



MIDDLE RIO GRANDE ENDANGERED SPECIES COLLABORATIVE PROGRAM

August 2021 Newsletter

FEATURED THIS ISSUE:

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LEARN ABOUT THE NEW MEXICO MEADOW JUMPING MOUSE

The New Mexico Meadow Jumping Mouse (*Zapus hudsonius luteus*; NMMJM or jumping mouse) is one of five species of interest to the Middle Rio Grande Endangered Species Collaborative Program (MRGESCP; Figure 1). It was listed as federally endangered in 2014, with critical habitat designated in 2016 (U.S. Fish and Wildlife Service [USFWS] 2020). USFWS assigned this subspecies a recovery priority of 3C, meaning it has a high degree of threat from habitat loss and fragmentation, yet also has a high recovery potential (USFWS 2020).

The range of the NMMJM extends from central New Mexico (NM) and southern Colorado to eastern Arizona. Historically, in the Middle Rio Grande (MRG), the jumping mouse was broadly distributed from Española, NM to the Bosque del Apache National Wildlife Refuge (BdANWR; USFWS 2020).

Currently the only known population on

the Rio Grande River occurs in the BdANWR, which contains critical habitat (USFWS 2020); that population is estimated at 25–50 individuals (USFWS 2014).

The NMMJM at the BdANWR is active above ground from mid-May/early June to late October (Frey 2015), meaning it spends over half the year in a state of hibernation. The active period coincides with the production of seeds by forbs, grasses, and sedges, which the jumping mouse eats to store fat for hibernation (USFWS 2020).

The NMMJM occupies only densely vegetated habitat in riparian areas along streams (USFWS 2020) characterized by tall vegetation (approximately 24 inches in height) consisting of sedges and forbs (Wright and Frey 2014). This habitat type forms within 1–3 years of a disturbance event. At 3–7 years post-disturbance, this habitat transitions to woody vegetation that is not suitable for the jumping mouse (USFWS 2020).



Photo: Foraging New Mexico Meadow Jumping Mouse.
Credit: USFWS

ABOUT THE JUMPING MOUSE

Jumping Mouse Continued...

The primary stressors on NMMJM populations are cumulative loss and fragmentation of habitat (USFWS 2020). Direct stressors include vegetation loss and soil drying that result from grazing pressure from grazers, intensive mowing in drainage ditches, drying, drought, and wildfires, many of which may be exacerbated by climate change (USFWS 2020). Additional habitat loss is likely the result of “scouring floods, stream incision, loss of beaver ponds, highway reconstruction, residential and commercial development, coalbed methane development, and unregulated recreation” (USFWS 2020).

The jumping mouse will be considered recovered when its overall population meets three benchmarks of population viability (USFWS 2020). Critical uncertainties regarding the jumping mouse include the amount of habitat needed to support a resilient population and the number of populations needed for sufficient redundancy and representation (USFWS 2020). Uncertainty also exists regarding locations of hibernacula and the size of some known populations (USFWS 2020).

One of the MRGESCP’s overarching goals is to establish and maintain a self-sustaining endangered NMMJM population in the MRG. To that end, the MRGESCP has developed objectives targeting the jumping mouse and plans to develop Science Strategies for meeting them. In addition, the MRGESCP plans to develop a conceptual ecological model for the species.

References:

- Frey, J.K. 2015. Variation in phenology of hibernation and reproduction in the endangered New Mexico meadow jumping mouse (*Zapus hudsonius luteus*). PeerJ, DOI 10.7717/peerj.1138. 27 pp.
- U.S. Fish and Wildlife Service. 2014. Recovery Outline: New Mexico Meadow Jumping Mouse (*Zapus hudsonius luteus*). FWS-R2-ES-2013-0023-0030. June 2014. 14 pp. Available online: <https://ecos.fws.gov/ServCat/downloadfile/55242>
- U.S. Fish and Wildlife Service. 2020. Species status assessment report for the New Mexico Meadow Jumping Mouse (*Zapus hudsonius luteus*), 1st Revision. January 2020. Albuquerque, NM. 160 pp.
- Wright, G., and J.K. Frey. 2014. Herbeal feeding behavior of the New Mexico meadow jumping mouse, (*Zapus hudsonius luteus*). Western North American Naturalist 74(2): 231-235.

