Executive Committee Meeting

March 30, 2023

Meeting Materials:

Agenda

Minutes

SAMC Memo to the EC with Recommendations from Workshop on Management of Vegetated Islands and Bank-attached Bars [read-ahead]

Draft 2022 MRGESCP Annual Report [read-ahead, draft]

Draft Multi-year Work Plan [read-ahead, draft]

Guiding Principles with proposed new objective G-2 [read-ahead, draft]

Draft Revised 2023 MRGESCP Work Plan [read-ahead, draft]

Memo to the EC on 2023 SAMC Membership Recommendations [read-ahead]

By-Laws Section 7.1 with proposed revisions [read-ahead]

2023 Hydrology Update [presentation]

2023 Reservoir Storage Status [follow-up]

Updated March 2023 MAT Recommendations [presentation]

Updated March 2023 MAT Recommendations [follow-up]

MRGESCP Multi-Year Plan [presentation]

Results from the Annual Program Evaluation [presentation]

Questions to Consider Regarding Future Program Portal Funding [follow-up]

Link to full Meeting Materials List

Executive Committee Meeting
March 30, 2023

See the following meeting material on the page below:

Agenda

Middle Rio Grande Endangered Species Collaborative Program

Est. 2000

Executive Committee (EC)
Meeting Agenda

March 30, 2023, 1:00 – 4:00 PM MT

Location: U.S. Fish & Wildlife Service
2105 Osuna Rd NE, Albuquerque, NM 87113

Zoom Log-In:
https://west-inc.zoom.us/j/8983593120?pwd=bU54V3NGeG93bXVlSlJFcEIzcE9wZz09
Call-In: +1-669-900-6833
Meeting ID: 898-359-3120; Passcode: 1251

Meeting Objectives:

- *Hear an update on Middle Rio Grande Endangered Species Collaborative Program (Collaborative Program) activities.*
- *Approve the 2022 Annual Report.*
- *Hear an update from the Fiscal Planning Committee (FPC) on their activities and requests for feedback and input.*
- *Learn about and discuss the proposed multi-year plan.*
- *Hear the results of the Annual Program Evaluation, and provide additional feedback and input.*
- *Appoint new members to the Science and Adaptive Management Committee (SAMC).*
- *Hear the 2023 hydrology forecast and an update from the Minnow Action Team (MAT), and discuss planned activities for 2023.*

1:00 – 1:10	**Welcome, Introductions, Agenda Review** • Meeting ground rules ✓ **Decision**: Approval of March 30, 2023 EC meeting agenda	*EC Co-chairs*
1:10 – 1:15	**December 2022 Meeting Summary** • Action items review ✓ **Decision**: Approval of December 22, 2022 EC meeting minutes Read-ahead: ☐ Draft December 22, 2022 EC Meeting Minutes	*EC Co-chairs*

1:15 – 1:35	**Program Support Team (PST) Update**
	• New PST members
	• Cost-Share and Signatory Contributions Update
	• Administrative schedule update
	• Science and Adaptive Management Committee (SAMC) Update
	  o Two-pronged approach to restoration guidance for Middle Rio Grande
	  o Recommendations from 2022 Vegetated Islands/Bars Workshop
	  o 2023 Climate Scenario Planning Workshop
	  o Long-Term Plan project evaluation criteria – test run
	• Ad Hoc Group Updates
	  o Strategic Plan for Drying in Angostura Reach
	  o Rio Grande Silvery Minnow (RGSM) Hypotheses Development
		Debbie Lee & Catherine Murphy, PST

- RGSM Conceptual Ecological Model Revisions
- Information and Data Quality Standards

Read-ahead:

☐ SAMC Memo to the EC with Recommendations from Workshop on Management of Vegetated Islands and Bank-attached Bars

1:35 – 1:45 **2022 MRGESCP Annual Report** — *Michelle Tuineau, PST*

✓ **Decision**: Approval of 2022 MRGESCP Annual Report

Read-ahead:

☐ Draft 2022 MRGESCP Annual Report

1:45 – 2:00 **Fiscal Planning Committee (FPC) Update** — *FPC Co-chairs & Debbie Lee, PST*

- New FPC Co-Chairs
- Update on FPC activities
  - Funding opportunities matrix
  - Incorporating FPC activities into the biennial schedule
- FPC request for reviewers
- FPC request for legal expertise to attend next FPC meeting

➢ **Action Item**: Signatory participants contact the PST to volunteer to review proposal/funding template language

➢ **Action Item**: PST will include named legal experts to the invitation for the next FPC meeting

2:00 – 2:30 **Multi-Year Plan** — *Debbie Lee & Catherine Murphy, PST*

- Overview of the multi-year work plan
- Scientific review and feasibility of management requests
- Proposed new objective
- Feedback and discussion

✓ **Decision**: Approve Multi-Year Plan

➢ **Action Item**: PST will update the Long-Term Plan for Science & Adaptive Management to include the approved Multi-Year Work Plan as a new subsection under 9.0 Future Direction

➢ **Action Item**: SAMC will undertake a science review of the Multi-Year Plan

Read-ahead:

☐ Draft Multi-year Work Plan

☐ Guiding Principles with proposed new objective G-2

2:30 – 2:40 **Break**

2:40 – 2:55 **Summary of Annual Program Evaluation** — *Michelle Tuineau, PST*

- Summary of responses
- Proposed changes to Collaborative Program operations
  - New objectives
  - SAMC membership
- Discussion and additional feedback
- Other surveys and responses

2:55– 3:10 **2023 MRGESCP Work Plan Update and Revisions** — *Debbie Lee & Catherine Murphy, PST*

- Proposed revisions

✓ **Decision**: Approve revised 2023 Work Plan

Read-ahead:

- ☐ Draft Revised 2023 MRGESCP Work Plan

3:10 – 3:25	**2023 SAMC Membership** • Recommended new SAMC members from the EC small group • Recommended changes to the By-Laws ✓ **Decision**: Revise By-Laws Section 7.1 to have "8-10 members" on the SAMC ✓ **Decision**: Appoint new SAMC members ➢ **Action Item**: PST will update By-Laws to incorporated approved revisions Read-ahead: ☐ Memo to the EC on 2023 SAMC Membership Recommendations ☐ By-Laws Section 7.1 with proposed revisions	*Catherine Murphy, PST*
3:25 – 3:50	**2023 Hydrology Forecast and Minnow Action Team (MAT) Update** • Review March 10, 2023 MAT meeting • Forecast for 2023 • Discussion of planned 2023 activities	*Carolyn Donnelly, U.S. Bureau of Reclamation & Shannon Weld, N.M. Interstate Stream Commission*
3:50 – 3:55	**Public Comment and Announcements**	
3:55 – 4 :00	**Meeting Summary and Action Items Review** ➢ **Next EC Meeting**: June 29, 2023	*EC Co-chairs*
4:00	**Adjourn**	

Link to full Meeting Materials List

Executive Committee Meeting
March 30, 2023

See the following meeting material on the page below:

Minutes

Middle Rio Grande Endangered Species Collaborative Program

Est. 2000

Executive Committee (EC)
Meeting Minutes

March 30, 2023; 1:00 PM–4:00 PM

Location: U.S. Fish & Wildlife Service, Albuquerque Office
2105 Osuna NE, Albuquerque, NM 87113; Conference Room

Zoom Log-In:
https://west-inc.zoom.us/j/8983593120?pwd=bU54V3NGeG93bXVlSlJFcEIzcE9wZz09
Call-In: +1-669-900-6833
Meeting ID: 898-359-3120; Passcode: 1251

Decisions:

- ✓ Approval of the March 30, 2023 EC meeting agenda
- ✓ Approval of the December 22, 2022 EC meeting minutes
- ✓ Approval of the 2022 Middle Rio Grande Endangered Species Collaborative Program (MRGESCP) Annual Report with the addition of a photo of EC members and a photo collage of 2022 signatory activities and/or additional testimonials from signatories
- ✓ Approval of the draft multi-year plan in principle, for review by the Science and Adaptive Management Committee (SAMC) before inclusion in the Long-Term Plan for Science and Adaptive management (Long-Term Plan)
- ✓ Approval of the new Program Objective G-2
- ✓ Approval of the revised 2023 MRGESCP Work Plan
- ✓ Approval of revising By-Laws Section 7.1 to change the maximum number of SAMC members from 8 members to 8-10 members
- ✓ Approval of new SAMC membership as follows:
    - Ryan Gronewold moving from the hydrology subject matter expert (SME) into the role of EC *ex officio* member
    - Mick Porter and Alison Hutson as the aquatic ecology SMEs
    - Aubrey Harris as the hydrology SME
    - Ondrea Hummel as the watershed resource planning and regulatory SME

Announcements:

- ❖ The U.S. Bureau of Reclamation (Reclamation) has provided the DRAFT 2022 Rio Grande Silvery Minnow (RGSM) Annual Report. Reviews of the draft report and associated data are due by April 5, 2023.
- ❖ The National Conference on Ecosystem Restoration (NCER) will be held on April 14-19, 2024 in Albuquerque, New Mexico. There has been interest in the MRGESCP presenting at the event. The Program Support Team (PST) can help support the development of a presentation to be given by a MRGESCP member. The MRGESCP will explore this option. Presentation proposals are due May 19, 2023.
- ❖ There will be an art auction fundraiser at the Bachechi Open Space on April 15, 2023 from 9 AM – 3 PM benefitting the Bosque Ecosystem Monitoring Program (BEMP).

- The Annual Rio Grande Compact Commission meeting will be held on April 21, 2023 at the New Mexico State Capitol Building in Santa Fe, New Mexico, starting at 9 AM MT. There will be options to attend the meeting virtually. Information for viewing the event virtually will be posted at https://www.ose.state.nm.us/Compacts/RioGrande/isc_RioGrande.php.
- The 2023 BEMP Crawford Symposium: Community Science, Education, and Stewardship will be held on April 28, 2023 from 5:30 – 7:30 PM at the Mountain View Community Center.
- The U.S. Army Corps of Engineers (USACE) received funding of $2 million for Fiscal Year 23 (FY23). The proposed President's Budget for FY24 was released with USACE set to receive $625,000. The final funding value is subject to change.
- The USACE is seeking a Program Manager for their participation in and funding for the MRGESCP.

Action Items:

WHO	ACTION ITEM	BY WHEN
PST	Re-send the link for the Annual Program Evaluation	4/3/2023
PST	Provide the link to the Water Ops Power BI Dashboard presented by Carolyn Donnelly	4/3/2023
Shannon Weld	Update the Minnow Action Team (MAT) presentation to include the RGSM numbers from the 2016 Biological Opinion	4/3/2023
PST	Provide a list of questions around Program Portal funding for potential legal experts to prep them for the upcoming Fiscal Planning Committee (FPC) meeting	4/3/2023
Jim Wilber	Provide a copy of Reclamation's Water Reliability in the West – 2021 SECURE Water Act to the PST to inform climate scenario planning	4/3/2023
PST	Reschedule the FPC meeting so it does not conflict with the Annual Operating Plan (AOP) Meeting	4/6/2023
PST	Update the Drying Ad Hoc Group name to expand beyond the Angostura Reach	4/7/2023
PST	Send out the draft report from the Drying Ad Hoc Group to EC members	4/7/2023
EC Representatives	Provide photos of 2022 activities with captions for inclusion in the 2022 Annual Report	4/7/2023
EC Representatives	Provide any testimonials on the MRGESCP for inclusion in the 2022 Annual Report	4/7/2023
EC Representatives	Suggest legal experts for potentially advising the FPC on Program Portal funding options [Current suggestions are Trevor Stevens, USACE; Chris Shaw, NMISC (contacted by Grace Haggerty; member of NMOAG Open Government Division (contacted by Bill Grantham); and Kyle Harwood to coordinate the group	4/7/2023
Kim Eichhorst	Provide information to the PST regarding contacts at Sevilleta National Wildlife Refuge [Suggested contacts: Jenn Rudgers and Scott Collins) to help inform climate scenario planning	4/7/2023

Kyle Harwood	Provide information to the PST on work done by the City of Santa Fe in Northern New Mexico to help inform climate scenario planning	4/7/2023
PST	Update the MRGESCP By-Laws to reflect the change in the maximum number of SAMC members	4/7/2023
PST	Contact Rick Carpenter on how the San Juan River Basin Recovery Implementation Program (RIP) is addressing climate change and adaptive management	4/12/2023
PST	Contact Jesse Roach, Bill Schneider, Steven Schultz regarding Los Alamos climate change work	4/12/2023
EC Representatives	Complete the Annual Program Evaluation by the extended deadline	4/14/2023
EC Co-Chairs	Provide thank you letters to SAMC members who are stepping down	4/28/2023
EC Representatives	Suggest ideas for MRGESCP presentations at NCER	4/28/2023
All	Contact the PST to volunteer to review draft proposal/funding template language	4/28/2023
EC Representatives	Provide 2022 signatory activities via the Science and Adaptive Management Information System (SAMIS; https://samis.west-inc.com/middleriogrande/login) or Survey Planet form (https://s.surveyplanet.com/dp2rytrj)	5/1/2023
PST	Develop a presentation with the help of MRGESCP members for the MRGESCP to present at NCER	5/19/2023
PST	Investigate the possibility of presenting a seminar on the Society for Ecological Restoration (SER) 5-Star Recovery Wheel	6/29/2023
SAMC	Undertake a science review of the multi-year plan	6/29/2023

Next Meeting: June 29, 2023; 1:00 PM – 4:00 PM

Meeting Minutes

Welcome, Introductions, Agenda Review

The Non-Federal Co-chair, Mark Kelly, Albuquerque-Bernalillo County Water Utility Authority (ABCWUA) opened the meeting, led introductions, and reviewed the March 30, 2023 meeting agenda. Jim Wilber, Reclamation, will serve as the stand-in for the Federal Co-chair until a new Federal Co-chair has been appointed. The EC approved the March 30, 2023 agenda.

- ✓ **Decision**: Approval of the March 30, 2023 EC meeting agenda

December 2022 Meeting Summary

Debbie Lee, Program Manager, PST, reviewed the December 22, 2022 meeting minutes and action items (see minutes). Summary updates for action items are below:

- The Collaboratory evaluation was sent out and there were a few responses, which will help planning future events.
- SAMIS training sessions were completed.
- Points-of-contact for the FPC were confirmed.
- The climate scenario planning exercise proposal was revised.
- There were a number of suggestions for participants in the planning group for the climate scenario planning exercise.
- Some of the 2022 signatory activities were entered into the SAMIS, but more are needed. This will be discussed later in the meeting.
- Signatory highlights will also be discussed later in the meeting.
- The PST provided a webinar on Collaboratory outcomes, which was expanded into the multi-year plan, to be discussed later in the meeting.
- The Habitat Restoration (HR) Coordination Group went on a field trip to Pueblo of Sandia and City of Albuquerque Open Space sites.
- Quarterly EC meetings were scheduled for 1-4 PM MT on the fourth Thursday of the month.
- A small group met to discuss SAMC applicants.
- The Survey of Manager Confidence in Science Support and Program Evaluation were sent out. The topic will be discussed later in the meeting.

The EC approved the December 22, 2023 meeting minutes.

- ✓ **Decision**: Approval of the December 22, 2022 EC meeting minutes

PST Update

Debbie L. and Catherine Murphy, PST, presented updates on MRGESCP activities. Summary updates are below:

- New PST members:
  - The PST welcomed two new members: Zoë Rossman and Angela Medina-Garcia, who will serve as Assistant Science Coordinators. Some may be familiar with Angela M., as she previously worked with the PST and assisted at the Collaboratory. Both Zoë R. and Angela M. were introduced in the February 2023 newsletter (https://webapps.usgs.gov/MRGESCP/documents/middle-rio-grande-endangered-species-collaborative-program-february-2023-newsletter).
- Cost-Share and Signatory Contributions Update:

    - In March, the PST typically gives an update on cost share and signatory contributions. Reporting for both is dependent on signatories submitting their 2022 activities to the PST. Not enough activities were submitted before the March meeting. EC representatives were asked to provide 2022 signatory activities via the SAMIS (https://samis.west-inc.com/middleriogrande/login) or Survey Planet form (https://s.surveyplanet.com/dp2rytrj) by the extended due date of May 1, 2023.
- Administrative schedule update:
    - There are no changes to the Biennial Schedule in March, but there will be changes from the FPC up for approval at the June EC meeting.
- SAMC Update:
    - The SAMC has made progress on developing HR monitoring guidance. The SAMC has opted to develop two ad hoc groups; one group will use the SER 5-Star Recovery Wheel to guide at the ecosystem restoration level and the second group will develop a compendium of HR resources in the Middle Rio Grande basin, which is the first step to developing standardized HR monitoring guidance. Contact Catherine M. (cmurphy@west-inc.com) for more details on these groups.
    - The SAMC sent a memo to the EC regarding recommendations from the Workshop on Management of Vegetated Islands and Bank-Attached Bars (see memo).
    - The SAMC is excited about the climate scenarios workshop to be held in fall 2023 and will be involved in the planning. The PST is convening a small group to plan the event.
    - The SAMC is testing the Project Evaluation Criteria from the Long-Term Plan on a few projects in the SAMIS. If the results do not match expectations, they will reevaluate the criteria.
- Ad Hoc Group Updates:
    - The Strategic Plan for Drying in the Angostura Reach Ad Hoc Group completed a survey to characterize the decision environments of different water management agencies. The group reviewed a summary report of publicly available information related to drying. Review comments and edits were merged into one document, and this version will be sent to EC members. The document is a working draft and should not be shared with the public.
        - Jim W. pointed out that the group's focus has expanded from the Angostura Reach to all reaches and requested a new name for the group to reflect that change.
    - The RGSM Hypotheses Development Ad Hoc Group is working on a tool to compare recent RGSM management response models, including the Yackulic et al. Integrated Population Model, and the Utah State University Walsworth and Budy model. The group hopes to increase utilization of these models.
        - The group is also developing a series of hypotheses relating to RGSM mesohabitat relationships, which will then be peer reviewed.
    - The RGSM Conceptual Ecological Model (CEM) Ad Hoc Group will finalize the PST-completed revisions of the CEM before it is peer reviewed.
    - An EC member asked about the peer review process. The PST explained the peer review process is laid out in the Long-Term Plan. To support scientific integrity, a peer review group will review ad hoc group deliverables, when deemed appropriate by the SAMC. The RGSM hypotheses and RGSM CEM will both undergo an internal science review, which will include reviewers who were not involved in their development. Reviewers will mostly come from within the MRGESCP, but external folks will not be excluded.

- Matt Wunder, New Mexico Department of Game and Fish, and Ara Winter, BEMP, are co-leads for the Information and Data Quality Standards Ad Hoc Group. Rather than write one set of standards for the MRGESP, the co-leads determined the group will summarize the standards of individual signatories and develop a template to preface documents and data, which captures the standards used in their development.

- **Action Item**: PST will update the Drying Ad Hoc Group name to expand beyond the Angostura Reach
- **Action Item**: PST will send out the draft report from the Drying Ad Hoc Group to EC members
- **Action Item**: EC Representatives will provide 2022 signatory activities via the SAMIS (https://samis.west-inc.com/middleriogrande/login) or Survey Planet form (https://s.surveyplanet.com/dp2rytrj)
- **Action Item**: PST will investigate the possibility of presenting a seminar on the SER 5-Star Recovery Wheel

2022 MRGESCP Annual Report

Michelle Tuineau, PST, presented the draft 2022 MRGESCP Annual Report (see draft report) for approval. The draft was missing a photo of the EC to be taken the day of the meeting. The draft also included a placeholder page for 2022 signatory activities. As few 2022 activities were provided by signatories, the page was not filled as initially planned. The EC was asked to make a decision on the direction of the page with the following options proposed: 1) Continue to collect 2022 activities and summarize them on the page, 2) include additional signatory testimonials, or 3) develop a picture collage of 2022 activities. Responses are summarized below:

- Mark K. surmised that 2022 signatory activities are unlikely to be submitted in time to complete the 2022 Annual Report; therefore, the other options should be favored.
- Debbie L. stated that no federal testimonials were submitted, so it would be good to include one.
  - Jim W. said he would submit a testimonial and supported the photo collage option.
- Michelle T. reminded the group that testimonials would move the section from a signatory focus to an MRGESCP focus. The section was the only remaining signatory-focused section.
- Grace Haggerty, New Mexico Interstate Stream Commission (NMISC), also supported the photo collage as it would create interest while flipping through the annual report.
- The USACE and NMISC stated they could provide 2022 activities.
- Colleen Langan-McRoberts, City of Albuquerque, Open Space, will provide photos of activities.
- Jim W. asked if congressional offices receive the annual report. Debbie L. answered that there are some congressional staffers on the MRGESCP mailing list who receive a link to the electronic copy, but no hard copies are provided.
- The PST will print two annual reports per signatory. If there is a need for more, EC members should contact Debbie L. to request more.
- The EC approved the report with the proposed addition of 2022 activity photos and a photo of the EC members. They agreed to waive any additional review of the report.

- ✓ **Decision**: Approval of the 2022 MRGESCP Annual Report with the addition of a photo of EC members and a photo collage of 2022 signatory activities and/or additional testimonials from signatories
- **Action Item**: EC representatives will provide photos of 2022 activities with captions for inclusion in the 2022 Annual Report

- **Action Item**: EC representatives will provide any testimonials on the MRGESCP for inclusion in the 2022 Annual Report

FPC Update

Debbie L. announced that Deb Hill, U.S. Fish & Wildlife Service, and Grace Haggerty, NMISC, have stepped down as the FPC co-chairs. Anne Marken, Middle Rio Grande Conservancy District (MRGCD), and Danielle Galloway, USACE, have been selected as the new co-chairs. Mark K. recognized and thanked Deb and Grace for their service on the FPC.

The next FPC meeting is scheduled for the morning of April 18, 2023, which will need to be scheduled to accommodate the 2023 AOP meeting.

Debbie L. then provided an update on FPC activities, including:

- Developing a collaborative funding opportunities matrix, which lists collaborative grant opportunities, noting deadlines, areas that can be funded, and eligible recipients of each grant.
- Incorporating FPC-related activities into the MRGESCP's Biennial Schedule, which will be brought to the EC for review and approval in June.
- Drafting template language which can be used for proposals and funding justifications. The FPC would like volunteers to be reviewers once that language has been developed.
- Discussing future Program Portal funding options. The FPC is requesting legal experts attend the next meeting to participate in that conversation.
    - Having contracting experts in that conversation would also be helpful.

- **Action Item**: PST will provide a list of questions around Program Portal funding for potential legal experts to prep them for the upcoming FPC meeting
- **Action Item**: PST will reschedule the FPC meeting so it does not conflict with the AOP Meeting
- **Action Item**: EC representatives will suggest legal experts for potentially advising the FPC on Program Portal funding options [Current suggestions are Trevor Stevens, USACE; Chris Shaw, NMISC (contacted by Grace Haggerty; member of NMOAG Open Government Division (contacted by Bill Grantham); and Kyle Harwood to coordinate the group
- **Action Item**: All will contact the PST to volunteer to review draft proposal/funding template language

Multi-Year Plan

Debbie L. and Catherine M. introduced the draft multi-year plan to the EC (see presentation and multi-year plan). They explained that they took the input received at the December Collaboratory, the 2021 HR Workshop, the 2022 Management of Vegetated Islands and Bank-Attached Bars Workshop, and individual signatory conversations to develop the focus areas in the multi-year plan and inform the development of immediate, short-term, and long-term priorities. They acknowledged that the multi-year plan was ambitious, and suggested the EC members consider it guidance for the direction of the MRGESCP direction and a menu of activities to achieve that direction.

Debbie L. shared that from the Collaboratory, two overarching themes emerged: 1) the need for climate scenario planning and 2) the applicability of the ecosystem approach. These are encapsulated throughout the multi-year plan, though there are specific priority activities related to climate scenario planning. In addition, the other focus areas are:

- HR planning and assessment

- Management of vegetated islands and bank-attached bars
- RGSM management and science
- Water operations and flexibility
- Strategic planning for river drying in the Middle Rio Grande

EC members discussed items in the multi-year plan. During the discussion, the following points were made:

- Climate scenario planning:
    - There was conversation around an appropriate time scale for the climate workshop.
        - One EC member suggested ten years out as it aligns with planning purposes (e.g., biological opinions) and that period would allow for more certainty when planning.
        - The Leap Ahead Analysis looked out over fifty years.
            - The fifty-year horizon also aligns with the USACE's future planning.
        - The high level of uncertainty in climate patterns over the next ten years would make it difficult to carry out scenario planning.
            - The research is trying to account for increased variability. It is vitally important to plan for that variability, and that is the value of having a workshop.
        - The small planning group can discuss the appropriate time scale.
    - Planning for the workshop will include determining how to characterize uncertainty in a way that would be helpful to managers.
    - Additional resources/people that were identified:
        - Ariane Pinson, USACE
        - Rick Carpenter, City of Santa Fe
        - San Juan Recovery Implementation Program
        - Jesse Roach, Bill Schneider, and Steven Schultz regarding Los Alamos climate change work
        - Sevilleta National Wildlife Refuge
    - Many of the planning documents from 10-15 years ago do not include climate considerations, and having the MRGESCP explicitly carrying out climate scenario planning will help the signatories with their own planning and justifications.
- Ecosystem:
    - There are big projects being planned that would impact the ecosystem and the species. It would be helpful to know how they might be impacted by climate change.
    - The SAMC is forming an ad hoc group to look at applying the SER Recovery Wheel the Middle Rio Grande.
- Water Operations and flexibility:
    - There is a need for more transparency on management actions and decisions.
- Strategic planning for river drying:
    - An EC member expressed support for expanding the focus beyond the Angostura Reach to encompass planning for drying throughout the river.
- Implementation of the multi-year plan:
    - The items in the multi-year plan can be implemented by the different committees, who can form work groups. The items can be tracked in SAMIS. WEST will not be completing all activities in the multi-year plan; the MRGESCP as a whole will work to implement the activities.

    - The purpose of the multi-year plan is to make the MRGESCP more useful to all the signatories, and link MRGESCP activities to signatory activities and initiatives.
    - The multi-year plan will be revisited every two years and revised as needed to reflect changing priorities.
- Multi-species approach:
    - An EC member pointed out that only RGSM is called out in the multi-year plan, and it should be more explicit on how the other four species are incorporated into the priorities.
    - Each multi-year plan focus area is linked to the Program Goals, so it's clear which species' goals are addressed by each focus area.

The EC approved the draft multi-year plan in principle, as it will undergo a science review by the SAMC before it is included in the Long-Term Plan.

Debbie L. also shared that while organizing the outcomes from the Collaboratory, a gap was made apparent in the Program Objectives. She proposed that the EC adopt a new Program Objective:

> G-2) Outreach to external stakeholders and the public about MRGESCP activities, initiatives, and priorities.

(See revised guiding principles) The EC approved the new Program Objective G-2.

- ✓ **Decision**: Approval of the draft multi-year plan in principle, for review by the SAMC before inclusion in the Long-Term Plan
- ✓ **Decision**: Approval of the new Program Objective G-2
- ➢ **Action Item**: Jim Wilber will provide a copy of Reclamation's Water Reliability in the West – 2021 SECURE Water Act to the PST to inform climate scenario planning
- ➢ **Action Item**: Kim Eichhorst will provide information to the PST regarding contacts at Sevilleta National Wildlife Refuge [Suggested contacts: Jenn Rudgers and Scott Collins) to help inform climate scenario planning
- ➢ **Action Item**: Kyle Harwood will provide information to the PST on work done by the City of Santa Fe in Northern New Mexico to help inform climate scenario planning
- ➢ **Action Item**: PST will contact Rick Carpenter on how the San Juan River Basin RIP is addressing climate change and adaptive management
- ➢ **Action Item**: PST will contact Jesse Roach, Bill Schneider, Steven Schultz regarding Los Alamos climate change work
- ➢ **Action Item**: SAMC will undertake a science review of the multi-year plan

Summary of Annual Program Evaluation

Michelle T. summarized and opened discussion on results of the Annual Program Evaluation (see presentation). The presentation and discussion are summarized below:

- The Annual Program Evaluation will be used to establish a baseline, indicate areas that need change, and compare results over time. The EC was asked for their insights and suggestions after reviewing the results.
    - There were only three responses but good information was provided and more signatories are asked to respond.

- The Annual Program Evaluation features six sets of statements regarding six conditions needed for enabling and implementing adaptive management, and respondents were asked to score each statement 1-5 based on how much they agreed with it.
- The lowest conditions overall were engagement, learning, and management relevance.
- The lowest statements for the conditions that enable adaptive management were discussed further:
    - Culture: "is respected by external parties"
        - One EC member believes that makes perfect sense given the poor reputation of the MRGESCP in the past but says that point of view is changing. The MRGESCP is working to improve this reputation and more folks are getting involved.
        - One EC member believes outreach is an important factor. During the Science Symposium, this member counsels that the MRGESCP bring in non-MRGESCP stakeholders and presenters, so the message spreads further.
    - Engagement: "engages all relevant stakeholders"
        - An EC member suggested Wild Earth Guardians could be a missing collaborative piece in the group.
        - An EC member stated the importance of determining what a stakeholder is. They asked if existing signatories are stakeholders or if they represent stakeholders? This could be a matter of terminology.
            - This member promotes continuing to engage with other local groups such as the Save Our Bosque Task Force.
- The lowest statements for the conditions that implement adaptive management were discussed further:
    - Collaboration: "provides venues for fostering external collaboration
        - An EC member stated some past examples of this type of collaboration were the RGSM release party, which was featured on the news, and the cheering onlookers during egg collection in the Isleta Reach.
            - This member believes celebration is good way to engage the public or local groups.
            - This member suggested the following external collaboration efforts:
                - Planting trees
                - Collaborating with Bernardo Wildlife Management Area
                - Collaborating with Whitfield Wildlife Conservation Area
                - Collaborating with Save Our Bosque Task Force
            - The PST has plans to ramp up public outreach in 2023.
    - Learning and Management Relevance: Scores were low, which was expected as the MRGESCP recently transitioned from planning to practice. Scores are expected to increase as the MRGESCP continues its work.

