Science and Adaptive Management Committee Meeting

July 12, 2022

Meeting Materials:

Agenda

Minutes

2021 BEMP Annual Technical Report [read-ahead, not included]

2022 BEMP Site List [read-ahead, spreadsheet]

SAMIS Water Quality Projects [read-ahead, spreadsheet]

Excerpt from DOI Information Guidelines [read-ahead]

Revised Draft Long-Term Plan Project Evaluation Criteria [read-ahead, draft]

Revised Draft S&T Ad Hoc Charge – MRG Habitat Restoration Monitoring Guidance Ad Hoc [read-ahead, draft]

EC-Approved Proposal for a Management of Vegetated Islands and Bank-Attached Bars Workshop [read-ahead]

Summary of MRGESCP June Poll Results [read-ahead]

Revised S&T Ad Hoc Group Charge – MRG Habitat Restoration Monitoring Guidance Ad Hoc [presentation]

Link to full Meeting Materials List

Science and Adaptive Management Committee Meeting

July 12, 2022

See the following meeting material on the page below:

Agenda

Middle Rio Grande Endangered Species Collaborative Program

Est. 2000

Science and Adaptive Management Committee (SAMC)
Meeting Agenda

July 12, 2022; 8:00 AM – 12:00 PM

Location: *Zoom*
https://west-inc.zoom.us/j/89835931 20?pwd=bU54V3NGeG93bXVlSlJFcEIzcE9wZz09
Call-In: +1-669-900-6833
Meeting ID: 898-359-3120; Passcode: 1251

Meeting Objectives:

- *Hear an update regarding the June Executive Committee (EC) meeting*
- *Discuss EC request regarding potential drying in the Angostura Reach*
- *Learn more about the benefits of a Data Management Protocol for the Middle Rio Grande Endangered Species Collaborative Program*
- *Discuss revised criteria for evaluating projects for the Long-Term Plan (LTP)*
- *Hear an update on Science & Technical (S&T) Ad Hoc Groups*
- *Discuss revisions to charge for Habitat Restoration Monitoring Guidance Ad Hoc Group*
- *Discuss workshop on management of vegetated islands in the Middle Rio Grande (MRG)*

8:00 – 8:10	**Welcome, Guest Introductions, Agenda Review** ✓ **Decision**: Approval of July 2022 Agenda	*Catherine Murphy, Program Support Team (PST)*
8:10 – 8:20	**April Meeting Minutes and Actions Item Review** ✓ **Decision**: Approval of April 12, 2022 SAMC meeting minutes Read-Ahead: ☐ Draft April 12, 2022 SAMC Meeting Minutes	*Catherine Murphy, PST*
8:20 – 9:00	**Update from June 2022 EC Meeting** • Discuss EC request regarding potential drying in the Angostura Reach • Discuss value of long-term monitoring sites (e.g., BEMP sites, water quality stations, etc.) within MRG Read-Aheads: ☐ 2021 BEMP Annual Technical Report ☐ 2022 BEMP Site List ☐ SAMIS Water Quality Projects ✓ **Decision**: Should we form a small group to recommend a response plan for potential early 2023 river drying? ➢ **Action Item**: Schedule a meeting of small group to begin formulating a response plan for drying	*Debbie Lee and Catherine Murphy, PST*

- ✓ **Decision**: Should we form a small group to draft a memo to EC regarding long-term monitoring efforts in the MRG?
- ➢ **Action Item**: Schedule a meeting of small group to discuss long-term monitoring efforts

9:00 – 9:30	**Information Quality Act (IQA) and Data Management Protocol** • Update on Data Management Protocol Hybrid S&T/Admin Ad Hoc • Presentation on IQA standard and benefits/challenges associated with adherence ✓ **Decision**: Does the SAMC recommend to the EC that all data served on the Portal adhere to the IQA standard? ✓ **Decision**: Does the SAMC recommend to the EC that data collected by signatories meet a minimum standard of data management? ➢ **Action Item**: PST will draft a memo from SAMC to EC regarding decision on IQA standard. Read-Ahead: ☐ Excerpt from DOI Information Quality Guidelines	*Debbie Lee, PST and Art Coykendall, Bureau of Reclamation (tentative)*
9:30 – 10:00	**Criteria for Long-Term Plan (LTP) project evaluation** • Discuss revisions to LTP project evaluation criteria • Discuss a plan for completing first round of evaluations ✓ **Decision**: Does the SAMC approve of the revised criteria? ➢ **Action Item**: If approved, PST will generate project summaries using SAMIS and begin scheduling batched evaluations. Read-Ahead: ☐ Revised Draft LTP Project Evaluation Criteria	*Catherine Murphy, PST*
10:00 – 10:10	**BREAK**	
10:10 – 10:45	**Update on current and proposed S&T Ad Hoc Groups** • Rio Grande Silvery Minnow (RGSM) Integrated Population Model S&T Ad Hoc (Charles Yackulic lead) • RGSM Conceptual Ecological Model (CEM)/Genetics S&T Ad Hoc (Wade Wilson lead) • Peer Review S&T Ad Hoc for Revised RGSM CEM • RGSM Hypothesis Development S&T Ad Hoc (Andy Dean lead) • Habitat Restoration (HR) Monitoring Guidance S&T Ad Hoc (Ken Richard and Grace Haggerty proposed co-leads)	*Catherine Murphy and Sarah Anderson, PST*

- ✓ **Decision:** Does the SAMC approve of the revised charge for the HR Monitoring Guidance S&T Ad Hoc?
- ➢ **Action Item**: If approved, PST will convene the HR Monitoring Guidance S&T Ad Hoc

Read-Ahead:

- ☐ Revised Draft S&T Ad Hoc Charge – MRG HR Monitoring Guidance Ad Hoc

- ❖ **Discussion Points**: S&T Ad Hoc Groups

10:45 – 11:45 **Workshop on management of vegetated islands and bank-attached bars in the MRG** *Facilitated discussion*

- Discuss EC-approved proposal outline for workshop
- Discuss WOTUS/wetlands seminar and MRGESCP June poll results
- Discuss focus group, workshop plan, objectives and break-out discussions

- ➢ **Action Item:** PST will convene focus group to plan workshop based on SAMC discussion

Read-Aheads:

- ☐ EC-Approved Proposal for a Management of Vegetated Islands and Bank-Attached Bars Workshop
- ☐ Summary of MRGESCP June Poll Results

- ❖ **Discussion Points**: Workshop planning guidance

11:45 – 12:00 **Action Items, Next Steps and Announcements** *PST*

- ➢ **Upcoming Collaborative Seminars**:
  - o Rob Dudley –August 23, 2022 at 10 AM MT
  - o Dan Shaw and Katia Chavez – TBD, late July/early August
- ➢ **SAMIS Trainings** – Schedule with PST
- ➢ **Next Meeting**: October 2022 (pending EC meeting date)

12:00 **Adjourn**

Link to full Meeting Materials List

Science and Adaptive Management Committee Meeting

July 12, 2022

See the following meeting material on the page below:

Minutes

Middle Rio Grande Endangered Species Collaborative Program

Est. 2000

Science and Adaptive Management Committee (SAMC)
Meeting Minutes

July 12, 2022; 8:00 AM – 12:00 PM
Location: Zoom Meeting

Decisions

- ✓ Approval of the July 12, 2022 SAMC meeting agenda
- ✓ Approval of the April 12, 2022 SAMC meeting minutes
- ✓ Approval of formation of a Science & Technical (S&T) Ad Hoc Group to inform a response plan regarding potential river drying in the Angostura (Albuquerque) Reach
- ✓ Approval of sending a memo to the Executive Committee (EC) describing the value of long-term data collections to the Middle Rio Grande Endangered Species Collaborative Program (MRGESCP) and encouraging continued support and funding
- ✓ Approval of sending a memo to the EC on the need for the Data Management Protocol Hybrid Ad Hoc Group

Action Items

WHO	ACTION ITEM	BY WHEN
Program Support Team (PST)	Send a Doodle poll to schedule the November SAMC meeting	7/14/2022
PST	Reconfirm membership for the Rio Grande Silvery Minnow Hypotheses Development Ad Hoc Group and schedule a meeting	7/22/2022
PST	Revise the charge for the Middle Rio Grande (MRG) Habitat Restoration (HR) Monitoring Guidance S&T Ad Hoc Group to incorporate SAMC feedback	7/29/2022
SAMC	Review the revised charge for the MRG HR Monitoring Guidance S&T Ad Hoc Group	8/5/2022
PST	Draft a SAMC memo to the EC describing the value long-term data collections have to the MRGESCP and encouraging continued support and funding	8/5/2022
SAMC	Review the draft memo on long-term data collections	8/19/2022
PST	Draft a charge for an S&T Ad Hoc Group to inform a response plan regarding potential river drying in the Angostura Reach	8/5/2022
SAMC	Review the charge for an S&T Ad Hoc Group to inform a response plan regarding potential drying in the Angostura Reach	8/19/2022
PST	Revise the charge for the Data Management Protocol Hybrid Ad Hoc Group to incorporate SAMC feedback	8/5/2022
SAMC	Review the revised charge for the Data Management Protocol Hybrid Ad Hoc Group	8/19/2022

PST	Draft a SAMC memo to the EC on the need for the Data Management Protocol Hybrid Ad Hoc Group	8/5/2022
SAMC	Review the draft memo on the Data Management Protocol Hybrid Ad Hoc Group	8/19/2022
PST	Revise the Long-Term Plan Project Evaluation Criteria	8/5/2022
SAMC	Review the revised Long-Term Plan Project Evaluation Criteria	8/26/2022
PST	Convene a small group to plan the Workshop on Management of Vegetated Islands and Bank-Attached Bars	8/15/2022

Next Meeting: November 2022

Meeting Summary

Welcome, Meeting Objectives, and Agenda Review

The meeting opened with introductions and followed with review and SAMC approval of the July 12, 2022 SAMC meeting agenda.

- ✓ **Decision**: Approval of the July 12, 2022 SAMC meeting agenda

April Meeting Minutes, New Protocol, and Action Items Review

The SAMC approved the April 12, 2022 meeting minutes and action items.

- ✓ **Decision**: Approval of the April 12, 2022 SAMC meeting minutes

Summary of June 2022 Executive Committee Meeting

Debbie L. reported the following three EC approvals from the June 23, 2022 EC meeting:

- A Fall 2022 workshop on the management of vegetated islands and bank-attached bars;
- The First MRGESCP Biennial Collaboratory (December 2022); and
- The MRGESCP Peer Review Process.

