

Executive Committee Meeting

December 7, 2021

Meeting Materials:

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[2021 MRGESCP Work Plan Accomplishments & Status \[read-ahead\]](#)

[Revised Reclamation Memo on Non-Federal Cost Share \[read-ahead\]](#)

[Reclamation Responses to Cost Share Questions \[read-ahead\]](#)

[Draft 2022 MRGESCP Work Plan \[read-ahead, draft, spreadsheet\]](#)

[Draft 2022 MRGESCP MOA \[read-ahead, draft\]](#)

[Draft 2021 MRGESCP LTP \[read-ahead, draft\]](#)

[Draft Peer Review Admin Ad Hoc Group Charge \[read-ahead, draft\]](#)

[Draft Annual MRGESCP Evaluation Matrix \[read-ahead, draft\]](#)

[2021 SAMC Accomplishments and LTP Update \[presentation\]](#)

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[Revised Draft 2022 MRGESCP MOA \[follow-up, draft\]](#)

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Executive Committee Meeting December 7, 2021

See the following meeting material on the page below:

Agenda



Middle Rio Grande Endangered Species Collaborative Program

Est. 2000

Executive Committee (EC) Meeting December 7, 2021 1:00 PM– 4:00 PM

Location: Zoom Meeting

<https://west-inc.zoom.us/j/8983593120?pwd=bU54V3NGeG93bXVlSlJFcElzcE9wZz09>

Call-In: +1-669-900-6833

Meeting ID: 898-359-3120; Passcode: 1251

Meeting Agenda

Meeting Objectives:

- Hear an update from the Program Support Team on MRGESCP activities and 2021 accomplishments.
- Approve the 2022 MRGESCP work plan.
- Discuss 2022 Science and Adaptive Management Committee (SAMC) membership, and proposed 2023 search process.
- Hear an update from the Fiscal Planning Committee (FPC) on the cost-share discussion.
- Hear a summary of revisions on the U.S. Bureau of Reclamation memo on non-federal cost-share.
- Approve the 2022 MRGESCP work plan.
- Approve the new Memorandum of Agreement (MOA).
- Approve an update to the Long-Term Plan (LTP).
- Charge an administrative ad hoc group to review the draft MRGESCP peer review process and make refinements to complement individual signatory policies and procedures.
- Approve the process for the annual MRGESCP evaluation, and task the Program Support Team (PST) to carry out the 2021 evaluation.

1:00 – 1:05	Welcome, Introductions, Agenda Review <ul style="list-style-type: none">• Ground rules for Zoom meeting✓ Decision: Approval of October 27, 2021 EC meeting agenda	<i>EC Co-chairs</i>
1:05 – 1:10	October 2021 Meeting Summary <ul style="list-style-type: none">• Action items review✓ Decision: Approval of October 27, 2021 EC meeting minutes <p>Read-ahead:</p> <ul style="list-style-type: none"><input type="checkbox"/> October 27, 2021 Draft EC meeting minutes	<i>EC Co-chairs</i>
1:10 – 1:30	Program Support Team Update <ul style="list-style-type: none">• 2021 accomplishments and year in review• SAMC 2021 summary <p>Read-ahead:</p> <ul style="list-style-type: none"><input type="checkbox"/> 2021 Work Plan Accomplishments	<i>Debbie Lee, PST Catherine Murphy, PST</i>
1:30 – 1:35	SAMC Membership <ul style="list-style-type: none">• 2022 SAMC membership update• Proposed SAMC membership process for 2023	<i>Catherine Murphy, PST</i>

1:35 – 1:50	Fiscal Planning Committee (FPC) Update <ul style="list-style-type: none"> FPC Co-Chairs Summary of FPC cost-share conversation Recommendations for SAMIS reporting ➤ Action Item: PST implement reporting functions in Science & Adaptive Management Information System (SAMIS) 	Grace Haggerty, NM Interstate Stream Commission & Deb Hill, US Fish & Wildlife Service
1:50 – 2:10	Cost Share Memo Update <ul style="list-style-type: none"> Summary of revisions to U.S. Bureau of Reclamation (Reclamation) Cost Share Memo Discussion Read-aheads: <ul style="list-style-type: none"> <input type="checkbox"/> Revised Reclamation Memo, “Middle Rio Grande Endangered Species Collaborative Program Non-federal Cost Share Under 2009 Omnibus Appropriations Act” <input type="checkbox"/> Reclamation Responses to Cost Share Questions 	Jennifer Faler, Reclamation
2:10 – 2:30	2022 MRGESCP Work Plan <ul style="list-style-type: none"> Proposed 2022 activities ✓ Decision: Approve 2022 Work Plan Read-ahead: <ul style="list-style-type: none"> <input type="checkbox"/> Draft 2022 MRGESCP Work Plan 	Debbie Lee, PST
2:30 – 2:40	Break	
2:40 – 2:50	New Memorandum of Agreement <ul style="list-style-type: none"> Review of draft 2022 MOA ✓ Decision: Approve 2022 MOA ➤ Action Item: All signatories sign new MOA and return to PST Read-ahead: <ul style="list-style-type: none"> <input type="checkbox"/> Draft 2022 MRGESCP MOA 	Debbie Lee, PST
2:50 – 3:15	Long-Term Plan Update <ul style="list-style-type: none"> Process used to update LTP LTP features, functions and future updates SAMC recommendations in the LTP ✓ Decision: Approve LTP Read-ahead: <ul style="list-style-type: none"> <input type="checkbox"/> Draft 2021 MRGESCP LTP 	Debbie Lee & Catherine Murphy, PST
3:15 – 3:35	Draft MRGESCP Peer Review Process <ul style="list-style-type: none"> Overview of draft MRGESCP peer review process Proposed administrative ad hoc group ✓ Decision: Approve Peer Review Administrative Ad Hoc Group ➤ Action Item: Peer Review Administrative Ad Hoc Group and the PST work on refining the draft peer review process for EC approval in June 2022 Read-ahead:	Debbie Lee, PST

- Draft Peer Review Administrative Ad Hoc Group Charge
- 3:35 – 3:50 **MRGESCP Annual Evaluation Process** *Debbie Lee, PST*
 - Components and timeline of evaluation process
 - ✓ **Decision:** Approve Annual Evaluation Process
 - **Action Item:** PST carry out 2021 MRGESCP Evaluation in coordination with the Program committees, and bring results and recommendations to March 2022 EC
- Read-ahead:
 - Draft Annual Collaborative Program Evaluation Matrix
- 3:05 – 3:55 **Announcements and Public Comment**
 - 2021 Rick Billings Award
 - SAMIS training workshops
- 3:55 – 4:00 **Meeting Summary and Action Items Review** *EC Co-chairs*
 - **Next EC Meeting:** March 2022
- 4:00 **Adjourn**

[Link to full Meeting Materials List](#)

Executive Committee Meeting December 7, 2021

See the following meeting material on the page below:

Minutes



Middle Rio Grande Endangered Species Collaborative Program

Est. 2000

Executive Committee (EC) Meeting Minutes

December 7, 2021; 1:00 PM–4:00 PM

Location: Zoom Meeting

Decisions:

- ✓ Approval of the December 7, 2021 EC meeting agenda
- ✓ Approval of the October 27, 2021 EC meeting minutes with amendments
- ✓ Approval of the 2022 Middle Rio Grande Endangered Species Collaborative Program (MRGESCP) Work Plan
- ✓ Approval of the updated MRGESCP Long-Term Plan (LTP)
- ✓ Approval of the Peer Review Administrative (Admin) Ad Hoc Group
- ✓ Approval of the Annual Evaluation process

Announcements:

- ❖ The Rick Billings Award recognizes an individual's contributions to the success of the MRGESCP. The 2021 winner of the award is Wayne Pullan, U.S. Bureau of Reclamation (Reclamation) and former Federal Co-Chair. Reclamation selected Wayne P. with the support of the EC. Reclamation will notify Wayne P. and arrange production and delivery of the award. The MRGESCP will develop a collaborative process for selecting a winner each year.
- ❖ Science and Adaptive Management Information System (SAMIS) training sessions will be held early in 2022. Trainings will be tailored to different security groups (split by signatory). The Program Support Team (PST) will set up meetings with representatives from each signatory to walk through the SAMIS.

Action Items:

WHO	ACTION ITEM	BY WHEN
PST	Add language to the 2022 Memorandum of Agreement (MOA) on reaffirming commitment to the MRGESCP and send to the EC for review	12/8/2021
EC	Review the revised 2022 MOA and send any comments to the PST	12/22/2021
PST	Finalize the 2022 MOA and send to the signatories for signatures	1/14/2022
All signatories	Sign the 2022 MOA and send signatures to the PST	March 2022 EC meeting
All signatories	Notify the PST of any regularly scheduled events that would conflict with a set day for EC meetings	12/10/2021
PST	Send out a Doodle Poll to select a set day for EC meetings	12/10/2021
PST	Contact proposed members of the Peer Review Admin Ad Hoc Group to finalize membership and send list to the EC	12/31/2021
Peer Review Admin Ad Hoc Group	Refine the draft peer review process for Science and Adaptive Management Committee (SAMC) review and EC approval	July 2022 EC meeting
Reclamation	Notify Wayne P. that he has been awarded the Rick Billings Award and arrange the production and delivery of the award	12/31/2021
PST	Work with U.S. Geological Survey to develop a Program Portal page for the Rick Billings Award	March 2022 EC meeting
EC	Develop a process for selecting an annual winner of the Rick Billings Award	July 2022 EC meeting
PST	Request reporting functions discussed by the Fiscal Planning Committee (FPC) to the SAMIS development team	January 2022
SAMC and PST	Discuss options for ensuring balanced Science & Technical Ad Hoc Group membership	Next SAMC meeting (January 2022)
PST	Carry out the 2021 MRGESCP Annual Evaluation in coordination with signatories and committees	2/28/2022
PST	Present results and recommendations from the 2021 MRGESCP Annual Evaluation to the EC	March 2022 EC meeting
PST	Schedule SAMIS trainings with representatives from each signatory	2/28/2022
PST	Revise the Science & Adaptive Management Plan (Science & AM Plan) to become the LTP for Science and AM in the Middle Rio Grande (MRG)	March 2022 EC meeting

Next Meeting: March 23, 2022; 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 December 7, 2021 agenda.