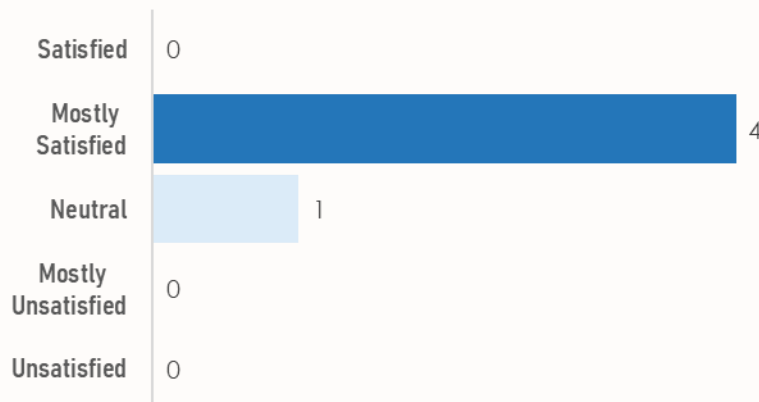


Photo: Favorable habitat for the New Mexico meadow jumping mouse at River-side Canal, Bosque del Apache National Wildlife Refuge, New Mexico in 2009.
Credit: J. Frey and G. Wright (USFWS 2020)

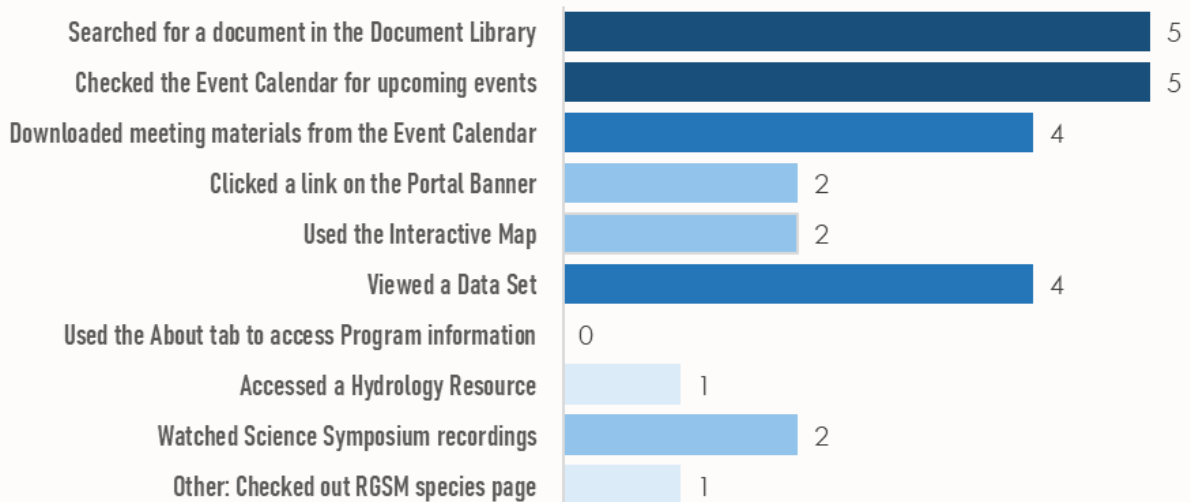
PROGRAM PORTAL POLL RESULTS

In July, Program Portal users were invited to give anonymous feedback on the site. Responses provide a better understanding of what is working, what could be improved, and what users would like to see in the future. Below is a summary of responses from five poll participants. Also included is a list of action items compiled from participant responses. These items are under consideration for improvement of the Program Portal.