The SAMC update on the EC discussions included the following topics:

1. The value of considering the relevance of the MRGESCP at a broader spatial and temporal scales.
    - There was general acceptance among EC attendees that management relevance could increase by incorporating broader spatial scale investigations (i.e., adding regional or watershed scales to existing reach and basin scales), as well as considering both long and short-term trends in MRG hydrology.
    - The SAMC members had no questions nor initiated any discussion on this topic.
2. The 2022 hydrological forecasts for the MRG suggest that the Angostura Reach has an increased likelihood of drying in 2022 and, perhaps, for years to come. In response to this forecast, the EC endorsed the idea of the MRGESCP becoming more proactive and better prepared for river drying events by developing a strategic approach to management decisions that reduce the likelihood or impacts of drying. An approach might include:

- Learning from the Spring water releases known as "jiggles," that enhance RGSM spawning and egg collection for propagation, in order to evaluate and improve the efficacy of this action on the RGSM response;
- Learning from agencies' past experiences with river drying in the lower reaches during the summer period, and determining whether those experiences can inform management of the Angostura Reach to maintain flows and mitigate impacts of drying.
    - The SAMC asked for clarifications to better understand the nature of the EC discussion, as well as the EC's interest in drying in the Angostura Reach.

SAMC Discussion Summary (on Angostura reach drying):

- The main questions from a water management operations perspective are: Is there a scientifically sound, better approach to drying in the Angostura Reach than just waiting for it to happen and dealing with it as it comes? Is there something we could set up as a best management practice if we anticipate drying occurring in that reach that would be different than from what we would have done in the past? And beyond the obvious goal of keeping water in the river, is there a strategy that will inform research and better support the conservation needs of the RGSM?
- The SAMC identified two management actions and a series of informational needs to assess in response to drying:
    1. The use of supplemental minnow water to manage drying in the Angostura Reach, and
    2. The use of MRGCD infrastructure and water movement through the system to manage drying in the Angostura Reach.
    - Where, when, and to what extent might drying be most likely?
- The EC suggested Charles Yackulic's integrated population model might be useful to predict potential impacts or benefits to the RGSM population, given a set of management actions, and "reduce drying" and "fish rescue" are included in his set of flow and nonflow management actions in that model.
- The SAMC pointed out that the expertise required to address flows in the Angostura Reach likely goes beyond the current expertise of the SAMC.
- The Drying Response Plan will need to consider:
    - Is RGSM rescue as a conservation action being abandoned?
        - Recent publications by Archdeacon et al. conversations at the recent MAT meeting indicated that rescue efforts after June 30 are not helpful/effective as a conservation action;
    - Identifying the variables (controllable and not controllable);
    - "Gaming out" different scenarios and associated alternatives, or combinations of alternatives, linked to outcomes for decision-making; and/or
    - Managing and monitoring irrigation returns (water availability, timing, and quality).
- The topic of long-term monitoring sites within the MRG was raised as an important issue to ensure standardized, protocol-based data are explicitly linked to any recommendations that may be offered.
    - The proposal to form a small group of SAMC members to draft a memo in support of long-term monitoring data to the EC was endorsed by the SAMC attendees.

3. The SAMC was also informed of a related EC discussion regarding messaging on drying in the Angostura Reach because of the public's potentially strong reactions to seeing a dry river. There was a great collaborative discussion at the EC about coming together and figuring out how to

message that potential drying to the public and how they can pool their resources and come up with a solid and consistent message for that. The SAMC had no questions nor any additional discussion on this topic.

- ✓ **Decision**: Approval of formation of an S&T Ad Hoc Group to inform a response plan regarding potential river drying in the Angostura (Albuquerque) Reach
- ✓ **Decision**: Approval of sending a memo to the EC describing the value of long-term data collections to the MRGESCP and encouraging continued support and funding
- ➢ **Action Item**: PST will draft a charge for an S&T Ad Hoc Group to inform a response plan regarding potential river drying in the Angostura Reach
- ➢ **Action Item**: SAMC will review the charge for an S&T Ad Hoc Group to inform a response plan regarding potential drying in the Angostura Reach
- ➢ **Action Item**: PST will draft a SAMC memo to the EC describing the value long-term data collections have to the MRGESCP and encouraging continued support and funding
- ➢ **Action Item**: SAMC will review the draft memo on long-term data collections

Next Step:

1. The PST will reach out to SAMC members to request assistance to assemble a team to address the EC request to come up with an approach, including data collection recommendations, for developing a drying response plan.
2. Potential candidates for the ad hoc group: (Reclamation) Lucas Barrett, Carolyn Donnelly, Eric Gonzales; (USACE) Mick Porter, Justin Reale; and (MRGCD) Alicia Lopez

Update on Information Quality Act (IQA) and Data Management Protocol

Art Coykendall (Bureau of Reclamation Policy and Programs Office, Lakewood, CO) presented an overview of Reclamation's peer review process and how it links with the IQA.

- IQA provides the authority and responsibility. For Reclamation, they implement the IQA through peer review
- Walked through the Peer Review Agenda and related resources found:
  - https://usbr.gov/main/qoi/peeragenda.html
  - click "Quality of Information" link at bottom of page
- Covered three levels of peer review (pdfs available on website):
  - "Highly Influential" – requires independent external review
    - Reviewers have to be external to Reclamation
    - Dept. of Interior "Indefinite Delivery, Indefinite Quantity" (IDIQ) contract for external reviewers
  - "Influential" – independent expert reviewer
    - Reviewers can be Reclamation employees, so long as they are independent from the work
  - "Discretionary" – available expert reviewer (can be internal)
    - Not required by IQA, but is good practice for science that is not quite ready to inform decision-making
  - These peer review plans are posted for public comment before a review begins
- When Reclamation rolled out peer review procedures, concerns were raised about level of effort. However, in practice they were not found to be onerous, but something we thought we needed to do anyway. Pros include:
  - Organized

    - Withstand legal challenges
    - Better defense of science with peer review
    - Showed we complied with all laws out there
    - Showed not "arbitrary or capricious"
    - Understanding upfront when collecting science, do peer review as early as possible
- CAVEAT: Remember that timelines for NEPA and ESA procedures are already tight. Adding formal peer review into an existing timeline may not be feasible. Therefore, Art C. emphasized the importance of trying to determine well in advance whether data/information will require review and what level of review will be appropriate.
- Also, don't confuse these peer review processes with NEPA Public Comment procedures. They are separate, but could occur simultaneously.
- RECOMMENDATION: The earlier you can decide if peer review is needed (or when it will be needed), the faster you can release data and information for decision support. Having a plan in place (review plan, list of reviewers, etc.) can expedite the entire process.

SAMC Discussion Summary:

- Can we house data on the Program Portal that do not meet these standards?
    - Yes, there is some grey area on this (i.e., "use in scientific assessment"). We use the threshold of, "are the data used for decision support."
    - Portal data = public data
- What about "data collection reports" and "monitoring reports," which are summaries and updates on long-term efforts, versus "data analyses" and "assessments," which draw conclusions and recommend actions?
    - Yes, you can distinguish between unanalyzed and analyzed data, and whether it is utilized for decision making.
- Does this apply to all data, including from the past, or not?
    - This is a forward-looking policy so only new reports require a peer review moving forward.
- IQA is applicable if the data is:
    - ✓ Made public,
    - ✓ Used in a management decision, or
    - ✓ Published.

✓ **Decision**: Approval of sending a memo to the EC justifying the need for a Data Management Protocol Hybrid Ad Hoc Group

➢ **Action Item**: PST will revise the charge for the Data Management Protocol Hybrid Ad Hoc Group to incorporate SAMC feedback

➢ **Action Item**: SAMC will review the revised charge for the Data Management Protocol Hybrid Ad Hoc Group

➢ **Action Item**: PST will draft a SAMC memo to the EC on the need for the Data Management Protocol Hybrid Ad Hoc Group

➢ **Action Item**: SAMC will review the draft memo on the Data Management Protocol Hybrid Ad Hoc Group

Criteria for Long-Term Plan (LTP) Project Evaluation

- The PST described the revisions to LTP project evaluation criteria (including the rating scale), and
- The plan for completing first round of evaluations

SAMC Discussion Summary:

- The rating scale is confusing – are the ratings for the project, if implemented, or for the description of the project?
- The projects will have to be evaluated based on the limited information provided in the project descriptions and linkages within the SAMIS. These are the same details that MRGESCP participants have always provided about their projects (in fact, we used project descriptions from previous annual reports to build the Project Bank). All of SAMIS fields listed at the end of the read-ahead will be provided to reviewers in a 1-2 page report generated by the SAMIS Data Viewer App.
- The rating scale, as written, conflates sufficiency (i.e., whether a project meets expectation under a criterion) with uncertainty (i.e., whether additional details need to be added to the description).
- We can take out the word "description" from the definitions in the rating scale, if that will help to clarify this point. Also, we can split the rating scale into two parts that cover sufficiency and uncertainty, respectively.
- The PST will incorporate the comments (split the rating scale) and send to SAMC for review.

➢ **Action Item**: PST will revise the Long-Term Plan Project Evaluation Criteria
➢ **Action Item**: SAMC will review the revised Long-Term Plan Project Evaluation Criteria

Update on Current and Proposed S&T Ad Hoc Groups

- Rio Grande Silvery Minnow (RGSM) Integrated Population Model S&T Ad Hoc (Charles Yackulic lead)
- RGSM Conceptual Ecological Model CEM/Genetics S&T Ad Hoc (Wade Wilson lead)
    - Peer Review S&T Ad Hoc for Revised RGSM CEM
- RGSM Hypotheses Development S&T Ad Hoc (Andy Dean lead)
- MRG Habitat Restoration (HR) Monitoring Guidance S&T Ad Hoc (Ken Richard and Grace Haggerty proposed co-leads)

PST Support of Ad Hoc Groups:

- RGSM Integrated Population Model Ad Hoc – paper is still in review, will publish soon. Once it is published, we can begin looking into applying it to some of our RGSM issues (such as the Angostura Reach drying question)
    - Update: This paper has been accepted for publication, but journal (*Ecosphere*, open access) is trying to find room for it in an upcoming issue.
- RGSM Genetics/CEM Development Ad Hoc – This group is waiting on Catherine M. to finish adding new variable relationships to the CEM table and revising the original rows to reflect the new components and component groupings. The group needs to meet at least one more time. Next steps are to present modified CEM to SAMC and provide a peer review of the RGSM CEM under the subsequent Peer Review Ad Hoc.
    - RGSM CEM Peer Review Ad Hoc – This group has a charge and tentative membership confirmed, but will not convene until the RGSM Genetics/CEM Development Ad Hoc has completed their final product (the object of review).
- RGSM Hypotheses Development Ad Hoc – Kevin S. and Catherine M. have developed an approach for this group and are ready to convene. The passage of so much time has caused us to have to reassess original members' availability, and once we've confirmed membership (email sent this week), we'll set the first meeting date.