The EC representatives were asked to continue to complete the Annual Program Evaluation to provide valuable feedback which can be compared to results in the future.

- **Action Item**: PST will re-send the link for the Annual Program Evaluation
- **Action Item**: EC representatives will complete the Annual Program Evaluation by the extended deadline

2023 MRGESCP Work Plan Update and Revisions

Debbie L. provided an update on 2023 Work Plan activities, and proposed the following updates based on the priorities that came out of the 2022 Collaboratory (see work plan):

- Removed the second potential topical workshop so that the MRGESCP can focus on the Climate Scenario Planning Workshop.
- Revised timing of several tasks to be more realistic:
    - The Information and Data Quality Standards Ad Hoc Group members discussed their charge and decided they would need until December to finish their charge as written.
    - Extended the timeline to finalize the revisions to the RGSM CEM, which in turn shifted peer review of the CEM.
    - Extended the timeline for the RGSM Hypotheses Development Ad Hoc Group.
- Revised timing for the Planning for Drying in the Angostura Reach Ad Hoc to incorporate a new task of surveying the water managers.
- Incorporated more detail on the following:
    - HR guidance ad hoc groups
    - Vegetated island and bank-attached bar activities
    - Climate Scenario Planning workshop
- Due to low response to the Survey of Managers' Confidence in Science Support, the intent of that survey will be incorporated into the Program Evaluation for 2024.

➢ **Decision**: Approval of the revised 2023 MRGESCP Work Plan

2023 SAMC Membership

Catherine M. summarized the changes to the existing SAMC members (see presentation):

- Alan Hatch stepped down as the EC *ex officio* member
- Ryan Gronewold stepped down as the hydrology SME, and agreed to be appointed as the EC *ex officio* member
- Mo Hobbs had previously stepped down as one of the aquatic ecology SMEs
- Thomas Archdeacon is stepping down as the other aquatic ecology SME

After the December EC, EC members had identified the following areas of expertise they would like on the SAMC:

- Two aquatic ecology experts
- An environmental planner
- An economist

Catherine M. noted that while no economist applied, she suggested that the MRGESCP can keep looking and, if one is found, ask them to be on our SME list to call upon for specific tasks.

A small group of EC members met to review applications. There was a group of excellent candidates, and the small group recommended the following new members to the SAMC in a memo to the EC (see memo):

- Mick Porter, aquatic ecology SME
- Alison Hutson, aquatic ecology SME
- Ondrea Hummel, water resource planning and regulatory SME
- Aubrey Harris, hydrology SME

The small group also discussed the need to increase the number of members on the SAMC, given the increased breadth and number of activities the MRGESCP is taking on. They also recommended that the By-Laws section 7.1 be amended to include "no more than 8-10" members on the SAMC to provide flexibility from year-to-year.

- ✓ **Decision**: Approval of revising By-Laws Section 7.1 to change the maximum number of SAMC members from 8 members to 8-10 members
- ✓ **Decision**: Approval of new SAMC membership as follows:
  - Ryan Gronewold moving from the hydrology SME into the role of EC *ex officio* member
  - Mick Porter and Alison Hutson as the aquatic ecology SMEs
  - Aubrey Harris as the hydrology SME
  - Ondrea Hummel as the watershed resource planning and regulatory SME
- ➢ **Action Item**: PST will update the MRGESCP By-Laws to reflect the change in the maximum number of SAMC members
- ➢ **Action Item**: EC Co-Chairs will provide thank you letters to SAMC members who are stepping down

2023 Hydrology Forecast and MAT Update

Carolyn Donnelly, Reclamation, presented the hydrology forecast for 2023 (see presentation). The presentation and discussion are summarized below:

- Antecedent soil moisture was high going into 2023.
- Early in March, Rio Chama snowpack was average. In late March, snowpack was nearing the maximum. A good amount is expected to melt off and be captured in the rivers and streams.
- Upper Rio Grande snowpack passed the median peak in late March.
- The National Weather Service Climate Prediction Center three-month outlook indicated above average temperature and below average precipitation. While temperature has been slightly above average, precipitation has been above average.
- The most probable forecast (50%) for April is likely to be closer to the March 30% exceedance forecast.
- The full San Juan-Chama allocation is expected at Heron this year. Total inflow into the San Juan-Chama Project is predicted to be 120,000-130,000 acre feet (ac-ft).
- Construction is ongoing at El Vado Reservoir and storage will be kept at 2,000 ac-ft.
  - Storage is allowed to increase between April 1st to May 15th if water cannot be released as it comes in. Storage can increase from 6,785 ft (2,000 ac-ft) to 6,800 ft (9,405 ac-ft).
  - Difficulty with grouting has prolonged construction.
  - Embankment construction will go into late 2024.
  - Prior and Paramount water will be retained in Abiquiu Reservoir in 2023 and 2024.
- Downstream channel capacity from Abiquiu Reservoir is 1,800 cubic feet per second (cfs). The reservoir could be releasing at channel capacity for a couple months with potential lockbin storage into the fall depending on snowmelt.
- An EC member asked whether New Mexico would get out of Article VII in the Rio Grande Compact. It is predicted New Mexico will exit Article VII in August or September.
- Cochiti Reservoir will hold its recreation pool and outflow what it inflows.
- Gages: Otowi Gage could reach a peak of 4,500 cfs. Central Gage could peak at 3,000-4,000 cfs for a couple months. Flows at Central Gage could be low but no drying is expected.
- Supplemental Releases: Reclamation has 5,010 ac-ft of supplemental water from 2022. Reclamation will be negotiating leases with contractors for around 12,000 ac-ft.

- Lucas Barrett, Reclamation, developed a Water Ops Power BI Dashboard. The dashboard graphically represents current conditions in the Rio Grande, current conditions in the Pecos River, reservoir conditions, and Middle Rio Grande conditions. The dashboard is updated every hour.
- An EC member asked about Abiquiu repairs. The work will start in November. There will be a shorter window of time to start releasing water downstream.

Shannon Weld, NMISC, gave an update on the MAT (see presentation). The presentation and discussion are summarized below:

- The MAT meeting was in early March, and forecasts have changed since then. The MAT was planning around the 50% forecast.
- New Mexico ended 2022 with 127,000 ac-ft of debt. After reconciliation and a one-time delivery credit, New Mexico is now at 93,000 ac-ft of debt.
- October catch-per-unit-effort (CPUE) for RGSM was 0.17 for 30 sites and 0.08 for 20 sites. 129,000 hatchery-reared RGSM were augmented.
- An EC member asked for the fall RGSM density target in the 2016 Biological Opinion to be added to the presentation.
- General MAT recommendations are to be prepared for small-scale "jiggle" and plan follow-up MAT meetings throughout the season. The next meeting is on April 12th; the date can change if needed and organizers can add additional meetings after.
- Hydrology recommendations: the natural spring hydrograph will cue spawning, minimize river channel drying, utilize diversion structures, prioritize supplemental water for upstream reaches, and utilize NMISC pumping rights at the Atrisco Pump for emergencies.
- Biology recommendations: collect RGSM eggs for captive propagation facilities with goals of 50,000 RGSM in captive propagation and 200,000 eggs, start monitoring eggs in April, distribute eggs, prepare for larval and juvenile fish collection, prepare for fish salvage if drying occurs, discharge cool water from MRGCD outfalls, and if lease water is not sufficient, coordinate fish rescue.
- Monitoring will be discussed in more depth at the April meeting. The recommendations discussed so far are:
    - continue RiverEyes,
    - continue egg monitoring at the temporary pump location,
    - ASIR is under contract with Reclamation to monitor presence of fish and larval fish,
    - collect more temperature and water quality data,
    - Reclamation egg monitoring from April 22nd to June 10th,
    - City of Albuquerque BioPark and SWCA monitoring as flows increase, and
    - inundation monitoring for peak flows and backwaters, and drone monitoring, at MRGCD outfalls.
- An EC member asked about inundation monitoring. Inundation monitoring is planned both on-the-ground and with drones.
    - NMISC has begun discussing a potential satellite flight, which it has done in the past. USACE is also planning a satellite flight. NMISC and USACE plan to communicate to coordinate their efforts.
- An EC member discussed the difficulty with egg collection this year. The stakeholder groups are coordinating on this effort.
- Anne M. discussed MRGCD operations. MRGCD planned a staggered start up, starting in the southern divisions, but accelerated its original plan and all four divisions have water. MRGCD is

making deliveries to the Socorro and Belen divisions. MRGCD is utilizing lease water through the Environmental Leasing Program to release water out of outfalls in Isleta Reach if needed. It will utilize 2023 San Juan-Chama allocation if needed. MRGCD cannot store in El Vado in 2023. Partial storage may be available in 2025.

- ABCWUA plans to utilize San Juan-Chama Project water until September and October, depending on the monsoons. ABCWUA plans to utilize monsoon water more efficiently than in the past.

- **Action Item**: PST will provide the link to the Water Ops Power BI Dashboard presented by Carolyn Donnelly
- **Action Item**: Shannon Weld will update the MAT presentation to include the RGSM numbers from the 2016 Biological Opinion

Public Comment and Announcements

- **Announcement**: Reclamation has provided the DRAFT 2022 RGSM Annual Report. Reviews of the draft report and associated data are due by April 5, 2023.
- **Announcement**: The NCER will be held on April 14-19, 2024 in Albuquerque, New Mexico. There has been interest in the MRGESCP presenting at the event. The PST can help support the development of a presentation to be given by a MRGESCP member. The MRGESCP will explore this option. Presentation proposals are due May 19, 2023.
- **Announcement**: The BEMP is hosting an art auction fundraiser at the Bachechi Open Space on April 15, 2023 from 9 AM – 3 PM.
- **Announcement**: The Annual Rio Grande Compact Commission meeting will be held on April 21, 2023 at the New Mexico State Capitol Building in Santa Fe, New Mexico, starting at 9 AM MT. There will be options to attend the meeting virtually. Information for viewing the event virtually will be posted at https://www.ose.state.nm.us/Compacts/RioGrande/isc_RioGrande.php.
- **Announcement**: The 2023 BEMP Crawford Symposium: Community Science, Education, and Stewardship will be held on April 28, 2023 from 5:30 – 7:30 PM at the Mountain View Community Center.
- **Announcement**: The USACE received funding of $2 million for FY23. The proposed President's Budget for FY24 was released with USACE set to receive $625,000. The final funding value is subject to change.
- **Announcement**: The USACE is seeking a Program Manager for the MRGESCP. Here is the link to the posting: https://www.usajobs.gov/GetJob/ViewDetails/714633600.

The EC discussed submitting a session proposal for the 2024 NCER conference. The PST has received inquiries about potential MRGESCP participation. The theme is "Strengthening Restoration through Collaboration." Potential session topics are listed at https://conference.ifas.ufl.edu/ncer/presentation-topics.php. In 2024, the MRGSECP should have some wins to discuss, including the Climate Scenarios Planning Workshop and the first year of the multi-year plan. An EC member noted that it would be a good way to increase external respect for the MRGESCP. EC members were asked to suggest proposal ideas, and the PST will help develop a presentation if one is pursued.

- **Action Item**: EC representatives will suggest ideas for MRGESCP presentations at NCER
- **Action Item**: PST will develop a presentation with the help of MRGESCP members for the MRGESCP to present at NCER

Meeting Participants

EC Representative	Organization
Mark Kelly, Non-Federal Co-Chair	Albuquerque Bernalillo County Water Utility Authority
Jim Wilber, Acting Federal Co-Chair	U.S. Bureau of Reclamation
Anne Marken	Middle Rio Grande Conservancy District
Bill Grantham	New Mexico Office of the Attorney General
Brittney Erdmann	Middle Rio Grande Conservancy District
Colleen Langan-McRoberts	City of Albuquerque, Open Space Division
Debra Hill	U.S. Fish and Wildlife Service
Dustin Chavez-Davis	City of Albuquerque, Open Space Division
Grace Haggerty	New Mexico Interstate Stream Commission
Kim Eichhorst	Bosque Ecosystem Monitoring Program
Kyle Faig	City of Albuquerque, Open Space Division
Kyle Harwood	Buckman Direct Diversion
Matthew Wunder	New Mexico Department of Game and Fish
Megan Osborne	University of New Mexico
Michael Scialdone	Pueblo of Sandia
Paul Tashjian	Audubon Southwest
Rick Carpenter	Buckman Direct Diversion
Ryan Gronewold	U.S. Army Corps of Engineers
Shawn Sartorius	U.S. Fish and Wildlife Service
Thomas Turner	University of New Mexico

Participant	Organization
Betsy Bainbridge	U.S. Fish and Wildlife Service
Carolyn Donnelly	U.S. Bureau of Reclamation
Casey Ish	Middle Rio Grande Conservancy District
Cetan Christensen	Albuquerque Bernalillo County Water Utility Authority
Lynette Giesen	U.S. Bureau of Reclamation
Shannon Weld	New Mexico Interstate Stream Commission

Support	Organization
Catherine Murphy	Program Support Team
Debbie Lee	Program Support Team
Michelle Tuineau	Program Support Team
Zoë Rossman	Program Support Team

Link to full Meeting Materials List

Executive Committee Meeting

March 30, 2023

See the following meeting material on the page below:

SAMC Memo to the EC with Recommendations from Workshop on Management of Vegetated Islands and Bank-attached Bars [read-ahead]

Middle Rio Grande Endangered Species Collaborative Program

Est. 2000

DATE: March 30, 2023

TO: The Middle Rio Grande Endangered Species Collaborative Program (MRGESCP) Executive Committee (EC)

FROM: The MRGESCP Science and Adaptive Management Committee (SAMC)

RE: Recommendations from October 2022 MRGESCP Workshop on Management of Vegetated Islands and Bank-attached Bars

Following the October 2022 Workshop on Management of Vegetated Islands and Bank-attached Bars, the SAMC reviewed problem statements, objectives and strategies developed during the breakout sessions, and identified key findings from the workshop. This memo summarizes those findings and recommends to the EC next steps for the MRGESCP regarding this important topic.

First, although the focus of the breakout sessions was management of vegetated islands and bars, participants quickly realized that this management has many implications and requires the balancing of three primary management priorities within the MRG: water delivery, flood control, and ecosystem management. The critical question became: *How do we balance these priorities through collaboration and partnerships in the face of a dynamic river system?*

Importantly, bars and islands are not replacements for the floodplain. Although bars and islands might create habitat for certain species under certain conditions and generate ecosystem services, they also affect important water conveyance and sediment transport processes in the channel. Formulation of a conceptual model is suggested for the vegetated island/bar phenomenon in the Middle Rio Grande. This model should account for spatial and temporal successional changes on islands and bars, as well as potential trade-offs regarding habitat formation/loss for different species. The model will help to characterize trends and conditions, which in turn help to identify management alternatives (e.g., maintaining a mosaic of different habitats within a reach) and potential impacts associated with each.

Finally, a more comprehensive and common understanding of the workshop topic is needed. To address this need, workshop breakout groups proposed strategies for tool development (i.e., maps and models), defining technical terms and relationships relating to this topic, and a summary report to develop consensus among stakeholders. Groups also identified research, planning and management needs, particularly all relevant data sets that are currently available, as well as data gaps. A designated team (or additional workshop) was suggested to carry these efforts forward.

The SAMC, therefore, recommends the following next steps in support of collaborative planning and management of vegetated islands and bars in the Middle Rio Grande:

- Develop common definitions for relevant technical terms relating to vegetated islands and bars
- Identify currently available, relevant data sets and data gaps
- Summarize in a report the research, planning and management efforts and needs regarding management of vegetated islands and bank-attached bars.
- Develop a conceptual model representing the ecosystem functions and physical river conditions of interest and develop management goals around these (e.g., ideal conceptual river cross sections and profiles, functional wetlands).

Link to full Meeting Materials List

Executive Committee Meeting
March 30, 2023

See the following meeting material on the page below:

Draft 2022 MRGESCP Annual Report [read-ahead, draft]

Program Portal: https://webapps.usgs.gov/MRGESCP/

ANNUAL REPORT 2022

Middle Rio Grande Endangered Species Collaborative Program

TABLE OF CONTENTS

2022 ANNUAL REPORT PREPARED BY:

WEST

Western EcoSystems Technology (WEST), Inc.
Environmental and Statistical Consultants
901 Lamberton Place Northeast South Suite
Albuquerque, New Mexico 87107

ON BEHALF OF:

The Middle Rio Grande Endangered Species Collaborative Program

PHOTO CREDITS:

Cover photo and pg 2 photo: *Danielle Galloway, U.S. Army Corps of Engineers*
Pg 3 photo, pg 6 banner, pg 8 banner, pg 14 banner, pg 18 banner, pg 21 banner: *Mike Marcus*
Pg 5 banner, pg 12 banner, pg 19 banner, and pg 22 banner: *SWCA Environmental Consultants staff*
Pg 9 and 10 banner: *J. N. Stuart*
Pg 11 banner: *Debbie Lee, Program Support Team*
Pg 20 banner: *Eric Coombs*
Pg 23 photo: *S. David Moore, U.S. Bureau of Reclamation*
Pg 22 species photos: *[left to right] J. N. Stuart; Museum of the Big Bend; Andy Reago and Chrissy McClarren; U.S. Fish and Wildlife Service; and Shannon Caruso, University of New Mexico*

NON-FEDERAL CO-CHAIR'S LETTER

from Mark Kelly, Non-Federal Co-Chair of the Executive Committee
Albuquerque Bernalillo County Water Utility Authority

As I reflect on all that we accomplished in 2022 as a Collaborative Program, I feel proud – proud and excited for all that we have teed up for 2023. With the convening of the first biennial Collaboratory in December 2022, we officially moved from planning to practice. In other words, we have finished establishing the Collaborative Program as a science and adaptive management program, and are—as noted at the Collaboratory—shifting to using the framework we've developed to make meaningful, timely, scientifically sound, and actionable management recommendations.

Last year, we started realizing the Collaborative Program's potential for addressing priority management issues in the face of the reality of the new Middle Rio Grande ecosystem under climate change. In 2022, we saw a fire in the bosque that burned over 30 acres on both sides of the river, as well as drying in the Angostura Reach for the first time in nearly 40 years. These events underscore the trends we have seen in vegetative communities, hydrology, geomorphology, weather, and listed species.

In response to interest from multiple signatories on the topic, we held a workshop focused on management of vegetated islands and bars in fall 2022. The Collaborative Program also, in partnership with the Bosque Ecosystem Monitoring Program and the City of Albuquerque Open Space Division, hosted a field trip to the bosque burn site. Such events are important steps in developing a common understanding of the issues facing the Middle Rio Grande, taking into account any potentially competing priorities and goals, and collaboratively finding strategies to address the issues.

As we move into 2023, we will continue tackling difficult listed species-related issues marked by scientific uncertainty. The Collaborative Program, through its use of sound scientific processes and principles, adaptive learning, and collaborative dialogue, can recommend scientifically justified solutions to priority management questions facing managers in the Middle Rio Grande.

Mark Kelly
Non-Federal Co-Chair of the Executive Committee

ACRONYMS & ABBREVIATONS

ABCWUA	Albuquerque Bernalillo County Water Utility Authority
AM	Adaptive management
Audubon	Audubon Southwest
BEMP	Bosque Ecosystem Monitoring Program
CoA	City of Albuquerque
Collaborative Program/Program	Middle Rio Grande Endangered Species Collaborative Program
EC	Executive Committee
FPC	Fiscal Planning Committee
HR	Habitat restoration
Long-Term Plan	Long-Term Plan for Science and Adaptive Management
MRG	Middle Rio Grande
MRGCD	Middle Rio Grande Conservancy District
NMDGF	New Mexico Department of Game and Fish
NMISC	New Mexico Interstate Stream Commission
NMMJM	New Mexico Meadow Jumping Mouse
PESU	Pecos sunflower
Reclamation	U.S. Bureau of Reclamation
RGSM	Rio Grande silvery minnow
SAMC	Science and Adaptive Management Committee
SAMIS	Science and Adaptive Management Information System
SDM	Structured decision making
SWFL	Southwestern willow flycatcher
UNM	University of New Mexico
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife
YBCU	Yellow-billed cuckoo

GUIDING PRINCIPLES

Our Mission

The Middle Rio Grande Endangered Species Collaborative Program (Collaborative Program) provides a collaborative forum to support scientific analysis and implementation of adaptive management to the benefit and recovery of the listed species pursuant to the Endangered Species Act within the Program Area, and to protect existing and future water uses while complying with applicable state, federal and tribal laws, rules, and regulations.

Our Species of Interest

The Collaborative Program supports the recovery of five listed species inhabiting the Middle Rio Grande (MRG): the endangered Rio Grande silvery minnow (RGSM; *Hybognathus amarus*), the endangered southwestern willow flycatcher (SWFL; *Empidonax traillii extimus*), the threatened yellow-billed cuckoo (YBCU; *Coccyzus americanus*), the endangered New Mexico meadow jumping mouse (NMMJM; *Zapus hudsonius luteus*), and the threatened Pecos sunflower (PESU; *Helianthus paradoxus*).

Our Goals

- Establish and maintain a self-sustaining population of endangered RGSM distributed throughout the MRG.
- Maintain and protect the MRG recovery unit goals for endangered SWFL.
- Maintain and protect suitable threatened YBCU habitat in the MRG.
- Establish and maintain a self-sustaining endangered NMMJM population in the MRG.
- Maintain and protect the threatened PESU in the MRG.
- Avoid the future listing or up-listing of species in the Collaborative Program area.
- Manage available water to meet the needs of endangered species and their habitat.

COMMITTEE MEMBERS

Executive Committee (EC)

CO-CHAIRS

Mark Kelly	Non-Federal Co-Chair, EC Representative for Albuquerque Bernalillo County Water Utility Authority (ABCWUA)
Katrina Grantz	Federal Co-Chair, U.S. Bureau of Reclamation (Reclamation)

REPRESENTATIVES

Paul Tashjian	Audubon Southwest (Audubon)
Kim Eichhorst	Bosque Ecosystem Monitoring Program (BEMP)
Rick Carpenter	Buckman Direct Diversion
Colleen Langan-McRoberts	City of Albuquerque (CoA)
Anne Marken	Middle Rio Grande Conservancy District (MRGCD)
William Grantham	New Mexico Office of the Attorney General's Office (NMOAG)
Matthew Wunder	New Mexico Department of Game and Fish (NMDGF)
Page Pegram [Jan–Jun]	New Mexico Interstate Stream Commission (NMISC)
Grace Haggerty [Jun–Dec]	NMISC
Blane Sanchez	Pueblo of Isleta
Michael Scialdone	Pueblo of Sandia
Alan Hatch	Pueblo of Santa Ana
Thomas Turner	University of New Mexico (UNM)
LTC Patrick Stevens [Jan–Aug]	U.S. Army Corps of Engineers (USACE)
LTC Jerre Hansbrough [Aug–Dec]	USACE
Jennifer Faler	Reclamation
Shawn Sartorius	U.S. Fish and Wildlife Service (USFWS)

GROUP PHOTO

Fiscal Planning Committee (FPC)

CO-CHAIRS

Grace Haggerty	Non-Federal Co-Chair
Debra Hill	Federal Co-Chair

MEMBERS

Mark Kelly	ABCWUA
Quantina Martine	Audubon
Kim Eichhorst	BEMP
Dustin Chavez-Davis	CoA
Brittney Erdmann	MRGCD
Anne Marken	MRGCD
Bill Grantham	NMOAG
Virginia Seamster	NMDGF
Michael Scialdone	Pueblo of Sandia
Lynette Giesen	Reclamation
Thomas Turner	UNM
Ryan Gronewold	USACE

Science and Adaptive Management Committee (SAMC)

MEMBERS

Thomas Archdeacon	Aquatic Ecology Expert
Meaghan Conway	Ecosystem Function Expert
Megan Friggens	Climate Science Expert
Ryan Gronewold	Hydrology Expert
Mo Hobbs	Aquatic Ecology Expert
S. Dave Moore	Terrestrial Ecology Expert
Ari Posner	Geomorphology Expert
Ara Winter	Statistics/Modeling Expert
Alan Hatch	EC *Ex Officio* Member

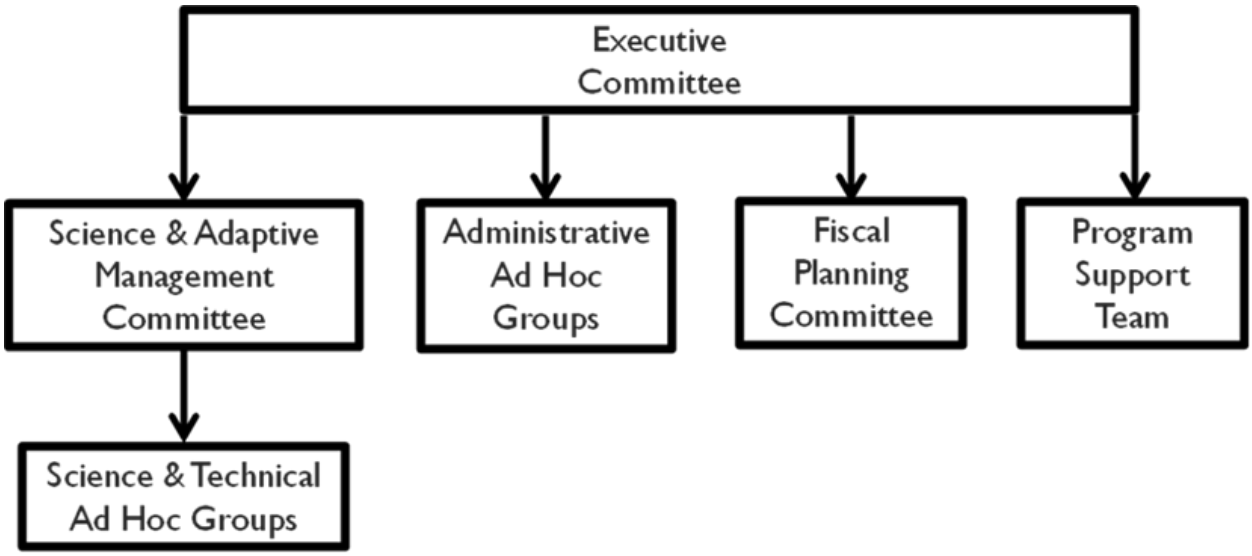
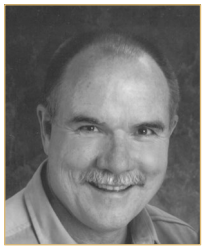


Figure 1. Structure of Collaborative Program committees and groups.

THE RICK BILLINGS MEMORIAL AWARD



RICK BILLINGS

Former member and supporter of the Collaborative Program, award namesake.

Rick Billings was the former EC Non-Federal Co-Chair, an EC member, and a long-time supporter of the Collaborative Program. In his memory, Reclamation's Albuquerque Area Office sponsors an annual award recognizing an individual's contributions to the success of the Collaborative Program.

The winner of the 2022 Rick Billings Memorial Award is Grace Haggerty from the NMISC. Grace was unanimously nominated for the award, with her nominators citing her many years in the Collaborative Program, high engagement, and work with non-federal and federal organizations alike among their reasons for selecting her.

> *"The Collaborative Program is in a much better place because of Grace and she deserves some recognition for all her hard work.*

> *"[Grace] has been a resource to her agency's staffing and to the work of the other non-federal and federal [Collaborative] Program participants.*

As one nominator accurately stated, Grace Haggerty has truly been a guiding force in the Collaborative Program for many years. As a stalwart supporter, she regularly attends meetings, contributes her technical expertise to committees and groups, and contracts important work that benefits the Collaborative Program. For example, Grace has contracted with GeoSystems Analysis to develop the RioRestore geospatial database of habitat restoration sites, and with Dr. Charles Yackulic at the U.S. Geological Survey to develop the RGSM Integrated Population Model. In addition, Grace is also a champion of the Los Lunas Silvery Minnow Refugium as a place for rearing RGSM and as a potential experimental facility. Grace has also served as the Non-Federal Co-Chair for the FPC for several years, in addition to her role as the EC representative for the NMISC.

The Collaborative Program would like to recognize Grace's continual support by awarding her the 2022 Rick Billings Award!

GRACE HAGGERTY

Winner of the 2022 Rick Billings Memorial Award, pictured rafting with her daughter [top] and hiking [bottom].

JOURNEY TO ADAPTIVE MANANGEMENT

Provided by Debbie Lee
Program Manager
Program Support Team

Collaborative Program signatories have been attempting to develop an adaptive management (AM) program for listed species in the MRG since the late 2000s. The Collaborative Program's first AM plan, *Adaptive Management Plan Version 1* (Murray et al.), was finalized in 2011, but it was only within the last few years that a functional plan was fully realized. A traditional AM cycle has six primary steps: assess, design, implement, monitor, evaluate, and adjust. To apply this cycle to the Collaborative Program, we had to identify not only the operational limitations of our signatory organizations, but also our assumptions about what the Collaborative Program was and what it had the potential to be. Once those limitations and assumptions were defined, opportunities for the Collaborative Program and its signatories to implement AM became clearer.

Successful AM is transparent, well documented, and iterative. In order to meet these standards, the Collaborative Program devoted a significant portion of the last few years to developing the tools and processes needed for implementing AM. Using a modified version of the U.S. Agency for International Development's Collaborating, Learning, and Adapting Framework, we identified conditions needed for either enabling AM or implementing AM within the Collaborative Program, the elements that define each condition, and the tools that support each condition (Figure 2; conditions and elements shown).

One of the most important tools we developed to support AM is the Program Portal, a website housing the Collaborative Program's Calendar, Document Library, data sets, and Interactive Map. Having a public-facing collection of resources ensures all participants have access to the same up-to-date information and data, which is foundational to AM.

In 2022, the EC adopted the ecosystem approach, which was an important addition to its AM process. The ecosystem approach focuses on supporting the essential structure, processes, and functions that keep an ecosystem in balance, so that it can continue to provide the benefits and services on which its inhabitants depend. Importantly, this places the Collaborative Program's listed species within a larger spatial and temporal context, which is necessary for managing the dynamic MRG ecosystem, and the physical conditions within the river and historic floodplain. By applying the ecosystem approach, the Collaborative Program can identify and protect vital ecosystem functions, plan in the face of uncertainty, and integrate the management goals of different organizations into one shared vision.

