

**Middle Rio Grande Endangered Species Collaborative Program (MRGESCP)
Science & Technical (S&T) Ad Hoc Group Charge
*Strategic Plan for Potential Drying in Angostura Reach Ad Hoc Group***

**Approved by the Science and Adaptive Management Committee (SAMC) on November 8, 2022.
Approved by the Strategic Plan for Potential Drying in Angostura Reach Ad Hoc Group on
December 16, 2022.**

Parent Committee

The Strategic Plan for Potential Drying in the Angostura Reach S&T Ad Hoc Group is formed by and reports to the SAMC, and operates at the will of the SAMC. The SAMC may, at any time, request updates from the S&T Ad Hoc Group, revise its charge, alter membership, or sunset the group.

Ad Hoc Group Charge

Develop recommendations for management actions to deploy in preparation for, or in response to, a potential drying event in the Angostura Reach near Albuquerque, New Mexico. Recommendations should include descriptions of each management action, scientific justification, anticipated responses, and considerations for deployment, including the consequences and tradeoffs for each alternative. Each alternative for the Angostura Reach should be considered in the context of other reach drying response actions or strategies (if in existence), and include recommendations for related data collection efforts, use of water infrastructure, and endangered species management actions for the Rio Grande silvery minnow (*Hybognathus amarus*; RGSM).

Membership

A. *Criteria for membership (at least one of the following is required for each member)*

- Knowledge of the operational scheme for water management within the Angostura, Isleta and San Acacia Reaches of the Middle Rio Grande;
- Experience with the RiverEyes Monitoring Program protocols and action thresholds
- Knowledge of endangered species management and recovery actions for RGSM

B. *Member List*

Lead TBD

Alison Hutson, New Mexico Interstate Stream Commission
Anne Marken, Middle Rio Grande Conservancy District
Carolyn Donnelly, U.S. Bureau of Reclamation
Casey Ish, Middle Rio Grande Conservancy District
Debra Hill, U.S. Fish & Wildlife Service
Diane Agnew, Albuquerque Bernalillo County Water Utility Authority
Eric Gonzales, U.S. Bureau of Reclamation
Justin Reale, U.S. Army Corps of Engineers
Kenneth Richard, U.S. Bureau of Reclamation
Lucas Barrett, U.S. Bureau of Reclamation
Lynette Giesen, U.S. Bureau of Reclamation
Nabil Shafike, U.S. Bureau of Reclamation
Reynalden Delgarito, U.S. Army Corps of Engineers

Iterative Steps for Task Development

Background

Portions of the Middle Rio Grande basin can experience channel drying during the summer months for up to 80 km (Archdeacon, 2016). While the Isleta and San Acacia reaches tend to experience drying events every summer, the Angostura Reach flows has not dried since the 1980's.

Angostura instream flows are typically managed at low levels through complex combination of interacting factors and can vary greatly as a function of inputs from upstream tributaries, irrigation demands, irrigation return flows, municipal demands and wastewater returns, water releases to supplement natural flows, downstream water delivery requirements, and precipitation. However, should drought conditions and low snowpack in the Upper Rio Grande basin and in Colorado continue in the future, maintaining flows in the Angostura Reach is likely to become even more challenging.

A higher frequency of drying in the Angostura Reach would not only negatively impact the RGSM and other listed species, but it would also adversely affect the agricultural, recreational, and municipal use of the river. Public safety and the overall perceptions of river conditions would also likely become unfavorable within the Albuquerque and surrounding metropolitan areas.

Concerns over Angostura Reach drying have been raised at multiple Executive Committee (EC) meetings since 2020. Accordingly, the MRGSCP now recognizes the urgency and importance of developing a strategic plan to address concerns associated with potential drying in the Angostura Reach. The proposed strategic plan will be developed beginning with the tasks in this charge.

Tasks and Deliverables

Task 1: Expert review and opinion of past management actions deployed in the Isleta and San Acacia Reaches.

Objective of Task 1.

Become sufficiently familiar with the historic actions of agencies in response to drying in the Isleta and San Acacia Reaches of the MRG in order to formulate an opinion on the efficacy of past management actions. Task 1 will focus on describing RGSM-specific objectives, scientific justification, validity of methods, and realized conservation benefits.

Deliverable(s): Opinion on efficacy (with respect to RGSM) of past management actions in response to drying in Isleta and San Acacia Reaches.

Task 2: Design and prioritize a suite of management objectives and associated actions regarding drying in the Angostura Reach. Base objectives and actions on the strength of scientific support and anticipated conservation benefit for the RGSM.

Objective of Task 2

The objective is to design new RGSM conservation objectives and actions (as needed) from insights gained in Task 1 that have a high likelihood of achieving measurable and meaningful benefits.

Deliverable(s): Prioritized list of management objectives and associated actions for conservation of RGSM in anticipation of drying in the Angostura Reach.

Task 3: Develop an innovative and achievable strategy to address the conservation needs of the RGSM in response to drying events in the Angostura Reach.

Objective of Task 3

The objective is to have a proactive, scientifically vetted and operationally sensitive suite of prioritized RGSM conservation actions to deploy in the Angostura Reach in response to the stressors associated with drying/dewatering events.

Deliverable(s): A strategic framework identifying consequences, tradeoffs, and associated risk and uncertainty to avoid or mitigate the adverse impacts of dewatering events on the RGSM.

Timeline and Reporting Scheduling

Task	Subtask	Deliverable	To Be Completed By
Task 1	Subtask 1A: Review	None	November 2022
	Subtask 1B: Expert Evaluation	Expert opinion on past actions	November 2022
Task 2	Subtask 2A: Design management objectives & actions	Comparison of management actions, consequences, & tradeoffs	November 2022
	Subtask 2B: Prioritize management actions	Prioritized list of management actions based on benefit & scientific defensibility	November 2022
	Subtask 2C: Describe metrics and methods	Monitoring plan	November 2022
Task 3	Subtask 3B: Design a deployment strategy for RGSM conservation actions	Draft strategic framework	January 2023