    - Was Mick Porter asked to join this group?
        - Yes, but at the time he was unsure of his ability to participate. We will reach out again. Additional names are welcomed.
- MRG HR Monitoring Guidance Ad Hoc
    - Sarah A. (PST) presented an overview of the significant revisions to this charge (*see presentation slides*)
    - SAMC Comments/Discussion:
        - I like the look of the SER Recovery Wheel Tool.
        - Q: Regarding attributes and sub-attributes for RGSM nursery habitat, do we have enough information to construct those elements of the wheel?
        - This tool could be useful as a high-level view of restoration.
        - Stating that the group will evaluate the tool may be premature.
            - Suggest we define the objectives (i.e., the questions that we want to address by using this tool) first, then talk about modifying and evaluating it.
        - I remember when this tool came out and it is well-founded in restoration science and appears to be well-supported within the restoration community.
        - I have a positive impression of the tool and think it would be a useful instrument for high-level assessments of restoration efforts in the MRG.
    - The intention of this revised charge is to have the group apply the SER Tool to a specific example in the MRG (e.g., RGSM nursery habitat), evaluate its utility, and provide recommendations on whether we should use it for the MRGESCP. The answer to that might be no.
    - Several meeting attendees indicated concern about the revised charge outlining an entirely different direction for the group and needing to rename the group to more accurately capture this new objective.
        - We can easily rename the group – the original name was retained only because this is a revision of that charge.

RECAP/QUESTIONS

- Regarding the LTP project evaluation criteria, can you clarify what it is we are evaluating: a project's merit/value to the MRGESCP or the project's description?
    - What does the SAMC want to evaluate? You will have to base your evaluation on only the details provided in the SAMIS for each project (e.g., brief description, anticipated benefits, linkages, etc.), not a fully-documented project proposal. So, to be fair, the evaluation criteria are necessarily a bit superficial. The goal is to organize and characterize the projects in the LTP list in such a way that helps inform the signatories' choice of projects to fund.
    - Once clarified, I believe this tool will be helpful for USACE funding decisions.
- Regarding the MRG HR Monitoring Guidance S&T Ad Hoc Group charge.
    - One SAMC member had a clear vision of what they wanted and these revisions are not it (not useful to their agency); Need to be better about communicating the broader context of why groups like these are important; Step-wise approach from where we are at to where we want to go; Thinks the idea is backwards-looking; unsure of the utility.

PST Support:
The PST will revise the MRG HR Monitoring Guidance S&T Ad Hoc Group charge again to reflect a new group name and a stepwise approach to habitat restoration support based upon PST interpretation and inference of what the SAMC indicated they wanted to see.

- **Action Item**: PST will reconfirm membership for the RGSM Hypotheses Development Ad Hoc Group and schedule a meeting
- **Action Item**: PST will revise the charge for the MRG HR Monitoring Guidance S&T Ad Hoc Group to incorporate SAMC feedback
- **Action Item**: SAMC will review the revised charge for the MRG HR Monitoring Guidance S&T Ad Hoc Group

Workshop on Management of Vegetated Islands and Bank-Attached Bars in the MRG

- Discuss EC-approved proposal outline for workshop
- Discuss WOTUS/wetlands seminar and MRGESCP June poll results
- Discuss focus group, workshop plan, objectives and break-out discussions

SAMC Discussion Summary:
- The group discussed the small group of volunteers (SAMC and non-SAMC) that will help the PST plan the workshop and how they will proceed.
- The group indicated that the workshop objectives were too vague and may be overly ambitious.
    - We might want to revisit the objectives, clarify them, and possibly consolidate or eliminate one or two of them.
    - The group agreed that we should ensure the desired outputs of the workshop directly tie back to the objectives, to increase our chances of a productive workshop.

PST Support:
The SAMC asked that the Vegetated Islands Workshop small planning group consider the workshop objectives, revise as needed, and ensure anticipated outcomes match the objectives. The PST will convene the small group to plan the in-person workshop for October 2022.

- **Action Item:** PST will convene a small group to plan the Workshop on Management of Vegetated Islands and Bank-Attached Bars

Action Items, Next Steps, and Announcements

- **Upcoming Collaborative Seminars**:
    - Rob Dudley (ASIR) – August 23, 2022 at 10 AM MT
    - Dan Shaw and Katia Chavez (Bosque School) – August 11, 2022 at 10:30 AM MT
- **SAMIS Trainings** – Schedule with PST
- **Next Meeting**: November 2022

PST Support:
- PST asked the SAMC members to consider whether they will serve another term and to let the PST know by end of September, so the EC can start planning for the application process.
- Upcoming seminars --- (*details above*)

- SAMIS training for SAMC members will be scheduled soon – we'll reach out to individuals. SAMIS logins will be generated as soon as the EULA is posted (still in review, but close to complete).
- Next SAMC meeting
- Group discussed the timing for the next meeting – decided on one more meeting in November (between the workshop and the Collaboratory).

➢ **Action Item**: PST will Send a Doodle poll to schedule the November SAMC meeting

Meeting Participants

SAMC Member	Role
Alan Hatch	Executive Committee *Ex Officio* Member
Ari Posner	Geomorphology Expert
Meaghan Conway	Ecosystem Function Expert
Megan Friggens	Climate Science Expert
Mo Hobbs	Aquatic Ecology Expert
Ryan Gronewold	Hydrology Expert

Program Support Team	Role
Catherine Murphy	SAMC Facilitator
Debbie Lee	Support
Kevin Shelley	Support
Luana Sencio	Support
Sarah Anderson	Support

Guests	Organization
Art Coykendall	U.S. Bureau of Reclamation
Kelsey Bicknell	Albuquerque Bernalillo County Water Utility Authority
Kyle Faig	City of Albuquerque Open Space Division
Lynette Giesen	U.S. Bureau of Reclamation
Matthew Wunder	New Mexico Department of Game & Fish

Link to full Meeting Materials List

Science and Adaptive Management Committee Meeting

July 12, 2022

See the following meeting material on the page below:

M2022 BEMP Site List [read-ahead, spreadsheet]

Site number	Site name	Latitude	Longitude	Reach	County	Notes	Date Established	Pre-pandemic school monitoring by	2022 monitoring by	Site Description
~~9~~	~~Ohkay Owingeh~~	~~36.0618~~	~~-106.0761~~	~~North of Angostura Diversion Dam~~	~~Rio Arriba~~	~~Inactive site starting 2016~~	~~Mar 2002 - Nov 2015~~	~~.~~	.	located by an extensive constructed wetland; periodically flooded by rising wetland water and a correspondingly rising adjacent water table; few large cottonwoods,history of few large fires, mostly native shrubs, vines, forbs and grasses
24	Santo Domingo	35.50989	-106.3896	North of Angostura Diversion Dam	Sandoval		Jan 2008	Santo Domingo Community School	.	sparse cottonwood overstory with scattered juniper, New Mexico olive and willow understory; lots of grasses; horse activity at site
5	Santa Ana	35.34284	-106.5458	Angostura Reach, north of Albuquerque	Bernalillo		Jul 1999	Bernalillo MS	.	Dying cottonwood gallery forest with understory of kochia
32	Sandia	35.255	-106.5907	Angostura Reach, north of Albuquerque	Bernalillo		Feb 2016	Native American Community School	Native American Community School	high intensity burn (2012) site with many dead standing and down cottonwoods (few living), revegetated with seepwillow and native grasses; some sunflowers, silverleaf nightshade, and occassional Russian olive.
22	Bobcat	35.1970563	-106.6439494	Angostura Reach	Bernalillo		Dec 2004 wells; Aug 2006 rest of site	La Cueva HS	La Cueva HS	cottonwood-dominated bosque with a couple Gooding's willows; C well has automated groundwater recording device as part of a collaboration between the US Army Corps of Engineers Urban Flood Demonstration and the University of New Mexico.
21	Badger	35.1956	-106.6402	Angostura Reach	Bernalillo		Dec 2004 wells; Jul 2006 rest of site	Rio Rancho Cyber Academy	Nature Ninos	cottonwood-dominated bosque with elm sub-canopy; most wells have automated groundwater recording device as part of a collaboration between the US Army Corps of Engineers Urban Flood Demonstration and the University of New Mexico.
12	Minnow	35.1931509	-106.646915	Angostura Reach	Bernalillo		Dec 2002	Bandelier ES	Bandelier ES	cottonwood-dominated bosque with a couple Gooding's willows, otherwise little understory; wells have automated groundwater recording devices as part of a collaboration between the USACE Urban Flood Demonstration and UNM.
10	Diversion	35.1908	-106.6429	Angostura Reach	Bernalillo		Nov 2002	Bosque School	Rio Rancho Cyber Academy	sparse, pole-planted cottonwoods, few elm; very open and sandy site; DWDD located directly north of site;
11	Calabacillas	35.1905682	-106.6491626	Angostura Reach	Bernalillo	dropped in 2021 due to funding issues	Jan 2003	Volcano Vista HS	.	mature cottonwood-dominated bosque with little to no understory
1	Alameda	35.1875	-106.6459	Angostura Reach	Bernalillo		Apr 1997	Bosque School	Bosque School	mature cottonwood overstory with dense New Mexico olive understory; one of the most native (90%) sections of the bosque throughout ALbuquerque; oldest BEMP site
17	Montano	35.1452882	-106.6803699	Angostura Reach	Bernalillo		May 2004	Bosque School	Bosque School	contains a few cottonwoods; northern section covered in kochia and tumbleweed; middle of site thick with tree of heaven
6	Savannah	35.1428529	-106.6819814	Angostura Reach	Bernalillo	dropped in 2021 due to funding issues	Mar 2000	Bosque School	Bosque School	grasses and forbs with pockets of overstory cottonwood stretching above an understory of Russian olive and saltcedar
2	Rio Grande Nature Center	35.127	-106.6854	Angostura Reach	Bernalillo		Jun 1997	Wilson MS	.	numerous thin cottonwoods with some Russian olive understory; lots of clover; very open site
20	Route 66	35.1006408	-106.6914783	Angostura Reach	Bernalillo		Sep 2004	Jefferson MS	Jefferson MS	natural seep or trough in the center of the site that is thickly vegetated with willows with some elm and Russian olive; cottonwoods line the trough; east and west sides of the trough cleared by Albuquerque Open Space every few years and are vegetated by kochia and tumbleweed
23	BioPark	35.079	-106.668	Angostura Reach	Bernalillo		Feb 2007	Albuquerque Institute of Math and Science	.	medium sized cottonwoods over elm and Russian olive sub-canopy; wetland to the west of site, pond to the northwest of site
8	Hispanic Cultural Center	35.0688127	-106.6580575	Angostura Reach	Bernalillo	dropped in 2021 due to funding issues	fall 2001 started, finished Apr 2002	Cien Aguas ES	.	cottonwood-dominated bosque with light understory of elm, Russian olive and Gooding's willows; tall wheatgrass getting denser each year
29	Albuquerque Overbank Project	35.04546	-106.6657	Angostura Reach	Bernalillo		established in 1998, BEMP took over in March 2014	La Academia de Esperanza	La Academia de Esperanza	mature cottonwoods along east side of site, west side was lowered and experiences overbank flooding during high flows, lots of young cottonwoods and willows
13	Harrison	35.015056	-106.6736953	Angostura Reach	Bernalillo		Spring 2003	Cottonwood Valley Charter School	.	located on a sand bar; covered with young cottonwoods, lots of willows, some seepwillow and some Russian olives; floods when river is high
31	San Jose	35.012375	-106.6728	Angostura Reach	Bernalillo		Dec 2015	Highland HS	.	site installed in USACE constructed willow swale. High flow channel runs through the center of the swale and innundates around 2,500 cfs. Mature cottonwoods on west side of site
28	Valle de Oro	34.97895	-106.6801	Angostura Reach	Bernalillo		January 2014	South Valley Academy	.	site was installed ouside of levee system on a fallow farm field. No trees or shrubs, primarily various forb ground cover
30	State Land Office	34.96785	-106.6856	Angostura Reach	Bernalillo		June, 2014	The International School (4th)	.	moderately dense mature cottonwood overstory with two large channels dug through site intended for stormwater runoff drainage to the river; some trenches with permentant standing water supporting coyote willow stands. Much of site outside of ditches covered with tumbleweed and kochia
27	Bosque Farms	34.848851	-106.714722	Isleta Reach	Valencia		Feb 2012	The International School (7th)	The International School (7th)	first site immediately south of Albuquerque; cottonwood-dominated bosque with some native grasses and willows on the east side, closer to the river
3	Los Lunas	34.8123694	-106.714458	Isleta Reach	Valencia		Oct 1997			large, older cottonwood overstory with mostly native understory of willow, New Mexico olive, wild currant, some Russian olive and saltcedar; yerba mansa covers much of the ground; experiencing more and more large branches falling; seep flood through a trough that runs through the center of the site
19	Reynolds Forest	34.6605458	-106.7429525	Isleta Reach	Valencia		Spring 2004	School of Dreams Academy	.	cottonwood overstory with a saltcedar and Russian olive understory; yerba mansa patches in northern section of site, wild currant interspersed; site continues to experience cottonwood dieback leading to the high woody debris load (prior to clearing in Feb 2012) - post 2013 clearing: kochia understory with thick woodchips from exotic clearing
18	Reynolds Cleared	34.6596643	-106.7421328	Isleta Reach	Valencia	dropped in 2021 due to funding issues	Spring 2004	School of Dreams Academy	.	fairly open site with young cottonwood canopy of pole plantings, with kochia and tumbleweed and also NM olive planted by river
15	Valencia Cleared	34.6486344	-106.7391728	Isleta Reach	Valencia		Spring 2003	Belen HS	.	few cottonwoods, Gooding's willows, Russian olives with large patches of wolfberry and ground cover of yerba masa
4	Belen	34.6484315	-106.7377022	Isleta Reach	Valencia		Feb 1998	Rio Grande ES	Master Naturalists	young cottonwoods (est ~1987), willows and Russian olives; experiences overbank flooding with high surface flow
16	Valencia Forest	34.6471623	-106.738482	Isleta Reach	Valencia		Spring 2003	Del Rio Academy	.	was uncleared and dominated by cottonwood, Russian olive, saltcedar with a saltgrass meadow at the south end of the site; after fire and clearings, now almost entirely covered by kochia and tumbleweed with small patches of yerba mansa and saltgrass
25	Crawford	34.63835	-106.74277	Isleta Reach	Valencia		Sep 2008	UNM interns	UNM	strongly hydrologically connected, seep floods occuring at higher flows; northern section: cottonwoods in low-lying areas with saltcedar and kochia in higher areas, lots of cocklebur; southern section: yerba mansa, rushes and sedges, CFRP site
14	Sevilleta	34.2583423	-106.8831845	Isleta Reach	Socorro		Spring 2003	Parkview ES	.	southern boundary of Sevilleta NWR upstream of San Acacia Diversion Dam; dense woody vegetation of mostly Russian olive and saltcedar mixed with smaller cottonwoods and a patchy understory of coyote willow; site has high groundwater salinity and soils contain heavy clay; occasional saltgrass dominated swards occur among trees
7	Lemitar	34.1670319	-106.8899486	San Acacia Reach	Socorro		Sep 2002	Parkview ES	.	north of Socorro Nature Area; site outside the levee; xeric site; open landscape with a sparse cover of grasses, forbs, broom dalea, sand sage, and four-wing saltbush; handful of stunted cottonwoods and clumps of saltcedar
34	River Realignment	33.8227	-106.8419	San Acacia Reach	Socorro	dropped in 2021 due to funding issues	April 2019	Hot Spring HS	Hot Spring HS	thick, monotypic saltcedar stand. Underwater most of year with deep mud when water is gone
33	Bosque del Apache	33.8197	-106.8539	San Acacia Reach	Socorro		Feb 2018	Hot Spring HS	Hot Spring HS	older cottonwood site with both exotic and open understory. Deep water table but can flood. River realignment project means the river will be moved further from site
26	Mesilla	32.248328	-106.821014	South of San Acacia	Doña Ana	dropped in 2021 due to funding issues	Jun 2011		.	primarily kochia with sparse wood chip piles and some native forbs