	ENABLING ADAPTIVE MANAGEMENT			IMPLEMENTING ADAPTIVE MANAGEMENT		
CONDITIONS	**CULTURE**	**PROCESSES**	**ENGAGEMENT**	**COLLABORATION**	**LEARNING**	**MANAGEMENT RELEVANCE**
ELEMENTS	✓ Openness ✓ Relationships & Networks ✓ Continuous Learning & Improvement ✓ Reputation ✓ Value	✓ Knowledge Management ✓ Institutional Memory ✓ Decision-Making ✓ Peer Review ✓ Timeline	✓ Investment ✓ Resources ✓ Information Sharing ✓ Mutual Benefit ✓ Relevance	✓ Internal Collaboration ✓ External Collaboration	✓ Results & Findings ✓ Addressing Uncertainty ✓ Scientific Evidence Base ✓ Documenting Change ✓ Improvement of Tools	✓ Recommendations ✓ Innovation ✓ Responsiveness ✓ Ecosystem Approach ✓ Scenario Planning

Figure 2. Conditions for enabling and implementing AM within the Collaborative Program and elements that define each condition.

JOURNEY TO ADAPTIVE MANAGEMENT

The key milestones for the Collaborative Program's journey to developing a functional AM process through 2022 are shown in Table 1:

Table 1. Key Milestones in Development of the Adaptive Management Process
2011 Completed *Adaptive Management Plan Version 1*
2017 Held EC Taos Retreat reaffirming commitment to the Program and direction to adopt AM as the decision framework
Apr 2018 Approved a new Program operational structure
May 2018 Developed key critical scientific uncertainties for RGSM, SWFL, YBCU, and NMMJM
Jun 2019 Approved a new mission statement
Sep 2019 Incorporated YBCU, NMMJM, and PESU into Program species of interest
Dec 2019 Held first Science Symposium
Dec 2019 Premiered new Program Portal
Feb 2020 Approved new Program goals
Sep 2020 Approved SAMC charter
Dec 2020 Launched Interactive Map, including RioRestore geospatial database, on Program Portal
Dec 2020 Approved Science & Adaptive Management Plan
Jul 2021 Adopted revised By-Laws
Jul 2021 Approved Science Objectives
Mar 2021 Developed Science Strategies for Objectives
Oct 2021 Developed administrative Biennial Schedule
Dec 2021 Approved Long-Term Plan for Science & Adaptive Management
Jun 2022 Approved Peer Review process
Jun 2022 Adopted the Ecosystem Approach
Dec 2022 Premiered Science and Adaptive Management Information System (SAMIS)
Dec 2022 Held first Collaboratory

A major theme at the December 2022 Collaboratory was the need to identify and challenge assumptions. The ecosystem approach serves to address our previous assumption that "what is good for a particular species is good for the system." This assumption may no longer hold true given the observed changes in the system over the past century, as well as the projected future changes. As we move forward with implementing AM, the Collaborative Program is working to provide scientifically-supported recommendations to management and funding agencies. These recommendations will help to prioritize research that addresses critical scientific uncertainties, and help to focus management of listed species on strategies that offer the greatest potential conservation benefit.

To fulfill the Collaborative Program's role of supporting AM in the MRG, we must be open to learning, changing, and making mistakes. We must consistently test our assumptions in order to ensure our actions and activities are those most beneficial to listed species and their habitats into the future. We also must listen to our signatories, and elicit the input of external organizations in order to regularly realign the Collaborative Program's priorities with the management needs of the present and future.

The Collaborative Program's AM process is detailed in the Long-Term Plan for Science & Adaptive Management, found on the Program Portal. It is meant to be a living document, continually assessed and revised to reflect how the Collaborative Program can operate more effectively and be more responsive to the priorities of its signatories.

BURN SITE FIELD TRIP

Provided by Michelle Tuineau
Project Coordinator
Program Support Team

On May 25, 2022, a fire started in the Albuquerque bosque and burned approximately 34 acres before it was contained and put out. In response to this major fire event, BEMP and the CoA, Open Space Division hosted a visit of an area of the burn site behind Bosque School, referred to as the Deep Dark Woods, for Collaborative Program participants. On June 17, 2022, 38 participants from BEMP, Pueblo of Sandia, Pueblo of Santa Ana, NMISC, Audubon, USACE, Reclamation, UNM, Tetra Tech, CoA Open Space, CoA Parks & Recreation, NM State Forestry, Bosque School, and the Program Support Team attended the impromptu field trip.

The group of stakeholders, managers, and researchers discussed post-fire mitigation strategies, monitoring needs, safety, and overall brainstorming for the Deep Dark Woods burn site and other burned areas of the Bosque. Over the two-hour visit, the group toured the burn site and broke into small groups for discussion. They discussed landscape considerations, fuels reduction, water and hydrology, soil and topography, vegetation, public outreach and education, and potential study questions and data collection efforts.

To follow up on the visit, CoA Open Space formed a task force to develop a draft plan for the Deep Dark Woods burn site. The task force met on June 30, 2022 and went on to implement ideas such as data collection to better understand the unstable post-fire conditions and regeneration of both native and invasive species, as well as steps to address public perception and safety. Students at the Bosque School created videos linked to posted QR codes in and around the site to educate the public on the dangers associated with post fire areas that have many dead and dying cottonwood snags. Still more ideas were generated at this meeting that addressed soil health, topography, regaining vegetative diversity, and controlling invasive species. Aspects of these ideas will be implemented at the site in the future.

More information about this fire was presented during Collaborative Seminar: Post May 2022 Montaño Fire Analysis, available on the Program YouTube channel.

Photos: Participants visiting the Deep Dark Woods bosque burn site.
Credit: Debbie Lee, Program Support Team.

WORKSHOP ON MANAGEMENT OF VEGETATED ISLANDS AND BARS

Provided by Catherine Murphy
Science Coordinator
Program Support Team

On October 4-5, 2022, forty-two participants representing seventeen different organizations attended an in-person Collaborative Program workshop that focused on management of vegetated islands and bank-attached bars hosted by the Pueblo of Santa Ana at the Tamaya Wellness Center. A small planning group of Collaborative Program volunteers organized the two-day event with the goal of identifying planning and research needs relating to the workshop topic. To support that goal, a panel of four invited speakers presented attendees with historical and technical context on vegetated islands/bars, which prompted discussions within the subsequent breakout groups. Each of the three successive breakout sessions was facilitated by one volunteer from the small planning group and one Program Support Team member, who guided participants through a structured decision making (SDM) process. SDM is an organized approach that enables multiple stakeholders to analyze a decision by breaking it into its component parts.

Invited speakers presented information on important physical and ecological features of vegetated islands/bars, as well as associated trends and forecasts. Mike Harvey, Tetra Tech, Inc., presented a summary of the hydrology and geomorphology of the MRG. Ari Posner, Reclamation, discussed river channel management and maintenance activities in the MRG. Todd Caplan, GeoSystems Analysis, Inc., presented on establishment of riparian vegetation in the channel and related impacts to the SWFL. Finally, Dagmar Llewellyn, Reclamation examined current conditions and future projections for the MRG. The speakers summarized key takeaways from their presentations and participated in a panel discussion with workshop attendees immediately following the talks. Recordings of all presentations, as well as the panel question/answer session are available on the Program YouTube channel.

Next, the workshop participants took part in a real-time group polling exercise to assess the urgency and uncertainty of management issues related to vegetated islands/bars (Table 2). The exercise was designed to collectively assess and explore differences in priorities and perceptions among participants regarding each management issue. The group discussion that followed highlighted not only differences in how participants perceived issues relating to management of vegetated islands/bars, but also variations in how they defined both urgency and uncertainty. With this list of issues assessed collaboratively, workshop participants broke into smaller breakout groups to work through an SDM process.

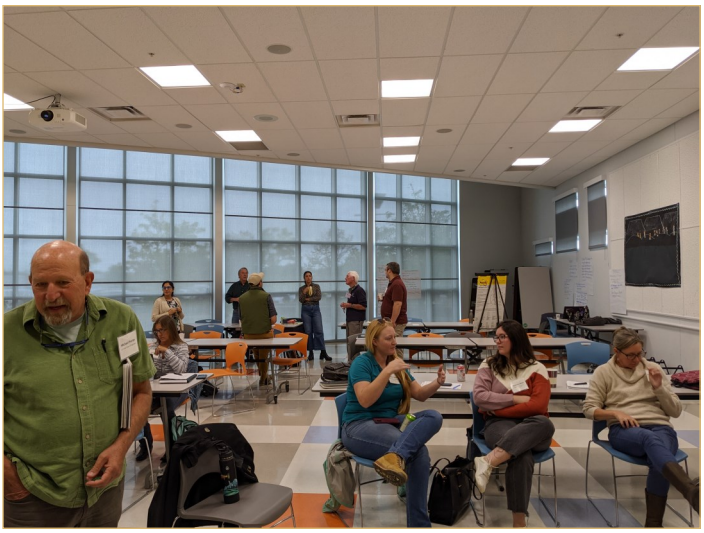
Table 2. Issues Related to Vegetated Islands and Bank-Attached Bars

Floodplain inundation on/near islands/bars
Aquatic habitat value adjacent to islands/bars
Management of wetlands on/near islands/bars
Control of invasive species on islands/bars
Flows and sediment transport around islands/bars
Stability/persistence of islands/bars
Water conveyance around islands/bars
Surface-groundwater exchange on/near islands/bars
Evapotranspiration rate associated with islands/bars
Fire fuels reduction on islands/bars
Bosque habitat being “replaced” by islands/bars
Vegetation encroachment on islands/bars
Effect of islands/bars on channel width, depth, and incision
Impact of islands/bars on depletions and channel efficiency
Habitat value of islands/bars
Determining who is responsible for managing islands/bars

During Breakout Session I, each group focused on three or fewer principal issues related to vegetated islands/bars and developed problem statements addressing each of them. Similarly, in Breakout Sessions II and III, the groups developed one or more objectives and strategies, respectively, for each of their problem statements.

To close the workshop, participants gathered to review developed strategies, share additional insights, and identify important themes that emerged during discussions. The need for a more comprehensive and common understanding of vegetated islands/bars was recognized by all. To avoid confusion during future discussions among stakeholders, it was proposed to develop a glossary of technical terms relating to vegetated islands/bars. In addition, compilation of a list of currently available data sets relevant to the workshop topic was suggested to help identify data needs for improved management. Participants also requested the development of a conceptual model representing ecosystem functions and physical river conditions, which would support collaboration around shared goals. Additional research, planning, and management efforts identified during the workshop will be summarized in a report.

Although participants differed in their approach to the topic of vegetated islands/bars, one important central theme was agreed upon by all: management of vegetated islands/bars requires the balancing of three primary management priorities in the MRG, which are water delivery, flood control, and ecosystem management. In the face of an increasingly dynamic river system, achieving this balance will be possible only through collaboration and partnerships, and the Collaborative Program provides an appropriate forum for this task.



Photos: Participants at the Workshop on Management of Vegetated Islands and Bank-Attached Bars. Credit: Catherine Murphy, Program Support Team.

2022 COLLABORATORY: FROM PLANNING TO PRACTICE

Provided by Michelle Tuineau
Project Coordinator
Program Support Team

The Collaborative Program hosted its first ever Collaboratory on December 6-7, 2022. The two-day event was attended by fifty-three (53) participants each day and sixty-four (64) attendees total. Attendees represented a wide range of affiliations, including academic institutions, federal agencies, irrigation districts, local agencies, non-governmental organizations, private companies, pueblos/tribes, and state agencies. The diversity of representation in the room led to many connections and conversations that would not otherwise have occurred, and attendees had high praise for the value of exchanging ideas, sharing priorities, and planning for the future of the Collaborative Program together.

In the previous three years, the Collaborative Program did the hard work to accomplish its goal of establishing itself as a science and AM program, which required the development of many processes, including the Long-Term Plan, Biennial Schedule, and peer review process. With the accomplishment of its first goal, the Collaborative Program is now poised to take on a new goal, one that tests and adaptively improves the many processes it developed. The new goal of the Collaborative Program is to use an AM framework to make meaningful, timely, scientifically sound, and actionable management recommendations to benefit the listed species of the MRG and their habitat.

The Collaboratory set the stage for this goal by adding management relevance to the Collaborative Program's science activities, as well as using signatory feedback to help determine the science priorities for the next two years. With the Collaboratory, the Collaborative Program takes a huge step away from planning and into the practice of fully interacting with its science and AM tools and processes.

On Day One of the Collaboratory, Debbie Lee, Program Support Team, helped to frame the structure of the Collaboratory during her overview of AM presentation. Figure 3 depicts the sequential structure of Collaboratory sessions. The sessions were designed to increase in temporal scale and scale of influence, starting with a foundational focus (i.e., building the program) and moving to an immediate focus (i.e., existing activities), then a short-term focus (i.e., signatory priorities), then a long-term focus (i.e., priorities for MRG ecosystem), and finally an aspirational focus (i.e., broader opportunities).

After Debbie reviewed the progress and future path of the Collaborative Program, Captain Jon C. Duffy, U.S. Navy, retired, presented on strategic planning. Jon focused on the Navy's planning process, the basic principles of which can easily be applied to other areas, including the Collaborative Program. Following this presentation, participants were split

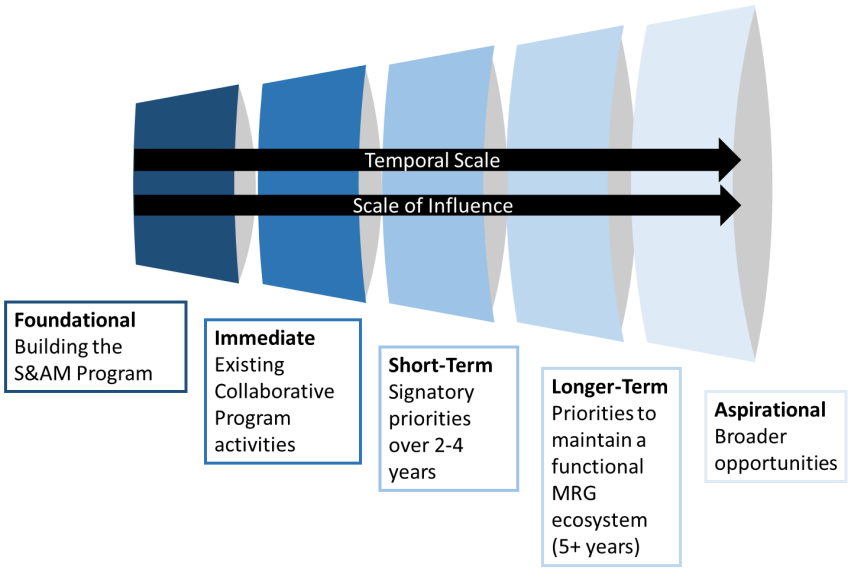


Figure 3. Sequential structure of Collaboratory sessions; sessions move from with topics increasing in scale from left to right .

into breakout groups to discuss the following Collaborative Program science activities: Rio Grande silvery minnow (RGSM) management (two groups), integrated species management (one group), the Management of Vegetated Islands and Bank-Attached Bars Workshop (one group), and drying in Angostura Reach (one group). Groups identified the top 1-3 management objectives for each activity and suggested any changes to the Collaborative Program's planning and research around them. The session was designed to align the Collaborative Program's current science activities with AM needs in the MRG.

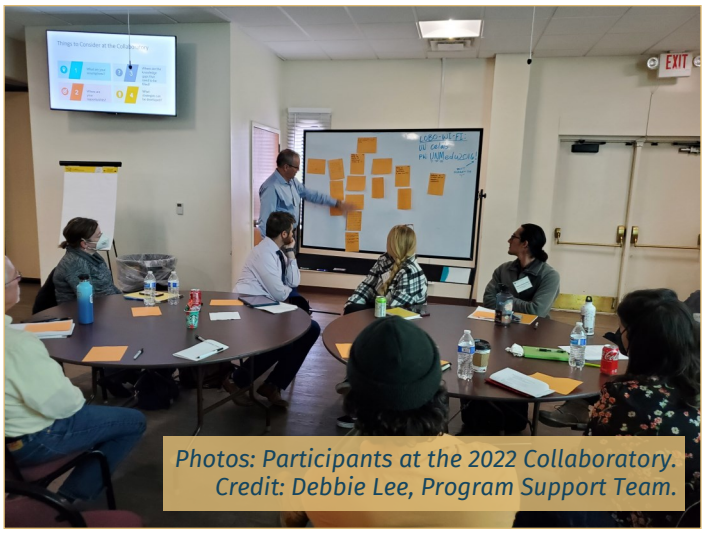
To begin Day Two of the Collaboratory, three back-to-back presentations were given to highlight the different interests and concerns in the MRG that should be considered when planning ahead. Josh Mann, water lawyer, presented on balancing water needs; Amador and Katy Lente, small farmers on the Pueblo of Isleta, spoke on their perspective as members of the agricultural community; and Dave Moeser, a hydrologist, environmental scientist, and data analyst with the U.S. Geological Survey New Mexico Water Science Center, presented on streamflow response to potential changes in climate in the Upper Rio Grand Basin. Dr. Moeser's presentation was particularly important to future discussions as he discussed how long-term drought has led to significant changes in the hydrograph, which has huge implications for species and water management.

With these perspectives in mind, participants were again split into breakout groups to brainstorm strategies for ecosystem management given the changing hydrograph. Groups identified management issues that the Collaborative Program can help address, then selected 1-3 of the most important issues, and finally came up with assumptions, opportunities, knowledge gaps, and potential strategies for those issues.

The outcomes and next steps from the Collaboratory were presented at the Collaborative Seminar on February 16, 2023. The Collaboratory outcomes combined with outcomes from the Workshop on Management of Vegetated Islands and Bank-Attached Bars (October 2022) and Workshop on Habitat Restoration (August 2021), will directly inform the Collaborative Program's multi-year planning efforts. Based on analysis of the outcomes from the workshops and Collaboratory, the focus areas in Table 3 emerged as most important to the Collaborative Program. Moving forward, the Collaborative Program will define an end goal for each focus area and develop immediate, short-term, and long-term plans for accomplishing them. This path ensures all of the work of Collaborative Program participants will be acknowledged and used to drive us forward!

All presentations from the Collaboratory are available on the Program YouTube page.

Table 3. Focus Areas for Multi-Year Planning
Climate Scenario Planning
HR Planning, Design, and Assessment
Management of Vegetated Islands and Bank-Attached Bars
RGSM Management and Science
Water Operations and Flexibility
Strategic Planning for River Drying in the MRG



Photos: Participants at the 2022 Collaboratory. Credit: Debbie Lee, Program Support Team.

Middle Rio Grande Endangered Species Collaborative Program

2022 YEAR IN REVIEW

WHO PARTICIPATED?

185+ participants from 35+ groups joined in Collaborative Program meetings, field trips, seminars, workshops, and the Collaboratory.

53 people were added to our contact list.

WHAT IS THE COLLABORATIVE PROGRAM?

A partnership of 16 signatory entities that supports actions in the Middle Rio Grande aimed at protecting and recovering *five federally listed species, while preserving existing and future water uses.**

JAN

Driscoll Seminar

Sunsetted the 2022 MOA Admin Ad Hoc Group

FEB

*Yellow-billed Cuckoo (YBCU)

Yackulic Seminar

MAR

Approved the 2022 MOA

Approved the Long-Term Plan with the Biennial Schedule

HR Coordination Meeting

Sunsetted the Peer Review Admin Ad Hoc Group

MAY

Parrish Seminar

JUN

Approved the Peer Review Process

Approved the Ecosystem Approach

Set membership for the Fiscal Planning Committee

HR Coordination Meeting

Bosque School Burn Site Field Trip

JUL

Angostura Reach Drying

AUG

Chavez, McCollough, and Shaw Seminar

Dudley Seminar

*Southwestern Willow Flycatcher (SWFL)

Formation of the RGSM Hypotheses Development S&T Ad Hoc Group

SEP

*Rio Grande Silvery Minnow (RGSM)

Drying mailer from the Public Outreach and Messaging on Drying Admin Ad Hoc Group

HR Coordination Meeting

Publication from the RGSM Population Modeling S&T Ad Hoc Group

Portal Stakeholder Meeting

OCT

Osborne Seminar

Management of Vegetated Islands and Bank-Attached Bars Workshop

NOV

Portal Stakeholder Meeting

HR Coordination Meeting

HR Coordination: Drone Discussion

DEC

Formation of the Strategic Plan for Potential Drying S&T Ad Hoc Group

Hummel Seminar

Collaboratory

Approval of 2023 Work Plan

*Pecos Sunflower (PESU)

*New Mexico Meadow Jumping Mouse (NMMJM)

FROM PLANNING TO PRACTICE

In 2022, the Collaborative Program executed its plan to establish itself as a science & adaptive management program and put its newly developed support tools to practice. Planning accomplishments (indicated in white), such as +approving the peer review process, were made early in the year. The year was later dominated by accomplishments that put tools to practice (indicated in black), such as the +workshop, +Collaboratory, and an ad hoc group +publication and +mailer.

SCIENCE COMMUNICATION BY-THE-NUMBERS

- 1 Workshop
- 1 Collaboratory
- 1 Field Trip
- 7 Collaborative Seminars
- 6 Newsletters
- 5 HR Coordination Meetings
- 23 Publications Shared
- 28 MRG Announcements Shared

The picture icon indicates there are event recordings available on the Program Portal.

KEY: Admin = Administrative; HR = Habitat Restoration; MOA = Memorandum of Agreement; MRG = Middle Rio Grande; S&T = Science & Technical

2022 COLLABORATIVE SEMINARS

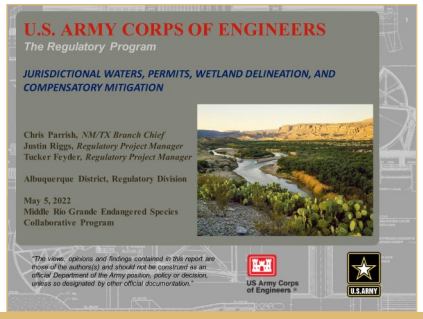
In 2022, the Collaborative Program hosted seven seminars from invited speakers presenting on work relevant to listed species in the MRG. All seminars were recorded and posted to the Collaborative Program YouTube channel at https://www.youtube.com/@mrgescp. Click each image to view a recording of the presentation.

Dr. Charles Yackulic, USGS, presented on the RGSM Integrated Population Model and Expert Elicitation on February 24, 2022.

Katia Chavez, Rayne McCollough, and Dan Shaw, Bosque School, presented on Post May 2022 Montaño Fire Analysis (a.k.a. "Deep Dark Woods Fire") on August 11, 2022.

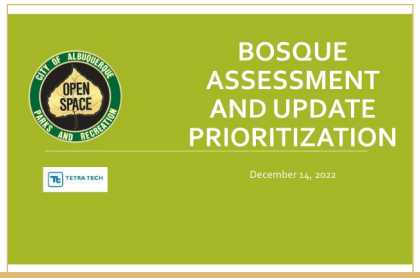
Megan Osborne, UNM, presented on Genetic Monitoring of the RGSM on October 19, 2022.

Katey Driscoll, U.S. Forest Service, presented on Statistical Designs and Potential Indicators for Evaluation of Restoration Success on January 12, 2022.



Chris Parrish, Justin Riggs, and Tucker Feyder, USACE, presented on Jurisdictional Waters, Permits, Wetland Delineation, and Compensatory Mitigation on May 5, 2022.

Robert Dudley, UNM, presented on the 2021 RGSM Population Monitoring Program on August 23, 2022.



Ondrea Hummel, Tetra Tech, Inc., presented on the Bosque Assessment and Update Prioritization (BAUP) on December 14, 2022.

2022 SIGNATORY HIGHLIGHTS

PLACEHOLDER: TO BE DISCUSSED AT EC

WHAT OUR SIGNATORIES HAVE TO SAY ABOUT THE COLLABORATIVE PROGRAM

"The Collaborative Program has evolved quite a bit since I went to my first meeting 12 years ago and most changes have been for the better. With Reclamation's commitment to funding the Program Support Team, the almost ad-hoc lead-from-behind feel the Program had has been replaced with an effort that is more organized and focused. Science is being put first, giving the move to Adaptive Management real heft. Best for me is the return of the Habitat Restoration Workgroup (now HR Coordination Group), which provides a forum for river/bosque managers to come together to discuss relevant natural resource issues and learn from each other. Recovering endangered species will never be a perfect process and, especially, the Rio Grande silvery minnow may not make it despite a tremendous effort, but the Program is better poised to aid in recovery than it was a decade ago.

– Michael Scialdone, Pueblo of Sandia, Bosque Project Manager

"The Collaborative Program is one of the few that is a fully interdisciplinary, democratic governance of stakeholders who synergistically work together using hypothesis-driven adaptive management to rapidly address issues related to climate change and stakeholder needs and obligations.

– Kim Eichhorst, BEMP, Science and Research Director

"In 2003, I was UNM's first representative to the Interim Steering Committee, which formed what is currently the Collaborative Program. Really important changes have happened since then. In the age of megadrought, the partners have come together like never before to attempt to manage instream flows to benefit the natural system that relies on spring flow pulses, overbank flooding, and sustained water during dry summers. An increased focus on science and data-driven policy making is an essential part of this, and expanded possibilities and opportunities for adaptive management. Now, 20 years on, we are better equipped to face new challenges of water scarcity and multiple uses. Large collaborative efforts are hard and often unwieldy, but they lead to lasting solutions and more inclusive willingness tackle new challenges head on.

– Thomas Turner, UNM, Professor of Biology and Curator of Fishes in the Museum of Southwestern Biology

"The Middle Rio Grande is an incredible greenbelt that runs through the heart of New Mexico and desert southwest. This vital ecosystem provides numerous benefits to the community and supports an abundance of wildlife. The Collaborative Program is a powerful group of stakeholders who share a common interest in supporting the health of the Middle Rio Grande for critical and endangered species. The management of the Middle Rio Grande has become more complex due to climate change, invasive species, development pressure, wildfires and many other issues. The Collaborative Program is adapting to these complex times through research and monitoring, utilizing and collaborating on scientific methods, and applying a holistic approach to management that promotes an overall healthy ecosystem. This is especially helpful for the Albuquerque's Open Space Division, which manages over 4,000 acres in the Bosque in the state's largest metropolitan area.

– Colleen Langan-McRoberts, CoA Open Space Division, Open Space Superintendent

MESSAGES FOR 2023

Provided by Debbie Lee
Program Manager
Program Support Team

Provided by Catherine Murphy
Science Coordinator
Program Support Team

We are better together…

One of the purposes of the 2022 Collaboratory was to acknowledge the Collaborative Program's transition from planning to practice. When the Collaborative Program adopted an AM plan tailored to its unique capacity in 2021, it established the tools for developing, evaluating, refining, justifying, and communicating recommendations for endangered species management in the MRG. The primary challenge before us is to find novel solutions within a complex and seemingly rigid decision environment. Trying to collaborate in this decision space can seem tedious and risky, but engaging in a deliberate and transparent process together, however, can increase stakeholder buy-in and produce lasting results. Our signatories see the benefit of utilizing a collaborative forum to generate creative and robust solutions for their shared set of problems.

We see bigger factors at play…

Practical management recommendations must take into account the larger environmental influences that will affect outcomes. In the MRG Basin, these include increased variability in both the river hydrograph and the response of the bosque ecosystem to a changing climate. Navigating these uncertainties for endangered species management will require wide-ranging expertise and a shared long-term outlook. By tracking relevant science and defining likely and extreme climate scenarios, the Collaborative Program will help its signatories plan in the face of uncertainty. By placing endangered species conservation within the context of an ecosystem approach, the Collaborative Program will enable its signatories to recognize and adapt to shifting paradigms in ecological structure and function. Importantly, the ecosystem approach recognizes the influence of humans on the ecosystem, which is sound practice in a river system as highly managed as the MRG.

We share priorities…

Implementation of collaborative and planning frameworks in 2023 and beyond will further help the Collaborative Program use AM to address complex issues affecting our listed species. Major management issues that have been brought to the Collaborative Program by signatories thus far include restoration monitoring and assessment, island and bar vegetation, and river drying. Each of these multifaceted topics presents a unique set of management challenges requiring careful consideration. Collaboration and proper framing are critical for effective management of issues that affect multiple stakeholders, species, and decision makers. By prioritizing next steps for these issues in the 2023 Work Plan, the Collaborative Program can capitalize on the collective expertise of our participants with a coordinated approach. Adhering to the process we've developed and documenting scientific evidence in SAMIS will also ensure transparency and help to maintain forward momentum and facilitate faster implementation of effective AM.

SCHEDULE FOR 2023

JANUARY	FPC Meeting
FEBRUARY	SAMC Meeting
	HR Coordination Field Trip
MARCH	EC Meeting
APRIL	FPC Meeting
MAY	SAMC Meeting
	HR Coordination Meeting
JUNE	EC Meeting
JULY	FPC Meeting
AUGUST	SAMC Meeting
	HR Coordination Field Trip
SEPTEMBER	EC Meeting
OCTOBER	FPC Meeting
	Climate Scenario Planning Workshop
NOVEMBER	SAMC Meeting
	HR Coordination Meeting
DECEMBER	EC Meeting
	Science Symposium





FEDERAL CO-CHAIR'S LETTER

from Katrina Grantz, Former Federal Co-Chair of the Executive Committee
U.S. Bureau of Reclamation

I have had the honor and privilege to serve as the Federal Co-Chair for the Collaborative Program since April 2021. In December 2022, I stepped down from that role, and am now reflecting on my time with the Collaborative Program and the opportunities I see for the future. I find myself optimistic and excited for the future of the Program and all the great things that it will accomplish.

My predecessor, Wayne Pullan, referred to working with the Collaborative Program as "doing God's work," and while that may seem like just an exaggeration, I find, in some ways, I have to agree. As the American Southwest faces increasing stressors from climate change, decreasing water supply, and increasing water demand, we know any path forward must utilize collaborative solutions. Endangered species are, in many ways, the proverbial canary in the coal mine. They are the early indicators of threats to the larger ecosystem. Given the increasing uncertainty regarding the Middle Rio Grande ecosystem and its species, the Collaborative Program's move to adopt an ecosystem approach in 2022 was timely.

