subspecies. Additionally, we invite you to submit any new information on this subspecies whenever it becomes available and any information you may have for recovery planning purposes (see **FOR FURTHER INFORMATION CONTACT**).

Section 7(a) of the Act requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402. Section 7(a)(4) of the Act requires Federal agencies to confer with the Service on any action that is likely to jeopardize the continued existence of a species proposed for listing or result in destruction or adverse modification of proposed critical habitat. If a species is listed subsequently, section 7(a)(2) of the Act requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of

the species or destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into consultation with the Service.

Federal agency actions within the species habitat that may require consultation as described in the preceding paragraph include livestock grazing, irrigation ditch maintenance and repair, recreational activities associated with Federal agencies or State parks that may affect habitat or the species; issuance of section 404 Clean Water Act permits by the U.S. Army Corps of Engineers; and construction and maintenance of roads or highways by the Federal Highway Administration.

The Act and its implementing regulations set forth a series of general prohibitions and exceptions that apply to all endangered wildlife. The prohibitions of section 9(a)(2) of the Act, codified at 50 CFR 17.21 for endangered wildlife, in part, make it illegal for any person subject to the jurisdiction of the United States to take (includes harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect; or to attempt any of these), import, export, ship in interstate commerce in the course of commercial activity, or sell or offer for sale in interstate or foreign commerce any listed species. Under the Lacey Act (18 U.S.C. 42–43; 16 U.S.C. 3371–3378), it is also illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that has been taken illegally. Certain exceptions apply to agents of the Service and State conservation agencies.

We may issue permits to carry out otherwise prohibited activities involving endangered and threatened wildlife species under certain circumstances. Regulations governing permits are codified at 50 CFR 17.22 for endangered species, and at 17.32 for threatened species. With regard to endangered wildlife, a permit must be issued for the following purposes: for scientific purposes, to enhance the propagation or survival of the species, and for incidental take in connection with otherwise lawful activities.

Our policy, as published in the **Federal Register** on July 1, 1994 (59 FR 34272), is to identify to the maximum extent practicable at the time a species is listed, those activities that would or would not constitute a violation of section 9 of the Act. The intent of this policy is to increase public awareness of the effect of a listing on proposed and ongoing activities within the range of listed species. The following activities could potentially result in a violation of section 9 of the Act; this list is not comprehensive:

(1) Unauthorized collecting, handling, possessing, selling, delivering, carrying, or transporting of the species, including import or export across State lines and international boundaries, except for properly documented antique specimens of these taxa at least 100 years old, as defined by section 10(h)(1) of the Act.

(2) Unauthorized modification or manipulation of riparian habitat, including mowing or prescribed burning of occupied habitats, especially during the active season (generally May through October).

(3) Activities that take or harm the New Mexico meadow jumping mouse on public or private lands by causing significant habitat modification or degradation such that the activities cause actual injury by significantly impairing the species' essential behavior patterns, without authorization or coverage under the Act for these impacts. This may include, but is not limited to, the alteration or removal of specific microhabitat components (as described in this rule or within the SSA Report) through new construction, livestock grazing, or dredging or filling in streams or wetlands.

(4) Unauthorized modification of any stream or water body or removal or destruction of herbaceous vegetation in any stream or water body in which the New Mexico meadow jumping mouse is known to occur.

(5) Unlawful destruction or alteration of New Mexico meadow jumping mouse habitats (e.g., unpermitted instream dredging, impoundment, water diversion or withdrawal, channelization, discharge of fill material) that impairs essential behaviors such as breeding, feeding, or sheltering, or results in killing or injuring a New Mexico meadow jumping mouse.

(6) Capture, survey, or collection of specimens of this taxon without a permit from us under to section 10(a)(1)(A) of the Act.

Questions regarding whether specific activities would constitute a violation of section 9 of the Act should be directed to the New Mexico Ecological Services Field

Office (see **FOR FURTHER INFORMATION CONTACT**).

## **Required Determinations**

### *National Environmental Policy Act (42 U.S.C. 4321 et seq.)*

We have determined that environmental assessments and environmental impact statements, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with listing a species as an endangered or threatened species under the Act. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244).

### *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.

### **References Cited**

A complete list of references used in support of this rulemaking is available on the Internet at <http://www.regulations.gov> within the Final SSA Report (Service 2014, Literature Cited) 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—[AMENDED]**

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

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

2. In § 17.11(h), add an entry for “Mouse, New Mexico meadow jumping” in alphabetical order under Mammals to 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	NA	NA
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Dated: May 27, 2014. \_\_\_\_\_

Signed: Stephen Guertin,

Acting Director, U.S. Fish and Wildlife Service.

**Billing Code 4310-55**

[FR Doc. 2014-13094 Filed 06/09/2014 at 8:45 am; Publication Date: 06/10/2014]