New Mexico Meadow Jumping Mouse

ASSESSING HABITAT QUALITY FOR PRIORITY WILDLIFE SPECIES IN COLORADO WETLANDS

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The New Mexico meadow jumping mouse (*Zapus hudsonius luteus,* Family *Dipodidae*) prefers tall, dense herbaceous vegetation, typically adjacent to perennial flowing water.

Species Description

Identification

The New Mexico meadow jumping mouse measures 7 to 9 inches, including a long tail more than half its length. Their white undersides contrast with grayish brown backs and yellowish brown sides. Aided by inch-long back feet, New Mexico meadow jumping mice are notable jumpers. They are generally nocturnal but can be observed during the day. They hibernate for approximately 8 to 9 months of the year and are usually active only during the summer months.

Preferred Habitats

Known as riparian obligates, New Mexico meadow jumping mice occupy dense, tall, herbaceous vegetation adjacent to flowing streams, irrigation ditches, beaver ponds, and slough habitats. Less is known about their winter hibernation habitat, but they likely burrow in drier grassy or wooded areas, such as adjacent uplands. Some individuals may overwinter within riparian zones.

Diet

New Mexico meadow jumping mice consume a wide variety of plant material. While they show a preference for forbs, grass seeds, and flowers, they also consume small fruits.

Conservation Status

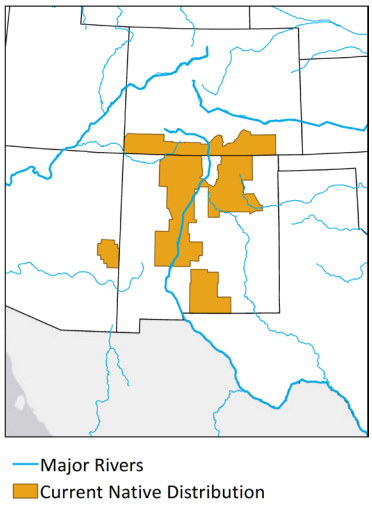
Federal: Listed as Endangered in 2014.
Colorado: Not listed, designated Tier 1 Species of Greatest Conservation Need.
BLM: Listed as Sensitive Species.
USFS: Listed as Sensitive Species.

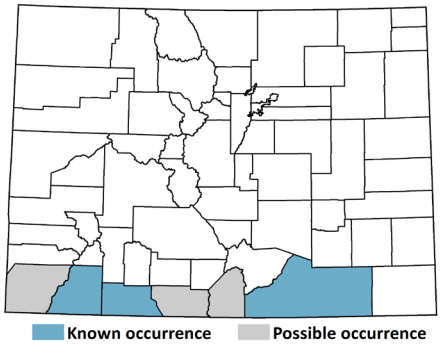
Populations declined sharply in the late 1980s to early 1990s, leaving only 29 small isolated populations that may not be resilient over time. They have been extirpated from at least 70 previously occupied sites.

Species Distribution

Range

New Mexico meadow jumping mice are endemic to New Mexico, Arizona, and small portions of southern Colorado. Since listing, they have been documented at 31 new locations where they had not previously been detected or where surveys had never been conducted. Of these, 24 were in areas outside of designated critical habitat.





Full species range map from USFWS (2018). Colorado map based on knowledge of reviewers and endorsed by USFWS

Version Date: Version 2020

Preferred Habitat Conditions

Distance between habitat patches for connectivity	within 330 feet
Herbaceous vegetation	present and dense
Herbaceous vegetation composition	a diversity of forbs, grasses, and sedges
Herbaceous vegetation height	at least 24 inches at full growth potential, higher in some areas outside of Colorado
Proximity to water	usually adjacent to perennial flowing water
Size of contiguous suitable habitat	>15 acres
Soil moisture	Saturated or nearly saturated

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Management Recommendations

This fact sheet contains easy-to-use guidelines for understanding habitat needs of Colorado Parks and Wildlife priority wetland-dependent wildlife. Biologists with expertise in New Mexico meadow jumping mice have suggested numerous practical steps that can be taken to improve habitat quality for this species.