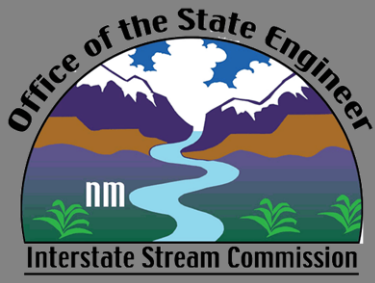
In 2023, the Collaborative Program will be tackling just what that future may look like and what the impacts will be on the bosque and its species. The Climate Scenario Planning Workshop is vitally important to both the Collaborative Program and its signatories for providing clarity to an uncertain future and helping us plan better for it. I encourage everyone to participate in the workshop and help us collectively identify not just threats but solutions and opportunities.

As we move into implementation of adaptive management, we know engagement that is sincere, complete, and transparent, is vitally important for the success of the Collaborative Program. And, as I see it, of the Middle Rio Grande. We have built an amazing thing with the Collaborative Program, and I have hopes of it becoming the model for other riverine programs in the West.

We all know adaptive management and collaboration are hard; they can both be time-consuming and slow. But in the end, the results are much more meaningful. While I may not officially be a part of the Collaborative Program any more, I will still be watching from afar, and look forward to seeing the amazing results of your work!

Katrina Grantz
Former Federal Co-Chair of the Executive Committee

US Army Corps of Engineers®



Middle Rio Grande Endangered Species Collaborative Program

ANNUAL REPORT 2022

Link to full Meeting Materials List

Executive Committee Meeting
March 30, 2023

See the following meeting material on the page below:

Draft Multi-year Work Plan [read-ahead, draft]

MRGESCP Multi-Year Plan (2023-2027)

On December 6-7, 2023, the Collaborative Program hosted its first biennial Collaboratory. Over the course of the two days, participants identified priority issues to inform a multi-year planning effort in service of the Collaborative Program's mission. Two overarching themes emerged from these priority issues:

1. A need for climate scenario planning to manage adaptively in the face of increasing uncertainty; and
2. A need to organize endangered species management under an ecosystem approach within the Middle Rio Grande (MRG) Basin.

These two themes provide a framework for all of the topical areas that are included in the multi-year plan. Careful consideration of both themes will ensure the continued relevance of Collaborative Program initiatives and activities to the management priorities of its signatories.

Five critical focus areas identified from Collaboratory conversations were:

- Habitat restoration planning and assessment
- Management of vegetated islands and bank-attached bars
- Rio Grande silvery minnow (RGSM) management and science
- Water operations and flexibility
- Strategic planning for river drying in the MRG

These focus areas, in addition to climate scenario planning, organized and pursued under the ecosystem approach, inform the Collaborative Program's planned direction for the next five years and beyond. Climate scenario planning, while an overarching theme that addresses each of the critical focus areas, will require significant effort from the Collaborative Program to undertake. The multi-year planning approach seeks to forecast the priority management issues and critical scientific questions that have the potential to support future management decisions.

The multi-year plan is organized into: 1) immediate priorities (to be addressed in 2023), 2) short-term priorities (to be addressed over the next 2-4 years), and 3) long-term priorities (to be addressed over five or more years). The levels of certainty and detail for the immediate and short-term priorities are greater than those for the long-term priorities. The end goal(s) of each focus area are stated in the sections below. Details for each focus area, as well as priorities regarding climate scenario planning, are organized in the tables below.

Each item in the tables is assigned an identification code. The first part of the code indicates to which focus area the item belongs. The second part of the code indicates whether the priority is immediate (I), short-term (ST), or long-term (LT). The codes are as follows:

- Focus area
    - CS: Climate Scenario Planning
    - HR: Habitat Restoration Planning, Design, and Assessment
    - SM: Rio Grande Silvery Minnow Management and Science
    - WO: Water Operations and Flexibility
    - RD: Strategic Planning for River Drying in the Middle Rio Grande
- Timing
    - I: Immediate (2023)
    - ST: Short-Term (2024-2026)
    - LT: Long-Term (2027 and beyond)

The multi-year plan is a means to organize complex initiatives that require longer implementation times and are interrelated. The multi-year plan will be supplemented by the Biennial Administrative Schedule and each year's Annual Work Plan. The multi-year plan will be revisited after each biennial Collaboratory and revised, as needed, to ensure the Collaborative Program remains responsive to the signatories' evolving needs and management priorities. The multi-year plan items will be linked to existing guiding principles (i.e., mission, goals, objectives, and strategies) and subsequently incorporated in the SAMIS following a scientific review. This review will assess the feasibility of each item and the linkages to existing Program efforts in order to inform new project development.

Climate Scenario Planning

As the climate continues to change in New Mexico, impacts to the ecosystems in which listed species exist are apparent and likely to cascade and intensify over time. To that end, the Collaborative Program, in order to recommend management actions that will protect listed species and their habitats under this new paradigm, must cope with the uncertainty of climate change by exploring potential future conditions in the MRG Basin. The main 2023 effort related to this focus area will be a Climate Scenario Planning Workshop, which will inform many of the other activities in the multi-year work plan.

End Goal: Enable the Collaborative Program signatories and other resource managers to deal collectively with uncertainty of future conditions within the basin.
Program Goals Addressed: *A-G*

ID	Priority	Informed By	Informs	Related Objectives
Immediate (2023):				
CS-I-1	Develop likely future scenarios by applying current climate data and models to the MRG • Harness the expertise of regional climate scientists with experience in developing appropriate scenarios		CS-I-2 CS-ST-2 HR-ST-2 HR-LT-3 WO-I-2	A-4, A-5.1, B-2, B-3.1, B-3.2, B-3.3, C-1.1, D-1.2, E-1.2, F-1
CS-I-2	Host a Climate Scenario Planning Workshop designed to: • Determine which key ecosystem functions are threatened by climate change • Identify scientific uncertainties that influence management decisions • Begin developing strategies to mitigate impacts of future changes in the system by targeting key ecosystem functions	CS-I-1	CS-ST-2 HR-ST-2 HR-ST-4 HR-LT-3 WO-I-2 RD-ST-1	A-4, A-5.1, B-2, B-3.1, B-3.2, B-3.3, C-1.1, D-1.2, E-1.2, F-1
Short-Term (2024-2026):				
CS-ST-1	Continue developing strategies to maintain ecosystem functions under different climate scenarios	CS-I-1 CS-I-2		F-1
CS-ST-2	Consider potential changes in hydrology and geomorphology, and associated impacts to the ecosystem and listed species	CS-I-1 CS-I-2	RD-ST-1	A-3, A-4, A-5.1, B-2, C-1.1, D-1.2, E-1.2
CS-ST-3	Investigate the cultural and socio-economic impacts of the changing ecosystem		CS-ST-4 WO-ST-5	
CS-ST-4	Engage the public through outreach and education regarding climate trends and changes in the bosque	CS-I-2 CS-ST-3 RD-I-3	WO-ST-5	

	• Identify actions that can be carried out by members of the public to help mitigate impacts			
Long-Term (2027 and beyond):				
CS-LT-1	Continue to update ecological forecasts with latest climate models and data	CS-I-1 CS-ST-2		F-1, A-5.1
CS-LT-2	Refresh recommendations for management strategies to protect and maintain important ecosystem functions	CS-I-I CS-I-2 CS-ST-1 CS-ST-2	HR-LT-1 VI-LT-2	F-1, A-5.1
CS-LT-3	Develop water conservation strategies		CS-LT-4	G-1
CS-LT-4	Carry out public outreach and education around water conservation strategies	CS-ST-4 CS-LT-3 RD-I-3	RD-I-3	G-1
CS-LT-4	Explore the role of agricultural practices and irrigation returns in implementing strategies to protect MRG ecosystem functions	DR-ST-4		Unsure

Habitat Restoration Planning and Assessment

Habitat restoration is an important conservation action for many Collaborative Program signatories, and will likely increase in importance in the future. Given the forecasted changes to the ecosystem, habitat restoration practices that were effective in the past need to be tested and refined, or replaced in order to preserve key ecosystem functions necessary to support the listed species. The priorities listed below relate to on-going habitat restoration efforts, including outcomes from the 2021 Habitat Restoration Workshop, and also items that address additional Collaborative Program planning and management requests.

End Goals:

- Develop restoration strategies that can provide habitat for listed species, maintain vital ecosystem functions, and contribute to ecosystem recovery.
- Recommend best practices for successful restoration planning, implementation, and monitoring (e.g., proper response metrics, maintenance thresholds, and assessment tools) for the MRG.

Program Goals Addressed: *A-F*

ID	Priority	Informed By	Informs	Related Objectives
Immediate (2023):				
HR-I-1	Develop a standardized framework to guide restoration planning that includes identification of response metrics to measure and track progress/success	HR-I-3	HR-ST-5 HR-ST-7	A-5.2, B-3.1, B-3.3, C-1.1, D-1.2, E-1.2
HR-I-2	Recommend updates to the habitat restoration geospatial database, “RioRestore”		HR-ST-1	A-5.2, B-3.1, B-3.3, C-1.1, D-1.2, E-1.2
HR-I-3	Organize habitat restoration monitoring plans and protocols into a compendium for MRG restoration practitioners		HR-ST-5 HR-ST-7 HR-I-1	F-1, E-1.1, D-1.1, C-1.3, B-1, A-1
HR-I-4	Investigate potential funding opportunities (especially long-term) and partnerships in support of habitat restoration projects			A-5.2, B-3.1, B-3.3, C-1.1, D-1.2, E-1.2
Short-Term (2024-2026):				

HR-ST-1	Update RioRestore	HR-I-2		A-5.2, B-3.1, B-3.3, C-1.1, D-1.2, E-1.2
HR-ST-2	Forecast expected changes to vegetative communities based on the climate scenarios	CS-I-1 CS-I-2	HR-ST-3	F-1, F-2
HR-ST-3	Develop restoration strategies to maintain ecosystem functions, exploring the roles of both native and non-native species	HR-ST-2	HR-ST-7 VI-LT-2	F-2
HR-ST-4	Recommend modifications to habitat restoration practices to incorporate climate scenarios, targeting vital ecosystem functions	CS-I-2 HR-ST-3 VI-ST-3	HR-ST-7	F-1
HR-ST-5	Integrate signatories' wildfire prevention, mitigation and restoration best practices		HR-LT-1	Unsure
HR-ST-6	Investigate feasibility and value of disposing or repurposing of post-construction materials, such as vegetation and sediment		HR-LT-1	New obj?
HR-ST-7	Develop strategies to adaptively manage habitat restoration	HR-I-1 HR-I-3 HR-ST-3 HR-ST-4 VI-LT-2		B-3.1, B-3.3, C-1.1, D-1.2, E-1.2
Long-Term (2027 and beyond):				
HR-LT-1	Continue to update recommendations for habitat restoration best practices based on learning from project implementation and refined future scenario predictions	HR-ST-4 HR-ST-5 HR-ST-6 HR-ST-7 CS-LT-2		A-5.2, B-3.1, B-3.3, C-1.1, D-1.2, E-1.2
HR-LT-2	Explore the value of applying an "integrated vegetation management plan" for the MRG	HR-ST-3 HR-ST-4		F-2, B-3.2, B-3.3, C-1.2, D-1.2, E-1.2
HR-LT-3	Apply the ecosystem approach to habitat restoration projects throughout the MRG	CS-I-2 CS-ST-1 HR-ST-2 HR-ST-3		F-1

Management of Vegetated Islands and Bank-Attached Bars

In 2022, the Collaborative Program hosted the Workshop on Management of Vegetated Islands and Bank-Attached Bars. While vegetated islands have always been a feature of the MRG ecosystem, changes in hydrology and geomorphology are contributing to changes in their number and permanence. Workshop participants raised questions about the effects these vegetated islands and bars are having on water conveyance and sediment transport processes, as well as the tradeoffs to consider regarding their value to species habitat. At the workshop, participants identified the need for better understanding of where vegetated islands and bars are (or are likely to occur) in the MRG. They also articulated a need for more clarity regarding the relationships between hydrology, ecological functions, and species' responses in order to support management decisions related to island and bar management.

End Goal: Balance the primary management priorities within the MRG (e.g., water delivery, flood control, and ecosystem management) while managing vegetated islands and bank-attached bars in a dynamic river system.

Program Goals Addressed: *A-G*

ID	Priority	Informed By	Informs	Related Objectives
Immediate (2023):				
VI-I-1	Develop a glossary for terminology related to vegetated islands and bars, to improve communication and collaboration among stakeholders		VI-I-3	A-3, A-5.1, A-5.2, B-2, B-3.3, C-1.1, C-1.2
VI-I-2	Clarify authorities and management roles related to vegetated islands and bank-attached bars		VI-LT-3	A-3, A-5.1, A-5.2, B-2, B-3.3, C-1.1, C-1.2
VI-I-3	Begin developing a conceptual model representing ecosystem functions and physical river conditions related to vegetated islands/bars in order to: • Account for spatial and temporal successional changes • Explore trade-offs regarding habitat formation/loss for different species • Characterize trends and conditions • Assess management alternatives	VI-I-1		A-3, A-5.1, A-5.2, B-2, B-3.3, C-1.1, C-1.2
VI-I-4	Determine feasibility of developing a map of locations of vegetated islands and bank-attached bars in the MRG, with a plan for regular updates		VI-ST-2	A-3, A-5.1, A-5.2, B-2, B-3.3, C-1.1, C-1.2
Short-Term (2024-2026):				
VI-ST-1	Fill in critical data gaps for maps and models, where possible			A-3, A-5.1, A-5.2, B-2, B-3.3, C-1.1, C-1.2
VI-ST-2	Update map of locations of vegetated islands and bank-attached bars in the MRG	VI-I-4	SM-ST-3	A-3, A-5.1, A-5.2, B-2, B-3.3, C-1.1, C-1.2
VI-ST-3	Refine conceptual model of ecosystem functions and physical river conditions related to vegetated islands/bars in the MRG to: • Inform further scientific research • Recommend adaptive management strategies	HR-ST-9 VI-ST-2	HR-ST-4 VI-ST-4 VI-LT-1 SM-ST-4 SM-LT-2	A-3, A-5.1, A-5.2, B-2, B-3.3, C-1.1, C-1.2
VI-ST-4	Investigate the effects of vegetated islands and bank-attached bars on water conveyance and sediment transport processes	VI-ST-3		A-3, A-5.1, A-5.2, B-2, B-3.3, C-1.1, C-1.2
Long-Term (2027 and beyond):				
VI-LT-1	Regularly update and revise the ecosystem-level conceptual model	VI-ST-3	VI-LT-2	A-3, A-5.1, A-5.2, B-2, B-3.3, C-1.1, C-1.2

VI-LT-2	Revise and update recommendations for management strategies related to vegetated islands and bank-attached bars	CS-LT-2 HR-ST-4 HR-ST-7 VI-LT-1		A-3, A-5.1, A-5.2, B-2, B-3.3, C-1.1, C-1.2
VI-LT-3	Develop recommendations for potential changes to authorities regarding wetlands within the MRG	VI-I-2		A-3, A-5.1, A-5.2, B-2, B-3.3, C-1.1, C-1.2

RGSM Management and Science

RGSM science and management has always been a focus of the Collaborative Program, and will continue to be a priority in the multi-year plan. With climate change creating more variability in the system and uncertainty in the future, the Collaborative Program's work will focus on tracking RGSM population trends under different climate scenarios, and evaluating and improving the efficacy of management actions into the future.

End Goal: Develop collaborative, multi-year adaptive management strategies for RGSM.
Program Goals Addressed: *A-G*

ID	Priority	Informed By	Informs	Related Objectives
Immediate (2023):				
SM-I-1	Finalize the revisions to the RGSM conceptual ecological model to include the genetics and propagation/augmentation programs, and undertake a peer review of the revised model		SM-ST-1 SM-ST-3	A-1, A-2, A-3, A-4, A-5.1, A-5.2, A-6.1, A-6.2
SM-I-2	Provide guidance on recently published RGSM population models, including data inputs, model assumptions, and appropriate application of each model		SM-I-3 SM-ST-1	A-1, A-2, A-3, A-4, A-5.1, A-5.2, A-6.1, A-6.2
SM-I-3	Develop a plan to update and refine the RGSM integrated population model based on new data	SM-I-2	SM-ST-1	A-1, A-2, A-3, A-4, A-5.1, A-5.2, A-6.1, A-6.2
SM-I-4	Incorporate the following questions into the climate scenario planning effort: • How will RGSM habitat availability be affected by climate change? • How will forecasted shifts in the hydrograph impact RGSM population trends?		CS-I-1	A-3, A-4, A-5.1, A-5.2, G-1
Short-Term (2024-2026):				
SM-ST-1	Use the RGSM population models to evaluate RGSM management actions under different conditions projected for climate scenarios, if feasible	SM-I-1 SM-I-2 SM-I-3	SM-LT-1 SM-ST-4	A-6.1, A-6.2, A-2 s

SM-ST-2	Consider RGSM management in the development of the ecosystem-level conceptual model for the MRG		SM-ST-4	A-1, A-3, A-4, A-6.1, A-6.2
SM-ST-3	Identify the sites in the MRG to target with habitat restoration for RGSM	VI-ST-2 SM-I-1		A-5.2
SM-ST-4	Identify vital ecosystem functions related to RGSM life history and management strategies	SM-ST-1 SM-ST-2 VI-ST-3		A-3, A-4, A-5.1, A-5.2
SM-ST-5	Investigate the feasibility of a 10(j) population outside the current RGSM range		SM-LT-4	A-6.1, A-6.2
Long-Term (2027 and beyond):				
SM-LT-1	Continue to evaluate RGSM management actions as future scenarios and models are updated	SM-ST-1		A-2, A-6.1, A-6.2
SM-LT-2	Recommend adaptive management actions for RGSM, taking into consideration effects of climate change and maintenance of ecosystem functions important to RGSM survival and recovery	VI-ST-3		A-2, A-6.1, A-6.2
SM-LT-3	Investigate the need for a new RGSM propagation facility and, if supported, provide recommendations for design and construction			A-6.1, A-6.2
SM-LT-4	Provide recommendations for implementing a potential 10(j) RGSM population, if determined to be feasible	SM-ST-5		A-6.1, A-6.2

Water Operations and Flexibility

Given that the Collaborative Program focuses on listed species that utilize the riparian zone, adjacent wetlands, floodplain and mainstem of the Rio Grande, water operations are integral to management of the species and their habitats. With changes in the hydrograph due to increasing variability and uncertainty in snowpack runoff and monsoon precipitation, water operations are already impacted by climate change. The Collaborative Program's focus will be to assess the effects of climate change on water operations and identify opportunities for flexibility.

End Goal: Plan for a water future that balances the needs of all users, including humans and listed species, and maintains ecosystem functions. [Addresses Program Goal G]
Program Goals Addressed: *A-G*

ID	Priority	Informed By	Informs	Related Objectives
Immediate (2023):				
WO-I-1	Using the responses from the survey of water managers on their roles in managing drying in Angostura Reach and additional signatory input, document the roles, responsibility, and available flexibility in water operations in the MRG	RD-I-1	WO-ST-1	G-1
WO-I-2	Based on likely climate scenarios, project potential effects on water operations related to changes in the hydrograph	CS-I-1 CS-I-2		G-1
Short-Term (2024-2026):				
WO-ST-1	Identify opportunities for coordination and flexibility regarding water operations	WO-I-1 RD-I-1	WO-ST-2 WO-ST-3	G-1

WO-ST-2	Identify flexibilities and multiple-use benefits of any changes to water operations	WO-ST-1		G-1
WO-ST-3	Identify research needs regarding conservation improvement to water operations	WO-ST-1	WO-LT-1	G-1
WO-ST-4	Tie Collaborative Program planning efforts into external planning efforts (e.g., 50-Year Water Plan, Rio Grande Basin Study, ABCWUA's 100-Year Plan, NM Water Resources Research Institute)		WO-ST-5 WO-LT-1	G-1
WO-ST-5	Stakeholder and public outreach and education on conservation strategies and benefits of changes to water operations	CS-ST-3 CS-ST-4 WO-ST-4		
Long-Term (2027 and beyond):				
WO-LT-1	Revise and update recommendations for changes to water operations regarding conservation needs	WO-ST-3 WO-ST-4 RD-ST-3 RD-ST-4 RD-ST-5		G-1

Strategic Planning for River Drying in the Middle Rio Grande

This focus first emerged in response to drying in the Angostura Reach, which occurred for the first time in nearly 40 years in 2022. Drying has been a regular and common occurrence south of Angostura and the Collaborative Program is working to develop a strategic plan for management of drying in the Angostura, Isleta, and San Acacia Reaches.

End Goal: Develop a multi-reach decision support tool to inform adaptive management related to drying in the MRG.
Program Goals Addressed: *A-G*

ID	Priority	Informed By	Informs	Related Objectives
Immediate (2023):				
RD-I-1	Describe the decision environment for management of drying in the MRG using the ad hoc group's survey and summary report		WO-I-1 WO-ST-1	G-1
RD-I-2	Identify research questions related to drying in the MRG			Unsure
RD-I-3	Develop public messaging strategies related to conservation actions and monitoring during river drying		CS-ST-4 CS-LT-4	
Short-Term (2024-2026):				
RD-ST-1	Where appropriate, include and update river drying considerations in ecosystem-level and species-level conceptual models	CS-I-2 CS-ST-2	RD-ST-5	A-2, A-3, A-4, A-5.1, G-1
RD-ST-2	Create a decision tool to assess management alternatives regarding drying in the MRG	RD-ST-3	RD-ST-5	A-2, A-3, A-4, A-5.1, G-1
RD-ST-3	Document lessons learned regarding management response to drying, in years when the opportunity arises		RD-ST-2 WO-LT-1	A-2, A-3, A-4, A-5.1, G-1

RD-ST-4	Incorporate findings from studies of the use of outfalls and irrigation infrastructure to affect the rate, duration and extent of drying, into recommendations		WO-LT-1	A-2, A-3, A-4, A-5.1, G-1
RD-ST-5	Continue to refine the strategic plan for management of drying	RD-ST-1 RD-ST-2	RD-LT-1 WO-LT-1	A-2, A-3, A-4, A-5.1, G-1
Long-Term (2027 and beyond):				
RD-LT-1	Continue to refine the strategic plan for management of drying	RD-ST-5		A-2, A-3, A-4, A-5.1, G-1

Link to full Meeting Materials List

Executive Committee Meeting
March 30, 2023

See the following meeting material on the page below:

Guiding Principles with proposed new objective G-2 [read-ahead, draft]

Middle Rio Grande Endangered Species Collaborative Program
Guiding Principles

Mission

The Middle Rio Grande Endangered Species Collaborative Program provides a collaborative forum to support scientific analysis and implementation of adaptive management to the benefit and recovery of the listed species pursuant to the Endangered Species Act within the Program Area, and to protect existing and future water uses while complying with applicable state, federal and tribal laws, rules, and regulations.

Goals

A. Establish and maintain a self-sustaining population of endangered Rio Grande silvery minnow (RGSM) distributed throughout the Middle Rio Grande (MRG).
B. Maintain and protect the MRG recovery unit goals for endangered southwestern willow flycatcher (SWFL).
C. Maintain and protect suitable threatened yellow-billed cuckoo (YBCU) habitat in the MRG.
D. Establish and maintain a self-sustaining endangered New Mexico meadow jumping mouse (NMMJM) population in the MRG.
E. Maintain and protect the threatened Pecos sunflower (PESU) in the MRG.
F. Avoid the future listing or up-listing of species in the Collaborative Program area.
G. Manage available water to meet the needs of endangered species and their habitat.

Objectives

RGSM Objectives

A-1) Estimate the abundance of augmented and wild born RGSM populations in the Angostura, Isleta, and San Acacia reaches from year to year.

A-2) Increase understanding of how the life history traits of the RGSM change over time and space, to better inform management of the species and increase the probability of recovery.

A-3) Determine the relationships between base flow and survival and recruitment of RGSM in the MRG.

A-4) Evaluate suitable environmental flow (i.e., timing, duration and magnitude of spring hydrograph), given system constraints and opportunities, needed to cue spawning and recruitment for the RGSM population.

A-5.1) Refine existing research and modeling efforts to understand the quantity and quality of habitat available at different flow regimes by 2030.

A-5.2) Develop a range of options for increasing habitat availability and refugia at life stage limiting flow regimes for all life stages by 2030.

A-6.1) Evaluate the effects of species management (i.e., propagation, augmentation, rescue/salvage) on RGSM genetic diversity.

A-6.2) Evaluate the effects of species management (i.e., propagation, augmentation, rescue/salvage) on RGSM population viability.

SWFL Objectives

B-1) Monitor for SWFL in the MRG management unit of the Rio Grande recovery unit.

B-2) Determine SWFL habitat availability within the MRG.

B-3.1) Characterize optimal breeding habitat conditions in currently occupied SWFL locations to inform restoration.

B-3.2) Manage successional processes that maintain existing SWFL breeding habitat in the Program Area.

B-3.3) Expand SWFL breeding habitat through restoration efforts in the Program Area.

YBCU Objectives

C-1.1) Characterize optimal habitat (i.e., foraging and nesting) conditions on landscape and microhabitat levels in currently occupied YBCU locations to inform habitat mapping and restoration efforts.

C-1.2) Determine successional processes that promote optimal YBCU habitat (i.e., foraging and nesting) in the Program Area.

C-1.3) Expand monitoring efforts for YBCU.

NMMJM Objectives

D-1.1) Initiate and support NMMJM monitoring efforts to locate existing populations, identify relevant habitat features, and identify potentially suitable unoccupied habitat.

D-1.2) Contribute to efforts to expand habitat and preserve existing habitat in the MRG.

PESU Objectives

E-1.1) Continue and expand monitoring and surveying for PESU stands in the West-Central New Mexico Recovery Region.

E-1.2) Preserve and expand existing habitat stands in the West-Central New Mexico Recovery Region.

Other Objectives

F-1) Monitor trends in ecosystem function in the MRG for indications of decline (e.g., changes in vegetation structure and composition, population trends in other special status species, etc.).

F-2) Determine the impacts from non-native vegetation on listed species' habitat availability and population dynamics.

G-1) Support efforts to enhance the operational flexibility of water managers to support species.

G-2) Outreach to external stakeholders and the public about Collaborative Program activities, initiatives, and priorities.