- ✓ **Decision:** Approval of the December 7, 2021 meeting agenda

October 2021 Meeting Summary

Debbie Lee, the Program Manager, PST, reviewed the October 27, 2021 meeting action items. Important updates are below:

- A form was sent out to collect information on 2021 projects, to be discussed during the meeting.
- The PST received responses to the questions on the cost share memo, to be discussed during the meeting.
- Reclamation's 2021 projects will be added to the SAMIS once information is approved.
- The FPC met and will give an update during the meeting.
- Signatories are invited to continue sending project ideas or questions for inclusion in the SAMIS.
- There were no comments on the Biennial Schedule, so it is included in the LTP update for the meeting.

Grace Haggerty, New Mexico Interstate Stream Commission, suggested changes to the October 27, 2021 minutes section on cost share to clarify that non-federal signatories did not find it difficult to meet Reclamation's cost share. Instead, the PST had difficulty obtaining cost share information. In addition, Grace H. suggested clarifying that U.S. Army Corps of Engineers (USACE) funding is 100% federal share with no non-federal cost share requirement.

- ✓ **Decision:** Approval of the October 27, 2021 EC meeting minutes with amendments

Program Support Team Update

Debbie L. presented the 2021 MRGESCP accomplishments and year in review (see 2021 Work Plan Accomplishments & Status). Summary points are below:

- The MRGESCP held an Objectives Workshop in February, and the EC approved Science Objectives at the July EC meeting. The Science Objectives and draft Science Strategies were integrated into the SAMIS and used to build the revised LTP.
- The SAMC formed several S&T Ad Hoc Groups in 2021.
 - The Avian Conceptual Ecological Model (CEM) Refinement Ad Hoc completed its task and sent the revised CEM to the SAMC in November.
 - The Rio Grande Silvery Minnow (RGSM) Population Monitoring Summary Report Ad Hoc completed its tasks and presented to the SAMC in April and EC in July.
 - The RGSM Integrated Population Model Ad Hoc is completing its work, and there should be a final presentation in February/March 2022.
 - The RGSM CEM/Genetics Ad Hoc is continuing its work and expected to finish in 2022. The MRGESCP will conduct an internal review of the final work product.
 - The RGSM Hypotheses Development Ad Hoc is being developed. The PST is reaching out to potential members and work will begin next year.
 - The Habitat Restoration (HR) Guidance Ad Hoc will follow up on the HR Workshop held in August 2021. The PST is working through a couple HR-related group ideas with

MRGESCP participants to determine which group to form. The SAMC will work to finalize the group and convene it in 2022.

- Previous MRGESCP efforts, such as the independent science panel report recommendations, were used to characterize items in the SAMIS.
- Resiliency planning is in development, and the SAMC is determining how to include it in Project Bank scoring criteria.
- Revised scoring criteria will be used to update the Project Bank in 2022.
- Developing science activities to address questions is an ongoing effort that informs adaptive management.
- The avian CEMs and RGSM CEM are being integrated into the SAMIS and used to build additional functionality relating scientific uncertainties to studies in the Project Bank.
- The Project Bank was designed and populated with past projects, and signatories will be asked to verify and add to that information. The PST is collecting information on 2021 projects.
- The peer review process was drafted and presented to the SAMC; it will be discussed during the meeting.
 - The EC will be asked to form an Admin Ad Hoc Group to review the peer review process.
- The scope of work process is still being revised, and will develop along with the Project Bank.
- Enhancing science communication is an ongoing effort. In 2021, the MRGESCP sent out bi-monthly newsletters, and held two workshops and two seminars, with more planned for 2022.
- SAMIS training materials are in development, and training sessions are planned for early 2022.
- The updated LTP is up for approval during the meeting.
- The updated Science & AM Plan will be up for approval in March 2022.
- The MRGESCP By-Laws were updated and adopted by the EC.
- The 2021 MOA Addendum was drafted and adopted in March 2021.
- The SAMC and FPC continue to develop processes to ensure LTP activities are coordinated and updated in the Project Bank.
- The new 2022 MOA was drafted, and is up for approval during the meeting.
- Maintaining the Program Portal is an ongoing effort the MRGESCP coordinates each year.
- The EC approved the Fiscal Year 2020 Annual Report.
- The contact list was updated to reflect the new program structure.
- There has been an ongoing conversation about changes to cost share, which will continue during the meeting.
- The EC approved a new concise annual report format.
- The Annual Evaluation checklist process is up for approval during the meeting.
- The 2021 Annual Report is being drafted. Project information is requested.
- The EC agreed to move the Annual Evaluation to 2022, to be completed by March.
- The 2022 Work Plan is up for approval during the meeting.
- RE: Update on Program and Science Support (PASS) contract
 - Reclamation is finishing the process of awarding the new PASS contract. The new contract will be in place before the six-month extension contract expires.

Catherine Murphy, the Science Coordinator, PST, presented the SAMC 2021 summary (see 2021 SAMC Accomplishments and LTP Update presentation). Summary points are below:

- The SAMC had to work entirely virtually during Year 1, but accomplished a lot despite that obstacle. The five focus areas of Year 1 were S&T Ad Hoc Groups, MRGESCP-wide workshops, MRGESCP planning tools, peer review process, and science communication.
- S&T Ad Hoc Groups:

- The S&T Ad Hoc Group deliverables spawned additional S&T Ad Hoc Group ideas.
- The SAMC developed a memo with recommended next steps for the RGSM Population Monitoring Summary Report. From those next steps, the SAMC is developing an S&T Ad Hoc Group to evaluate questions and develop research hypotheses for RGSM.
- The RGSM Integrated Population Model Ad Hoc is meeting to discuss the draft manuscript on the model for publication. Dr. Charles Yackulic, U.S. Geological Survey, will present a Collaborative Seminar on the model in spring 2022.
- The RGSM CEM/Genetics Ad Hoc refined the CEM by adding new genetic, propagation, and augmentation components. A separate S&T Ad Hoc Group will peer review the CEM.
- The Avian CEM Refinement Ad Hoc characterized uncertainty in the models for incorporation in the SAMIS. This will help develop studies to reduce uncertainty.
- MRGESCP-Wide Workshops:
 - The SAMC hosted two workshops: the Objectives Workshop and HR Workshop.
 - Science Objectives were approved and can be used to categorize projects in the LTP.
 - The SAMC will form S&T Ad Hoc Groups to provide guidance for HR.
- MRGESCP Planning Tools:
 - The SAMIS can be used to identify and characterize uncertainties in the CEMs, and to develop research hypotheses, from which studies can be proposed.
- Peer Review Process:
 - Defines types and levels of review for MRGESCP products, improving transparency.
- Collaborative Seminars:
 - #1 - Robert Dudley, American Southwest Ichthyological Researchers and Museum of Southwestern Biology (Fishes), University of New Mexico, presented on RGSM population monitoring on August 24, 2021.
 - #2 - Matthew Wunder, New Mexico Department of Game and Fish, will present on conservation planning tools on December 2, 2021.
 - #3 - Katey Driscoll, U.S. Forest Service, will present on HR and ecosystem function on January 12, 2022.
 - #4 - Charles Y. will present on the RGSM integrated population model in spring 2022.

SAMC Membership

Catherine M. gave an update on SAMC membership. Summary points are below:

- All Year 1 SAMC members had the option to serve only one year of the standard two-year term. The PST interviewed SAMC members individually, and they all agreed to serve on the SAMC for the full two years.
- Terms were intended to be staggered to allow new SAMC members to join existing SAMC members. The EC Co-Chairs and PST propose to reassess SAMC membership at the end of 2022 and begin staggering terms in 2023.
- Current member terms will end in March 2023. SAMC members will be given the option to stay on for an additional year. The EC will replace any vacant positions.

Fiscal Planning Committee (FPC) Update

Grace H., Non-Federal Co-Chair for the FPC, and Debbie L. gave an FPC update. Summary points are below:

- The FPC meeting was held January 27, 2022. The group discussed Reclamation's revised cost share memo. The group is satisfied with Reclamation's responses to questions on the original cost share memo.
 - Moving forward, the FPC will engage with the LTP and work with the SAMC to ensure activities are coordinated.
 - It is important for all signatories to submit their activities for the SAMIS.
 - The PST is developing a list of items for the SAMIS development team, including tracking cost share.
- **Action Item:** The PST will request reporting functions discussed by the FPC to the SAMIS development team

Cost Share Memo Update

Jim Wilber, Reclamation, discussed Reclamation's responses to questions on the cost-share memo (see Reclamation Non-Federal Cost Share Memo and Reclamation Responses to Cost Share Memo Questions). Summary points are below:

- Reclamation's interpretation of the 2008 Consolidated Appropriations Act is the 2016 Biological Opinion does not fall under the cost share requirement. As activities are entered into SAMIS and distinguished as cost share, Reclamation hopes to clarify what falls under the cost share requirement.
- Reclamation's memo states that cost share would only be applied to a subset of MRGESCP activities that Reclamation enters into an agreement with a non-federal partner to fund.
 - There are currently no examples of a cost share activity that meets that requirement.
- Reclamation believes cost share should be viewed on the programmatic scale, not project-by-project. While the SAMIS will be used to update cost share more frequently, Reclamation would do a more formal audit every three years.
- RE: Can money received by non-federal signatories from other federal entities be used for cost share?
 - Generally no, but Reclamation suggests groups do their own legal review for this question. One exception is Pueblos with 638 contracts; the money from those contracts can be reapplied as cost share.
- Reclamation will continue to work on cost share with the other MRGESCP signatories to come to a satisfactory understanding.
- RE: List of 2021 Reclamation activities
 - Some non-federal signatories asked about the list of 2021 activities to be provided by Reclamation.
 - Reclamation focused on revising the cost share memo, but will provide a list of activities for inclusion in the SAMIS by early 2022.