dataset	**timing**
Depth to groundwater	monthly
Water levels in adjacent drains/ditches	monthly
Precipitation (open and canopy)	monthly
Air and sub-surface temperature at select sites	hourly, downloaded annually
Primary productivity - through litterfall (cottonwood, willow, seepwillow, NM olive, indigo bush, saltcedar, Russian olive, elm, mulberry, and other leaves)	monthly
Wood fall - through litterfall	monthly
Reproductive effort - through litterfall (cottonwood, willow, Russian olive, saltcedar and other plant reproductive parts)	monthly
Surface-active arthropods through pitfall trapping	3x/year
Vegetation species and cover	annually
Fuel load/woody debris	annually (with funding)
Water quality of groundwater, ditch/drain water, and/or river* **water quality sampling includes field parameters: specific conductance, conductivity, temperature, pH, turbidity, dissolved oxygen* **water quality sampling can include: E. coli; chloride, bromide, nitrate, phosphate, sulfate; PPCPs (pharmaceuticals and personal care products); PCBs, pesticides*	funding dependent
Pressure transducers logging depth to groundwater	every 30 minutes; downloaded annually
Cottonwood sex and diameter at breast height	funding dependent
Tamarisk leaf beetle distribution and abundance	monthly: May-Aug/Sept
Woody stem reemergence or seedling germination after fire or exotic species removal	as needed with funding
Phenology (primarily cottonwoods)	site and funding dependent
Soil fungi communities	funding dependent

Link to full Meeting Materials List

Science and Adaptive Management Committee Meeting

July 12, 2022

See the following meeting material on the page below:

SAMIS Water Quality Projects [read-ahead, spreadsheet]

Project Name	Status	PrimaryAgency
Assessing temporal and spatial continuous water quality trends in the Isleta and San Acacia reaches of the Middle Rio Grande	Outlined	USACE
Evaluate Water Quality in the Middle Rio Grande in Relation to the Rio Grande Silvery Minnow	Outlined	NA
Effects of the Las Conchas Fire on Water Quality and Fish Assemblages in the Middle Rio Grande	**Finalized**	NA
Water Quality Impacts of Runoff from Monsoon Storms on the Middle Rio Grande: Comparing Urban and Non-Urban Events	**Finalized**	UNM
Water Quality Monitoring in the Middle Rio Grande: The Importance of Long-term Datasets for Assessing River Function and Health	**Completed**	UNM
Water Quality Monitoring of Aquatic Refugia in the Middle Rio Grande	Outlined	NA
Assessing temporal and spatial continuous water quality trends in the Angostura, Isleta, and San Acacia reaches of the Middle Rio Grande	Approved	USACE
Assessing Water Quality Trends and Suspended Sediment Surrogates Above and Below Reservoirs Using High-Frequency Sensors in New Mexico and Southern Colorado		USACE
Water quality monitoring in the southern reach of the Middle Rio Grande, New Mexico		NMISC
Water Quality Monitoring in San Acacia Reach	In-Progress	NMISC