Link to full Meeting Materials List

Executive Committee Meeting
March 30, 2023

See the following meeting material on the page below:

Draft Revised 2023 MRGESCP Work Plan [read-ahead, draft]

Middle Rio Grande Endangered Species Collaborative Program
Revised 2023 Work Plan

	TASK	SUBTASK	EC	AAH	SAMC	S&T	FPC	Sigs	PST	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23
		Executive Committee (EC) meeting	X									X			X			X			X
		Science and Adaptive Management Committee (SAMC) meeting			X						X			X			X			X	
		Fiscal Planning Committee (FPC) meeting					X			X			X			X			X		
General Collaborative Program Administration	**1.1**	**Program Portal Administration**																			
	1.1a	Maintain and update documents and content on the Program Portal							X	X	X	X	X	X	X	X	X	X	X	X	X
	1.1b	Update the existing datasets on the Program Portal						X	X	X	X	X									
	1.1c	Upload new datasets on the Program Portal identified at the 2022 Portal Stakeholder Meetings						X	X	X	X	X	X	X							
	1.1d	Develop a plan for continued Program Portal funding	X				X			X	X	X									
	1.2	**Science and Adaptive Management Information System (SAMIS)**																			
	1.2a	Maintain and update activities in SAMIS						X	X	X	X	X	X	X	X	X	X	X	X	X	X
	1.2b	Finish module one of signatory SAMIS trainings	X		X			X	X	X	X	X									
	1.3	**SAMC Membership**																			
	1.3a	Collect applications for new SAMC members							X	X	X	X									
	1.3b	Appoint new SAMC members	X	X								X									
	1.4	**Science Evaluation**																			
	1.4a	Carry out the Science Evaluation based on the outcomes of the 2022 Collaboratory			X				X	X	X	X									
	1.4b	Complete and present results from the Science Evaluation	X		X				X			X									
	1.5	**Annual Program Evaluation**																			
	1.5a	Carry out the Annual Program Evaluation	X		X		X		X	X	X	X									
	1.5b	Complete and present results from the Annual Program Evaluation	X						X			X									
	1.5c	If needed, draft and adopt updates to the Long-Term Plan for Science & Adaptive Management to reflect recommendations from the Science Evaluation and Program Evaluation		X					X	X	X	X									
	1.5d	If needed, draft and adopt updates to committee charters and the By-Laws to reflect recommendations from the Program Evaluation	X	X					X				X	X	X						
	1.6	**Work Plan**																			
	1.6a	Check in and revise the 2023 Work Plan if needed	X						X			X			X			X			
	1.6b	Develop and approve the 2024 Work Plan	X						X										X	X	X
	1.7	**Reporting**																			
	1.7a	Continue drafting and approve the 2022 Annual Report	X						X	X	X	X									
	1.7b	Collect and finalize 2022 signatory contributions reports						X	X	X	X	X									
	1.7c	Develop and finalize the 2022 cost share report						X	X	X	X	X									
	1.7d	Begin drafting the 2023 Annual Report						X	X										X	X	X
	1.7e	Develop the SAMC annual summary presentation to the EC			X				X											X	X
Communication and Information Sharing	**2.1**	**Send out regular MRGESCP newsletters**							X		X		X		X		X		X		X
	2.2	**Host regular collaborative seminars**			X				X			X			X			X			X
	2.3	**2023 Science Symposium**																			
	2.3a	Approve the proposal for the 2023 Science Symposium	X												X						
	2.3b	Collect abstracts for the 2023 Science Symposium							X							X	X	X	X		
	2.3c	Finalize the agenda for the 2023 Science Symposium			X				X											X	
	2.3d	Host the 2023 Science Symposium	X		X				X												X
Science Decision Support Planning and Tools Development	**3.1**	**Information and Data Quality Standard**																			
	3.1a	Convene the hybrid ad hoc group to develop a data and information quality standard for the MRGESCP to ensure consistency with the Information Quality Act									X	X	X	X	X	X	X	X	X	X	X
	3.1b	Review and approve the data and information quality standard for the MRGESCP	X		X												X	X	X	X	X
	3.2	**Survey of Manager Confidence in MRGESCP Science Support**																			
	3.2a	Present results of the 2022 survey	X						X			X									
	3.2b	Incorporate the objective of the survey of manager confidence into the Annual Program Evaluation for 2023							X											X	X
	3.3	**Evaluate and refine project evaluation criteria to align with management needs**			X					X	X	X	X	X	X	X	X				
	3.4	**Conceptual Ecological Models**																			
	3.4a	Complete the revisions to the Rio Grande Silvery Minnow (RGSM) Conceptual Ecological Model to incorporate genetics considerations and the augmentation program			X	X				X	X	X	X	X							
	3.4b	Initiate an Internal Science Review of the draft revised Rio Grande Silvery Minnow (RGSM) Conceptual Ecological Model			X	X			X						X	X	X				
	3.4c	Draft a conceptual ecological model for the New Mexico meadow jumping mouse			X	X			X	X	x	x	X	X	X	X					
	3.4d	Draft a conceptual ecological model for the Pecos sunflower			X	X			X				X	X	X	X					
	3.5	**Climate Scenario Planning Workshop**																			
	3.5a	Plan Climate Scenario Planning Workshop for the Middle Rio Grande to develop strategies for managing listed species in the future			X				X		X	X	X	X	X	X	X	X			
	3.5b	Link climate forecast models with projected on-the-ground impacts to species and habitat			X				X				X	X	X						
	3.5c	Host a Climate Scenario Planning Workshop	X		X				X										X		
	3.5d	Compile and present results from Climate Scenario Planning Workshop			X				X											X	X
	3.6	**Hold signatory workshop for input and feedback on data relationship visualization options for the Program Portal**						X	X					X	X	X					
Ig Adaptive Management Activities	**4.1**	**Continue RGSM Hypothesis Development S&T Ad Hoc Group**				X						X	X	X							
	4.1a	Explore research hypotheses regarding the influence of mesohabitat on fish distribution (Rec #4)				X				X	X	X	X	X							
	4.1b	Compare and contrast various RGSM population models, and determine most appropriate uses for each (Rec #7)				X				X	X	X	X	X							
	4.2	**Provide Recommendations for Drying in the Angostura Reach**																			
	4.2a	Survey of water managers regarding roles and flexibility in planning for and controlling drying				X			X	X	X	X									
	4.2b	Provide recommendations for management actions and data collection in response to potential drying in the Angostura reach in 2023	X		X	X			X				X	X							
	4.2c	Develop public messaging strategies in concert with recommendations for drying in 2023	X	X					X					X	X						
	4.2e	Evaluate effectiveness of the drying response plan, and refine recommendations for 2024 (contingent on drying in Angostura Reach)	X		X	X			X									X	X	X	X
	4.3	**Convene Restoration Guidance S&T Ad Hoc Groups to define restoration goals, monitoring/maintenance considerations, and metrics to document success**																			

Implementir	4.3a	Evaluate use of the Society of Ecological Restoration (SER) Recovery Wheel's applicability and usefulness to plan and evaluate ecosystem restoration in the MRG			X	X							X	X	X	X	X	X	X	X	
	4.3b	Compile and review a compendium of restoration resources for the MRG			X	X						X	X	X	X	X	X	X	X	X	
	4.4	**Vegetated Islands and Bank-Attached Bars in the MRG**																			
	4.4a	Develop a glossary of technical terms related to management of vegetated islands and bars			X	X								X	X	X					
	4.4b	Develop conceptual model representing the vegetated islands/bars phenomenon			X	X								X	X	X					
Coordination of Signatory Activities	**5.1**	**Host quarterly HR coordination meetings**					X		X		X			X			X			X	
	5.2	**Identify coordination opportunities related to the spring/summer hydrology**	X					X				X									
	5.3	**Provide updates on coordination activities related to the spring/summer hydrology, and lessons learned**	X					X													X
	5.4	**Provide updates on the implementation of signatory activities from the Long-Term Plan**					X	X		X			X			X			X		

Middle Rio Grande Endangered Species Collaborative Program
Previous 2023 Work Plan

	TASK	SUBTASK	EC	AAH	SAMC	S&T	FPC	Sigs	PST	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23
		Executive Committee (EC) meeting	X									X			X			X			X
		Science and Adaptive Management Committee (SAMC) meeting			X						X			X			X			X	
		Fiscal Planning Committee (FPC) meeting					X			X			X			X			X		
General Collaborative Program Administration	**1.1**	**Program Portal Administration**																			
	1.1a	Maintain and update documents and content on the Program Portal							X	X	X	X	X	X	X	X	X	X	X	X	X
	1.1b	Update the existing datasets on the Program Portal						X	X	X	X	X									
	1.1c	Upload new datasets on the Program Portal identified at the 2022 Portal Stakeholder Meetings						X	X	X	X	X	X	X							
	1.1d	Develop a plan for continued Program Portal funding	X				X			X	X	X									
	1.2	**Science and Adaptive Management Information System (SAMIS)**																			
	1.2a	Maintain and update activities in SAMIS						X	X	X	X	X	X	X	X	X	X	X	X	X	X
	1.2b	Finish module one of signatory SAMIS trainings	X		X			X	X	X	X	X									
	1.3	**SAMC Membership**																			
	1.3a	Collect applications for new SAMC members							X	X	X	X									
	1.3b	Appoint new SAMC members	X	X								X									
	1.4	**Science Evaluation**																			
	1.4a	Carry out the Science Evaluation based on the outcomes of the 2022 Collaboratory			X				X	X	X	X									
	1.4b	Complete and present results from the Science Evaluation	X		X				X			X									
	1.5	**Annual Program Evaluation**																			
	1.5a	Carry out the Annual Program Evaluation	X		X		X		X	X	X	X									
	1.5b	Complete and present results from the Annual Program Evaluation	X						X			X									
	1.5c	If needed, draft and adopt updates to the Long-Term Plan for Science & Adaptive Management to reflect recommendations from the Science Evaluation and Program Evaluation		X					X	X	X	X									
	1.5d	If needed, draft and adopt updates to committee charters and the By-Laws to reflect recommendations from the Program Evaluation	X	X					X				X	X	X						
	1.6	**Work Plan**																			
	1.6a	Check in and revise the 2023 Work Plan if needed	X						X			X			X			X			
	1.6b	Develop and approve the 2024 Work Plan	X						X										X	X	X
	1.7	**Reporting**																			
	1.7a	Continue drafting and approve the 2022 Annual Report	X						X	X	X	X									
	1.7b	Collect and finalize 2022 signatory contributions reports						X	X	X	X	X									
	1.7c	Develop and finalize the 2022 cost share report						X	X	X	X	X									
	1.7d	Begin drafting the 2023 Annual Report							X										X	X	X
	1.7e	Develop the SAMC annual summary presentation to the EC			X				X											X	X
Communication and Information Sharing	**2.1**	**Send out regular MRGESCP newsletters**							X		X		X		X		X		X		X
	2.2	**Host regular collaborative seminars**			X				X			X			X			X			X
	2.3	**Topical workshop**																			
	2.3a	Approve the topic and proposal for the 2023 topical workshop	X		X										X						
	2.3b	Plan and coordinate the 2023 topical workshop							X						X	X	X	X	X		
	2.3c	Host the 2023 topical workshop	X		X				X										X		
	2.4	**2023 Science Symposium**																			
	2.4a	Approve the proposal for the 2023 Science Symposium	X												X						
	2.4b	Collect abstracts for the 2023 Science Symposium							X							X	X	X	X		
	2.4c	Finalize the agenda for the 2023 Science Symposium			X				X											X	
	2.4d	Host the 2023 Science Symposium	X		X				X												X
Science Decision Support Planning and Tools Development	**3.1**	**Information and Data Quality Standard**																			
	3.1a	Convene the hybrid ad hoc group to develop a data and information quality standard for the MRGESCP to ensure consistency with the Information Quality Act			X	X				X	X	X	X	X							
	3.1b	Review and approve the data and information quality standard for the MRGESCP	X		X									X	X						
	3.2	**Survey of Manager Confidence in MRGESCP Science Support**																			
	3.2a	Collate and present results of the 2022 survey	X						X			X									
	3.2b	Administer the 2023 survey of manager confidence in MRGESCP science support	X						X										X	X	
	3.2c	Collate and present results of the survey	X						X												X
	3.3	**Evaluate and refine project evaluation criteria to align with management needs**			X					X	X	X	X	X	X						
	3.4	**Conceptual Ecological Models**																			
	3.4a	Complete the revisions to the Rio Grande Silvery Minnow (RGSM) Conceptual Ecological Model to incorporate genetics considerations and the augmentation program			X	X				X	X										
	3.4b	Initiate an Internal Science Review of the draft revised Rio Grande Silvery Minnow (RGSM) Conceptual Ecological Model			X	X			X			X	X	X							
	3.4c	Draft a conceptual ecological model for the New Mexico meadow jumping mouse.			X	X			X		X	X	X	X							
	3.4d	Draft a conceptual ecological model for the Pecos sunflower.			X	X			X		X	X	X	X							
	3.5	**Scenario planning effort for the Middle Rio Grande in the context of listed species**			X	X			X						X	X	X	X			
	3.6	**Hold signatory workshop for input and feedback on data relationship visualization options for the Program Portal**			X			X	X					X	X	X					
Implementing Adaptive Management Activities	**4.1**	**Reconvene the RGSM Hypothesis Development S&T Ad Hoc Group for Phase 2**				X						X	X	X							
	4.2	**Provide Recommendations for Drying in the Angostura Reach**																			
	4.2a	Provide recommendations for management actions and data collection in response to potential drying in the Angostura reach in 2023.	X		X	X			X	X											
	4.2b	Develop public messaging strategies in concert with recommendations for drying in 2023	X	X					X	X	X										
	4.2c	Report back to MRGESCP on adopted plan for potential drying in Angostura Reach in 2023 given the Annual Operation Plan (AOP)	X					X				X									
	4.2d	Evaluate effective of the drying response plan, and refine recommendations for 2024.	X		X	X			X									X	X	X	X
	4.3	**Convene Habitat Restoration (HR) Guidance S&T Ad Hoc Groups to develop species-specific restoration goals, monitoring considerations, and metrics to document success**			X	X						X	X	X	X	X	X	X	X	X	
f ies	**5.1**	**Host quarterly HR coordination meetings**					X		X		X			X			X			X	

Coordination o Signatory Activiti	**5.2**	**Identify coordination opportunities related to the spring/summer hydrology**	X					X				X									
	5.3	**Provide updates on coordination activities related to the spring/summer hydrology, and lessons learned**	X					X													X
	5.4	**Provide updates on the implementation of signatory activities from the Long-Term Plan**					X	X		X			X			X			X		

Link to full Meeting Materials List

Executive Committee Meeting
March 30, 2023

See the following meeting material on the page below:

Memo to the EC on 2023 SAMC Membership Recommendations [read-ahead]

Middle Rio Grande Endangered Species Collaborative Program

Est. 2000

DATE: March 30, 2023

TO: Executive Committee (EC) of the Middle Rio Grande Endangered Species Collaborative Program (MRGESCP)

FROM: EC Review Group: Applicants for Science and Adaptive Management Committee (SAMC)

RE: Recommended applicants for SAMC membership in 2023

Per Article 7 of the MRGESCP By-Laws (2021), the SAMC "*shall consist of no more than eight subject matter expert members appointed by the Executive Committee*." Four positions on the SAMC are maintained with the following areas of expertise: aquatic ecology, terrestrial ecology, ecosystem function, hydrology. The EC also has discretion to select flexible areas of expertise based on upcoming science needs and, given the breadth of tasks in the current Work Plan (2023 *draft*), **the EC should consider amending Article 7 of the By-Laws to allow for a total of eight to ten subject matter experts on the SAMC**.

Three areas of expertise were identified in December 2022 to fill current vacancies on the SAMC:

- aquatic ecology [especially expertise with Rio Grande silvery minnow (*Hybognathus amarus*, RGSM)],
- watershed resource planning/regulatory, and
- environmental/natural resource economics.

The purpose of this memo is to communicate the results of the March 13, 2023 meeting of a subset of EC members to review and recommend applicants to fill vacant positions on the SAMC in 2023. Six well-qualified individuals submitted applications for membership on the SAMC during January and February 2023. Following the process described in the MRGESCP By-Laws (section 7.1.1.), applications were reviewed by the subset of EC members and applicants have been recommended for appointment to the SAMC during the March 30, 2023 EC meeting.

At the December 2022 meeting of the EC, Ryan Gronewold was nominated to take over the EC *ex-officio* position on the SAMC, replacing outgoing Alan Hatch. Per the MRGESCP SAMC Charter (2021), the *ex-officio* advisory "*position will not count towards the eight (8)-count membership, and will not participate as a subject matter expert.*" Therefore, with this proposed

adjustment to the roster and the addition of a new area of expertise, **the recommendations for SAMC membership in 2023 are presented in Table 1**.

Table 1. Recommended SAMC membership for 2023 with respective areas of expertise.

SAMC member	Expertise	Type	Proposed membership in 2023
Ryan Gronewold, PE	EC *ex-officio*	Standing	Nominated (moving from Hydrology)
Mick Porter, PhD, CFP	Aquatic Ecology	Standing	Recommended 2023 applicant
S. David Moore	Terrestrial Ecology	Standing	Incumbent, staying on for 2023
Meaghan Conway, PhD	Ecosystem Function	Standing	Incumbent, staying on for 2023
Aubrey Harris, PE	Hydrology	Standing	Recommended 2023 applicant
Alison Hutson, PhD	Aquatic Ecology	Flexible	Recommended 2023 applicant
Megan Friggens, PhD	Climate Science	Flexible	Incumbent, staying on for 2023
Ari J. Posner, PhD	Geomorphology	Flexible	Incumbent, staying on for 2023
Ara Winter, PhD	Statistics/Modeling	Flexible	Incumbent, staying on for 2023
Ondrea Hummel, CERP	Watershed Resource Planning/Regulatory	Flexible	Recommended 2023 applicant

References:

MRGESCP. 2021. Middle Rio Grande Endangered Species Collaborative Program: By-Laws. *Adopted by the Executive Committee on July 28, 2021.*

MRGESCP. 2021. Middle Rio Grande Endangered Species Collaborative Program: Science and Adaptive Management Committee Charter. *Approved by the Executive Committee on October 27, 2020. Revised to Align with the By-Laws, Adopted on July 28, 2021.*

MRGESCP. 2023. Draft Work Plan for the Middle Rio Grande Endangered Species Collaborative Program. *To be approved by the Executive Committee on March 30, 2023.*

Link to full Meeting Materials List

Executive Committee Meeting
March 30, 2023

See the following meeting material on the page below:

By-Laws Section 7.1 with proposed revisions [read-ahead]

Article 7. SCIENCE AND ADAPTIVE MANAGEMENT COMMITTEE

The Science and Adaptive Management Committee is a non-decision-making body and makes recommendations to the Executive Committee. It will coordinate the implementation of Collaborative Program-related science initiatives and Signatory efforts by defining and delegating tasks to Science and Technical Ad Hoc Groups; compiling results from scientific studies, modeling, and monitoring efforts; and translating scientific findings into recommendations for best management practices in the Middle Rio Grande.

7.1. Membership

The Science and Adaptive Management Committee shall consist of eight-to-ten (8-10) subject matter expert members appointed by the Executive Committee. These positions will include:

- Four (4) specified subject matter experts with the following areas of expertise:
    1. Aquatic ecology
    2. Terrestrial ecology
    3. Ecosystem function
    4. Hydrology
- Up to six (6) flexible subject matter experts selected based on science-related needs, as determined by the Executive Committee. The Science and Adaptive Management Committee may provide input on which areas of expertise would benefit the group, but the final decision will be made by the Executive Committee.

An individual may not hold more than one position on the Science and Adaptive Management Committee at one time.

One (1) Executive Committee member shall serve in an *ex-officio* advisory capacity to the Science and Adaptive Management Committee. This position will not count towards membership, and will not participate as a subject matter expert.

The Science and Adaptive Management Committee will be chaired by the science coordination lead and supported by the Program Support Team (Article 10). Neither the science coordination lead nor members of the Program Support Team will count towards membership.

Link to full Meeting Materials List

Executive Committee Meeting
March 30, 2023

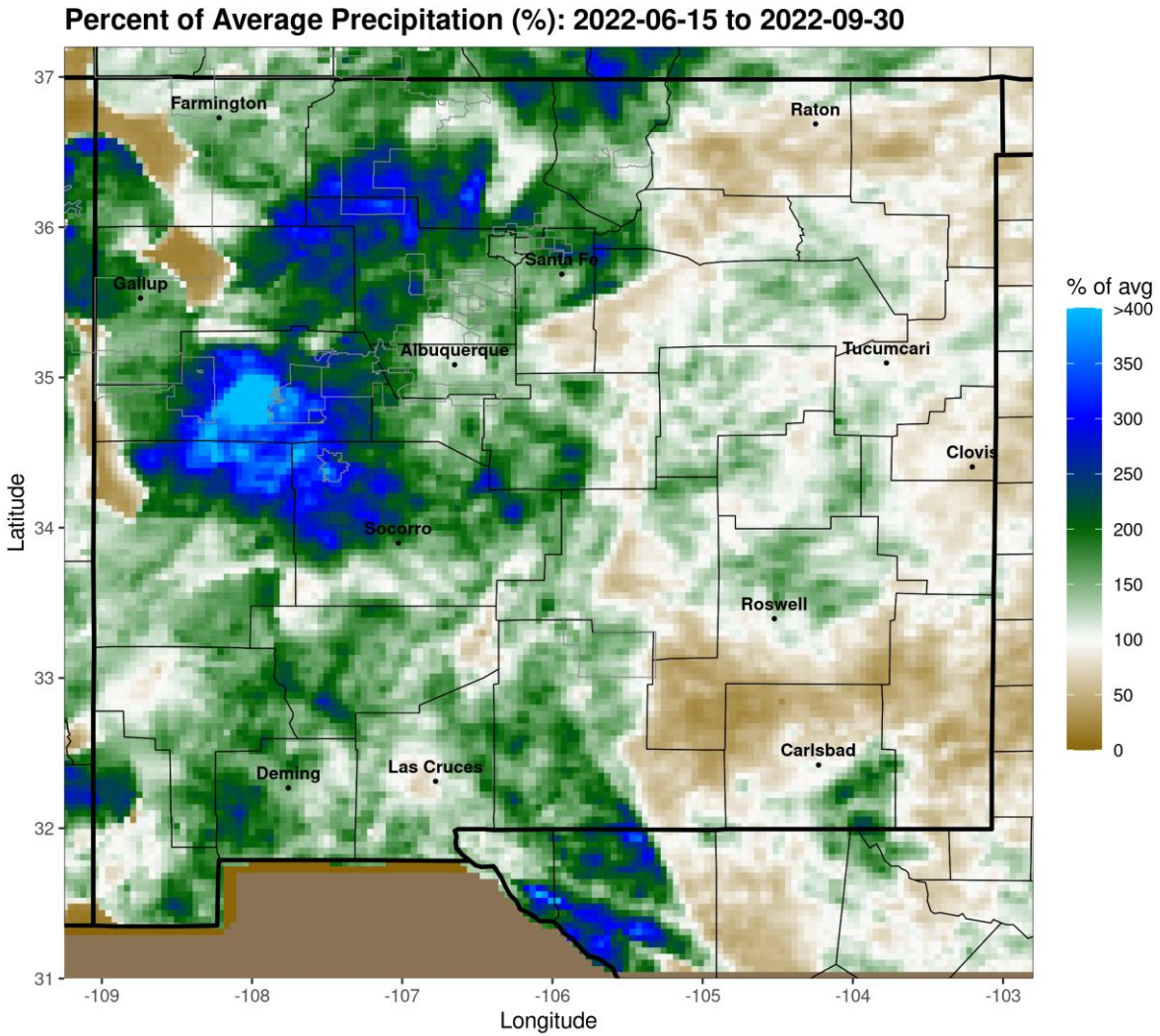
See the following meeting material on the page below:

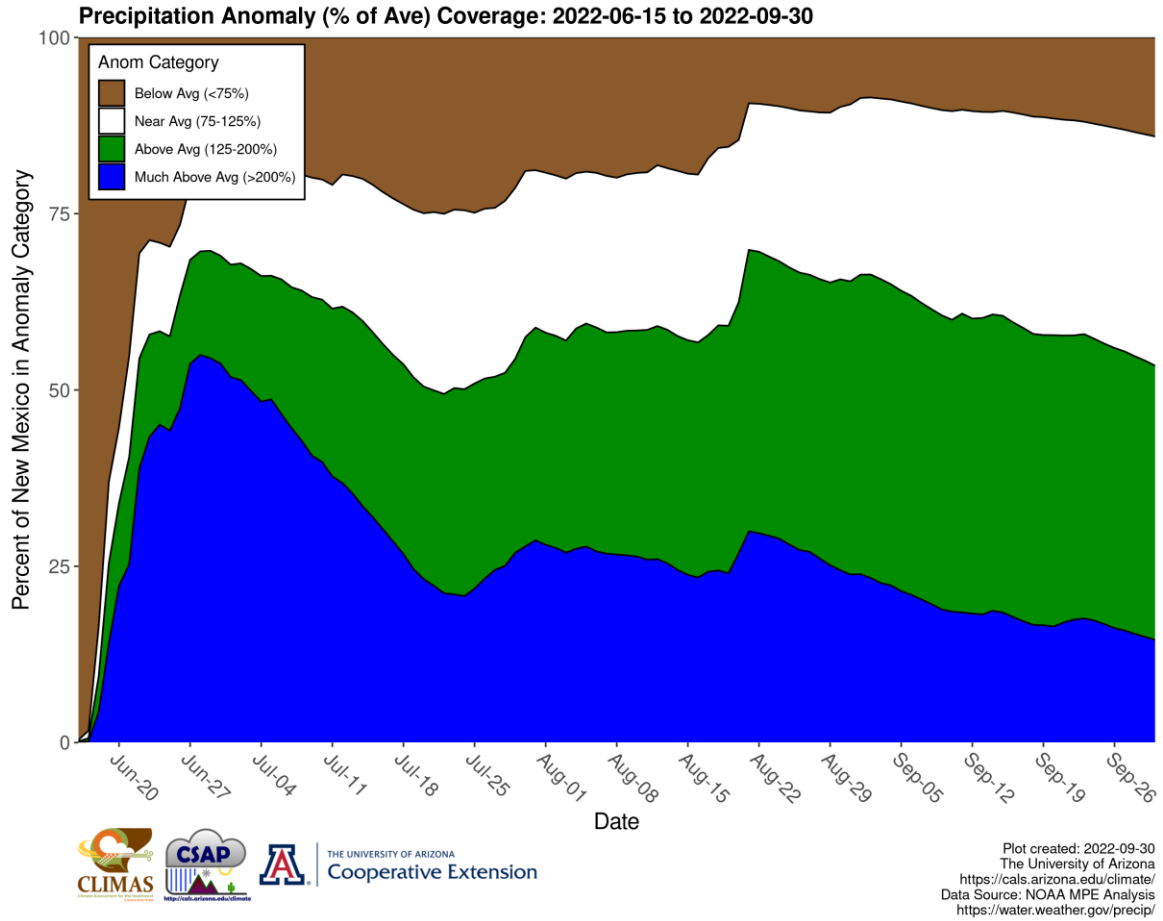
2023 Hydrology Update [presentation]

MRG ESA Collaborative Program Meeting

March 30, 2023

2022 Monsoon Precipitation



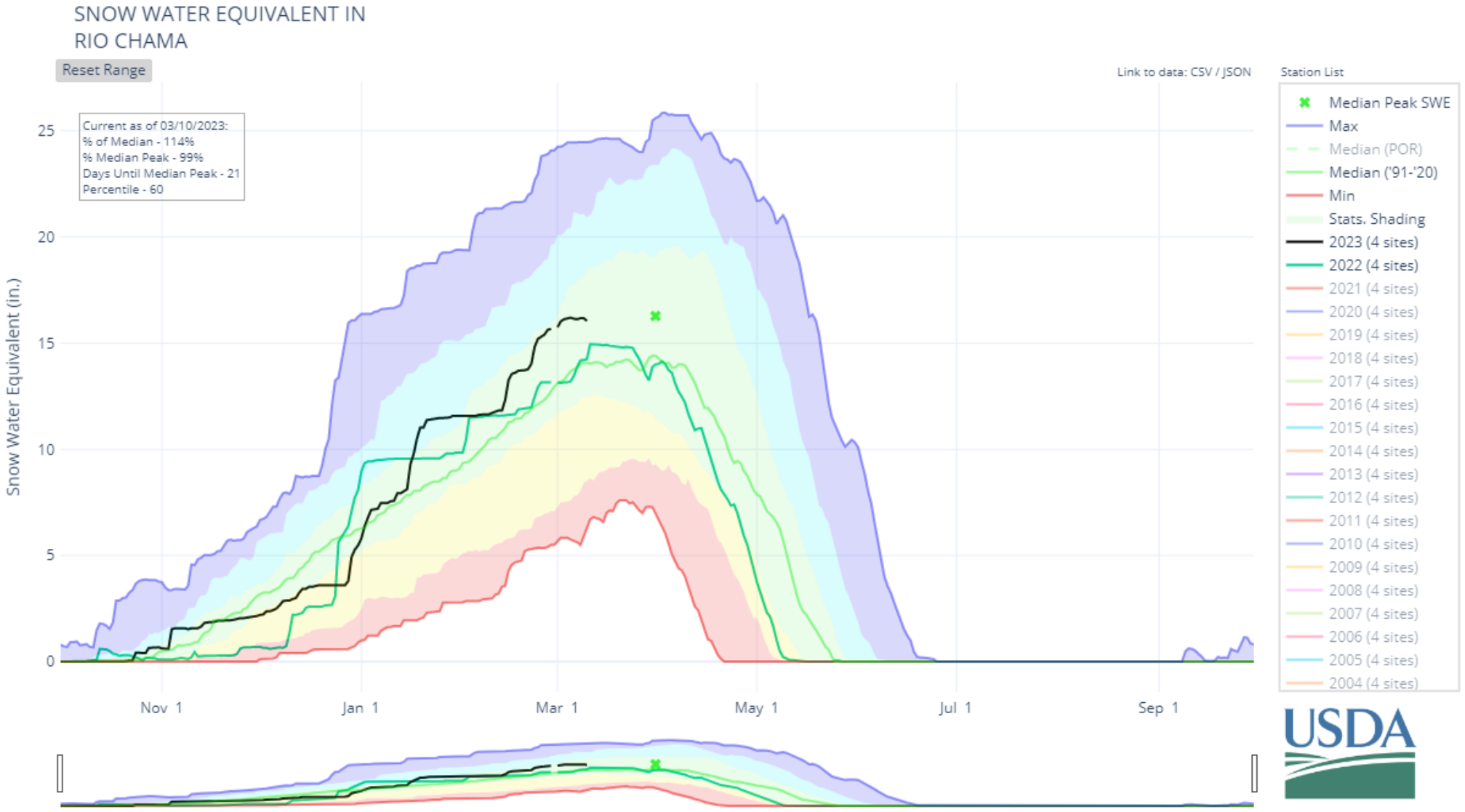


CLIMAS | CSAP | THE UNIVERSITY OF ARIZONA Cooperative Extension

Plot created: 2022-09-30
The University of Arizona
https://cals.arizona.edu/climate/
Data Source: NOAA MPE Analysis
https://water.weather.gov/precip/

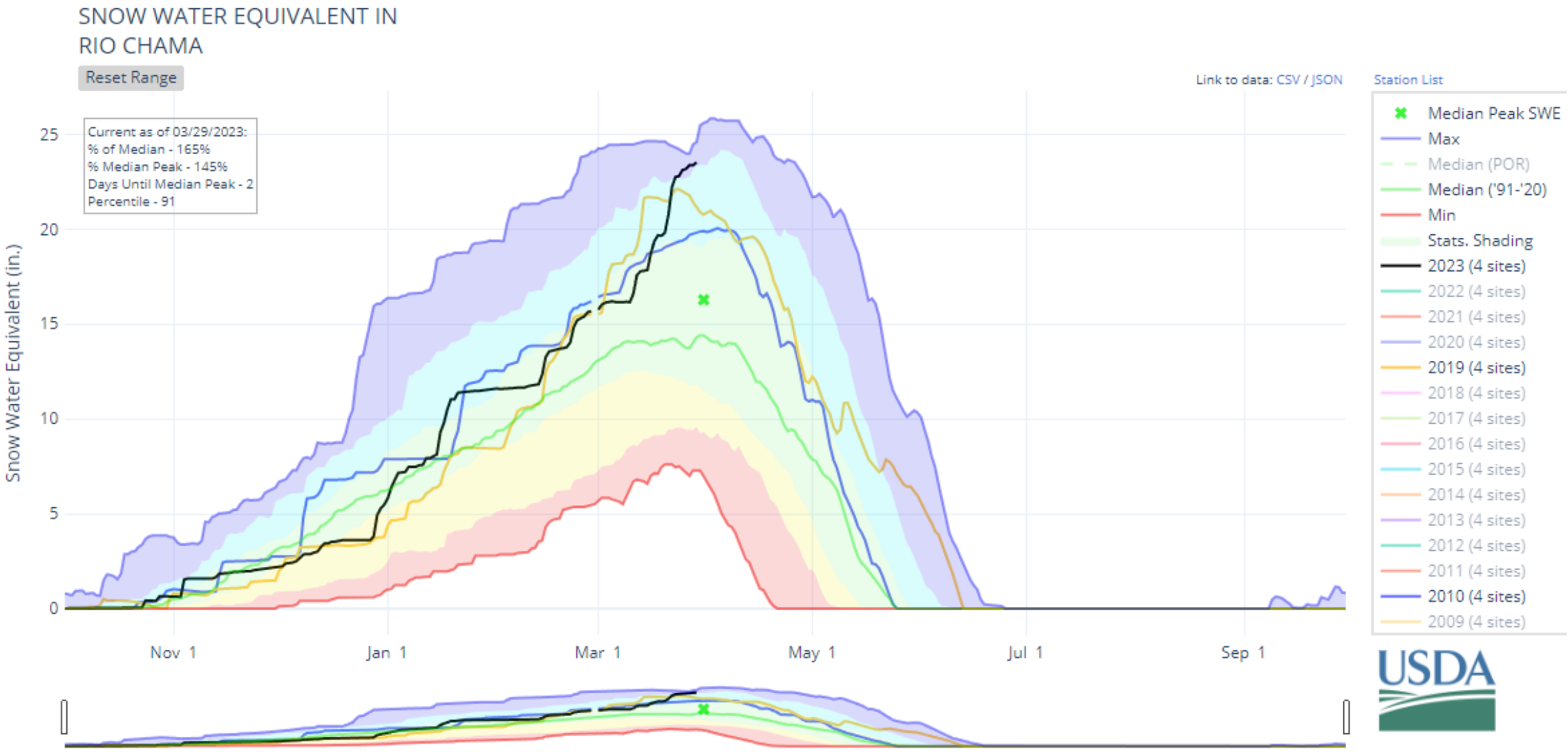
Antecedent soil moisture levels are high!