2022 MRGESCP Work Plan

Debbie L. presented the 2022 MRGESCP Work Plan (see 2022 MRGESCP Work Plan). Summary points are below:

- The goal for 2022 is to increase the management-relevance of the MRGESCP.
- The 2022 Work Plan aligns with the Biennial Schedule.
- There are five buckets of tasks for 2022: administrative tasks, tasking S&T Ad Hoc Groups, building linkages and content for SAMIS, building decision tools for adaptive learning, and information sharing and coordination.

- RE: Should the EC approve S&T Ad Hoc Group membership to ensure balanced representation?
 - The SAMC would need to put together a memo with potential membership for EC approval, which would extend the time needed to create a group.
 - There has not been an issue yet, but the SAMC can improve transparency of groups to prevent issues arising.
 - Suggestion to report S&T Ad Hoc Group membership every quarter for EC review.
 - Some S&T Ad Hoc Groups will have work products that need review. Experts not on initial groups will be tapped for review of work products.
 - One option is to post a tentative list of participants who have accepted membership to an S&T Ad Hoc Group to the Program Portal, and allow the EC to weigh in.
 - The PST will discuss the issue further with the SAMC and Alan Hatch, the EC *Ex Officio* on the SAMC.
- ✓ **Decision:** Approval of the 2022 Work Plan
- **Action Item:** The SAMC and PST will discuss options for ensuring balanced S&T Ad Hoc Group membership

New Memorandum of Agreement

Debbie L. discussed the 2022 MOA. Summary points are below:

- The 2022 MOA Admin Ad Hoc was tasked with drafting the 2022 MOA for EC approval.
- There is no new language; most language was taken from the previous MOA with details from the By-Laws and Science & AM Plan.
- The main change was the group decided on a period of five years for the new MOA, with an automatic extension for another five years if there is no objection from the EC.
- RE: 2022 MOA cover letter
 - Suggestion to add a cover letter to the 2022 MOA to include details on its creation and any deadlines.
- RE: Reaffirming commitment to the MRGESCP
 - Suggestion to add language to the 2022 MOA on signatories reaffirming their commitment to the MRGESCP.
- The 2008 MOA extension is in place until May 2022. Signatures for the 2022 MOA are due in March 2022. The PST will revise the 2022 MOA based on EC comments and provide it for EC review.
- **Action Item:** The PST will add language to the 2022 MOA on reaffirming commitment to the MRGESCP and send to the EC for review
- **Action Item:** The EC will review the revised 2022 MOA and send any comments to the PST
- **Action Item:** The PST will finalize the 2022 MOA and send to the signatories for signatures
- **Action Item:** All signatories will sign the 2022 MOA and send signatures to the PST

Long-Term Plan Update

Catherine M. and Debbie L. gave an update on the LTP (see MRGESCP LTP and 2021 SAMC Accomplishments and LTP Update presentation). Summary points are below:

- The LTP should be getting to a point that it meets MRGESCP needs for strategic planning and individual signatory needs.
- The purpose of the LTP is to be an evolving communication and planning tool that supports the MRGESCP's long-term scientific efforts under the Science & AM Plan.

- The LTP is guided by the Guiding Principles (i.e., Mission, Goals, Science Objectives, and Science Strategies).
 - Generally, projects are considered within a 1-2 year timeframe, Science Strategies within 2-5 years, Science Objectives within 5-10 years, and Goals within 10+ years. Deviations from this general schedule are to be expected, but these targets are helpful for planning purposes.
- The Biennial Schedule features checkpoints for updating the LTP, including the Science Symposium, Collaboratory, and signatory contributions.
- Recommended activities in the LTP link to Science Strategies and Objectives, project status, project category, focus/species, and other fields.
- The more fields completed for projects within the SAMIS, the more features signatories can use to filter projects that meet their needs.
- The SAMC recommends the following: 1) Signatories provide projects for the SAMIS, 2) the MRGESCP develop a scoring mechanism for evaluating projects in the Project Bank, and 3) Science Strategies be developed for the Science Objective related to RGSM genetics.
 - Proposed scoring criteria could include three scores: a SAMIS Linkage Score (value of project to MRGESCP), a S.M.A.R.T. Score (clarity of scope of work), and a Resiliency Score (value to planning and AM).
 - A low score in one or more criteria would serve to identify aspects of a project scope that need to be clarified or augmented.
- The recommended activities list in the LTP is based on project ideas generated by the Science and Habitat Restoration Work Group and panel reports, as well as ideas provided directly by signatories. The list will always evolve in order to align with MRGESCP planning initiatives.
- The PST received feedback that it was difficult to keep track of multiple MRGESCP plans, and there is a lot of overlap between the LTP and Science & AM Plan. The PST proposes to combine the LTP and Science & AM Plan into the LTP for Science & AM in the MRG. A combined plan would be easier to track and update.
- RE: More info on scoring criteria for the Project Bank
 - The proposed scoring criteria have not been used previously in the MRGESCP. There has been no solid process for evaluating projects. The scoring criteria would help to make that evaluation transparent.
 - The Project Bank will be more practical if it is accompanied by some evaluation criteria. Each of the three scores evaluates a different aspect of a project's scope. Signatories with different priorities can determine how to use the criteria to select projects suited to their planning needs.
 - There have been mixed reviews among SAMC members on combining the three scores. The drawback to providing a single combined score is that the information regarding individual criteria is lost. In addition, it would be more complicated to understand how the single score was calculated versus presenting the set of criteria scores with simple definitions.
 - Further development of the scoring criteria will be an iterative process.
 - Multiple scores can help determine where a project scope may need clarifications or improvement. For example, a project with a high Linkage Score but low S.M.A.R.T. Score would be highly relevant but may need more detail to be implementable.
- RE: A LTP typically has goals, objectives, and projects with defined schedules for implementation, measures of success, and estimated costs. Is that the goal of the MRGESCP LTP?

- That document requires budget, timing, and logistical information. The more detailed information is provided for the SAMIS, the closer the MRGESCP LTP will be to the described “typical” LTP.
- Signatories will be able to add their own proposed studies to the SAMIS for potential funding. The SAMIS can also include studies designed to reduce uncertainties identified from the CEMs and to address management-relevant questions.
- RE: Standard template for the LTP
 - The SAMIS contains project descriptions with specific fields, which will standardize projects for the LTP. Descriptions of past projects require some formatting to better fit in the LTP.
- RE: Path for combining the LTP and Science & AM Plan
 - The final document will have two parts: the narrative and a summary table of recommended activities. The narratives are the easiest to combine. The bigger lift is applying evaluation criteria to the activities.
 - The PST will aim for a draft by March 2022.
- ✓ **Decision:** Approval of the updated MRGESCP LTP
- **Action Item:** The PST will revise the Science & AM Plan to become the LTP for Science and AM in the MRG

Draft MRGESCP Peer Review Process

Debbie L. presented on the draft MRGESCP peer review process (see Peer Review Process presentation and draft Peer Review Admin Ad Hoc Group Charge). Summary points are below:

- Debbie L. worked with the SAMC on developing the MRGESCP peer review process, a 10-page document.
- Peer review was split into types and categories. Types include statistical review, editorial review, contextual review, legal review, and programmatic review. Categories include Internal Administrative Review, Internal Scientific Review, External Expert Review, and Independent Science Panel (ISP).
- Internal Review Categories:
 - Internal Administrative Review is for governance documents and MRGESCP-authored documents (e.g., By-Laws or LTP). These are reviewed by all signatories.
 - Internal Scientific Review is for S&T Ad Hoc Group work products and science and AM tools (e.g., CEMs, scientific reports, or study plans). Reviewers have relevant expertise. Performed or delegated by the SAMC. External reviewers may be included if necessary.
- External Review Categories:
 - External Expert Review is for a singular work product (either administrative or scientific) or a topic with medium-to-high level of contention (e.g., Science & AM Plan or population models). The SAMC recommends the review and the EC approves it. Reviewers are experts and interaction is not required between them and MRGESCP experts.
 - ISP is for broad, complex, and consequential topics or topics with high level of contention (e.g., Hubert panel, Noon panel, or Fraser panel). This is a programmatic review, not for a single work product. The SAMC recommends the review and the EC approves it. Reviewers are experts and interaction between them and MRGESCP experts is required (in-person or virtual).