Hydrology

- Avoid irrigation diversions in New Mexico meadow jumping mouse habitat.
- Replace outdated water delivery infrastructure with structures that minimize impacts to or enhance habitat.
- Maintain perennial flowing water that supports suitable habitat prior to and throughout their active season.

Vegetation

- Promote and maintain native riparian woody shrubs (e.g., willow and alder).
- Avoid mowing and other surface-disturbing activities in New Mexico meadow jumping mouse habitat during their active season.
- Avoid ground disturbance in potential hibernation areas during winter.

Land Use

- Manage livestock grazing to avoid potential negative effects to New Mexico meadow jumping mouse habitat.
- Avoid development and recreation activities that result in habitat loss.

Conservation

- Encourage beaver where appropriate and where they maintain New Mexico meadow jumping mouse habitat.
- Simulate beaver dams where appropriate to recover riparian ecosystems.
- Increase quantity and quality of emergent wetlands adjacent to perennial flowing water.

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Suggested Reading and Citations

CPW (Colorado Parks and Wildlife). 2015. State Wildlife Action Plan. Colorado Parks and Wildlife, Denver, CO.

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DISCLAIMER: This scorecard is designed specifically for the Colorado Parks and Wildlife Wetland Wildlife Conservation Program. It does not replace protocols required by U. S. Fish and Wildlife Service. Please contact the U. S. Fish and Wildlife Service regarding questions about their required protocols for species listed under the Endangered Species Act.

Habitat Scorecard for New Mexico Meadow Jumping Mouse (v. Nov 2020)

Assessment of habitat before and after restoration or management actions

Project Name: _____ Project Area (acres): _____ Habitat Area (acres): _____

Size of Contiguous Habitat outside Project Area (acres): _____ Ownership (circle): Same / Different / Conservation Easement

Scorecard Instructions: Enter one value that best describes early to late-summer conditions of each habitat variable, using the numbers in the value column. Habitat variables are in shaded boxes; ranges of condition are directly below each variable. **If condition is outside range or is not described, enter a zero.**

Project Area and Habitat Area: The project area includes the entire area affected by the project. The habitat is the area that will provide (in case of pre-project) or does provide (post-project) habitat for each potential target species within the project area. The habitat area may be the same size as the project area or it might be smaller and it may be defined differently for different target species. If there is contiguous habitat area outside the project area, note the size and whether the ownership of the contiguous areas is the same or different and whether it is under conservation easement or other habitat protection. If the habitat area within your project area is noncontiguous and/or if sections are in very different conditions, consider using multiple scorecards so that each scorecard represents the general conditions. If you use multiple scorecards, identify each habitat area on a map.

Key habitat variable and conditions	Value	Pre-Project	Expected Post-Project	Actual Post-Project
Date of assessment				
Height of herbaceous vegetation (overall average within 15 feet of water, measured at peak of growing season)				
>24 inches	18.7			
>18 – 24 inches	12.5			
12 – 18 inches	6.2			
Herbaceous vegetation density (overall average within 15 feet of water)				
Present and dense (>75% cover)	18.7			
Present with >50 – 75% cover	12.5			
Present with 35 – 50% cover	6.2			
Size of contiguous suitable habitat within the floodplain of perennial flowing stream				
>15 acres	18.7			
>6 – 15 acres	12.5			
2.5 – 6 acres	6.2			
Herbaceous composition				
Mix of >20 distinguishable species	15.9			
Mix of 3 – 20 distinguishable species	10.6			
Dominated by 1 or 2 distinguishable species	5.3			
Distance between patches of suitable linear habitat (includes neighboring properties)				
<330 feet	15.0			
330 – 400 feet	10.0			
>400 – 500 feet	5.0			
Length of perennial flowing water with at least one side having access to floodplain (landscape level)				
>5.6 miles	13.1			
>3 – 5.6 miles	8.7			
1 – 3 miles	4.4			
Total (of 100 possible): add all numbers in before or after columns				