March 10 Rio Chama Snowpack

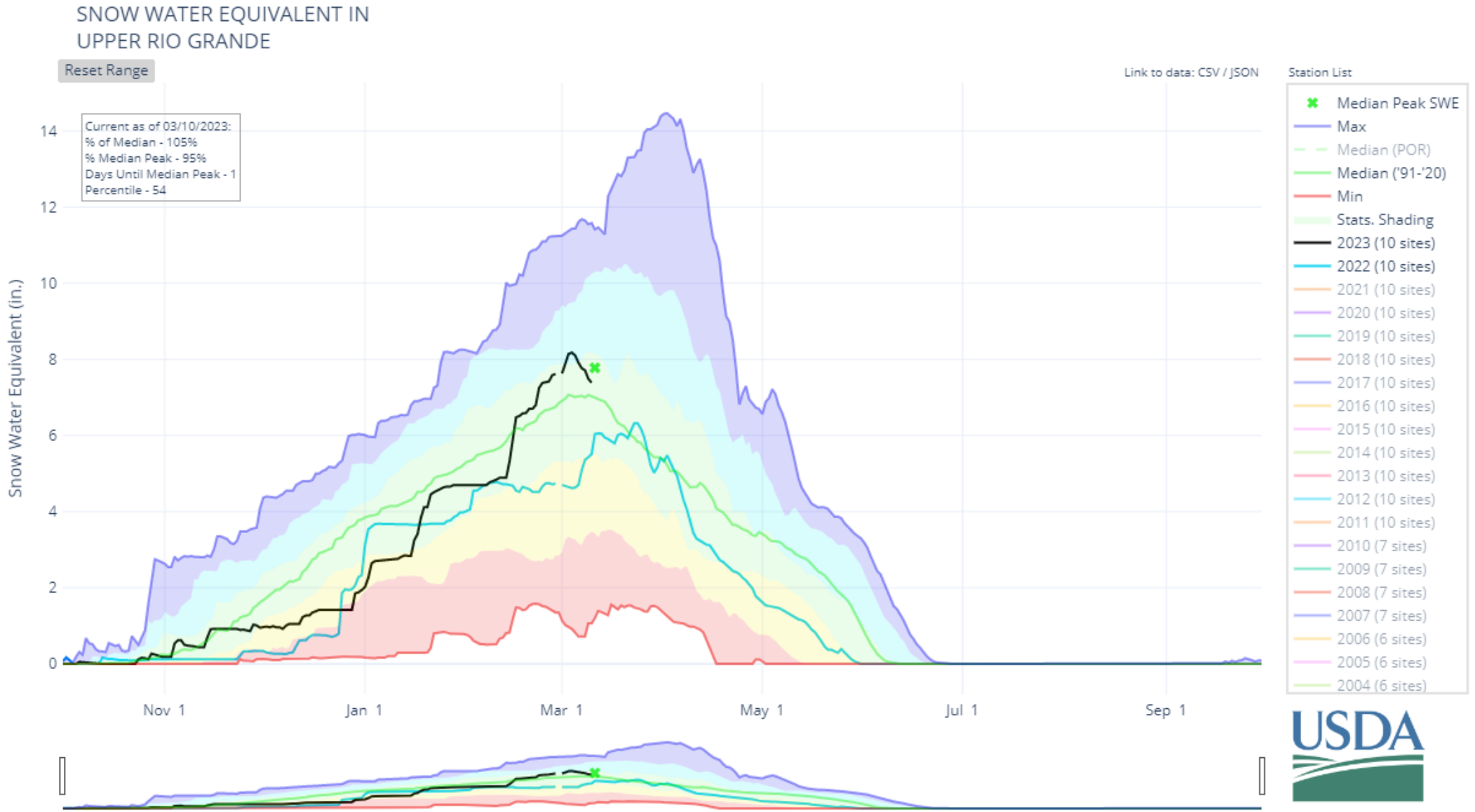


USDA

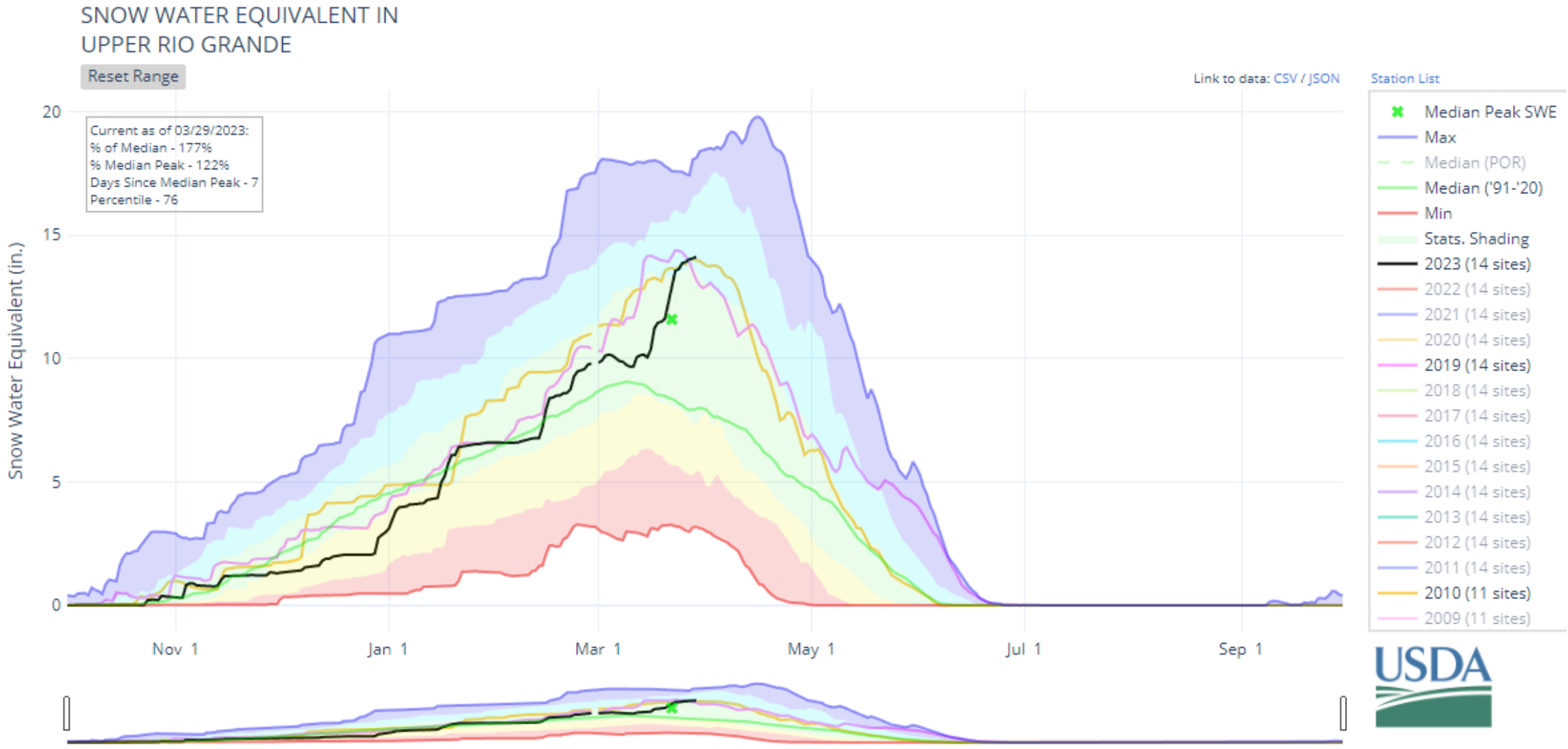
March 29 Rio Chama Snowpack



March 10 Upper Rio Grande (NM) Snowpack

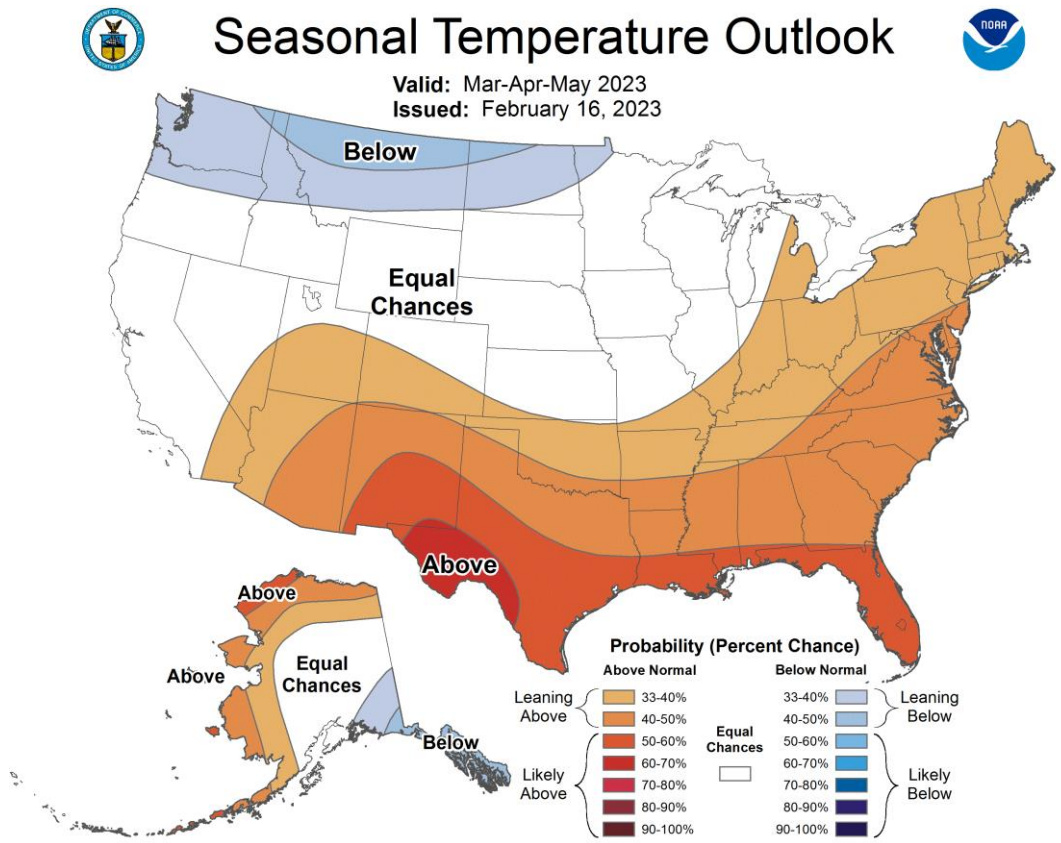


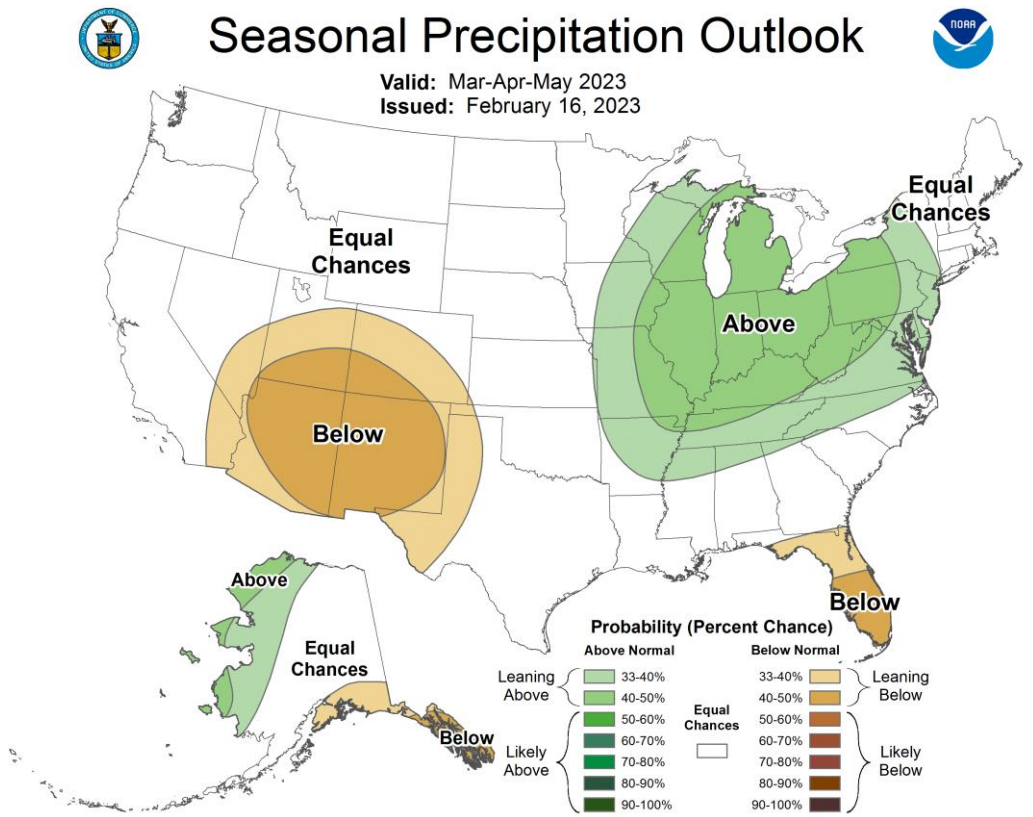
March 29 Upper Rio Grande (NM) Snowpack



USDA

Spring Climate Projections





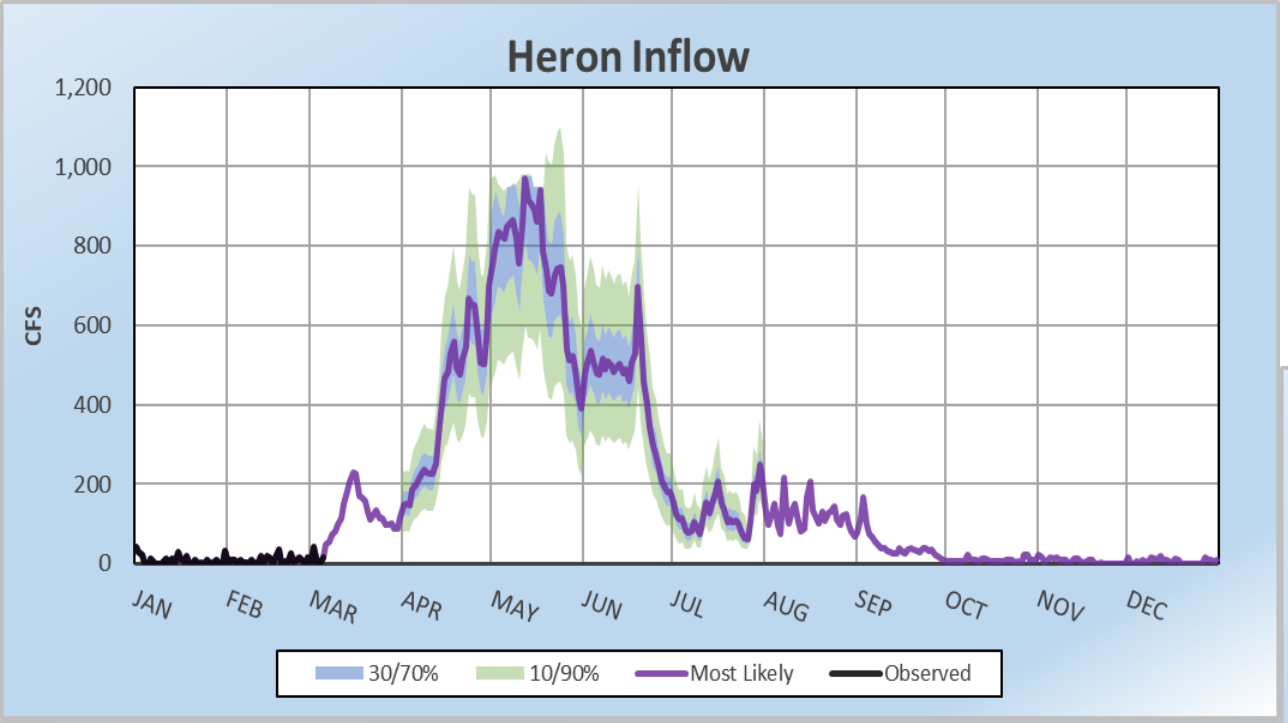
However, local NWS predicts the opposite due to expected large change in Madden-Julian Oscillation

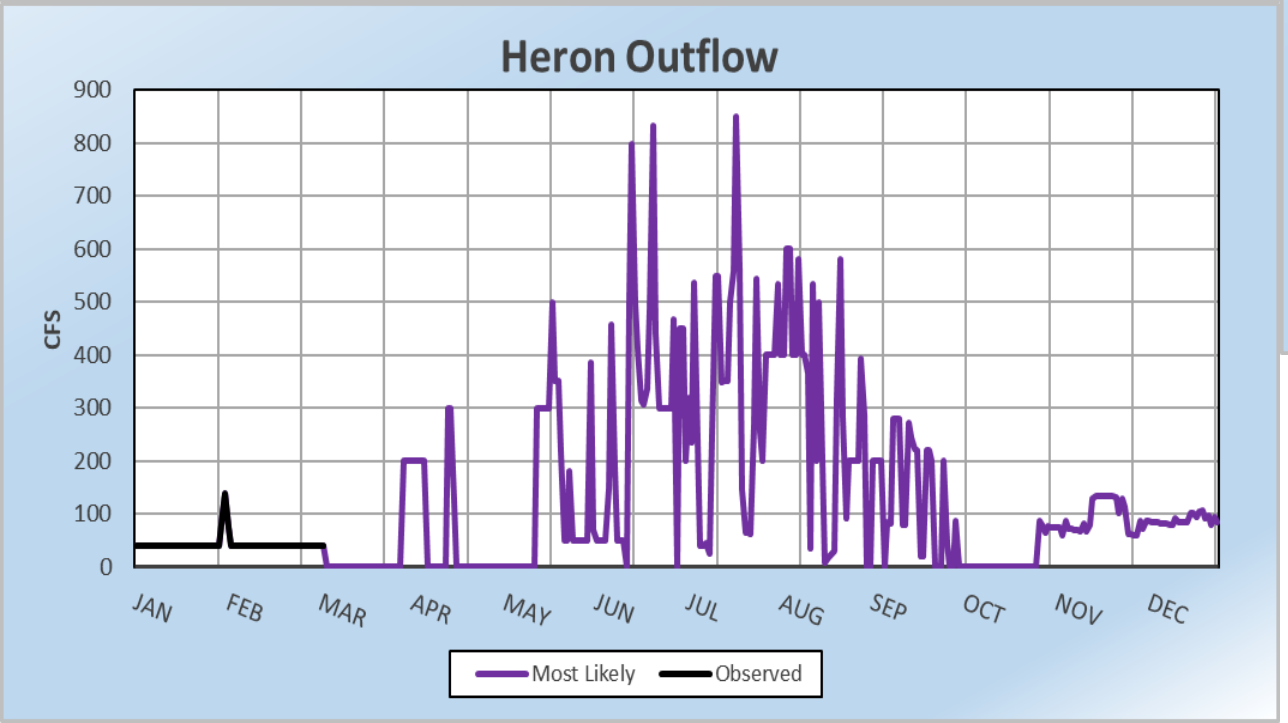
March 2023 Streamflow Forecast

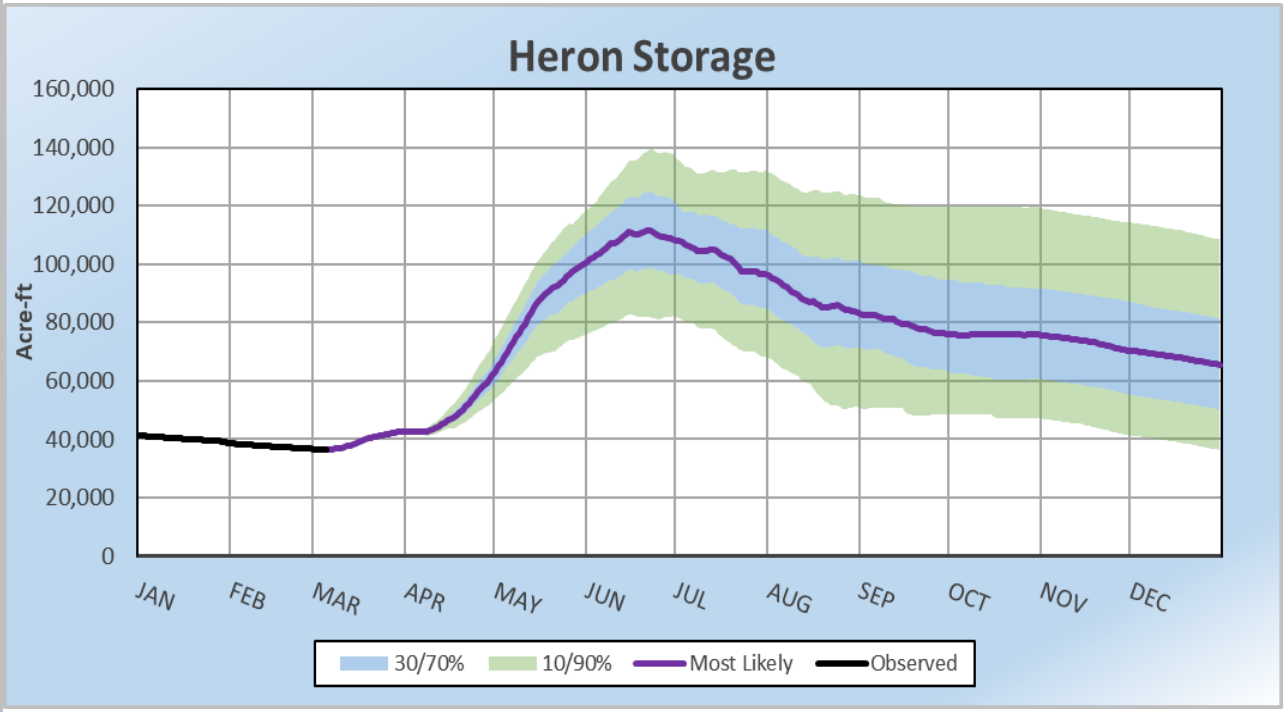
Location	period	50%, KAF	% of avg	30%, KAF	70%, KAF	90%, KAF
Rio Grande nr Del Norte	Apr - Sep	505	105	580	435	340
Conejos R nr Mogote	Apr - Sep	196	117	220	172	140
El Vado Reservoir Inflow	Mar - Jul	215	116	255	182	136
	Apr - Jul	195	117	230	163	120
Rio Grande at Otowi	Mar - Jul	575	102	690	470	335
Rio Grande at San Marcial	Mar - Jul	365	106	495	230	36
Rio Blanco at Blanco Diversion	Apr - Jul	53	110	61	46	36
Navajo R at Oso Diversion	Apr - Jul	64	114	74	55	43

April most probable forecast (50%) likely to be closer to March 30% exceedance forecast

2023 Heron Operations



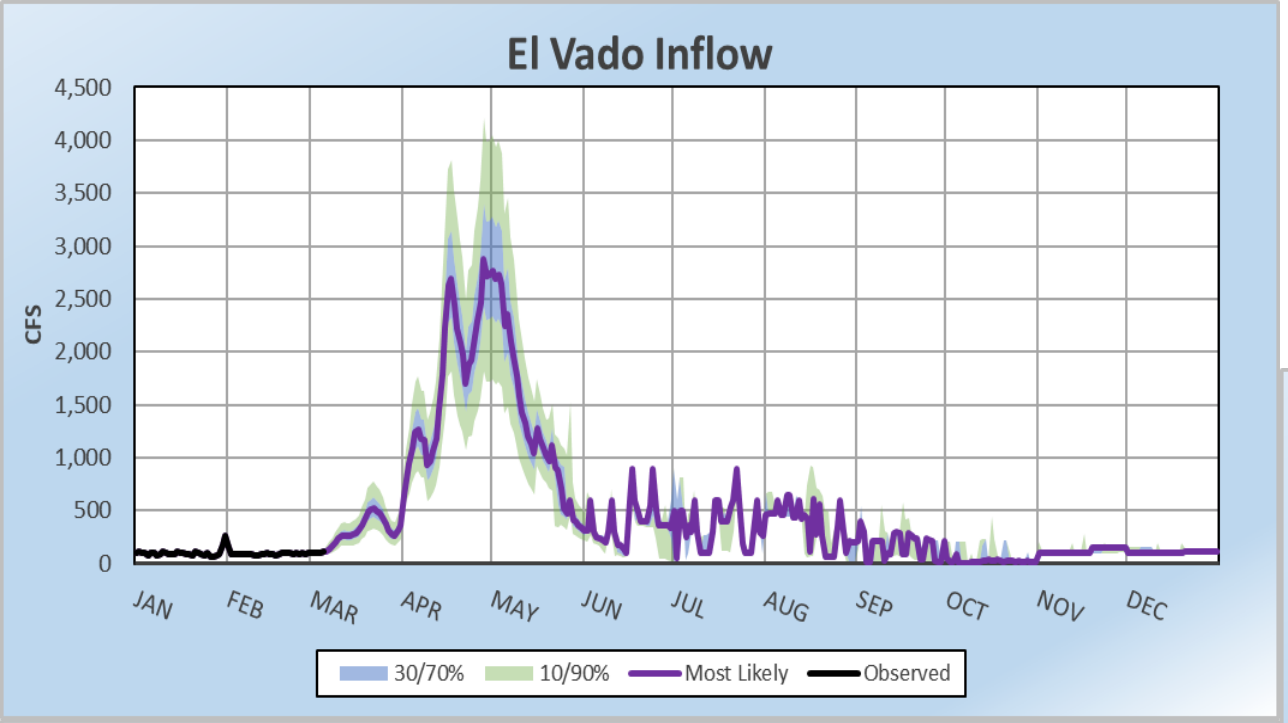


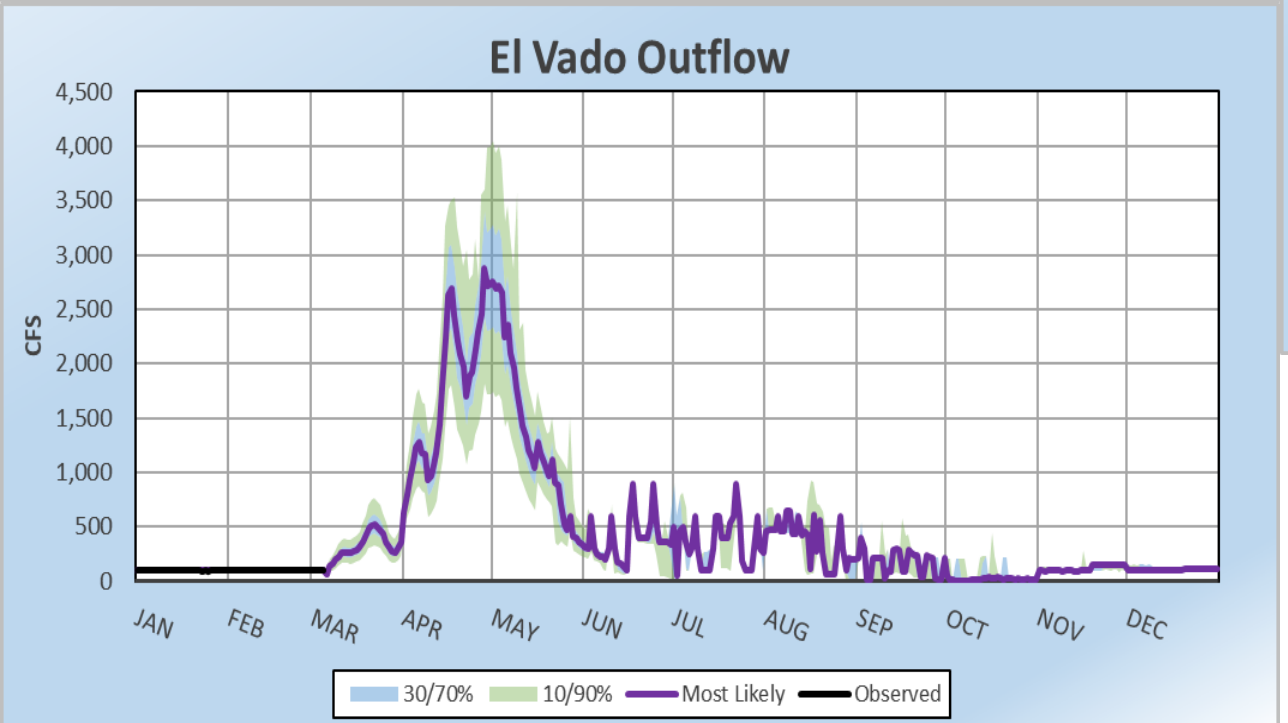


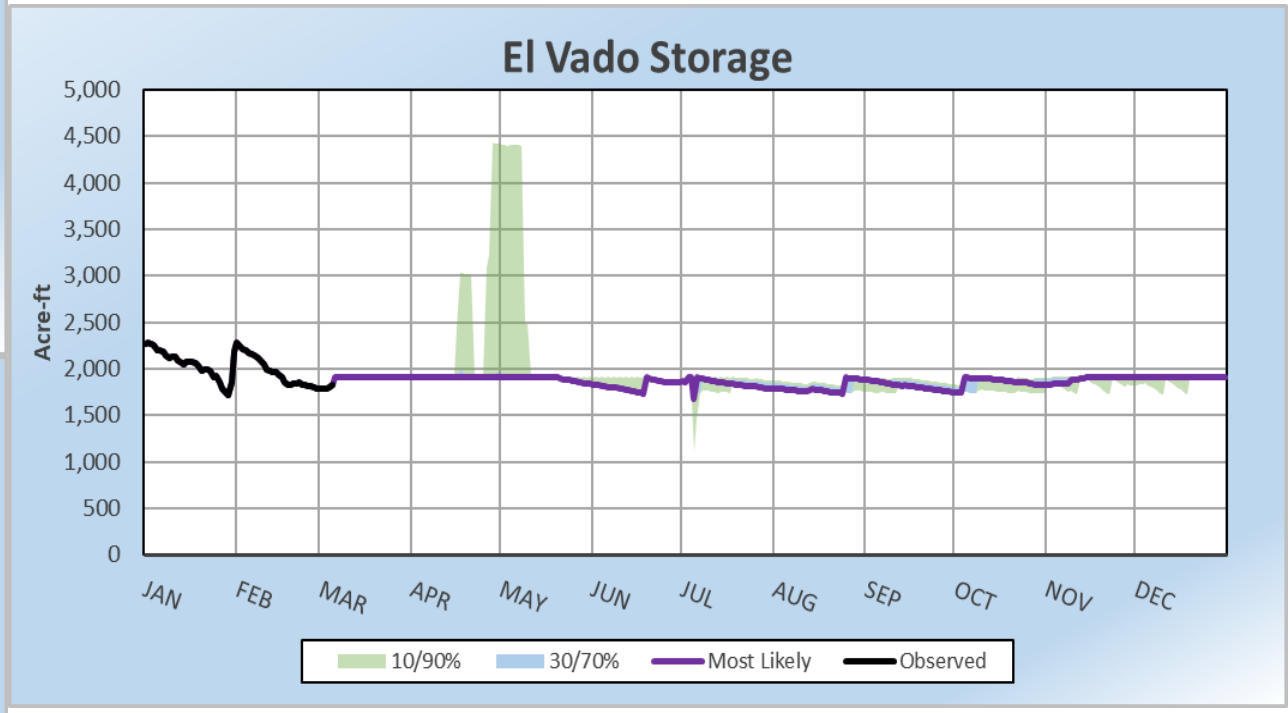
- Full SJCP allocation in all but the driest scenarios
- SJCP inflow 120 – 130 KAF