- Internal reviews are much more nimble and responsive to needs. They require low time commitment and cost. External reviews have exponentially higher time commitments and costs. They required contracting, time to identify and vet reviewers, and time to get agreements in place.
 - Cost and time go up significantly for ISPs. The threshold for one is very high.
- The draft peer review process includes the following: descriptions for review categories, a decision support process, step-by-step processes for each category, and codes of conduct.
- The SAMC and PST propose an Admin Ad Hoc be formed to review the peer review process.
- RE: How many signatories have an internal review process?
 - The ABCWUA and Middle Rio Grande Conservancy District do not.
 - Reclamation/U.S. Department of the Interior and USACE have review processes that inform the MRGESCP peer review process.
- RE: Proposed Peer Review Admin Ad Hoc member list
 - The list include three lawyers and three technical personnel. The PST aimed for a mix of people familiar with agency peer review policies and people familiar with the scientific peer review process.
 - Signatories will suggest any changes to the proposed list of members. The PST will contact proposed members and send the final list to the EC.
- The Peer Review Admin Ad Hoc is tasked with reviewing the draft peer review process and individual signatory peer review policies, and providing recommendations for revisions.
- The group timeline runs through May 2022, and a final peer review process will be up for approval at the June 2022 EC meeting.
- RE: Reviews of ISPs
 - ISPs typically have standalone reports that are not subject to review, but they are open to comments. Any draft ISP will be provided to the MRGESCP for comments, but the panel will decide whether to incorporate comments.
 - If there is enough scientific justification for conflicting comments, the SAMC can decide to add the conflict to the SAMIS as an uncertainty.
- ✓ **Decision:** Approval of the Peer Review Admin Ad Hoc Group
- **Action Item:** The PST will contact proposed members of the Peer Review Admin Ad Hoc Group to finalize membership and send list to the EC
- **Action Item:** The Peer Review Admin Ad Hoc Group and PST will refine the draft peer review process for SAMC review and EC approval

MRGESCP Annual Evaluation Process

Debbie L. presented on the MRGESCP Annual Evaluation process (see Annual Program Evaluation presentation and Annual Program Evaluation Matrix). Summary points are below:

- The Annual Evaluation is an administrative evaluation of the MRGESCP's operations and functions.
- The Annual Evaluation covers the Guiding Principles, MRGESCP administration, the EC, Admin Ad Hoc Groups, the FPC, the SAMC, S&T Ad Hoc Groups, committee & group structure, and MRGESCP operations.
- Potential outcomes could be changes to Guiding Principles, changes to By-Laws, updates to planning documents, updates to committee charters, creation/changes to ad hoc group charges, or changes to committee or ad hoc group membership.

- At the March EC meeting, the EC will review the results of the Annual Evaluation and determine the need for changes.
- ✓ **Decision:** Approval of the Annual Evaluation process
- **Action Item:** The PST will carry out the 2021 MRGESCP Annual Evaluation in coordination with signatories and committees
- **Action Item:** The PST will present results and recommendations from the 2021 MRGESCP Annual Evaluation to the EC

Announcements and Public Comment

- The Rick Billings Award recognizes an individual's contributions to the success of the MRGESCP. The 2021 winner of the award is Wayne P., the previous Federal Co-chair. Reclamation selected Wayne P. with the support of the EC. Reclamation will notify Wayne P. and arrange production and delivery of the award. The MRGESCP will develop a collaborative process for selecting a winner each year.
- SAMIS training sessions will be held early in 2022. Trainings will be tailored to different security groups (split by signatory). The PST will set up meetings with representatives from each signatory to walk through the SAMIS.
- **Action Item:** Reclamation will notify Wayne Pullan that he has been awarded the Rick Billings Award and arrange the production and delivery of the award
- **Action Item:** The PST will work with U.S. Geological Survey to develop a Program Portal page for the Rick Billings Award
- **Action Item:** The PST will develop a process for selecting an annual winner of the Rick Billings Award
- **Action Item:** The PST will schedule SAMIS trainings with representatives from each signatory

Closing Items

- The next EC meeting will be in March 2022.
- There is interest in choosing a set day and time for EC meetings. Signatories should notify the PST if there are any known conflicts.
- **Action Item:** All signatories will notify the PST of any regularly scheduled events that would conflict with a set day for EC meetings
- **Action Item:** The PST will send out a Doodle Poll to select a set day for EC meetings

Meeting Participants

EC Representative	Organization
Alan Hatch	Pueblo of Santa Ana
Anne Marken	Middle Rio Grande Conservancy District
Ara Winter	Bosque Ecosystem Monitoring Program
Debra Hill	U.S. Fish and Wildlife Service
Grace Haggerty	New Mexico Interstate Stream Commission
Jennifer Faler	U.S. Bureau of Reclamation
Jim Wilber	U.S. Bureau of Reclamation
Katrina Grantz, Federal Co-Chair	U.S. Bureau of Reclamation
Kelsey Bicknell	Albuquerque Bernalillo County Water Utility
Kyle Harwood	Buckman Direct Diversion
Mark Kelly, Non-Federal Co-Chair	Albuquerque Bernalillo County Water Utility Authority
Megan Osborne	University of New Mexico
Michael Scialdone	Pueblo of Sandia
Page Pegram	New Mexico Interstate Stream Commission
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
Virginia Seamster	New Mexico Department of Game & Fish

Participant	Organization
Ari Posner	U.S. Bureau of Reclamation
Ashleigh Morris	Office of the Solicitor, U.S. Department of the Interior
Catherine Murphy	Program Support Team
Dale Strickland	Program Support Team
Debbie Lee	Program Support Team
Lynette Giesen	U.S. Bureau of Reclamation
Michelle Tuineau	Program Support Team
Mick Porter	U.S. Army Corps of Engineers
Rich Valdez	SWCA Environmental Consultants
Sarah Anderson	Program Support Team
Trevor Birt	New Mexico Interstate Stream Commission
Trevor Stevens	U.S. Army Corps of Engineers

[Link to full Meeting Materials List](#)

Executive Committee Meeting December 7, 2021

See the following meeting material on the page below:

2021 MRGESCP Work Plan Accomplishments & Status [read-ahead]

**MIDDLE RIO GRAND ENDANGERED SPECIES COLLABORATIVE PROGRAM
2021 WORK PLAN ACCOMPLISHMENTS**

The following are status updates and notes for each of the 2021 Work Plan items, prepared for the December 7, 2021 Executive Committee (EC) meeting.

	Item	Status	Notes
1a	Convene an Objectives Workshop for each species	COMPLETE	An Objectives Workshop was held February 10-11 and draft objectives for each species were drafted for SAMC review, and EC review/approval.
1b	Report objectives and their implications for science initiatives to the EC for review and comment	COMPLETE	The EC approved the Science Objectives at the July meeting.
1c	Integrate objectives and strategies into the Science and Adaptive Management Information System (SAMIS)	COMPLETE	Objectives and draft strategies were integrated into SAMIS during development. These components will need to be updated as objectives and strategies are updated.
2a	Form Science & Technical (S&T) Ad Hoc Groups to address specific questions	-	-
	Task S&T Ad Hoc Group to refine the avian CEMs to include uncertainties	COMPLETE	This S&T Ad Hoc completed its work and presented at the November SAMC meeting.
	Task S&T Ad Hoc Group to summarize Population Monitoring Work Group (PMWG) work in a final report	COMPLETE	This S&T Ad Hoc completed its work, and presented to the SAMC in April, and presented to the EC in July.
	Task S&T Ad Hoc Group to the Rio Grande silvery minnow (RGSM) integrated population model	IN PROGRESS	This S&T Ad Hoc is completing its work of incorporating expert elicitation into the RGSM integrated population model, and is anticipated to have a final presentation in February/March 2022.
	Task S&T Ad Hoc Group to update the RGSM conceptual ecological model (CEM) to include genetics and augmentation components	IN PROGRESS	This S&T Ad Hoc is anticipated to complete its work in 2022. A new group will then be charged to review the revised CEM.
	Task S&T Ad Hoc Group to develop hypotheses from the PMWG summary report	IN PROGRESS	Subsequent research recommendations based on the PMWG summary report will continue into 2022.

	Item	Status	Notes
	Task S&T Ad Hoc Group to develop guidance on addressing questions and challenges related to defining and documenting habitat restoration success	IN PROGRESS	A Habitat Restoration Workshop was held August 31. Follow-up S&T Ad Hoc Group(s) are still being formed.
2b	Identify critical carry-over work from past MRGESCP efforts, including panel recommendations, and begin breaking large issues into specific questions	COMPLETE	The panel reports and Caplan 2018 were used to characterize line items in the SAMIS Project Bank.
2c	Develop a framework to incorporate resiliency planning into project design	IN PROGRESS	The SAMC is determining how to incorporate support of resiliency into the Project Bank scoring, and will finalize the scoring rubric in 2022.
2d	Develop scientific activities to address questions from S&T Ad Hoc Groups and incorporate into the Project Bank	ONGOING	This is an ongoing effort.
3a	Integrate Rio Grande silvery minnow, yellow-billed cuckoo, and southwestern willow flycatcher CEMs into the SAMIS by converting schematics into graphical models and individual relationships	COMPLETE	The CEMs, including characterized pairwise component relationships, were integrated into SAMIS during the development. These components will have to be updated as the CEMs are updated.
3b	Update RGSM CEM to include genetics and augmentation components	IN PROGRESS	This S&T Ad Hoc has added new components and is anticipated to complete its work on pairwise relationships in 2022. A new group will be charged with reviewing the revised CEM.
3c	Update avian CEMs to include levels of uncertainties	COMPLETE	This S&T Ad Hoc completed its work and presented the results at the November SAMC meeting.
3d	Populate the Project Bank with past and current projects. Specify research hypotheses, where appropriate.	IN PROGRESS	Old annual reports were used to populate the Project Bank for SAMIS development. 2021 projects are currently being collected to update it.
4a	Define the MRGESCP peer review process, including both internal reviews and external reviews	IN PROGRESS	The draft peer review process was presented to the SAMC in August for review and comment. An overview will be presented to the EC at the December meeting, and a decision to form an administrative ad hoc group is on the agenda.
4b	Revise the scope of work (SOW) process to incorporate the S&AM Plan elements	IN PROGRESS	The SOW process is being developed in concert with the SAMIS Project Bank. Details are still being discussed.