ProjectID	ProjectName	ProjectDescription	AnticipatedBenefit	StartDate	EndDate	ProjectStatus	ProjectCategoryName	ProjectSpe	PrimaryAgency	Agency	PointOfContact	ContactEm	Focus	Reach	ProjectNotes	ISPRecommendationStatement	ISPRecCount	ProgramStrategyName	StratCount	ObjectiveStatement	ObjCount	ProgramGoalStatement	ProgramGoalCount
4	Assessing temporal and spatial continuous water quality trends in the Isleta and San Acacia reaches of the Middle Rio Grande	Collect long-term and high-frequency measurements of water temperature, specific conductance, DO, pH, and	NA	NA	NA	Outlined	Habitat Assessments and Modeling	Other	USACE	NA	Justin Reale	justin.k.rea	Other	Isleta Reach;San Acacia Reach	NA	Rear RGSM in environmental conditions that resemble natural environmental conditions as much as	2	Science_Strategy A-3a;Science_Strategy A-3d;Science_Strategy G-1a	3	Determine the relationships between base flow and survival and recruitment of	2	Establish and maintain a self-sustaining population of endangered Rio Grande	2
26	Evaluate Water Quality in the Middle Rio Grande in Relation to the Rio Grande Silvery Minnow	The objectives of this project include: 1. Review and compile past water quality and toxicity studies. 2.	Identification of water quality parameters with potential effects on various RGSM life history stages	NA	NA	Outlined	Field and Laboratory Experiments	RGSM	NA	NA	NA	NA	RGSM	Angostura Reach;Isleta Reach;San Acacia Reach	This project description seems to cover several potential efforts: a literature review, two or three	Using statistical modeling, estimate the relationships between RGSM demographic rates and a l	3	Science_Strategy A-2b;Science_Strategy A-4c;Science_Strategy A-5.1a	3	Increase understanding of how the life history traits of the RGSM change over	3	Establish and maintain a self-sustaining population of endangered Rio Grande	1
74	Effects of the Las Conchas Fire on Water Quality and Fish Assemblages in the Middle Rio Grande	This study evaluated the effects of wildfire on downstream water quality and fish assemblages in large arid-land	To help water and resource managers be aware of potential impacts to water quality and biota in arid-land catchments	NA	NA	**Finalized**	Field and Laboratory Experiments	Other	NA	NA	NA	NA	Other	Northern Reach;Cochiti Reach;Angostura Reach;Isleta Reach;San	NA	NA	0	NA	0	NA	0	NA	0
115	Water Quality Impacts of Runoff from Monsoon Storms on the Middle Rio Grande: Comparing Urban and Non-Urban Events	NA	NA	NA	NA	**Finalized**	Field and Laboratory Experiments	NA	UNM	USACE	NA	NA	MRG_Ec	Northern Reach;Cochiti Reach;Angostura Reach;Isleta Reach;San	Presented at 2019 Science Symposium	NA	0	NA	0	NA	0	NA	0
128	Water Quality Monitoring in the Middle Rio Grande: The Importance of Long-term Datasets for Assessing River Function and Health	To assess the effectiveness of the restoration activities, oversee/ehhance surveys for	NA	NA	NA	**Completed**	Habitat Assessments and Modeling	NA	UNM	USACE	NA	NA	MRG_Ec	Northern Reach;Cochiti Reach;Angostura Reach;Isleta Reach;San	Presented at 2019 Science Symposium	NA	0	NA	0	NA	0	NA	0
129	Water Quality Monitoring of Aquatic Refugia in the Middle Rio Grande	Aquatic MRG wildlife experiences habitat loss as drying occurs along stretches of the river. Remaining	Continuous and discrete measurements of water quality within aquatic refugia have provided insight into factors that	NA	NA	Outlined	Habitat Assessments and Modeling	RGSM	NA	NA	NA	NA	MRG_Ec	Northern Reach;Cochiti Reach;Angostura Reach;Isleta Reach;San	NA	Estimate the spatial extent and hyrdaulic quality used by RGSM for key life-stages (spawning, larval	3	Science_Strategy A-2b;Science_Strategy A-3d	2	Increase understanding of how the life history traits of the RGSM change over	2	Establish and maintain a self-sustaining population of endangered Rio Grande	1
186	Assessing temporal and spatial continuous water quality trends in the Angostura, Isleta, and San Acacia reaches of the Middle Rio Grande	NA	NA	NA	NA	Approved	Habitat Assessments and Modeling	NA	USACE	NA	NA	NA	MRG_Ec	Angostura Reach;Isleta Reach;San Acacia Reach	NA	Estimate the spatial extent and hyrdaulic quality used by RGSM for key life-stages (spawning, larval	6	Science_Strategy A-2b;Science_Strategy A-3c;Science_Strategy A-	4	Increase understanding of how the life history traits of the RGSM change over	3	Establish and maintain a self-sustaining population of endangered Rio Grande	1
242	Assessing Water Quality Trends and Suspended Sediment Surrogates Above and Below Reservoirs Using High-Frequency Sensors in New Mexico and Southern	Assessing Water Quality Trends and Suspended Sediment Surrogates above and Below Reservoirs Using	NA	NA	NA	NA	Habitat Assessments and Modeling	RGSM	USACE	UNM	Thomas Turner	turnert@u	MRG_Ec	Northern Reach;Cochiti Reach	POC David Van Horn; No project details provided	Attention to long-term climate-change issues and integration with climate-change planning efforts was	2	NA	0	NA	0	NA	0
243	Water quality monitoring in the southern reach of the Middle Rio Grande, New Mexico	Water quality monitoring in the southern reach of the Middle Rio Grande, New Mexico	NA	NA	NA	NA	Habitat Assessments and Modeling	RGSM	NMISC	UNM	Thomas Turner	turnert@u	MRG_Ec	San Acacia Reach	POC David Van Horn;	Estimate the spatial extent and hyrdaulic quality used by RGSM for key life-stages (spawning, larval	6	Science_Strategy A-2b;Science_Strategy A-3a;Science_Strategy A-3d	3	Increase understanding of how the life history traits of the RGSM change over	2	Establish and maintain a self-sustaining population of endangered Rio Grande	1
250	Water Quality Monitoring in San Acacia Reach	Most water quality efforts have been located in the ABQ and Isleta reaches. This effort adds the lower reaches of	Improves understanding of species response to ecosystem variables; Improves understanding of species	6/1/2021	7/1/2023	In-Progress	Habitat Assessments and Modeling	RGSM	NMISC	UNM	Trevor Birt	Trevor.Birt	MRG_Ec	San Acacia Reach	NA	Using statistical modeling, estimate the relationships between RGSM demographic rates and a l	6	Science_Strategy A-2b;Science_Strategy A-3c;Science_Strategy A-	4	Increase understanding of how the life history traits of the RGSM change over	3	Establish and maintain a self-sustaining population of endangered Rio Grande	1

Link to full Meeting Materials List

Science and Adaptive Management Committee Meeting

July 12, 2022

See the following meeting material on the page below:

Excerpt from DOI Information Guidelines [read-ahead]

Excerpt from "U.S. DEPARTMENT OF THE INTERIOR, INFORMATION QUALITY GUIDELINES PURSUANT TO SECTION 515 OF THE TREASURY AND GENERAL GOVERNMENT APPROPRIATIONS ACT FOR FISCAL YEAR 2001[1]," pertaining to scientific information quality principles:

"With respect to influential scientific information disseminated by the Department, regarding analysis of risks to human health, safety, and the environment, the Department will ensure to the extent practicable, the objectivity of this information by adapting the quality principles found in the Safe Drinking Water Act Amendments of 1996. The Department will:

> *(a) Use the best available science and supporting studies conducted in accordance with sound and objective scientific practices, including peer-reviewed studies where available.*
>
> *(b) Use data collected by standard and accepted methods or best available methods (if the reliability of the method and the nature of the decision justifies the use of the data).*
>
> *(c) In the dissemination of influential scientific information about risks, ensure that the presentation of information is as comprehensive as possible, informative, and understandable. In a document made available to the public, specify, to the extent practicable:*
>
> > *(i) Each population addressed by any estimate of applicable effects*
> >
> > *(ii) The expected risk or central estimate of risk for the specific populations affected*
> >
> > *(iii) Each appropriate upper bound or lower-bound estimate of risk*
> >
> > *(iv) Each significant uncertainty identified in the process of the risk assessment and studies that would assist in reducing the uncertainty*
> >
> > *(v) Any additional studies, including peer-reviewed studies, known to the Department that support, are directly relevant to, or fail to support the findings of the assessment and the methodology used to reconcile inconsistencies in the scientific data."*

[1] *https://www.doi.gov/sites/doi.gov/files/uploads/doi_information_quality_guidelines.pdf*

Link to full Meeting Materials List

Science and Adaptive Management Committee Meeting
July 12, 2022

See the following meeting material on the page below:

Revised Draft Long-Term Plan Project Evaluation Criteria [read-ahead, draft]

MRGESCP Long-Term Plan for Science and Adaptive Management: Evaluation Criteria for Proposed Projects and Activities

Review the SAMIS-generated summary for each Project Bank item to be evaluated. Use the following criteria to evaluate the clarity and completeness of the project description (A1-3), relevance and value to the Collaborative Program mission, including management and/or science priorities (B1-3), and vision and utility for adaptive management (C1-3). For each criterion, select a rating of **Exceptional**, **Adequate**, **Insufficient**, or **Unable To Determine** from the drop-down list provided. Rating scale definitions are provided below. Suggest improvements in the space provided, if needed.

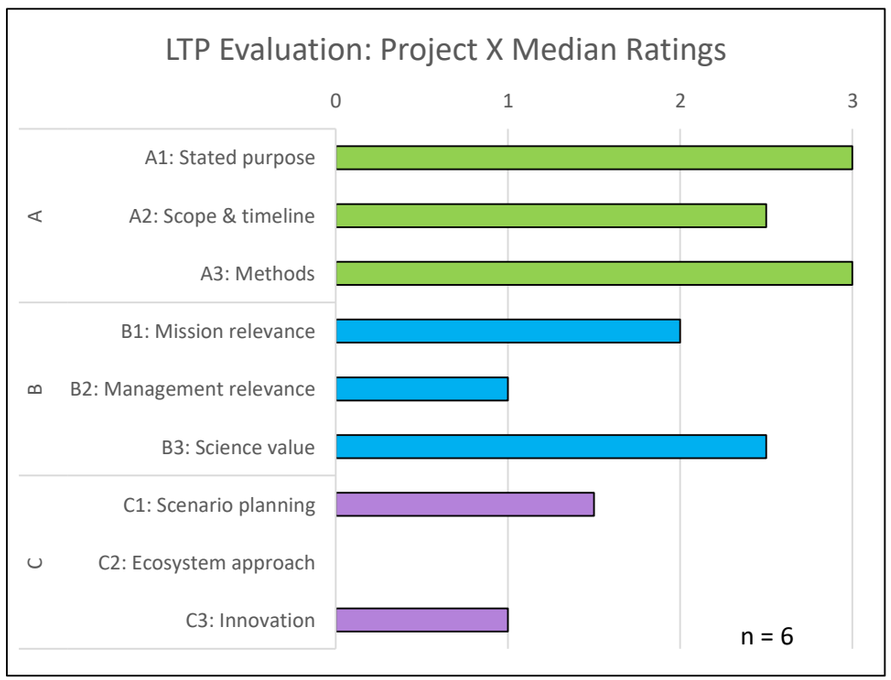
ID	Criterion	Select a Rating[1]	Suggested Improvements	Questions to Guide the Assessment of Each Criterion
Clarity and Completeness of Description (REQUIRED)				
A1	Statement of purpose	Select a rating		How clear are the project objectives? If this is a scientific study, is the research question clearly articulated?
A2	Scope and timeline	Select a rating		Does the scope describe a single, well-defined project or should it be split into several different projects? Is the timeline reasonable for the scope?
A3	Aptness of methods	Select a rating		Are the methods well-suited to the project objectives or research question? Are important elements missing?
Relevance and Value to Collaborative Program (REQUIRED)				
B1	Relevance to mission	Select a rating		How well does the project fit within the purview of the Collaborative Program's mission? Could anything be added to the description to increase relevance?
B2	Relevance to management	Select a rating		How well does the project address the Collaborative Program's management priorities and recommendations? Use the linkages to strategies and ISP recommendations to inform your answer.
B3	Value to advancement of science	Select a rating		Will the project produce data or findings that will 1) inform other projects and/or 2) reduce a scientific uncertainty identified in the conceptual ecological models (CEMs)? Use the linkages to projects and uncertainties to inform your answer.
Vision and Utility for Adaptive Management (ENCOURAGED)				
C1	Value to scenario planning	Select a rating		How valuable is the project for planning for future climate scenarios and/or increasing resilience under changing conditions?
C2	Relevance to ecosystem approach	Select a rating		Will the project inform an integrated approach for management of land, water, and living resources? Does the project promote conservation and sustainable use in an equitable way?
C3	Proactivity and innovation	Select a rating		How forward thinking is the work described? Will the project result in a new technology, methodology, or model that improves the way we study the species or system or plan for the future?