March 2023 Operating Plan Model Results

2023 El Vado Operations

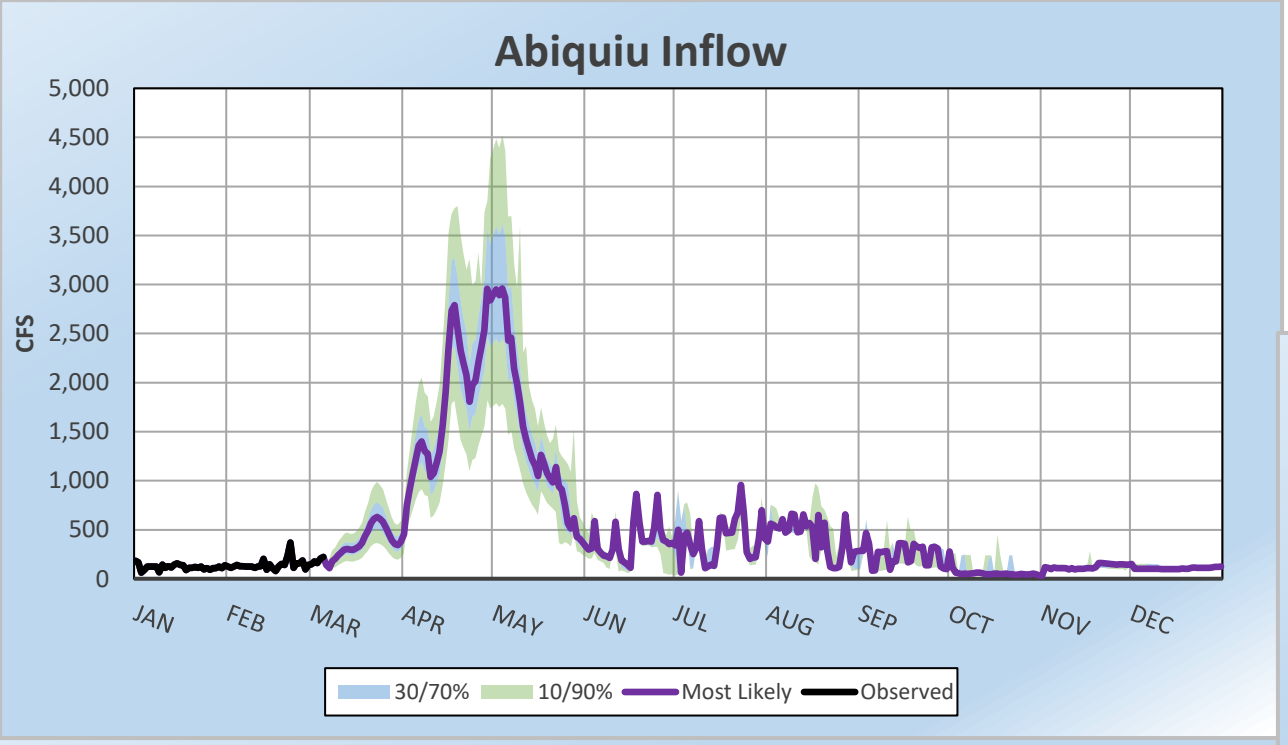


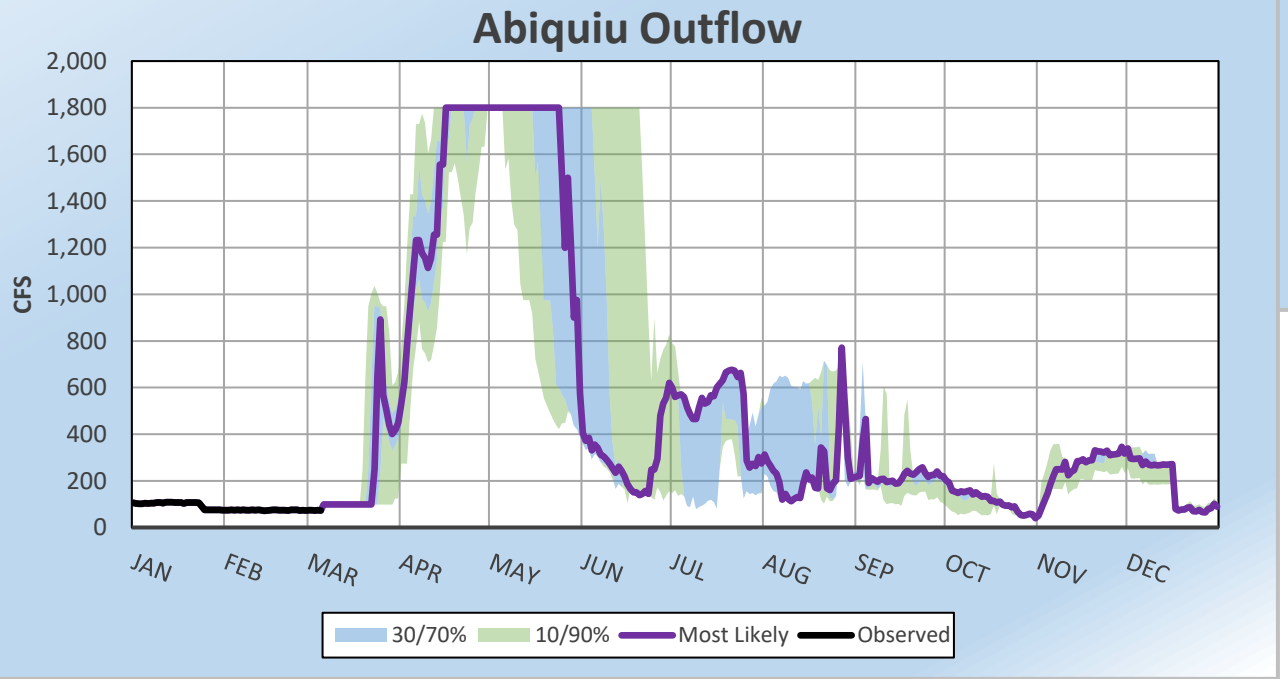


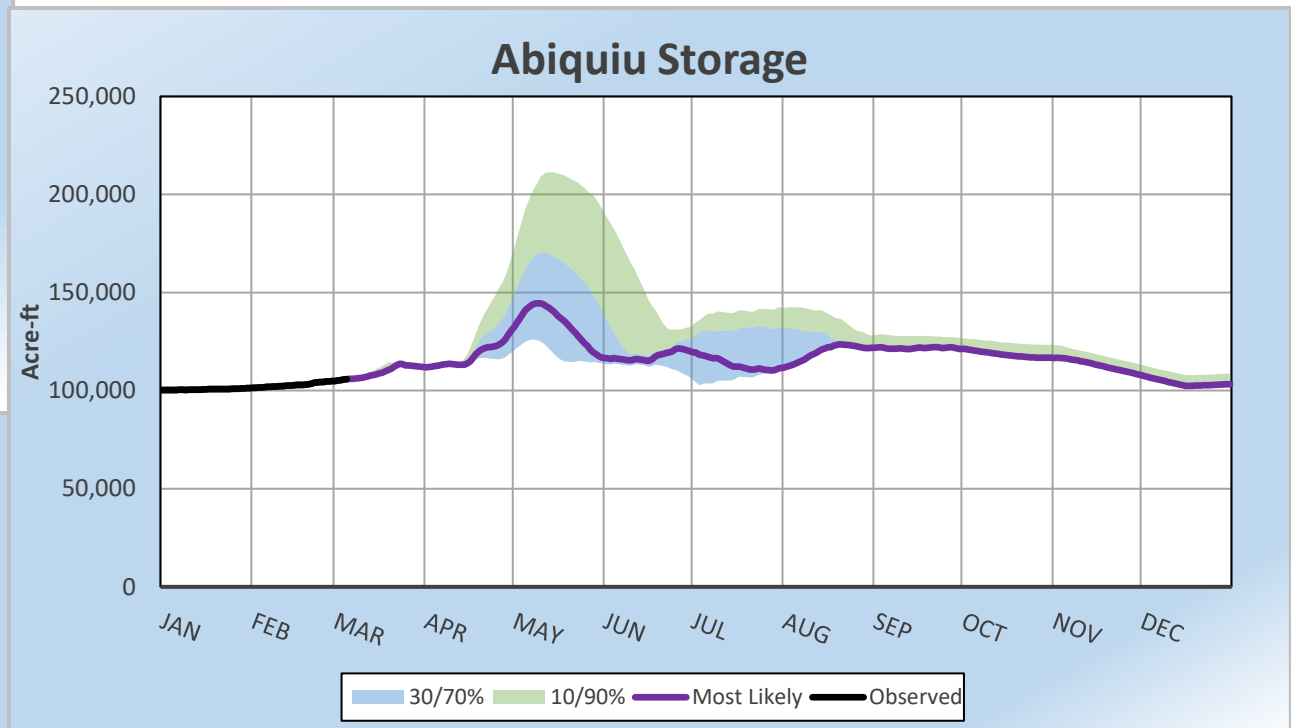


March 2023 Operating Plan Model Results

2023 Abiquiu Operations

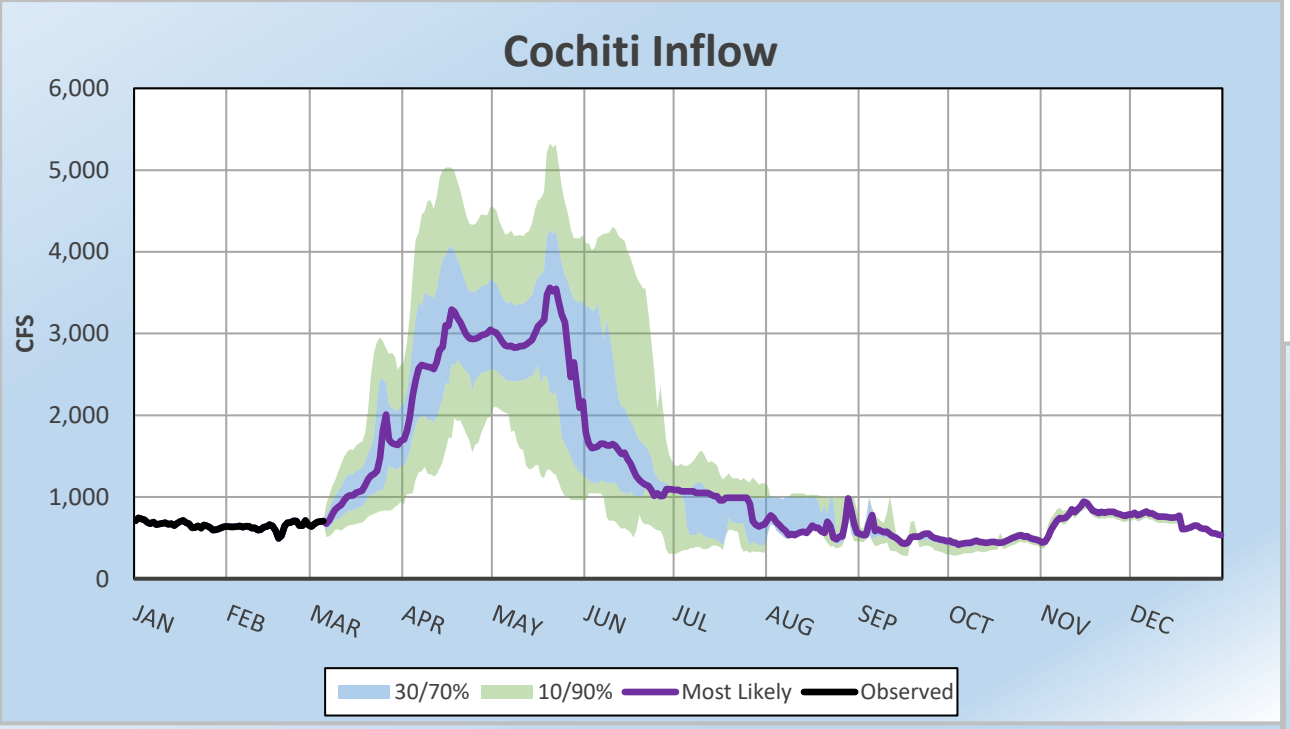


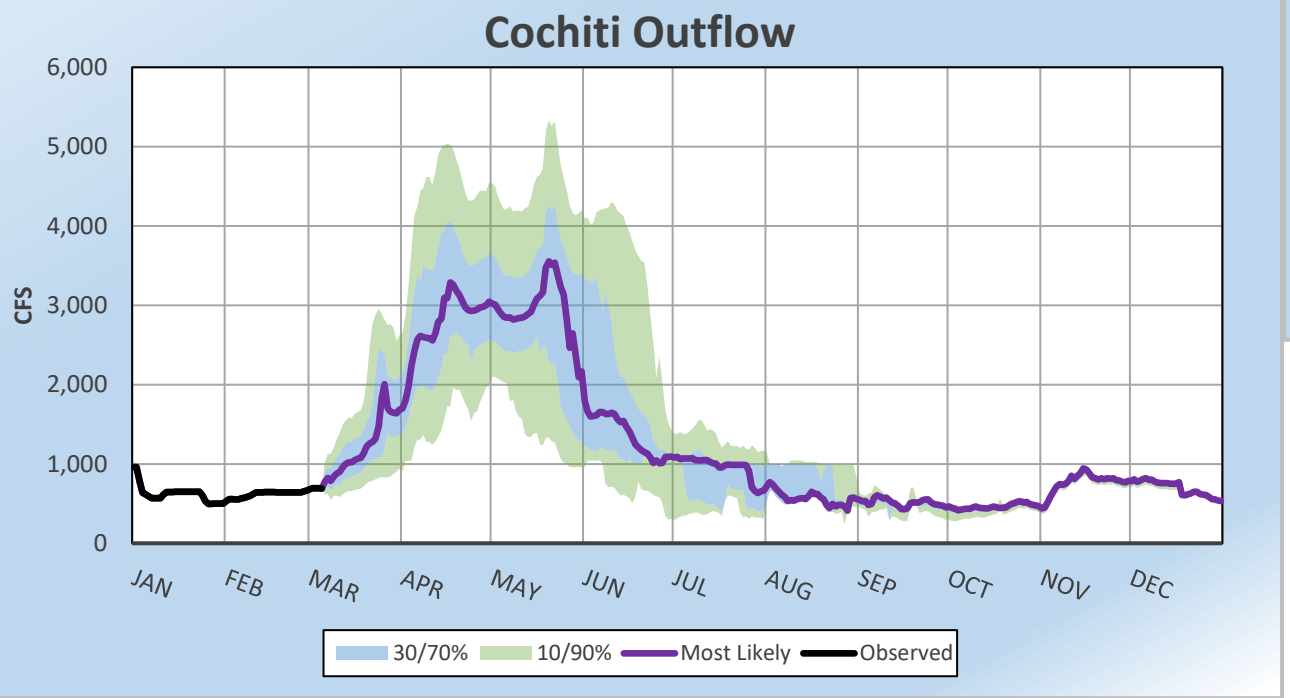


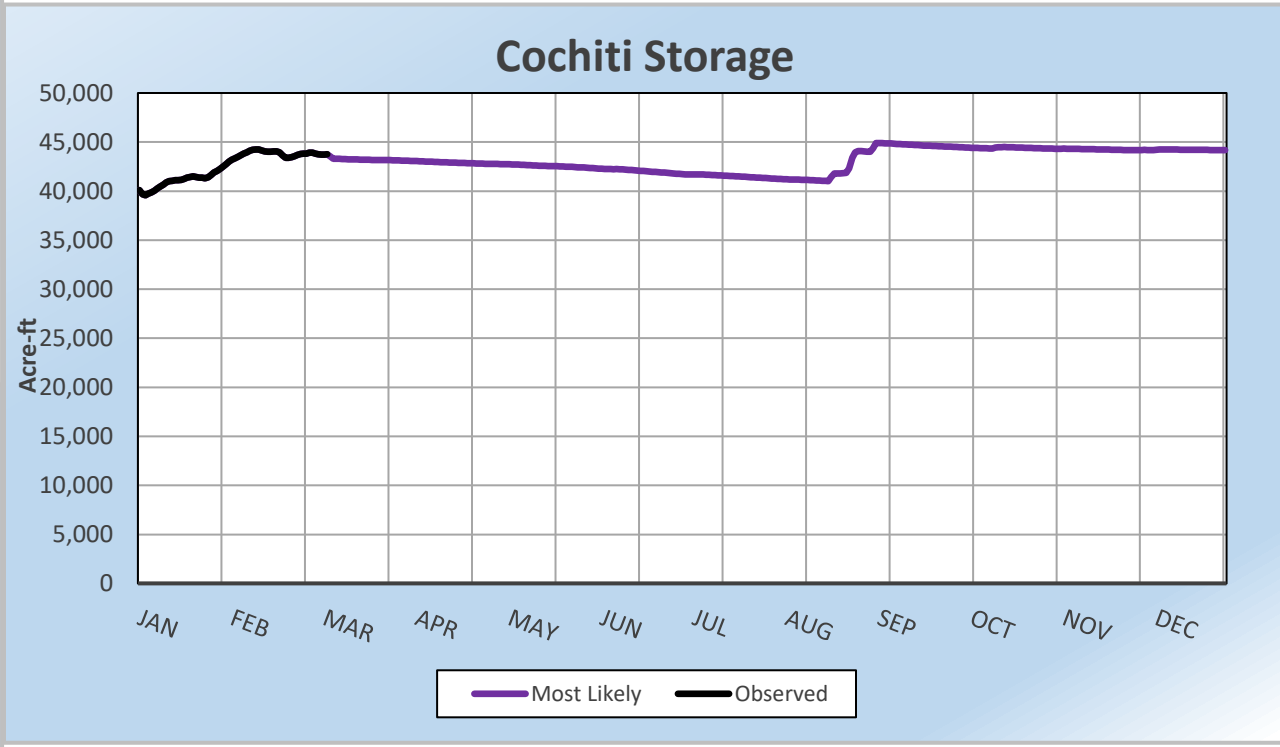


March 2023 Operating Plan Model Results

2023 Cochiti Operations

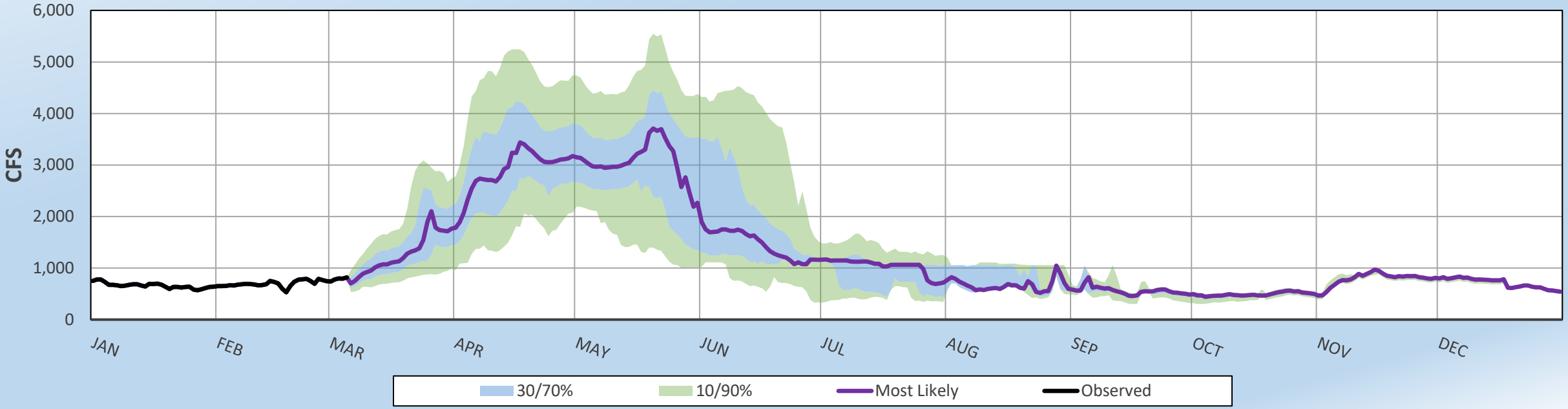




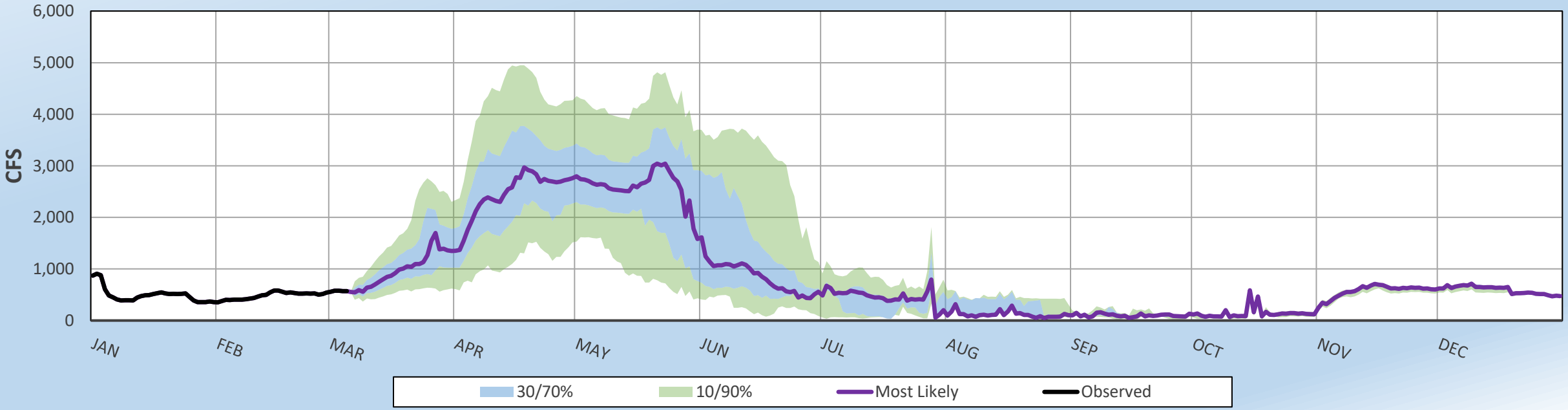


March 2023 Operating Plan Model Results

Otowi

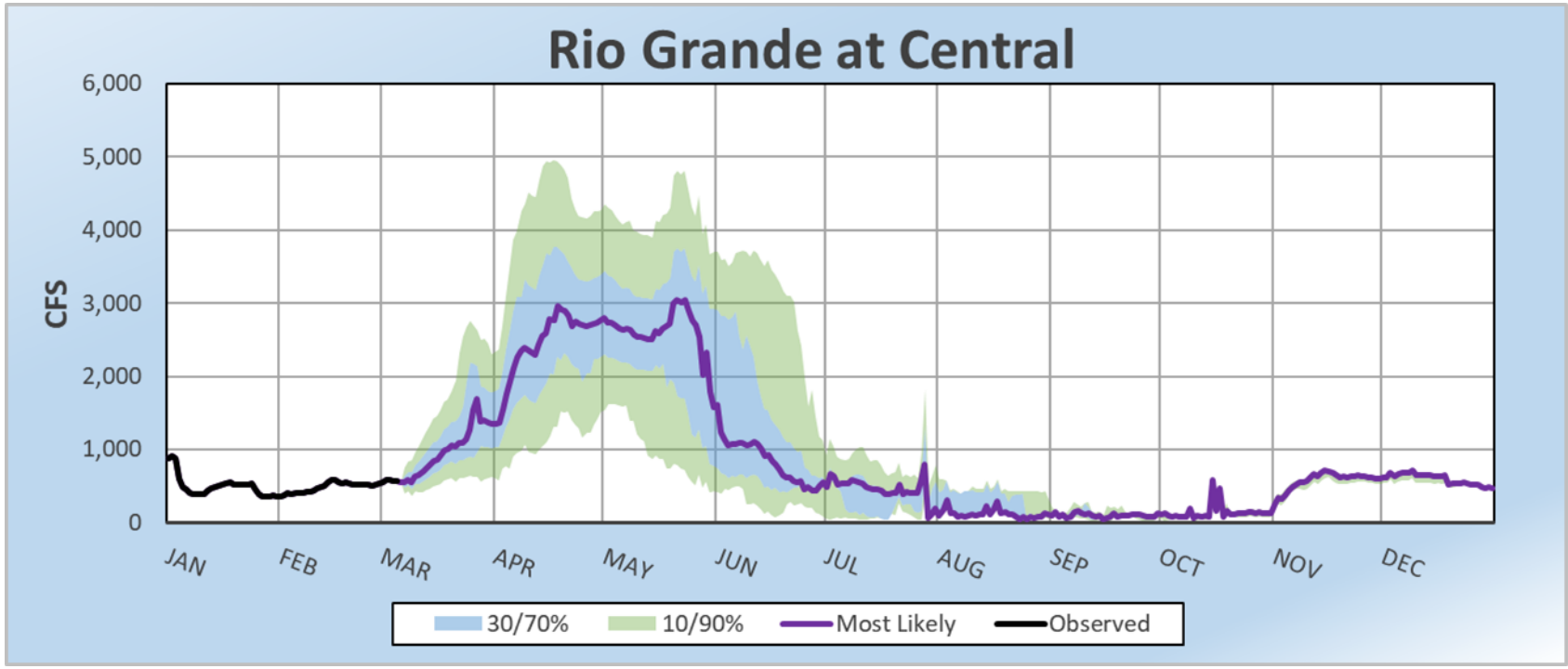


Central



2023 MRG Supplemental Releases

- ~5,010 ac-ft from 2022
  - 3,360 ac-ft in Heron
  - 1,650 ac-ft in Abiquiu
- Negotiating 2023 leases of ~12,000 ac-ft from SJCP contractors
- Flow at Central gage may reach 50-100 cfs, drying unlikely in Angostura reach