How satisfied are you with the features available on the Program Portal?



What features have you used on the Program Portal?



PROGRAM PORTAL POLL RESULTS

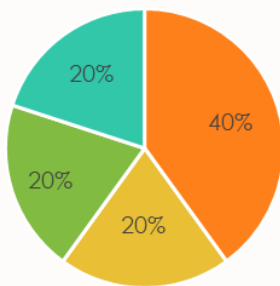
Collaborative Poll Continued...

How useful are these Portal features?

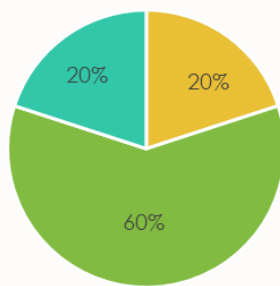
KEY

Very Useful	Somewhat Useful	Neutral	Somewhat Not Useful	Not Useful
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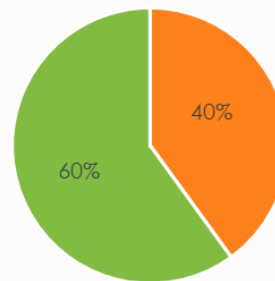
Document Library



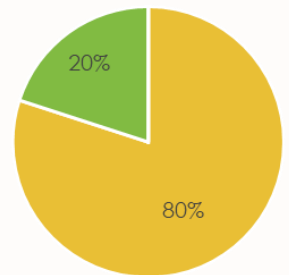
Downloadable Meeting Materials



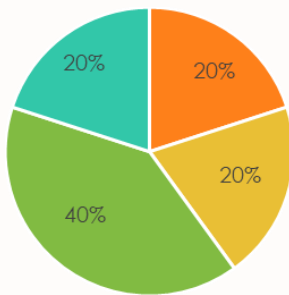
Front Page Banner



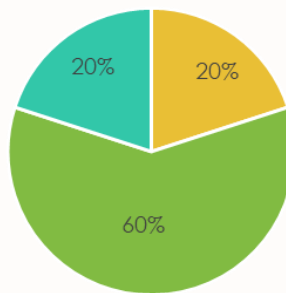
Interactive Map



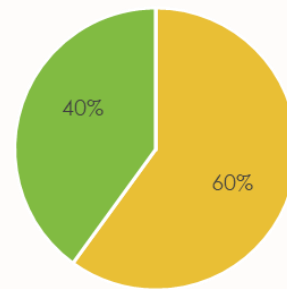
Data Sets



Science Symposium Archive



Hydrology Resources



Action Items Under Consideration for Improving the Portal:

- ◆ Speed up searches in the Document Library
- ◆ Improve search function on the Document Search page
- ◆ Provide more directions on the Document Search page
- ◆ Add a "No results found" message to the Document Search page
- ◆ Add full dates to publications
- ◆ Improve species pages by linking to BISON-M booklets and collapsing species publications
- ◆ Highlight reaches a different color when selected in the interactive map

CONSERVATION PLANNING TOOLS

As the MRGESCP continues to discuss restoration planning and implementation, this newsletter highlights several tools and programs that can support and inform conservation planning efforts in the Middle Rio Grande. If you know of others you'd like to share, please email mtuineau@west-inc.com.



The New Mexico Department of Game and Fish (NMDGF) is collaborating on a series of tools and programs to help with conservation planning. More information about all of the conservations plans, programs, and tools can

be found here: <https://www.wildlife.state.nm.us/conservation/>. Two of them are described below.

The New Mexico Environmental Review Tool (ERT) is an interactive tool for conservation planning and review of important resources for wildlife and habitats. It was developed in partnership with Natural Heritage New Mexico and the NatureServe Network. It provides conservation information on wildlife and habitat diversity, protected lands, and other natural resources, and allows users to submit proposed projects for review of potential impacts to special status species and their habitats. The ERT can be found here: <https://nmert.org/>.