	Item	Status	Notes
4c	Enhance MRGESCP science communication venues, such as seminars, workshops, and newsletters	ONGOING	Regular bi-monthly newsletters sent out. An Objectives Workshop and a HR Workshop were held. Two seminars were scheduled/held, with more planned for 2022.
4d	Develop training materials and hold workshops on the SAMIS	IN PROGRESS	The training materials are in development, and trainings will be scheduled for early 2022.
5a	Update the Long-Term Plan (LTP)	COMPLETE	The updated LTP is up for EC approval at the December meeting.
5b	Update the Science & Adaptive Management (S&AM) Plan	IN PROGRESS	The updated S&AM Plan will be up for EC approval in March 2022.
6a	Update and adopt By-laws to reflect new MRGESCP structure and operations	COMPLETE	The EC adopted new By-Laws in July, and amended the By-Laws in October.
6b	Draft and adopt an addendum extending the 2008 Memorandum of Agreement (MOA)	COMPLETE	The EC adopted the MOA addendum in March.
6c	Develop processes for SAMC and FPC coordination on Collaborative Program recommendations	IN PROGRESS	This will focus on coordinating implementation of activities in the LTP, and ensuring activities are updated in the Project Bank.
6d	Draft a new MOA	COMPLETE	The new MOA is up for approval at the December EC meeting.
7a	Maintain and update documents and content on the Program Portal	ONGOING	This is an ongoing effort.
7b	Draft and approve the FY20 Annual Report	COMPLETE	The FY20 Annual Report was approved at the July EC meeting.
7c	Update the MRGESCP contact lists to reflect changes to the new structure	COMPLETE	This was completed in February, and the mailing list is continually updated as needed.
7d	Propose and adopt changes to cost-share	IN PROGRESS	The EC approved moving to collecting signatory contributions at the July meeting. Signatory contributions will be tracked in SAMIS. Those signatory contributions which are part of cost-share will also be tracked according to FPC guidance.
7e	Develop a format for a concise Annual Report	COMPLETE	The new Annual Report format was presented to the EC at the July meeting.
7f	Develop the annual MRGESCP evaluation checklist process	COMPLETE	The annual evaluation process will be presented to the EC for approval at the December meeting.

	Item	Status	Notes
7g	Begin drafting FY21 Annual Report	ONGOING	This is an ongoing effort.
7h	Complete the annual MRGESCP evaluation	IN PROGRESS	The EC agreed to move the completion of this task until March 2022. The EC will approve evaluation process at the December meeting.
7i	Develop the SAMC annual summary report	COMPLETE	The SAMC 2021 summary report will be presented to the EC at the December meeting.
7j	Develop and approve 2022 Annual Work Plan	COMPLETE	The 2022 Work Plan will be presented for EC approval at the December meeting.

[Link to full Meeting Materials List](#)

Executive Committee Meeting December 7, 2021

See the following meeting material on the page below:

Revised Reclamation Memo on Non-Federal Cost Share [read-ahead]



United States Department of the Interior



BUREAU OF RECLAMATION
Albuquerque Area Office
555 Broadway NE, Suite 100
Albuquerque, NM 87102-2352

IN REPLY REFER TO:

ALB-121
2.2.1.06

VIA ELECTRONIC MAIL ONLY

Executive Committee Middle Rio Grande Endangered Species Collaborative Program
C/O Debbie Lee MRGESCP Program Manager Western EcoSystems Technology, Inc.
901 Lamberton PL NE, South Suite
Albuquerque, NM 87107
dlee@west-inc.com

Subject: Middle Rio Grande Endangered Species Collaborative Program (Program) non-federal cost share under 2009 Omnibus Appropriations Act

Dear Executive Committee:

The following memorandum revises the draft October 20, 2021, memorandum on the same subject matter that was shared with the Executive Committee at its October 2021 meeting and used for discussion purposes.

The Bureau of Reclamation seeks to clarify its view of the non-federal cost share language set forth in the federal 2009 Omnibus Appropriations Act (Act) in order to provide the Program Executive Committee (Executive Committee) a better understanding of the funding obligations of non-federal Program signatories moving forward in support of the Program's new approach for reframing cost-share to signatory contributions.

Background:

The Act was passed in 2009 as part of a federal appropriations package. Subsection (c)—read in conjunction with subsection (e)(1) below—requires a non-federal cost share when Reclamation (acting through the Secretary of the Interior), in collaboration with the Executive Committee, exercises its discretion to “enter into any grants, contracts, cooperative agreements, or other agreements that the Secretary determines to be necessary to comply with the 2003 Biological Opinion or any related subsequent biological opinion or in furtherance of the objectives set forth in the collaborative program long-term plan.”

Specifically, subsection (e)(1) of the Act requires that, when Reclamation enters into such funding agreements as set forth in subsection (c), “the non-Federal share of activities carried out under subsection (c) (other than an activity or a cost described in subsection (d)(1)) shall be 25 percent. The non-Federal cost share shall be determined on a programmatic, rather than a project-by-project basis.” Nothing in the Act sets forth a specific time period under which Reclamation's programmatic determination should be reported or based.

Issue

At the July 28, 2021, Executive Committee Meeting, a proposal for reframing cost-share to signatory contributions was approved. The Program will compile information on signatory contributions, including voluntarily provided costs related to activities that contribute to Program operations or work towards achieving its guiding principles (i.e., mission, goals, and objectives).

To that end, Reclamation provides the following clarification for the first non-federal cost-share requirement under subsection (c) of the Act setting forth a non-federal cost share when Reclamation enters into agreements “necessary to comply with the 2003 Biological opinion or any related, subsequent opinion.” It is important to understand the history of the two biological opinions at issue. The 2016 Biological Opinion differs significantly from the 2003 Biological Opinion, both in its approach to water management and species protection and in its approach to the Program’s Executive Committee, such that Reclamation views the 2016 Biological Opinion as a new replacement biological opinion and not a “related, subsequent biological opinion” to the 2003 Biological Opinion, as contemplated by the Act.

Additionally, the 2016 Biological Opinion specifically identifies discrete water management responsibilities of four primary entities, federal and non-federal: Reclamation, the U.S. Bureau of Indian Affairs, the Middle Rio Grande Conservancy District, and the State of New Mexico, with specific conservation measures identified for each. And, while the 2016 Biological Opinion recognizes the important contributions of the Program in regards to the development of science and other implementing activities, the 2016 Biological Opinion is no longer tied to the Program Executive Committee for collaboration and compliance in the same way that the 2003 Biological Opinion was structured. Accordingly, Reclamation interprets the Act as not requiring a non-federal cost share when Reclamation enters into agreements that are necessary to comply with the 2016 Biological Opinion because the 2016 Biological Opinion is not a “related, subsequent biological opinion,” as contemplated by the Act.

In regards to the second cost-share funding requirement under subsection (c) of the Act, requiring a 25 percent non-federal cost share when Reclamation enters into agreements in furtherance of the objectives of the Collaborative Program long-term plan, the non-federal cost share will be determined by Reclamation on a programmatic—and not project-by-project—basis. Subsection (e)(2) of the Act states, “The Non-Federal share ... may be in the form of in-kind contributions, the value of which shall be determined by the Secretary in consultation with the executive committee.”

In summary, Reclamation interprets the 2009 Omnibus Appropriations Act as continuing to require a 25 percent non-federal cost share when Reclamation enters into agreements with non-federal entities in furtherance of the objectives of the Collaborative Program Long-Term Plan and consistent with the Program’s recently approved approach for reframing cost-share to signatory contributions, but not for Reclamation-funded agreements for activities solely undertaken in compliance with the 2016 Biological Opinion.

Therefore, in keeping with the proposal to re-frame signatory contributions approved by the Executive Committee, Reclamation will continue to request that non-federal entities report their

Program activities on an annual basis, in terms of Collaborative Program activities, Biological Opinion activities, and in regard to any Reclamation-funded agreements requiring a 25-percent non-federal cost share, as applicable. Non-federal entities shall report this information in the Program's Science and Adaptive Management Information System (SAMIS). These activities include, but are not necessarily limited to, Program activities, such as active participation in Collaborative Program committees, groups, workshops, and scientific activities such as studies, monitoring, data collection, habitat restoration, research, etc. as well as any in-kind contributions. The activities reported into the SAMIS would comply not only with the Collaborative Program long-term plan, but also in keeping with the 25-percent non-federal cost share requirement set forth in subsections (c) and (e)(2) of the Act. See Act, subsection (e)(2).

If you have any questions or comments, please contact Lynette Giesen at (505) 462-3544 or email lgiesen@usbr.gov. For Text Telephone Relay Service access, call the Federal Relay System Text Telephone (TTY) number at (800) 877-8330.