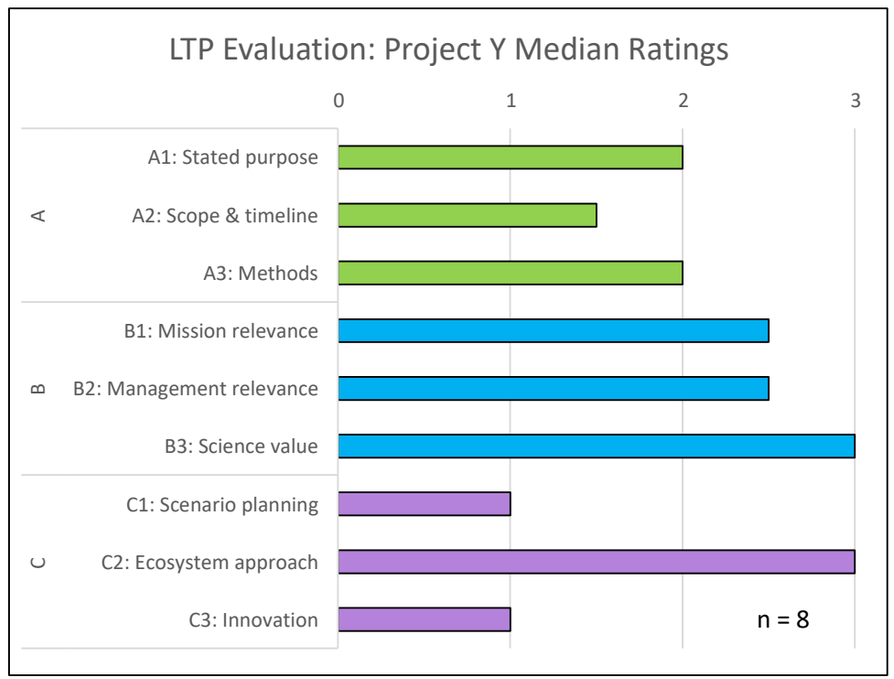
[1]See instructions below for rating scale.

Rating Scale for Evaluation Criteria

Value	Rating	Definition
3	Exceptional	Project description exceeds expectation under this criterion. No additional details are needed.
2	Adequate	Project description meets expectation under this criterion. Additional details are suggested for improvement.
1	Insufficient	Project description falls short of expectations under this criterion. Additional details are needed.
0	Unable To Determine	Project description does not contain enough information to rate this criterion.

Examples of Assessment Results – Median Ratings for Project X and Project Y





Example Interpretation:

Project X is well-scoped, fits within the mission of the Collaborative Program and will add scientific value. Direct relevance to management is not clear and may require additional explanation. The project will inform scenario planning (criteria C1-3 are encouraged but optional).

Example Interpretation:

The description for Project Y would benefit from a few additional details. The Project is well-suited to the Collaborative Program and will address both management and science priorities. Project Y also informs the ecosystem approach and may be useful for planning purposes.

SAMIS Data Viewer report type – Long-Term Plan project summaries for SAMC evaluation

Project ID

- ✓ Project Bank ID#, Project Name, Project Status

Project Description fields

- ✓ CP Category, Focus, Species, Reach
- ✓ Anticipated Benefit
- ✓ Project Description, Study Considerations (if applicable)
- ✓ Planning document linkage(s) (e.g., BiOp, Genetics Mgmt Plan, SWAP)

SAMIS Linkages (lookup lists can be found in the S&AM Plan appendices)

- ✓ Related Projects (#parent, #child, project names)
- ✓ CP Science Strategies (#strategies; use numbering system to indicate goal, objective, strategy)
- ✓ ISP Recs (#recs; include panel name and rec number)

Questions for SAMC:

Do you approve of this approach to evaluation of projects for consideration in the Long-Term Plan?

Are the criteria clear, appropriate and complete?

Is the rating scale clear and appropriate?

How many of these evaluations do you think you might be able to complete within a week?

What is the minimum number of SAMC reviewers that should be required for each review?

Are the results formatted in a way that will be useful to signatories?

Link to full Meeting Materials List

Science and Adaptive Management Committee Meeting

July 12, 2022

See the following meeting material on the page below:

Revised Draft S&T Ad Hoc Charge – MRG Habitat Restoration Monitoring Guidance Ad Hoc [read-ahead, draft]

Middle Rio Grande Endangered Species Collaborative Program (MRGESCP)
Science & Technical (S&T) Ad Hoc Group Charge
Middle Rio Grande Habitat Restoration Monitoring Guidance Ad Hoc

Revised for Science and Adaptive Management Committee (SAMC) review on June 29, 2022.

Parent Committee
Science and Adaptive Management Committee.

Ad Hoc Group Charge

- Adapt a Society for Ecological Restoration (SER) Recovery Wheel tool for application in the Middle Rio Grande (MRG), focusing on Rio Grande silvery minnow (*Hybognathus amarus*; RGSM) nursery habitat. Validate the modified tool using actual monitoring results from recently restored sites in the San Acacia Reach. Assess the utility of the tool for the MRGESCP to inform subsequent adaptations for other species and habitat types.

Membership

A. Criteria for membership

- Knowledge of the ecology, dynamics, and habitat features of the MRG;
- Knowledge of RGSM biology, life history, and habitat needs;
- Familiarity and experience with project design for RGSM habitat restoration, monitoring needs, and data collection methods.

B. Members (Nominees)

_____(Lead),
_____(Member),
_____(Member),
_____(Member),
_____(Member),
…

Iterative Task Development

Background

A need exists for guidance on design and maintenance of habitat restoration efforts to benefit endangered species within the MRG. Substantial amounts of money and effort are expended each year on restoration of ecologically functional habitats for listed species in this basin. As competition for funds increases and hydrologic conditions change, questions arise about when and how to maintain restored habitats. Restoration ecologists have developed customizable tools for cost-effective management of restoration sites, and data from existing MRG restoration projects can be used to validate and improve such decision support tools.

In 2019, the SER developed a "Recovery Wheel" tool (Figure 1) to measure ecological recovery over time and, in the years that followed, the tool has been validated through measurement and communication of recovery trends in river ecosystems of the United States and abroad (McDonald et al. 2016; Gann et al. 2019; Decleer and Bijlsma 2021). The Recovery Wheel framework was designed to inform decisions regarding efficient and cost-effective restoration site management. This tool also accounts for primary and secondary environmental

benefits and helps to identify ecological components that may have been omitted during the project design phase.

In 2018, Reclamation and NMISC partnered to develop monitoring protocols to monitor eight habitat sites created in the San Acacia Reach of the Middle Rio Grande. These protocols were used for the first time in 2019 and were continued in 2020 and 2021. Annual results from three years of monitoring are provided in reports that are available on the MRGESCP Portal (Caplan and McKenna 2019, McKenna et al. 2020). These results can be used to evaluate the suitability of decision support tools for restoration in the MRG.

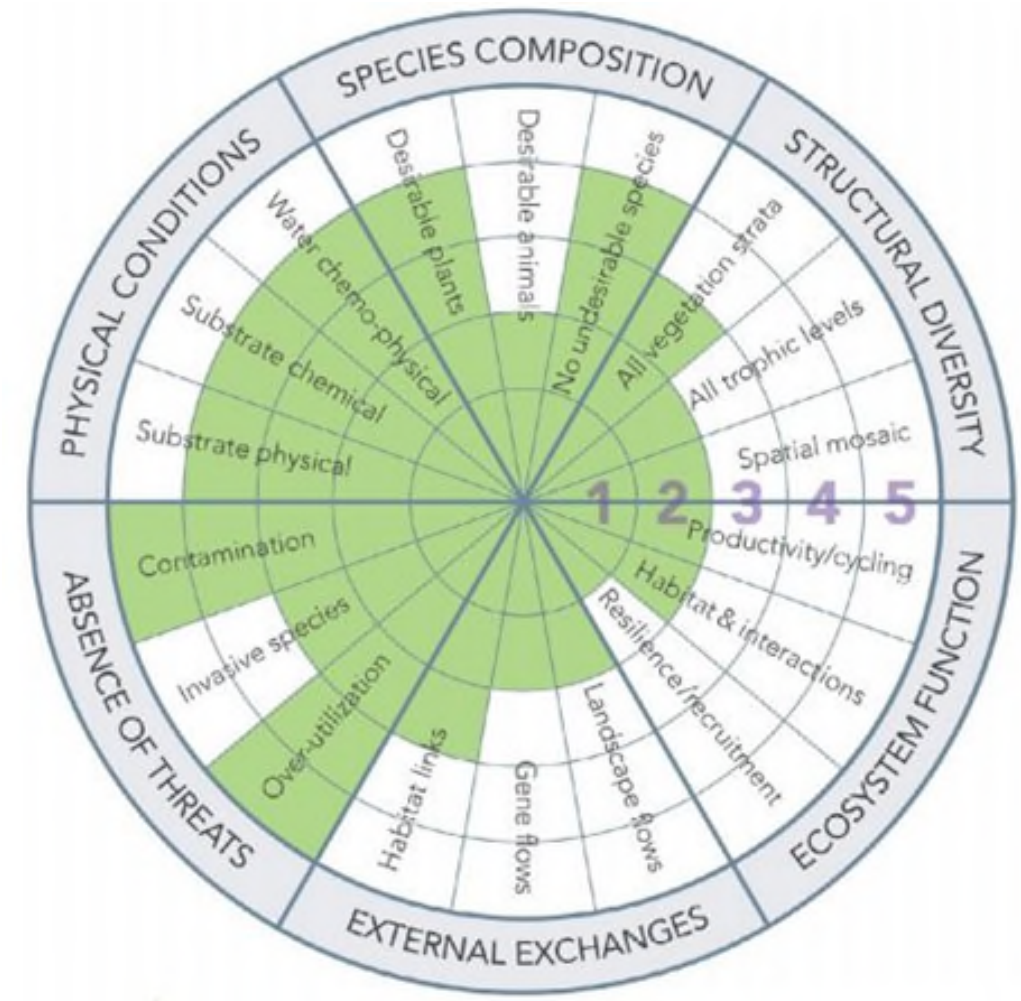


Figure 1. An example from the Society for Ecological Restoration of a recovery wheel for a site that is on its way to a 4-star condition (SER 2019)

The SAMC requests that you review the draft tasks, deliverables and schedule below and provide feedback and questions to begin the iterative process of task development.

Tasks and Deliverables

Step	Objective	Task	Deliverable
1.	**Review Tool**	Study the SER Recovery Wheel • Primary Attributes • Sub-attributes • 5-star Recovery Levels Determine if this tool is appropriate for application to Habitat Restoration efforts in the MRG.	Brief summary (bullets) of pros and cons regarding use of the Recovery Wheel Tool for MRG restoration.
2.	**Customize Tool: Attributes**	Define attributes and sub-attributes that indicate suitable habitat for RGSM nursery habitat in the MRG. The attributes and sub-attributes should be customized to the habitat requirements for this species and life stage.	A recovery wheel customized for RGSM nursery habitat in the MRG describing the habitat attributes that indicate restoration success. Please cite sources, where appropriate.
3.	**Customize Tool: Thresholds**	Using the customized wheel from Task 2, determine sub-attribute thresholds for the 5-star recovery levels and determine "desirable" and "undesirable" conditions for your attributes/sub-attributes. Consider the question of when to maintain/intervene at a site.	A fully-functional recovery wheel for RGSM nursery habitat, including sub-attribute thresholds that inform decisions about site maintenance/intervention.
4.	**Validate Tool with Actual Results**	Evaluate your RGSM nursery habitat recovery wheel using the restoration monitoring reports for San Acacia sites (Caplan and McKenna 2019; McKenna et al. 2020).	Assessment of the recovery wheel tool on its functionality and usefulness in answering monitoring and maintenance questions using actual results from the San Acacia sites.
Check-in with SAMC – Summarize progress, issues and findings			
5.	**Recommend next steps**	Using the lessons learned from Task 4, provide recommendations regarding application of this exercise for other habitat types and species within the MRG.	A final report will be created at the conclusion of this group that includes the draft and final versions of the RGSM nursery tool, as well as recommendations on other potential applications to inform HR site maintenance and defining project success. The group will identify any lessons learned during the task for future iterations of this tool development.