NATURAL HERITAGE
NEW MEXICO

The New Mexico Riparian Habitat Map (NMRipMap) provides a comprehensive, fine-scale spatial view of the composition, cover, and structure of riparian and wetland vegetation along New Mexico's perennial streams and rivers. It is being developed in partnership with the U.S. Forest Service (USFS), Natural Heritage New Mexico, and the Missouri Resource Assessment Partnership. NMRipMap is designed to serve wildlife habitat management, wetland and riparian conservation and restoration planning, non-native species management, riparian monitoring design, identifying refugia, and more. Products include a comprehensive New Mexico Riparian Corridor Map and Riparian Habitat maps for major basins of the state as they become available. The Middle Rio Grande Riparian Habitat Map is available for download at the NMRipMap site: <https://nhnm.unm.edu/riparian/nmripmap/>.

The USFS has worked on **climate change vulnerability of wildlife in Southwestern U.S. riparian habitats**, and developed habitat suitability maps under future climate scenarios and vulnerability assessments. More information about this project can be found here: <https://www.fs.usda.gov/rmrs/science-spotlights/climate-change-vulnerability-wildlife-southwestern-us-riparian-habitats>



The Southern Rockies Landscape Conservation Cooperative Conservation Planning Atlas (CPA) provides a platform to access and integrate geospatial data sets, maps, and information for use in analysis and conservation planning across the southern Rockies region, including most of the Middle Rio Grande. The CPA can be found here: <https://srlcc.databasin.org/>



SOUTHERN
ROCKIES
Landscape Conservation Cooperative

The N.M. Interstate Stream Commission funded **RioRestore**, a comprehensive habitat restoration geo-database of habitat restoration projects in the Middle Rio Grande. RioRestore is housed on the Program Portal. That geospatial data can be accessed here: <https://webapps.usgs.gov/MRGESCP/data/habitat-restoration-riorestore>. It is also a viewable layer on the Program Portal's Interactive Mapper: <https://webapps.usgs.gov/MRGESCP/map/map.html>.



SCIENCE PROGRAM ANNOUNCEMENTS

Habitat Restoration Workshop

The Science and Adaptive Management Committee (SAMC) of the MRGESCP hosted a virtual Habitat Restoration (HR) Workshop on Tuesday, August 31, 2021 from 1:00–4:00 PM. The workshop was open to all with interest or experience in HR. Workshop activities focused on defining “success” for HR projects, discussing project design, and identifying resources to support measuring success. Participants were split into breakout rooms to answer HR questions round-robin style. Breakout group leads summarized their discussions for all participants. The SAMC will use the questions and challenges generated during this workshop to develop guidance for effective monitoring restoration within the Middle Rio Grande.

If you are were unable to attend the workshop, but would like to contribute to post-workshop activities, please contact the MRGESCP Science Coordinator, Catherine Murphy, at cmurphy@west-inc.com for more information.

Collaborative Seminars

The MRGESCP wants to hear from you! The MRGESCP will be hosting virtual seminars, each with a question and answer session, via Zoom and will make recordings available via the Program Portal (<https://webapps.usgs.gov/MRGESCP/>).

To kick off this effort, Dr. Robert Dudley with American Southwest Ichthyological Researchers (ASIR) and the Museum of Southwestern Biology at the University of New Mexico presented a seminar on the 2020 Population Monitoring Program for the Rio Grande silvery minnow (RGSM; *Hybognathus amarus*) on August 24, 2021.

If you have a seminar topic you would like to present, or if you would like to nominate a speaker (students are strongly encouraged!), please contact the MRGESCP Science Coordinator, Catherine Murphy, at cmurphy@west-inc.com with topics, suggested dates, and contact information.



Welcome Ryan Gronewold!