Sincerely,

Jennifer Faler, P.E.
Area Office Manager

[Link to full Meeting Materials List](#)

Executive Committee Meeting December 7, 2021

See the following meeting material on the page below:

Reclamation Responses to Cost Share Questions [read-ahead]

Cost Share Comments from Mark Kelly Email on 10/25

1. Shouldn't the reference to second cost-share requirement in the 2nd full para pg 2 be to subsection e(1) of the Act ... the first cost-share requirement reference was to subsection (c) of the Act - maybe a typo. **Memo has been revised for clarity.**
2. What we learned from Ashleigh Morris during a counsel call on the MOA, I think, is that when the BOR talks about the 'programmatic basis' and not 'project basis' they also mean it is aggregate over the years, not federal or calendar fiscal year. If that is true, we need this clarifying memo be accompanied by some rough accounting of what BOR costs fit into the description in the last full and long sentence in the 2nd full para on pg. 2 ... so we know what part of the BOR expenditures are subject to a voluntary (see below) non-fed 25% cost share. **Reclamation has proposed that the cost share be tracked in the Collaborative Program's information system and plans to populate SAMIS with our Collaborative Program expenditures, including the subset that trigger the cost share, in accordance with the signatory contributions descriptions approved by the EC. Refer to our list of 2021 contributions as an example of what Reclamation considers its collaborative program expenditures. Reclamation agrees that the Act sets forth no specific time frame for its programmatic expenditure determinations, and the memo has been revised to reflect such.**
3. The memo appears to answer the in-kind contributions question raised in our non-fed discussion (1st full para on pg2) and addresses non-fed Program activities including CP participation and related (3rd full para pg2), but I don't see where a fed non-BOR funded project that supports the Long Term plan gets credited to the non-fed or fed cost-share. **SAMIS will be used to track CP contributions in general, including specific cost-share contributions, as applicable. This will include in-kind contributions. Accordingly, signatories will be credited by entering such information into SAMIS.**
4. Lastly, and perhaps most importantly, it is not clear to me what the following (1st full para on pg2) sentence means "And, while ... the 2016 BiOp is no longer tied ... in the same way that the 2003 BiOp was structured". Is that trying to say that the 25% cost share is *not* a requirement ... just saying something is not 'tied in the same way' doesn't tell you what it is. Or said another way, is the conclusion made in this memo that the 2016 BiOp is *not* a 'related, subsequent biop' to the 2003 BiOp mean there is no non-fed cost share required under the 2009 Omnibus Approps Act? If so this memo could start and end with that and state non-fed cost share is voluntary and we are going to collect the information solely to inform policy makers and track who is helping ... but that is informational, not compliance with a federal legislative requirement. **Reclamation interprets the Act's 25-percent non-federal cost share requirement as not applying to the 2016 BiOp. The memo has been revised to clarify such.**

: Is there case law informing the question of what comprises a related subsequent biop? None is cited, and I think "related" in this context is subject to interpretation. However, to

the extent the non-feds are happy with cost share not applying to biop-related costs, but only to long term plan-related costs, we may not want to push back on Reclamation's conclusion.

Reclamation has not identified any applicable case law defining "related subsequent." Thus, Reclamation relies upon the ordinary meaning of the terms.

1. What does Reclamation believe their obligations are for Program funded activities that provide opportunities for cost share? Is there an amount of funding that will go to projects initiated by the Program? What projects does Reclamation label as in the BO vs in the Program? **Same as 2. above. In general, when Reclamation enters into an agreement with a non-federal partner to fund specific CP activities outside of the 2016 BO, such agreements will require a 25 percent, non-federal cost share. BO activities and contributions will be entered into SAMIS but will not require cost share.**
 - a. One purpose of the Program is to get stakeholder engagement and buy-in to activities addressing the issues that impact species. Also to ensure how Reclamation conducts ESA activities are in-line with local and state needs and objectives. Maybe that will fall to the long-term plan? The State specifically proposed commitments related to mitigating State water management actions and other commitments that were related to a MRG recovery program. The BO did not distinguish these commitments in their opinion, however, the NMISC believes many of these commitments by all the 2016 BO partners often need Program signatory participation and input to be successfully realized. **No question is presented to which Reclamation may respond.**
2. Programmatically the nonfederal parties are well ahead of the 25% cost share for the past 5 years (at least). How do we best document that continued commitment by the nonFeds especially if this is a required report – still not sure if this is a requirement or voluntary and if and how Reclamation will be using cost share in its ESA efforts? There are currently no specific appropriations for Collaborative Program activities to Reclamation. Is the cost share only a requirement for those kinds of appropriations? **Reclamation is providing a draft 2021 list of expenditures to assist in clarifying this question.**
3. 5th paragraph: Where in the 2003 BO is there a connection with the MRGESCP? The 2016 BO probably relies on MRGESCP efforts more than the 2003 BO did but there isn't an explicit call out for all that nonfed entities do – City (Biopark) for example. **The Act specifically requires a 25-percent non-federal cost share for all agreements that Reclamation may enter into that are necessary to comply with the 2003 Biological Opinion.**
4. What are solely funded BO activities vs ones that might be interpreted as Program-related? For example, if there is a science and monitoring component of a Reclamation project going to FWS or a contractor, what is the role of the Program in those activities and are they going to count towards the federal side of the cost share for the Program or

be separate? There are a number of monitoring efforts required in the BO, are those also Program activities that collectively would be part of the federal contribution to the Program? **Reclamation is providing a draft 2021 list of expenditures to assist in clarifying this question.**

My main question about the October 20, 2021 memo (Memo) interpretation of the 2009 Omnibus Appropriations Act is whether the Memo contradicts clear Congressional intent found in the second amendment to the Energy and Water Development Appropriation Act of 2004 (“Silvery Minnow rider”). To wit: Section 205(a) of Public Law 108-447, December 8, 2004 states as follows: “Notwithstanding any other provision of law **and hereafter**, the Secretary of the Interior, acting through the Commissioner of the **Bureau of Reclamation, may not obligate funds, and may not use discretion, if any to restrict, reduce or reallocate any water stored in Heron Reservoir or delivered pursuant to San Juan Chama Project contracts, including execution of said contract facilitated by the Middle Rio Grande Project, to meet the requirements of the Endangered Species Act**, unless such water is acquired or otherwise made available from a willing seller or lessor and the use is in compliance with the laws of the State of New Mexico, including but not limited to, permitting requirements.” Section 121(b) of the Energy and Water Development Appropriations Act of November 19, 2005, states as follows: Section 2005(b) of Public Law 108-447 (118 Stat. 2949) is amended **by adding “and any amendments thereto” after the word “2003”**. (Emphasis added).

Reclamation interprets the Act as an appropriations limitation that is not in conflict with the statutory language cited, above. Further review would be needed of specific Reclamation agreements with non-federal entities to ensure compliance.

The Energy and Water Development Appropriations Act of November 19, 2005, Section 121 (a) states: The Secretary of the Army may carry out and fund projects to comply with the 2003 Biological Opinion described in Section 205(b) of the Energy and Water Development Appropriations Act, of 2005 (Public Law 108-447) as amended by subsection (b) and may award grants and enter into contracts, cooperative agreements, or interagency agreements with participants in the Endangered Species Act Collaborative Program Workgroup referenced in section 209 (a) of the Energy and Water Development Appropriations Act of 2004 (Public Law 108-137) in order to carry out such projects. **Any project undertaken under this subsection shall require a non-Federal cost share of 25 percent, which may be provided through in-kind services or direct cash contributions and which shall be credited on a programmatic basis instead of on a project-by-project basis, with reconciliation of total project costs and total non-Federal cost share calculated on a three year incremental basis. Non-Federal cost share that exceeds that which is required in any calculated three year increment shall be credited to subsequent three year increments.** (*Emphasis added*)

Reclamation defers to the Secretary of the Army for its interpretation of the above cited statutory language.

Based on this understanding, my question is whether the interpretation that the 2016 Biological Opinion is a new replacement biological opinion and not a ‘related, subsequent biological opinion’ to the 2003 Biological Opinion contravene ‘the notwithstanding any other provision of

law clause' of the 2004 Energy and Water Development Appropriations Act and the any amendments thereto clause of the 2005 Energy and Water Development Appropriations Act of 2005? At first glance, it appears the determination that the 2016 Biological Opinion is not a related subsequent opinion necessarily requires that the provisions of the Energy and Water and Development Appropriations Act do not apply to the 2016 Biological Opinion. That said, I believe it is a fair question to ask how the provisions of the 2005 Energy and Water Development Appropriations Act and amendments thereto, relate to the funding of Collaborative Program (Work Group) activities and how the determination will be made?

Reclamation defers to the Secretary of the Army for its interpretation of the above cited 2005 statutory language.

Finally, I note that the scope of Reclamation discretion to use water for Endangered Species Act purposes is raised by WildEarth Guardians in the June 9, 2021 Notice of Intent to Sue under the Endangered Species Act. See for e.g. assertion that Reclamation failed to consult over the full scope of its discretionary authority over all aspects of its middle Rio Grande water management actions in violation of ESA Section 7(a)(2). (Pages, 42, 43 and 44) I would like to discuss whether the Reclamation scope of discretion outlined in the October 20, 2021 memo affects Collaborative Program funding and therefore, the non-Federal cost share obligation. If so, I think the Executive Committee should look at ways the effect on non-Federal cost share can be mitigated. I look forward to our discussion of this important issue. Thanks, Chris

No question is presented to which Reclamation may respond. Reclamation appreciates the robust discussion with the EC and CP signatories on this issue.

Also raised during the October EC meeting: Can money received by non-federal entities from other federal entities be used to meet Reclamation's 25-percent non-federal cost share for CP agreement activities under the Act?

As a general matter, no. The federal GAO Redbook, at pg. 10-93, states:

As discussed in more detail in section E.5.a of this chapter, a grantee generally may not use funds received under one federal grant program to meet its nonfederal share under another federal grant program. See B-270654, May 6, 1996 (private nonprofit corporation could not use general support funds it received from the State Department as the nonfederal match for other federal grants it received from the Agency for International Development and the United States Information Agency); B-214278, Jan. 25, 1985 (funds from the Farmers Home Administration's Water and Waste Disposal Development Grant Program could not be used to satisfy the nonfederal match requirement of the Environmental Protection Agency's treatment works construction grant program). Congress can, of course, enact a statutory exception that expressly permits this method of funding the nonfederal share. See, e.g., B-239907, July 10, 1991 (Community Development Block Grants (CDBG) can constitute the nonfederal share

because one of the statutorily authorized activities for CDBG funds is providing the nonfederal share for other federal grant programs that are listed in the community's annual CDBG application document).