Timeline and Reporting Scheduling

Task	Subtask	Deliverable	To Be Completed By
Step 1	NA	Study the SER Recovery Wheel a. Primary Attributes b. Sub-attributes c. 5-star Recovery Levels Determine if this tool is appropriate for application in the MRG.	TBD
Step 2	NA	A customized recovery wheel for RGSM nursery habitat in the MRG describing the habitat attributes required to indicate project success.	TBD
Step 3	NA	A fully-functional recovery wheel for RGSM nursery habitat that outlines sub-attribute thresholds that inform decisions about site maintenance/intervention.	TBD
Step 4	NA	Validated tool with notes on application to questions of site monitoring and maintenance. Include any lessons learned during the development process that would inform future applications of this tool in the MRG.	TBD
Step 5	Presentation to SAMC	Final Report with Recommendations	TBD
		Collaborative Program seminar	TBD

Footnote

"While every restoration practitioner strives to place his/her site on a secure trajectory to full ecosystem recovery relative to an appropriate reference system, full recovery can often be slow or unrealistic in the short-term. In these cases, and for all restoration projects, practitioners are encouraged to aim and monitor for continuous improvement toward ecosystem recovery… The 5-Star Recovery System tool utilizes a 5-star scale that represents a cumulative gradient from very low to very high similarity to a reference ecosystem. A restoration site can be assigned to one of the five recovery levels (1 to 5 stars) in an overall assessment; or, different ecosystem attributes can be individually assigned recovery levels based on available monitoring data, which provides a more detailed overview of recovery progress, and accounts for the fact that different attributes may have varying rates of recovery. The Recovery Wheel (Figure 1) provides a visual way in which to communicate ecological recovery progress using the 5-star system, and can be shaded in as various sub-attributes of the site achieve greater recovery over time." (https://www.ser.org/page/SERNews3113)

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Gann, G.D., T. McDonald, B. Walder, J. Aronson, C.R. Nelson, J. Jonson, J.G. Hallett, C. Eisenberg, M.R. Guariguata, J. Liu, F. Hua, C. Echeverría, E. Gonzales, N. Shaw, K. Decleer and K.W. Dixon. 2019. International principles and standards for the practice of ecological restoration. Second edition. Restoration Ecology, 27: S1-S46. https://doi.org/10.1111/rec.13035

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Link to full Meeting Materials List

Science and Adaptive Management Committee Meeting

July 12, 2022

See the following meeting material on the page below:

EC-Approved Proposal for a Management of Vegetated Islands and Bank-Attached Bars Workshop [read-ahead]

Middle Rio Grande Endangered Species Collaborative Program
Management of Vegetated Islands and Bank-Attached Bars Workshop Proposal
For Executive Committee (EC) Review and Approval
June 23, 2022

The Science and Adaptive Management Committee (SAMC) is proposing a Middle Rio Grande Endangered Species Collaborative Program-hosted workshop on the topic of management of vegetated islands and bank-attached bars. Based on conversations that happened at Science and Adaptive Management Committee (SAMC) meetings, at Habitat Restoration (HR) Coordination meetings, and with individual signatories, there is sufficient interest, momentum, and management need to propose a 2022 workshop on the topic of interest.

Timing: Fall 2022 (tentatively October)

Location: In-person, TBD (with a virtual back-up plan)

Workshop Objectives:

- Define the state of and trends regarding vegetated islands and bank-attached bars in the Middle Rio Grande (MRG) today
- Clarify and organize the varied issues related to management of vegetated islands and bank-attached bars
- Develop condition-specific criteria to guide management decisions regarding vegetated islands and bank-attached bars
- Determine future approaches to management of vegetated islands and bank-attached bars
- Identify strategies for managing vegetated islands in a dynamic system under different climate scenarios

Participants:

- Organizations that plans and funds management of vegetated islands and bank-attached bars
- Organizations whose work is impacted by vegetated islands and bank-attached bars
- Individuals with expertise in management of vegetated islands and bank-attached bars

Anticipated Outcomes:

- Summary of workshop products with which the SAMC can:
    - Recommend short- and long-term management strategies to the EC
    - Identify research questions for inclusion in SAMIS
- Opportunities for signatory partnerships
- Topics for future HR Coordination meetings

Next Steps:
Upon EC approval of this proposal:

- The SAMC will form a Science & Technical (S&T) Ad Hoc Group to help plan the workshop
- The S&T Ad Hoc Group will work with the Program Support Team (PST) to define the workshop objectives, plan workshop discussion, and develop an agenda
- The PST will coordinate the logistics for hosting an in-person, virtual, or hybrid workshop

Link to full Meeting Materials List

Science and Adaptive Management Committee Meeting
July 12, 2022

See the following meeting material on the page below:

Summary of MRGESCP June Poll Results [read-ahead]

Vegetated Islands and Bars Poll

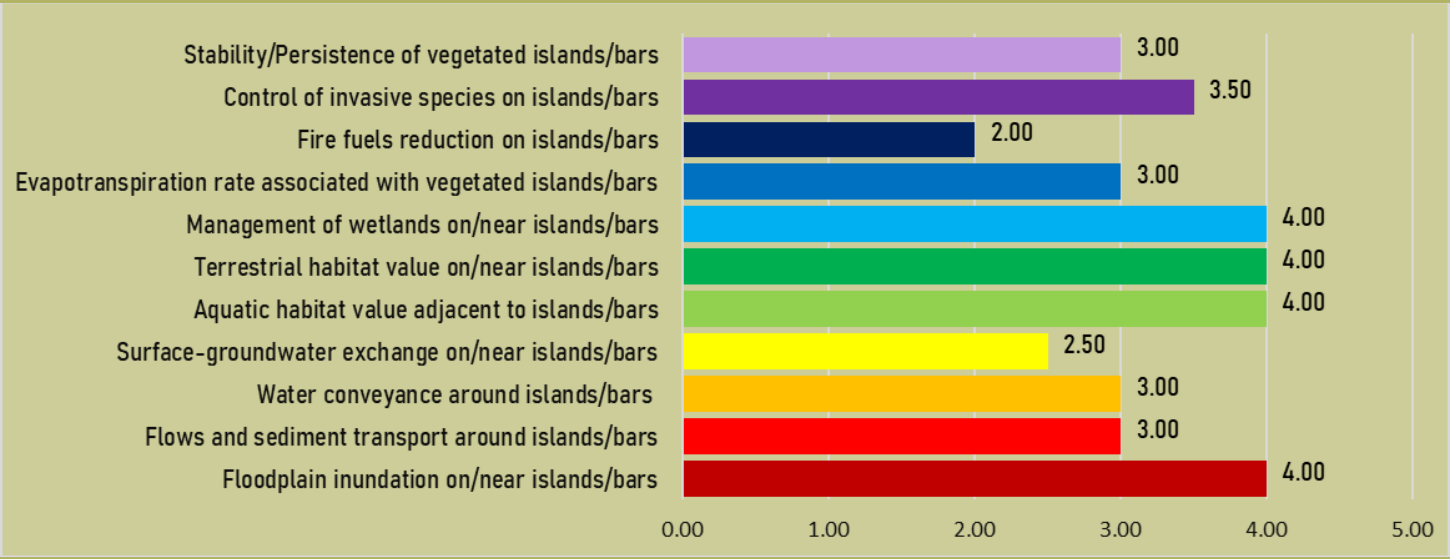
Collaborative Program participants and interested members of the public were invited to participate in an anonymous poll on the topic of managing vegetated islands and bank-attached bars in the MRG. This poll is part of a Collaborative Program poll series meant to encourage the sharing of science and adaptive management ideas. Responses to the poll help inform the Management of Vegetated Islands and Bank-Attached Bars Workshop in fall 2022. Below is a summary of responses from 28 poll participants. To view the full anonymous responses to each question, use the link: https://webapps.usgs.gov/MRGESCP/documents/responses-to-the-june-2022-collaborative-poll.

Question 1: What type of organization are you affiliated with?

Federal agency	13	Municipal water utility	1
State agency	3	Local Agency	1
Non-governmental organization	3	Pueblo	1
Other	3	Prefer not to say	1
University	2		

Question 2: Rate each item as it concerns your organization.

RATING SCALE: 1-Not a concern, 2-Low priority, 3-Medium priority, 4-High priority, 5-Immediate concern



Question 3: Indicate and rate any additional management issues associated with vegetated islands and bank-attached bars.

Participants indicated the following additional management issues and ratings:

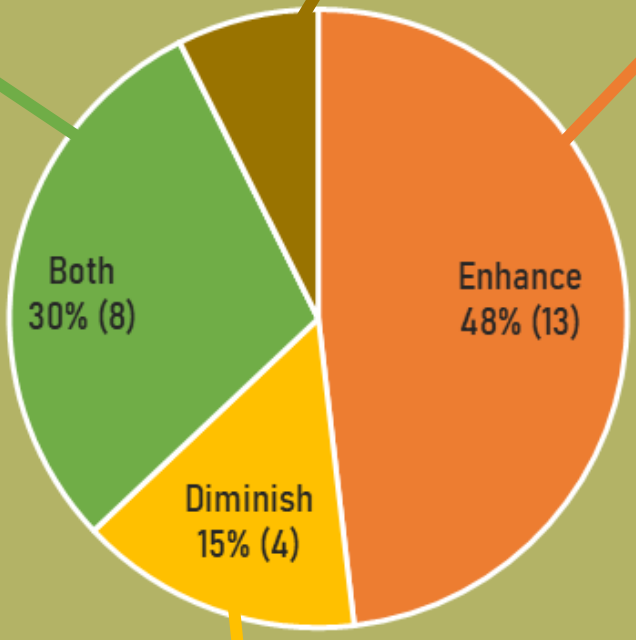
Ravenna grass on islands/bars (5), channel narrowing/deepening/incising (4 or 5), native vegetation on islands/bars (5), bankline levees isolating backwaters/ fish (4), deepening channel reducing target fish habitat (5), channel capacity, water losses, and levee impacts (5), issues with classifying islands/bars as wetlands (4), effects on the Bosque ecosystem (4), rate of vegetation colonization and interdependency with flow rate and soil texture (no rating), vegetation composition of the islands/bars and successional stages (no rating), and habitat value and characteristics that drive determination (no rating).