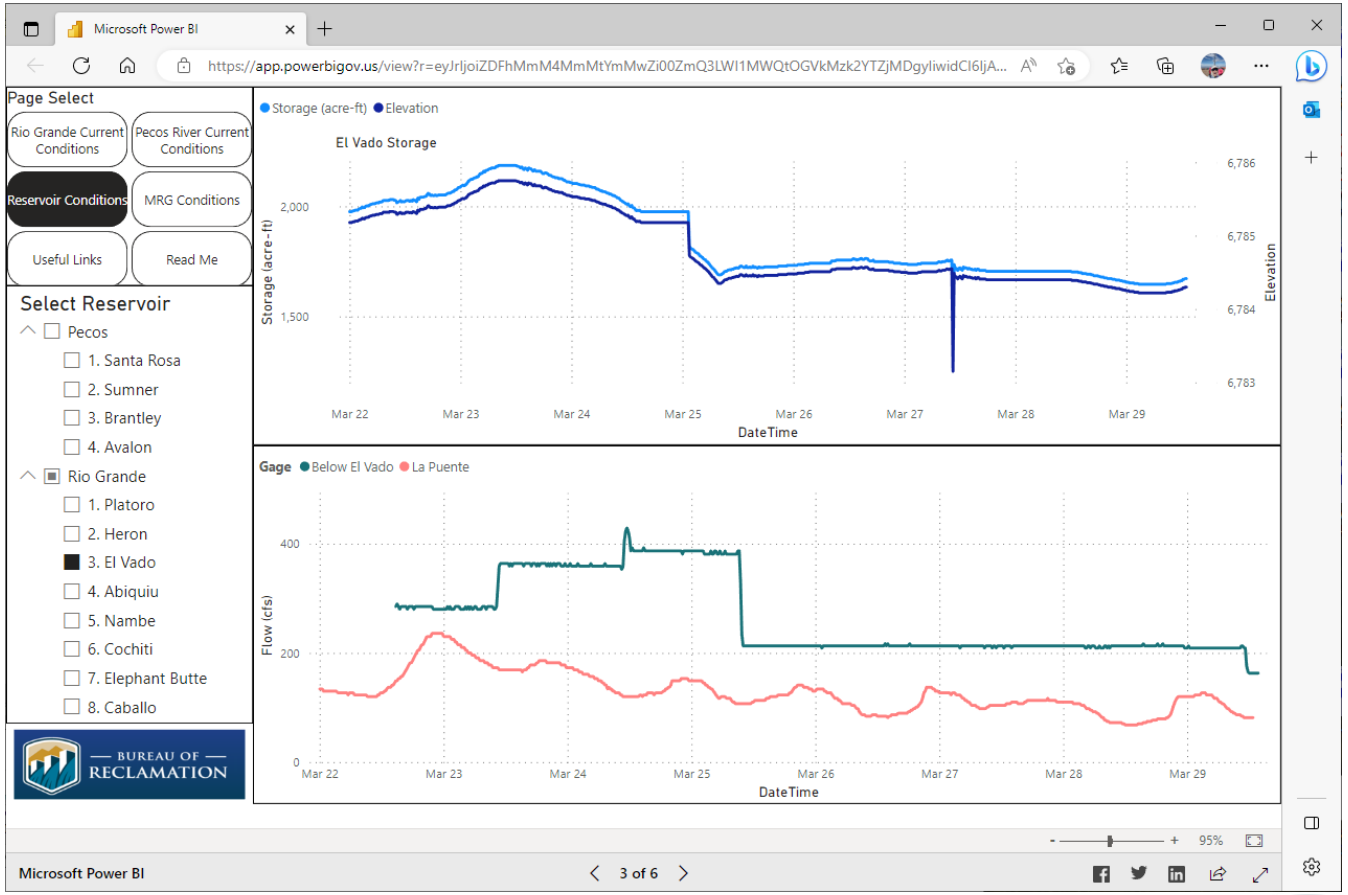


El Vado Construction Update

- During construction, reservoir elevation restricted to 6,875 ft +/- 1.5 ft
- From April 1 to May 15, reservoir may rise to 6,800 ft (9,405 ac-ft)
- Grouting behind faceplates has been challenging; new admixture will be used in hopes of reducing volume needed
- Embankment construction will go into 2024
- P&P to be retained in Abiquiu Reservoir in 2023 and 2024

Reclamation's New Water Ops Dashboard

- [Microsoft Power BI (powerbigov.us)](https://app.powerbigov.us/view?r=eyJrIjoiZDFhMmM4MmMtYmMwZi00ZmQ3LWI1MWQtOGVkMzk2YTZjMDgyIiwidCI6IjA2OTNiNWJhLTRiMTgtNGQ3Yi05MzQxLWYzMmY0MDBhNTQ5NCJ9)
  https://app.powerbigov.us/view?r=eyJrIjoiZDFhMmM4MmMtYmMwZi00ZmQ3LWI1MWQtOGVkMzk2YTZjMDgyIiwidCI6IjA2OTNiNWJhLTRiMTgtNGQ3Yi05MzQxLWYzMmY0MDBhNTQ5NCJ9



Carolyn Donnelly, water operations supervisor
cdonnelly@usbr.gov

BUREAU OF
RECLAMATION

Link to full Meeting Materials List

Executive Committee Meeting
March 30, 2023

See the following meeting material on the page below:

2023 Reservoir Storage Status [follow-up]

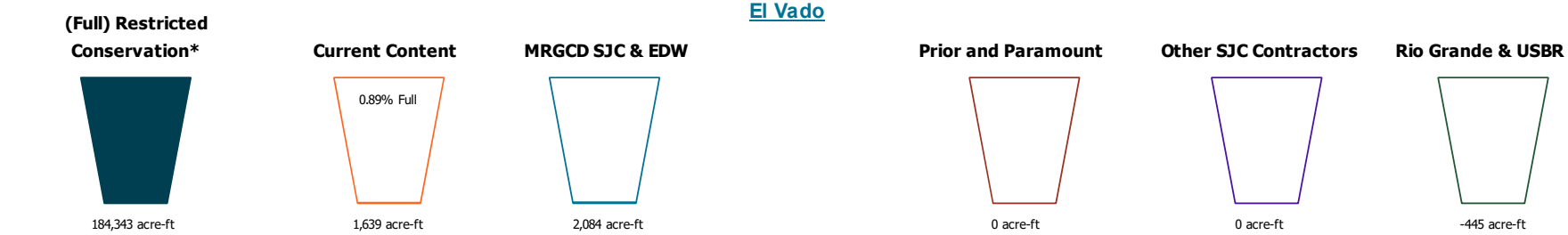
BUREAU OF RECLAMATION

Mar 28, 2023 data

Reservoir Storage Status

Heron

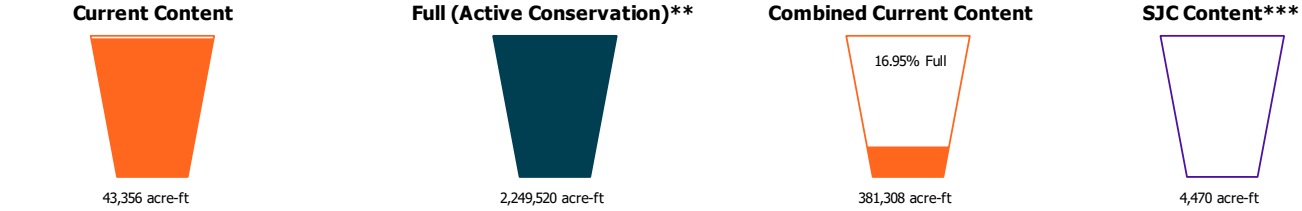
El Vado



Abiquiu

Cochiti

Elephant Butte and Caballo



* 172,656 AF 06/01 - 09/30 unless waiver requested. Otherwise, reported number.

** Varies by time of year. Reported number is for 04/01 - 09/30.

*** Max San Juan-Chama storage in Elephant Butte is 50,000 AF.

Total reservoir content may include incidental storage of water in transit.

Link to full Meeting Materials List

Executive Committee Meeting
March 30, 2023

See the following meeting material on the page below:

Updated March 2023 MAT Recommendations [presentation]

March 2023 Minnow Action Team (MAT) Recommendations
MRGESCP EC Meeting 3/30/2023

Shannon Weld – Shannon.weld@ose.nm.gov

NMISC

Hydrology Conditions

1. March 1 Forecast (50% exceedance) **575,000 acre-feet (AF) RG at Otowi** (102% of median) with **215,000 AF inflow to El Vado** (116% of median) March-July.
2. Article VII restrictions are in place and **New Mexico ended 2022 carrying 127,000 AF of debt**. With 3,400 AF over delivered in 2022, a -1,800 AF 2011-2021 reconciled adjustment, and a 32,500 AF one time delivery credit adjustment **New Mexico starts 2023 carrying 93,000 AF of debt**.
3. Due to construction on El Vado Dam and Rio Grande Compact Restrictions, no native Rio Grande water will be stored for Middle Rio Grande non-Prior and Paramount lands. 18,496 AF of native Rio Grande water will be stored for Prior and Paramount lands in Abiquiu Reservoir for the 2023 irrigation season.
4. Based on March 1 forecast San Juan Chama Project (SJC) allocation is **likely to be 100% of a full allocation.**
5. Bureau of Reclamation has contracts for about 5,000 AF of San Juan Chama water carried over from 2022 and has leased for about 12,000 AF to be used for its supplemental water program.

RGSM Condition

1. October 2022 preliminary estimated Catch Per Unit Effort (CPUE) for Rio Grande Silvery Minnow (RGSM) across **20 sites was .08 fish/100m^2 and .17 fish/100m^2 across 30 sites** (FWS MAT Meeting update).

- October density is greater than or equal to 1.0 fish per 100 m2 for 10 of 15 years; and
- October density is less than 1.0 fish per 100 m2 for no more than 5 of 15 years; and
- October density is less than 0.3 fish per 100 m2 for no more than 2 of the 15 years

2. **129,497 hatchery reared RGSM** were augmented in the fall 2022.

Year	CPUE
2017	23.2 fish/100m2
2018	0.1 fish/100m2
2019	3.41 fish/100m2
2020	0.36 fish/100m2 (20 sites = 0.29 fish/100m2)
2021	0.32 fish/100m2 (20 sites = 0.27 fish/100m2)
2022	0.17 fish/100m2 (20 sites = 0.08 fish/100m2)

General Recommendations

1. Be prepared to conduct a small-scale flow manipulation (Jiggle) to cue reproductively ready RGSM to spawn to collect eggs for captive propagation facilities. Favorable conditions for such an operation are unlikely in 2023.
2. MAT will meet again through the season if conditions warrant, **first follow up meeting April 12th, 2023, 9-11:30 AM**

Hydrology Recommendations

1. **Natural spring hydrograph is expected to cue RGSM to spawn** (deviations are unlikely due to current reservoir authorizations and Rio Grande Compact restrictions on storage).
2. Minimize river channel drying and provide refugia for RGSM through small consistent flows at outfalls as available in Isleta Reach.
3. Utilize diversion structures to manage the rate of river drying to reduce fish mortality. Begin the recession earlier and at a slower rate, to provide crews enough time to rescue fish if possible. Keep rate of recession constant. Smaller more frequent cuts from diversion bypasses.
4. Prioritize supplemental water for upstream reaches (Angostura) if conditions warrant.
5. Utilize ISC's pumping rights at Atrisco pumps for emergencies.

Biology Recommendations

1. Collect RGSM eggs for captive propagation facilities with MECs. Expand the geographic extent of egg collections for genetic diversity**. FWS service goal of 50,000 RGSM for captive propagation facilities. (200,000 eggs).**
2. **Monitoring for eggs** to start in April.
3. **Distribute collected eggs** proportionally to all egg collection propagation facilities.
4. Be prepared for **larval and juvenile fish collection**.
5. Conduct fish salvage as first drying occurs.
6. Intentionally discharge cool water from MRGCD irrigation outfalls in the Isleta reach during hot and low flow periods. These discharges provide refuge to RGSM from the hot inhospitable water in the river channel (thermal refugia). Water for these operations were leased by MRGCD with Audubon New Mexico and National Fish and Wildlife Foundation.
7. If leased water is not sufficient to continue supporting thermal refugia in MRGCD outfalls at any point during 2023 irrigation season, coordinate fish rescue from the outfalls with the FWS.

Monitoring

1. River Eyes hydrologic monitoring will continue through the summer. Monitoring will be conducted in the Angostura Reach in 2023 if needed.
2. MRGCD will conduct RGSM egg monitoring at the temporary pump location at the Corrales Siphon.
3. ASIR under contract to Reclamation will conduct fish monitoring at set locations in April, May, June, July, August, September, and October. ASIR conducts an occupancy collection in November.
4. **Monitor floodplains to evaluate presence of fish and larval fish** and if possible, correlate with population monitoring results later in year.
5. Collect **more temperature and water quality data** in the MRG.
6. **BOR egg monitoring** occurs **April 22nd June 10th**. Uploaded to listserv daily.
7. **Biopark and SWCA** monitor for eggs as flows begin to increase.
8. BOR has hired biologists that will be assisting FWS with its egg and juvenile monitoring.
9. **Inundation monitoring** at peak flows and backwater stranding when flows initially drop.
10. Audubon will be conducting **drone monitoring at the MRGCD outfalls**.

Link to full Meeting Materials List

Executive Committee Meeting
March 30, 2023

See the following meeting material on the page below:

Updated March 2023 MAT Recommendations [follow-up]

March 2023 Minnow Action Team (MAT) Recommendations

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Link to full Meeting Materials List

Executive Committee Meeting
March 30, 2023

See the following meeting material on the page below:

MRGESCP Multi-Year Plan [presentation]

Proposed Multi-Year Plan (2023-2027)

Presentation to the Executive Committee

March 30, 2023

Debbie Lee & Catherine Murphy, Program Support Team

Inputs

- 2021 Habitat Restoration Workshop
- 2022 Management of Vegetated Islands and Bank-Attached Bars Workshop
- 2022 Collaboratory
- Signatory conversations

Purpose

- Increases management relevance
- Responsive to signatory priorities
- Provides clarity on Collaborative Program direction
- Illustrates how different Collaborative Program activities and initiatives relate to and build off each other
- Bridges management priorities to science activities
- Links to Collaborative Program activities with goals, objectives, and signatory planning needs in SAMIS
- Needed for out-planning:
  - Identifies future needs for resources and expertise in order to carry out tasks
  - Identifies related science activities
  - Operationalizes the Long-Term Plan

Planning for the Future

- Immediate Priorities – projected to be addressed in 2023
- Short-Term Priorities – projected to be addressed 2023-2026
- Long-Term Priorities – projected to be addressed in 2027 and beyond

Focus Areas

Overarching Themes:

- Need for Climate Scenario Planning
- Applicability of the Ecosystem Approach

- Habitat restoration planning and assessment
- Management of vegetated islands and bank-attached bars
- Rio Grande silvery minnow management and science
- Water operations and flexibility
- Strategic planning for river drying in the Middle Rio Grande

Climate Scenario Planning

- Enable signatories and other resource managers to deal collectively with the uncertainty of future conditions within the MRG basin

Immediate	• Develop future scenarios • Host the Climate Scenario Planning Workshop
Short-Term	• Continue developing strategies to maintain ecosystem functions under different scenarios • Consider potential changes in hydrology and geomorphology, and associated impacts to the ecosystem and listed species • Investigate the cultural and socio-economic impacts of the changing ecosystem • Engage the public through outreach and education regarding climate trends and changes in the bosque
Long-Term	• Continue to update ecological forecasts with latest climate models and data • Refresh recommendations for management strategies to protect/maintain important ecosystem functions • Develop water conservation strategies • Public outreach and education • Explore role of agricultural practices and irrigation returns in implementing strategies

Habitat Restoration Planning and Assessment

- Develop restoration strategies that can provide habitat for listed species, maintain ecosystem functions, and contribute to ecosystem recovery.
- Recommend best practices for successful restoration planning, implementation, and monitoring in the MRG.

Immediate	• Develop a standardized framework • Recommend updates to RioRestore • Develop a habitat restoration compendium • Investigate potential funding opportunities and partnerships
Short-Term	• Update RioRestore • Forecast expected changes to vegetative communities based on climate scenarios • Develop restoration strategies to maintain ecosystem functions • Recommend modifications to HR practices to incorporate climate scenarios • Integrate wildlife prevention, mitigation, and restoration best practices • Investigate feasibility of repurposing post-construction materials • Develop strategies to adaptively management HR
Long-Term	• Continue to update recommendations for HR best practices • Explore applying an integrated vegetation management plan for the MRG • Apply the ecosystem approach to HR projects

Management of Vegetated Islands and Bank-Attached Bars

- Balance the primary management priorities within the MRG (e.g., water delivery, flood control, and ecosystem management) while managing vegetated islands and bank-attached bars in a dynamic river system.

Immediate	• Develop a glossary for terminology • Clarify authorities and management roles • Begin developing a conceptual model representing ecosystem functions and physical river conditions related to vegetated islands/bars • Determine feasibility of developing a map of locations of vegetated islands and bank-attached bars, and begin developing (if feasible)
Short-Term	• Fill in critical data gaps for maps and models • Update map of locations of vegetated islands and bars • Refine conceptual ecosystem model • Investigate the effects of vegetated islands/bars on water conveyance and sediment transport
Long-Term	• Regularly update and revise the ecosystem-level conceptual model • Revise and update recommendations for management strategies • Develop recommendations for potential changes to authorities regarding wetlands in the MRG

RGSM Management and Science

- Develop collaborative, multi-year adaptive management strategies for RGSM.

Immediate	• Finalize and peer review the revisions to the RGSM conceptual ecological model • Provide guidance on recent RGSM population models • Develop a plan to update and refine the RGSM integrated population model • Incorporate RGSM questions into the climate scenario planning effort
Short-Term	• Use RGSM population models to evaluate RGSM management actions under different conditions projected for climate scenarios • Consider RGSM management in the development of the ecosystem-level CEM • Identify sites to target for HR for RGSM • Identify vital ecosystem functions related to RGSM life history and management strategies • Investigate the feasibility of a 10(j) population outside the current RGSM range
Long-Term	• Continue to evaluate RGSM management actions • Recommend adaptive management actions for RGSM • Investigate the need for a new RGSM propagation facility and, if supported, provide recommendations • Provide recommendations for implementing a potential 10(j) population, if feasible

Water Operations and Flexibility

- Plan for a water future that balances the needs of all users, including humans and listed species, and maintains ecosystem functions.

Immediate	• Document the roles, responsibility, and available flexibility in water operations in the MRG • Based on likely climate scenarios, project potential effects on water operations related to changes in the hydrograph
Short-Term	• Identify opportunities for coordination and flexibility regarding water operations • Identify flexibilities and multi-use benefits of any changes to water operations • Identify research needs regarding conservation improvement to water operations • Tie MRGESCP planning efforts into external planning efforts • Stakeholder and public outreach and education on conservation strategies and benefits to changes in water operations
Long-Term	• Revise and update recommendations for changes to water operations regarding conservation needs

Strategic Planning for River Drying in the MRG

- Develop a multi-reach decision support tool to inform adaptive management related to drying in the MRG.

Immediate	• Describe the decision environment for management of drying in the MRG • Identify research questions related to drying in the MRG • Develop public messaging strategies related to conservation actions and monitoring during river drying
Short-Term	• Where appropriate, include and update river drying considerations in ecosystem-level and species-level CEMs • Create a decision tool to assess management alternatives regarding drying in the MRG • Document lessons learned • Incorporate findings from studies of the use of outfalls and irrigation infrastructure to affect the rate, duration, and extent of drying, into recommendations • Continue to refine the strategic plan for management of drying
Long-Term	• Continue to refine the strategic plan for management of drying

Next Steps

- These multi-year priorities will be incorporated into the Long-Term Plan for Science and Adaptive Management in section 9.0 Future Direction
- The SAMC will conduct a science review of the priorities in the multi-year plan:
  - Assess feasibility and scientific justification
  - Determine linkages to existing Collaborative Program pathways
- The multi-year plan will inform new project development
- The multi-year plan will be revised at least every two years following the Collaboratory

Link to full Meeting Materials List

Executive Committee Meeting
March 30, 2023

See the following meeting material on the page below:

Results from the Annual Program Evaluation [presentation]

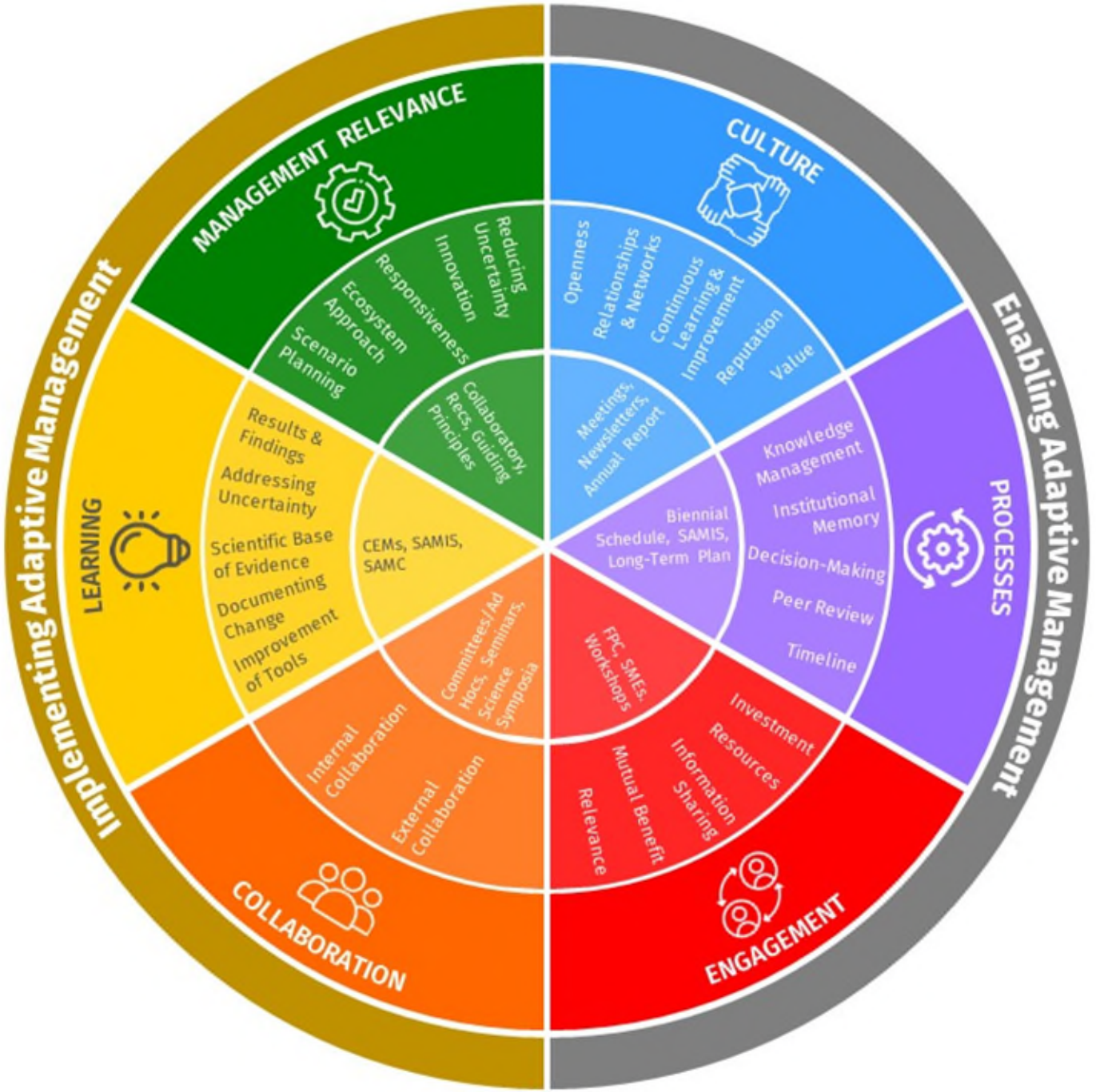
Results from the Annual Program Evaluation

MICHELLE TUINEAU

MARCH 30, 2023

What is the Annual Program Evaluation?

- Provided via Survey Planet (Link) in Jan 2023 – Due Feb 2023
- Evaluation of the Program's operational effectiveness within an adaptive management (AM) framework
- Used to inform changes to operations, communication strategies, committee charters, By-Laws, and/or the Long-Term Plan
- Each signatory asked to provide one response each
- Set-up: Six sets of statements regarding **six conditions for enabling and implementing AM** scored 1-5
- These conditions are from the Program's AM Graphic - introduced in Debbie's Overview of AM presentation at the 2022 Collaboratory

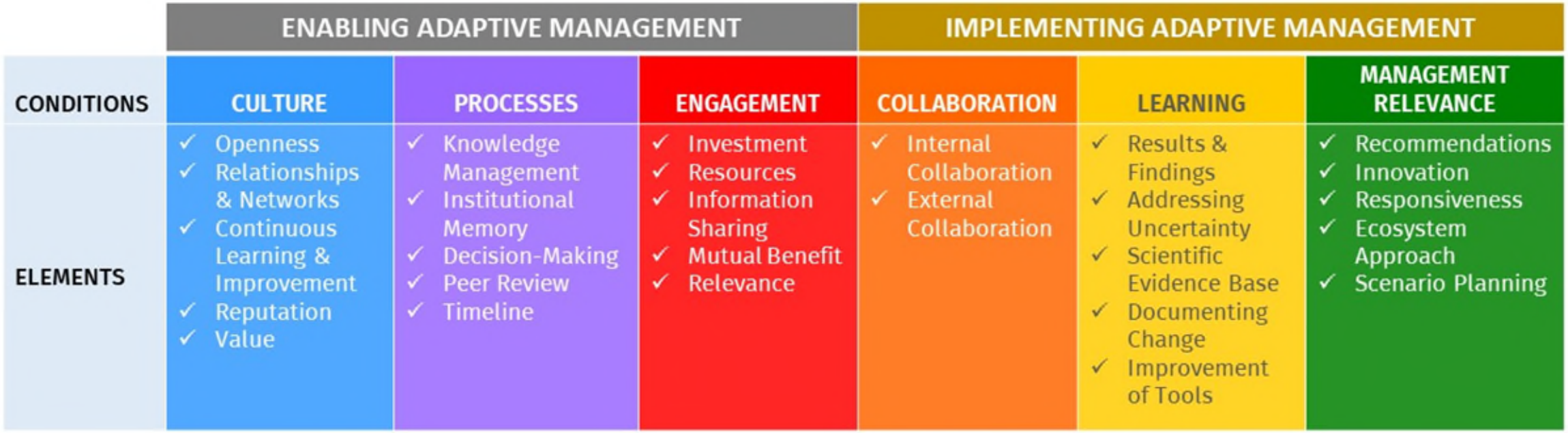


Adaptive Management Graphic

- Split into enabling AM and implementing AM
- Outer to inner ring:
  - **6 Conditions** – Broad categories that encompass what the Program needs to enable or implement AM
  - **Elements** – Define the conditions
  - **Tools** – What the Program uses to support each condition

Conditions and Elements of AM

- The Annual Program Evaluation was developed around these conditions and elements.
- Graphic provided to participants



Set-Up for the Annual Program Evaluation

- 5-7 survey statements that gauge your opinion on how well the Program sets up each AM condition
- Six sets of statements, one set for each condition
- On a scale of 1-5, indicate your agreement with the following statements: "The Collaborative Program…"
- Example:

Condition	**Elements**	**Survey Questions** *(On a scale of 1-5, indicate your agreement with the following statements: "The Collaborative Program…")*
CULTURE	✓ Openness ✓ Relationships & Networks ✓ Continuous Learning & Improvement ✓ Reputation ✓ Value	1. Provides an open space for all opinions 2. Fosters collaborative relationships amongst signatories 3. Encourages a solution-based focus 4. Is responsive to participant feedback 5. Strives to improve operational efficiency 6. Is respected by external parties 7. Provides value to its participants

How we Use the Annual Program Evaluation

- Establish a baseline for AM in the Program
- Indicate areas that need change
- Compare results over time
- Multiple ways to analyze results:
  - By individual signatory
  - By condition
  - By statement
  - Enabling vs implementing AM
- Asking for your insights and suggestions today

Overall Results

- 3 signatory responses – difficult to draw meaningful conclusions
- More responses needed!
- Focus on improving areas that need it
- Lowest conditions overall:

ENGAGEMENT

- ✓ Investment
- ✓ Resources
- ✓ Information Sharing
- ✓ Mutual Benefit
- ✓ Relevance

LEARNING

- ✓ Results & Findings
- ✓ Addressing Uncertainty
- ✓ Scientific Evidence Base
- ✓ Documenting Change
- ✓ Improvement of Tools

MANAGEMENT RELEVANCE

- ✓ Recommendations
- ✓ Innovation
- ✓ Responsiveness
- ✓ Ecosystem Approach
- ✓ Scenario Planning

Results – Lowest Statements for Conditions that Enable AM Conditions

- Average scores from three respondents
- Highlighted statements have average scores under 3.5
- *Lowest conditions overall

Condition	Survey Questions *(On a scale of 1-5, indicate your agreement with the following statements: "The Collaborative Program…")*
CULTURE	**Is respected by external parties (3.3)** *Encourages a solution-based focus*
PROCESSES	*Effectively communicates the status of Collaborative Program activities* *Has a transparent process for making and documenting decisions* *Develops an annual Work Plan with achievable and relevant tasks and milestones* *Has a clear administrative schedule*
*ENGAGEMENT	**Signatories are invested in the Collaborative Program's success (3.7)** **Engages all relevant stakeholders (3.3)** **Engages all relevant scientific & technical expertise (3.7)** *Provides opportunities for information sharing among signatories*

Results – Lowest Statements for Conditions that Implement AM

Condition	Survey Questions *(On a scale of 1-5, indicate your agreement with the following statements: "The Collaborative Program…")*
COLLABORATION	**Provides venues for fostering external collaboration (3.7)** **Shares information on relevant external efforts in a timely manner (3.7)** *Offers equal opportunity for all Signatories to engage in collaboration* *Fosters collaboration among its members* *Engages participants with appropriate expertise for ad hoc groups and committees* *Members communicate effectively within committees and ad hoc groups*
***LEARNING**	**Documents scientific findings in an organized manner (3.3)** **Makes recommendations to management agencies based on best available science (3.3)** **Updates tools and resources to incorporate new scientific findings (3.7)** *Characterizes and acknowledges scientific uncertainty*
***MANAGEMENT RELEVANCE**	**Promotes novel solutions to issues in the MRG (3.3)** **Provides meaningful recommendations to management agencies in a timely manner (3.7)** **Addresses species-level issues while employing an ecosystem approach (3.0)** **Uses forecasted conditions to inform its planning and recommendations (3.7)** **Addresses scientific uncertainties relevant to management decisions (3.7)**

Extended Deadline

- Results are highly insightful – good for comparison over time
- Directly informs the Program's operations and improves your experience
- Extended deadline: **April 14, 2023**
- Link: https://s.surveyplanet.com/mojzcupt

Link to full Meeting Materials List

Executive Committee Meeting
March 30, 2023

See the following meeting material on the page below:

Questions to Consider Regarding Future Program Portal Funding [follow-up]

Questions to Consider Regarding Future Program Portal Funding

The Fiscal Planning Committee (FPC) is requesting legal expertise to attend their next meeting (date and time TBD) and participate in a conversation about options for future Program Portal funding. Specifically, they are hoping for clarification on:

- Can signatories contribute funds to the Program Portal?
- Which signatories can contract with US Geological Survey (USGS)?
- Which signatories can accept money from other signatories for the USGS Program Portal contract?
- What, if any, are the limitations on cost sharing?