Given that the Act does not provide a statutory exception allowing the use of other federal funds to meet the Act's cost-share requirement, Reclamation suggests that signatories conduct further legal review of their specific situations in order to determine compliance with cost-share requirements, as applicable.

[Link to full Meeting Materials List](#)

Executive Committee Meeting December 7, 2021

See the following meeting material on the page below:

Draft 2022 MRGESCP Work Plan [read-ahead, draft, spreadsheet]

Tasks	
1	Administrative tasks
2	Task Science & Technical (S&T) Ad Hoc Groups
3	Building linkages and content for the Science and Adaptive Management Information System
4	Decision tools to facilitate adaptive learning
5	Information sharing and coordination

[illegible]

[illegible]

[Link to full Meeting Materials List](#)

Executive Committee Meeting December 7, 2021

See the following meeting material on the page below:

Draft 2022 MRGESCP MOA [read-ahead, draft]

MIDDLE RIO GRANDE ENDANGERED SPECIES COLLABORATIVE PROGRAM
NEW MEMORANDUM OF AGREEMENT
DRAFT

I. STATEMENT OF PURPOSE

The Middle Rio Grande Endangered Species Collaborative Program (Collaborative Program) was established by the 2003 Memorandum of Understanding, which was superseded by the 2008 Memorandum of Agreement (MOA). This new MOA supersedes both, and reaffirms the Collaborative Program as a collaborative effort consisting of federal, state, and local government entities, Indian Tribes and Pueblos, and non-governmental organizations.

II. TERMS AND CONDITIONS

- A. Effective Date and Duration. This MOA shall remain in effect for a period of 5 years from the date of its execution by the Executive Committee. The MOA shall automatically extend for an additional 5 years, unless otherwise terminated by unanimous consent of the Executive Committee.
- B. Individual Termination. During the term of this MOA, any signatory may withdraw from this MOA upon written notice to the Executive Committee. A signatory's participation in this MOA may also be terminated through termination of membership to the Collaborative Program by non-attendance at three consecutive Executive Committee meetings. Termination by individual signatories shall not terminate this MOA, which shall continue to apply with respect to the remaining signatories.
- C. Sovereignty. This MOA does not constitute a waiver or alternation of any sovereign rights and immunities.
- D. Execution in Part and Additional Signatories. This Agreement may be executed in one or more separate counterparts. All of such counterparts shall, when taken together, constitute one and the same agreement. New signatories to this MOA may be added at any time through the duration of this MOA.
- E. Under section 4(f)(2) of the ESA, 16 U.S.C. § 1533, the Secretary of the Interior is directed to develop and implement plans for the conservation of endangered species. The Secretary of the Interior may procure the services of public and private agencies, individuals, and institutions in developing and implementing such recovery plans. Advice from such agencies, individuals, and institutions, such as that offered by signatories to this MOA, is not

subject to the Federal Advisory Committee Act, 5 U.S.C. app.2. See also Bylaws, Article 6 (Executive Committee, including public notice and participation).

- F. This MOA shall not obligate any signatory to participate in, contribute to, or otherwise implement activities recommended by the Collaborative Program.
- G. This MOA is not intended to conflict with or abrogate any legal rights or responsibilities of any signatory or other party.

The signatories hereby state that they have legal authority to enter into this MOA, and have legal authority to work toward the intent of the Collaborative Program.

III. SIGNATURES

Name
Title
Organization

Date

[Link to full Meeting Materials List](#)

Executive Committee Meeting December 7, 2021

See the following meeting material on the page below:

Draft 2021 MRGESCP LTP [read-ahead, draft]



Middle Rio Grande Endangered Species
Collaborative Program

Long-Term Plan

*DRAFT Presented to the Executive Committee for
Approval December 7, 2021*

Prepared for:
Middle Rio Grande Endangered Species Collaborative Program

Prepared by:
Western EcoSystems Technology, Inc.
Program Support Team

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ACRONYMS AND ABBREVIATIONS

2D	two-dimensional
AAH	Administrative Ad Hoc
AM	Adaptive Management
CEM	conceptual ecological model
Collaborative Program	Middle Rio Grande Endangered Species Collaborative Program
EC	Executive Committee
ESA	Endangered Species Act
FPC	Fiscal Planning Committee
GIS	Geographic Information System
H&O	Hink and Ohmart
HR	Habitat Restoration
LLSMR	Los Lunas Silvery Minnow Refugium
Long-Term Plan	Long-Term Plan
MRG	Middle Rio Grande
NMMJM	New Mexico meadow jumping mouse
PASS	Program and Science Support
PESU	Pecos sunflower
PST	Program Support Team
PVA	Population Viability Analysis
RGSM	Rio Grande silvery minnow
S&AM	Science and Adaptive Management
S&T	Science and Technical
SAMC	Science and Adaptive Management Committee
SIG	Signatories
SOW	scope of work
SWFL	southwestern willow flycatcher
USACE	U.S. Army Corps of Engineers
USBR	U.S. Bureau of Reclamation
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
YBCU	yellow-billed cuckoo

FORWARD

This Long-Term Plan is a living document that will be updated biennially to reflect changes in our understanding of the Middle Rio Grande ecosystem, species interactions, and the management approaches used, implementation of proposed projects, and the Middle Rio Grande Endangered Species Collaborative Program's (Collaborative Program) guiding principles. This Plan complements the Collaborative Program's Science & Adaptive Management Plan. Modifications to this Plan will serve to document iterative learning within the Collaborative Program.

1.0 INTRODUCTION TO THE COLLABORATIVE PROGRAM'S LONG-TERM PLAN

The Middle Rio Grande Endangered Species Collaborative Program (Collaborative Program) uses a science and adaptive management (S&AM) process for its operations in support of its mission and goals, and to support greater adaptive management (AM) efforts in the MRG. The Long-Term Plan complements the S&AM Plan, which defines the Collaborative Program's role and associated processes in providing science-based recommendations for the management of the MRG. Together, the S&AM Plan (Collaborative Program 2020) and this Long-Term Plan provide the framework for implementing the science and AM process.

1.1 Overview of the Middle Rio Grande Endangered Species Collaborative Program

The Middle Rio Grande Endangered Species Collaborative Program (Collaborative Program) is a partnership of federal, state, and local governmental entities, Indian Tribes and Pueblos, and non-governmental organizations aiming to protect and recover federally listed species in the riparian corridor of the Middle Rio Grande (MRG), while preserving the area's existing and future water uses in compliance with applicable state, federal, and tribal laws, rules, and regulations. The Collaborative Program currently aids in the recovery of five species listed under the Endangered Species Act of 1973 (ESA): the endangered Rio Grande silvery minnow (*Hybognathus amarus*; RGSM), the endangered southwestern willow flycatcher (*Empidonax traillii extimus*; SWFL), the endangered New Mexico meadow jumping mouse (*Zapus hudsonius luteus*; NMMJM), the threatened yellow-billed cuckoo (*Coccyzus americanus*; YBCU), and the threatened Pecos sunflower (*Helianthus paradoxus*; PESU).

The Collaborative Program was formally established in 2003 with the signing of a Memorandum of Understanding, followed by a 2008 Memorandum of Agreement (MOA) which reaffirmed the signatories' commitment to the Collaborative Program. Currently, sixteen signatories support the Collaborative Program's mission by performing scientific, technical, and administrative activities. The signatories fund and staff scientific studies, population management efforts, water operations, and habitat restoration to the benefit of the MRG's listed species, while also participating in Collaborative Program planning, administration, and technical support.

1.2 Long-Term Plan Purpose

The Long-Term Plan is an evolving communication and planning tool that serves to orient the Collaborative Program's long-term scientific efforts under the S&AM Plan. It is structured to present the Collaborative Program's focus and priorities within a given period (e.g., two-year, five-year, or ten-year) and provide an administrative timeline for operations under the S&AM Plan. None of the signatories are obligated to implement the activities specified in the Long-Term Plan, but signatories may use the document to aid their administrative out-year planning efforts, and give coverage for their authorities under which they participate in the Collaborative Program. This Long-Term Plan lists tasks associated with the implementation of the new framework as an S&AM-based program.

1.3 Development and Structure

Development of the Long-Term Plan is organized under the Collaborative Program's guiding principles (i.e., mission, goals, and objectives). This Long-Term Plan uses the Collaborative Program's priority objectives for a given time period to recommend scientific activities that address the goals of the Collaborative Program. The recommended activities list (Section 7) is presented as potential activities to address the planning objectives in the MRG. The list is informed by the Project Bank contained within the Science and Adaptive Management Information System (SAMIS; Section 4), and is intended to help resource managers in their planning efforts by outlining the short- and long-term priorities recommended by the Collaborative Program. Additionally, the Long-Term Plan hosts an administrative timeline that facilitates tracking, coordination and timely completion of Collaborative Program efforts.

1.4 Updates

The Long-Term Plan should be periodically updated in order to remain relevant to management questions, and current with new scientific learning. Some of these updates will be triggered by revisions to the guiding principles, typically the science objectives and strategies. Others will occur on a regular biennial schedule to incorporate new information from the most recent scientific findings.