Continued on pg 7

Vegetated Islands and Bars Poll Cont.

Question 4: Do vegetated islands and bank-attached bars ENHANCE, DIMINISH or have NO AFFECT on the ecological integrity of the MRG?

Reasoning provided for each response is listed below.



BOTH (8 responses)

- Provide edge habitat but diminish ecosystem by hosting invasives.
- At lower flows, they simplify channel and increase flow velocity, but also shrink channel capacity and reduce habitat quality for Rio Grande silvery minnow (RGSM). At higher flows, they can function as floodplain habitat and increase hydraulic retention, providing fish habitat.
- Many are dominated by native willow and cottonwood, providing high -quality southwestern willow flycatcher (SWFL) habitat, but not all islands/ bars are equal in their detriment to flow conveyance or benefit to SWFL.
- Variable, but they add to channel complexity.
- Each reach is different.
- If they are low enough to be inundated or have native vegetation, they can add to channel habitat diversity. But they tend to be too high and stable, and have invasive vegetation.
- Enhance riparian habitat but diminish aquatic habitat.

NO AFFECT (0 responses)

UNKNOWN (2 responses)

- Not enough data.

ENHANCE (13 responses)

- Provide wetland/riparian habitat
- Enhance habitat diversity
- Provide sanctuary for birds
- Edges can produce food for RGSM
- Offset losses due to terrace drying
- Provide sediment deposition
- Vegetation filters water and improves water quality, raises the water table
- Increase connectivity to floodplain
- Disperse energy in floodwaters
- Provide way for terrestrial life to cross the river efficiently
- Enhance when vegetation structure and composition mimics historic types
- Retain natural river processes
- Terraces provide floodplain refuge for slow-moving shallow loving species

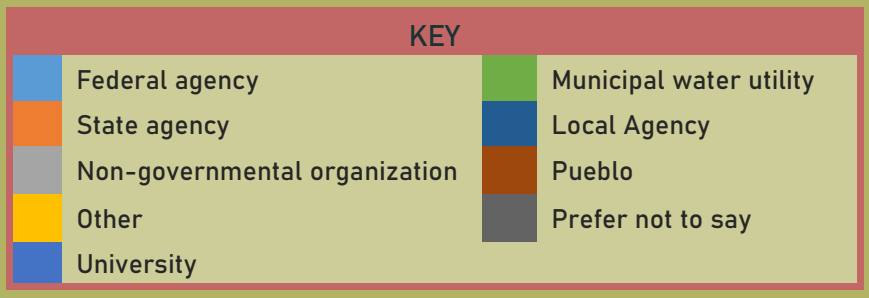
DIMINISH (4 responses)

- The more established they become, the more they narrow the channel
- Bars results in fast, deep flows that don't support RGSM
- Vegetation bars inhibit the channel's ability to handle large events, reducing natural avulsion and the integrity of levees and infrastructure
- Vegetated islands are a result of channel incision, which creates a slew of other issues in the ecosystem

Continued on pg 8

Vegetated Islands and Bars Poll Cont.

Question 5: Select the strategies that your organization employs when dealing with vegetated islands and/or bank-attached bars.



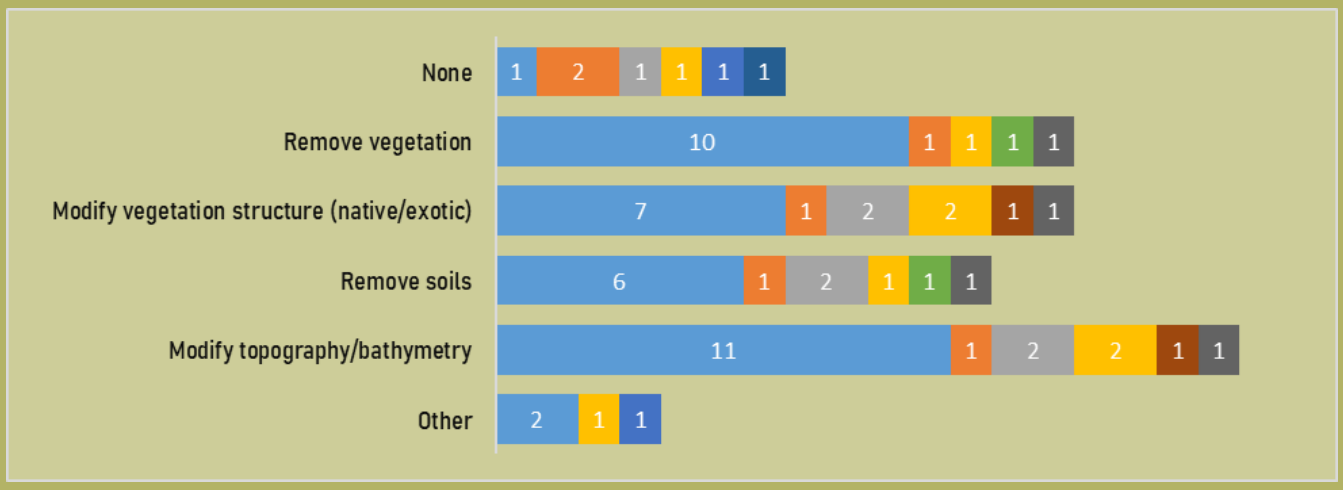


Photo: Deep Dark Woods bosque burn site.
Credit: Debbie Lee, PST

Link to full Meeting Materials List

Science and Adaptive Management Committee Meeting

July 12, 2022

See the following meeting material on the page below:

Revised S&T Ad Hoc Group Charge – MRG Habitat Restoration Monitoring Guidance Ad Hoc [presentation]

Revised MRGESCP S&T Ad Hoc Group Charge:

MRG HABITAT RESTORATION MONITORING GUIDANCE AD HOC

PRESENTED BY SARAH ANDERSON

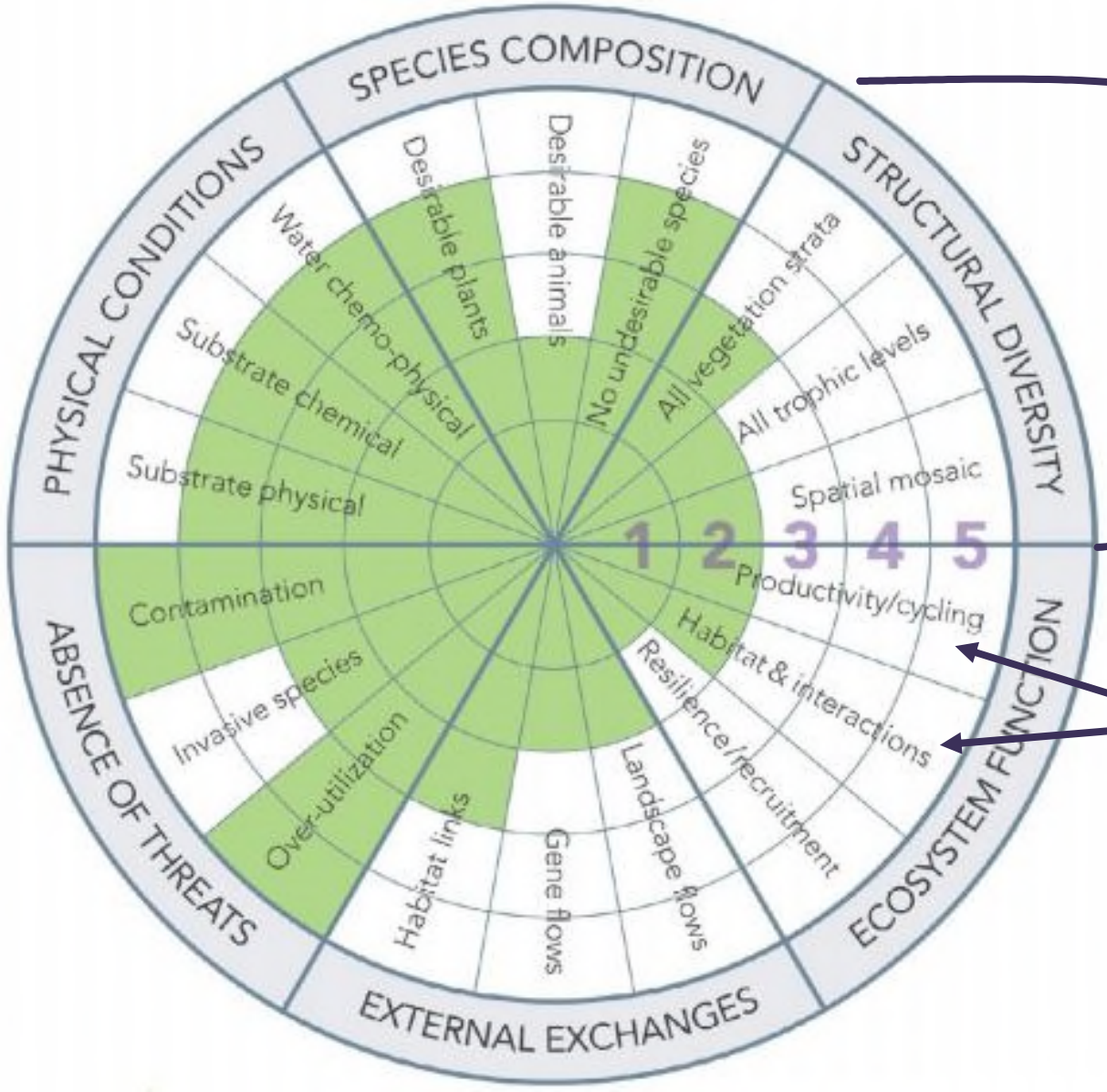
MRGESCP PROGRAM SUPPORT TEAM

S & T Ad Hoc Group Summary

Objectives:

1. Assess the value of applying a Society for Ecological Restoration (SER) 5-Star Recovery Wheel Tool to restoration efforts in the Middle Rio Grande (MRG)
2. Customize the SER Tool for Rio Grande silvery minnow nursery habitat in the MRG
3. Evaluate the adapted tool using actual monitoring results from restoration sites in the San Acacia Reach[1]

SER 5-star Recovery Wheel Tool



Attribute

Sub-attributes

SER 2019

Larger Context for the Middle Rio Grande

- Scope of this group's charge has been expanded
- Focus on documenting and communicating restoration success
- Group will evaluate the SER Tool using real monitoring results
- Group will provide recommendations for future iterations of this type of tool

Charge addresses needs identified in the HR Workshop:

A need to inform a larger adaptive management context

A need for more versatile response metrics

A need for a standardized approach to restoration "success"

Now, we would like to encourage questions and discussion related to this ad hoc group.