Join us in welcoming Ryan Gronewold, the Planning Branch Chief for U.S. Army Corps of Engineers (USACE)-Albuquerque District, to the EC. Ryan will serve as the alternate representative for USACE

PROGRAM UPDATES

Administrative Announcements

Revised MRGESCP By-Laws Approved

The MRGESCP By-Laws were revised by the By-Laws Ad Hoc Group to align with the Science & Adaptive Management Plan and Long-Term Plan. Revisions were reviewed and approved at the July 28th Executive Committee meeting. The section on annual MRGESCP evaluation will be revised and up for EC review at the October 27th EC meeting.

FY20 Annual Report Approved

The draft Fiscal Year 2020 (FY20) Annual Report was approved at the July 28th EC meeting. The final version is available on the Program Portal: <https://rb.gy/lgnh8l>

2021 Science Objectives Approved

The draft 2021 Science Objectives were approved at the July 28th EC meeting. The final objectives are listed on the Program Portal Guiding Principles page: <https://rb.gy/bapnvn>

Call for Collaborative Opportunities

The MRGESCP would like to highlight collaborative opportunities! For requests or inquiries, please email Michelle Tuineau at mtuineau@west-inc.com.

HR Coordination Meeting

A Habitat Restoration (HR) Coordination meeting was held on August 5, 2021 and attended by representatives from U.S. Bureau of Reclamation, City of Albuquerque Open Space, U.S. Army Corps of Engineers, Audubon Southwest, Pueblo of Sandia, Albuquerque Bernalillo County Water Utility Authority, Middle Rio Grande Conservancy District, and New Mexico Interstate Stream Commission. The group met to discuss and coordinate on HR activities in the Albuquerque Reach, and decided to hold quarterly HR Coordination meetings with the next one occurring in November 2021.

Recent Publications

Southwestern Willow Flycatcher Restoration Siting and Prioritization Within Saltcedar Habitat of the Middle Rio Grande, New Mexico. Tetra Tech, Inc. (2021). Report prepared for U.S. Army Corps of Engineers. <https://rb.gy/cbmvke>

Rio Grande Silvery Minnow Population Monitoring During May 2021. Dudley RK, Platania SP, White GC. (2021). Report prepared for U.S. Bureau of Reclamation. <https://rb.gy/mbhhmm>

Rio Grande Silvery Minnow Population Monitoring During June 2021. Dudley RK, Platania SP, White GC. (2021). Report prepared for U.S. Bureau of Reclamation. <https://rb.gy/amufut>

February Raft Mounted Electrofishing Surveys, Middle Rio Grande: 2020 Annual Report. U.S. Bureau of Reclamation. (2021). Technical Memorandum. <https://rb.gy/25cfhw>

FUNDING OPPORTUNITIES & UPCOMING DATES

FUNDING OPPORTUNITIES

The U.S. Bureau of Reclamation has funding opportunities open through various WaterSMART programs. More information about these opportunities can be found at www.grants.gov.

The FY 2022 Drought Resiliency Projects funding opportunity closes on October 5, 2021. Funding # R22AS00020. <https://rb.gy/ecwch4>

The FY 2022 Water Energy and Efficiency Grants funding opportunity closes on November 3, 2021. Funding #: R22AS00023. <https://rb.gy/hpbabf>

The FY 2022 Environmental Water Resources Projects funding opportunity closes on December 9, 2021. Funding #: R22AS00026. <https://rb.gy/s8xf3k>


UPCOMING MEETINGS

Executive Committee Meeting

October 27, 2021
9:00 AM–12:00 PM

Science and Adaptive Management Committee Meeting

First Week of November
8:00 AM–12:00 PM



The information in this newsletter should not be attributed to the MRGESCP or its Executive Committee, but to the organization from which it was submitted.

For comments and inquiries, contact:

Program Support Team | (505) 362-1251 | jdickey@west-inc.com

Photo: Middle Rio Grande Bosque; Photo Credit: Mike Marcus