Annual Program Evaluation

The EC directs the PST to carry out an annual administrative evaluation of the Collaborative Program, focusing on the continued relevance of the Collaborative Program's mission, goals, and activities; operational effectiveness and efficiency; and signatory engagement. Based on the evaluation results, the EC may decide to revise the guiding principles. These revisions will be reflected in updates to the Long-Term Plan.

Collaboratory and Science Evaluation

The SAMC hosts a biennial "Collaboratory", a workshop to compile scientific learning from the past two years in the context of the Collaborative Program science objectives and scientific uncertainties, and strategically plan for future management needs. In order to identify opportunities for Collaborative Program input, workshop participants learn about signatories' upcoming projects, and priority questions and management issues. Collaboratory participants discuss those questions and issues and attempt to organize them into topical areas (e.g., species, modeling, climate change).

The results of the Collaboratory directly inform a biennial Science Evaluation, where the SAMC recommends updates to the science objectives and strategies (reprioritized to better respond to management needs) and develops approaches to address questions identified by managers. The results of the Science Evaluation inform an update to the Long-Term Plan every two years that reflects changes to priorities, current scientific understanding, and new entries to the Project Bank. These updates, revisions and realignments keep the Collaborative Program's efforts

current and connect the steps of the adaptive management cycle. The EC must approve all updates to the Long-Term Plan.

2.0 GUIDING PRINCIPLES

The Collaborative Program's mission, goals, and objectives guide the direction of its science and AM efforts. The Long-Term Plan describes their purpose and outlines the administrative process to update these guiding principles.

2.1 Mission

In 2019, the Collaborative Program adopted the following mission statement:

Box 1. Collaborative Program Mission Statement

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.

2.2 Goals

The Collaborative Program's long-term species-specific goals (Box 2) are linked to the species recovery plans. They are meant to be aspirational and complementary to existing and future efforts in the MRG. The Collaborative Program assists its signatories and partners in pursuit of these goals by providing scientifically defensible recommendations for management actions benefitting the listed species. When the Collaborative Program activities and initiatives are kept in line with its guiding principles, they pave the way for a collaborative approach to future management of the MRG that benefits its listed species.

Box 2. Collaborative Program Goals

- A) Establish and maintain a self-sustaining population of endangered RGSM distributed throughout the MRG.
- B) Maintain and protect the MRG recovery unit goals for endangered SWFL.
- C) Maintain and protect suitable threatened YBCU habitat in the MRG.
- D) Establish and maintain a self-sustaining endangered NMMJM population in the MRG.
- E) Maintain and protect the threatened 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.

2.3 Objectives

The Collaborative Program's objectives support the goals by focusing the Collaborative Program's efforts on criteria within the species recovery plans for RGSM, SWFL, and PESU; the recovery outline for NMMJM; and the conservation strategy for YBCU. The strategies associated with each objective present the various approaches for achieving that objective, including methods, targets and timelines.

The Collaborative Program uses the species recovery plans, published literature, and input from scientific and technical experts to develop objectives and associated strategies. Initial objectives were defined during a workshop in February 2021, subsequently reviewed by the SAMC, recommended to the EC, and approved by the EC in July 2021. The management relevance and scientific justification of the science objectives will be formally reviewed every two years as part of the Science Evaluation by the SAMC.

Box 3. Collaborative Program 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) Determine suitable environmental flow (i.e., timing, duration and magnitude of spring hydrograph) needed to cue spawning and recruitment for the RGSM population, given system constraints and opportunities.
- A-5.1) Refine existing research and modeling efforts to understand the quantity and quality of habitat available at different flow regimes.
- A-5.2) Develop a range of options for increasing habitat availability and refugia at life stage-limiting flow regimes for all life stages.
- 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 habitat availability for SWFL 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.

From these objectives, the SAMC develops strategies detailing specific actions to address an objective, and from which projects are proposed to include in the Project Bank and, thus, the

Long-term Plan. The Collaborative Program's recommended scientific activities and future direction, as outlined in this Long-Term Plan, are adaptive and determined by the objectives. As such, changes to the objectives and strategies will trigger updates to the Long-Term Plan.

2.4 Using the Guiding Principles to Plan in the Face of Uncertainty

The different levels of the guiding principles are hierarchical with increasing level of specificity and, therefore, achievability (Figure 1). The mission statement and goals are meant to be aspirational, whereas the objectives and strategies provide more details on how to address the mission and goals. Strategies, in turn, inform the development of individual projects.

Each of the guiding principles adds detail to an idea from the layer above it. For example, each of the seven Collaborative Program goals can, and most do, have multiple associated objectives. In turn, each of those objectives may have multiple strategies which provide more specificity, and each strategy may inform the development of one or more projects.



Figure 1. Conceptual diagram of the Collaborative Program guiding principles.

The different levels of the hierarchy also inform strategic planning timelines. For example, because goals are inherently less specific than objectives, more time should be allowed for achieving goals. Similarly, the details provided in a strategy will enable the rapid design of a study to address it. This framework allows for general expectations regarding the timing of progress regarding the guiding principles (Figure 2).



Figure 2. Conceptual diagram of the approximate planning periods for the different levels of the Collaborative Program's guiding principles.

The biennial Science Evaluation will ensure the application of adaptive learning within the Collaborative Program through the assessment of new scientific information, associated revisions to science objectives and strategies, and regular updates to the recommended activities list of the Long-Term Plan. As part of the Science Evaluation, the guiding principles may be updated to respond to changes in management priorities or to incorporate a significant change in scientific understanding.

3.0 SUPPORTING ADAPTIVE MANAGEMENT IN THE MIDDLE RIO GRANDE

Over the past decade, the Collaborative Program's EC has reaffirmed its commitments to use science and AM as the central tenets for its operations and decision-making processes, and to support a broader vision for the MRG. The S&AM Plan codifies that commitment and lays out the policies, procedures, and structure required to implement adaptive management within the context of the MRG by detailing how the Collaborative Program's organizational structure and operations can track progress, improve communication, and learn from and adjust for new information. While the S&AM Plan defines the Collaborative Program's scientific process and protocols to support communication and transparency, this Long-Term Plan incorporates a schedule of tasks associated with implementing the new framework as an S&AM-based program (Section 6).

Additionally, the Long-Term Plan describes activities that support the S&AM Plan by addressing critical scientific uncertainties, integrating new information and forecasts, responding to management questions, and implementing AM strategies as described in Section 7.

3.1 Supporting Resiliency and Climate Change Planning

The 2009 U.S. Geological Survey (USGS)'s *Climate Change and Water Resources Management: A Federal Perspective* lists four elements of a collaborative process and sound science strategy (Table 1). These foundational elements are incorporated throughout the Collaborative Program's S&AM Plan and processes, and are instrumental in ensuring the plan's value and utility to individual signatories and to AM in the MRG.

Table 1. The Elements of a Collaborative Process and Sound Science Strategy.

Element	Definition
Consolidate the Needs of the Natural Resource Management Community	Identify the common needs of the federal and non-federal natural resource management community for information and tools required to support adaptation as climate changes
Inform the Scientific Community	Guide and foster federal and non-federal research and technology investments toward meeting these "user-defined" needs
Teamwork and Participation	Generate collaborative efforts across the natural resource management and scientific communities to develop, test, and apply new methods, tools, and capabilities
Flexible and Inclusive	Issue periodic updates as new information and additional perspectives are obtained

The Collaborative Program embraces these elements throughout its implementation schedule for the S&AM process. Common needs across the natural resource management community of the MRG are assessed regularly via engagement with the SAMC. The SAMC considers the needs and challenges of each signatory organization, and uses scientific evidence to design management-relevant recommendations that meet the Collaborative Program's objectives. In addition, annual evaluation of the objectives ensures activities are aligned to address current management needs and changing hydrologic conditions, while the biennial science evaluation aligns the objectives with evolving critical scientific uncertainties. Impartial prioritization of research efforts is based on the level of scientific impact, timeliness, and relevance to management needs. This prioritization, along with tracking and synthesis of new findings, is carried out primarily through the use of the SAMIS, with input from the SAMC and approval by the EC.

Updates to the SAMIS, supported with scientific evidence, are documented to create a decision record that can be referenced, as needed, to support adaptive management. With a shared understanding of past decisions and the motivations behind them, scientists and managers will be able to build forward-thinking and proactive contingencies into their decision-making

processes. For future scenarios, the Long-Term Plan lays out a path along which the Collaborative Program can inform AM and navigate uncertainties, such as those associated with climate change.

Incorporating Future Planning into the Long-Term Plan

The U.S. Army Corps of Engineers (USACE) and U.S. Bureau of Reclamation (Reclamation) built upon the USGS foundational elements (2009) with a 2011 planning guide, *Addressing Climate Change in Long-Term Water Resources Planning and Management*, that details eight technical steps to categorize ways of incorporating climate trends and forecasts into long-term water resource planning. These are:

1. *Summarize Relevant Literature*
2. *Obtain Climate Change Information*
3. *Make Decisions about How to Use the Climate Change Information*
4. *Assess Natural Systems Response*
5. *Assess Socioeconomic and Institutional Response*
6. *Assess System Risks and Evaluate Alternatives*
7. *Assess and Characterize Uncertainties*
8. *Communicating Results and Uncertainties to Decision-Makers*

Similar steps can be used by the Collaborative Program to incorporate other future scenarios besides climate change into strategic planning. By integrating forecasts, model outputs, and condition-dependent alternatives, as described in the S&AM Plan, the Collaborative Program can make its recommended activities, such as habitat restoration, more resilient to changing environmental and operational conditions.

Socioeconomic factors, risk, and uncertainty are assessed at multiple levels of the planning process by engaging regularly with experts and stakeholders. To ensure that Collaborative Program activities remain relevant to management, individual signatories may participate in the Collaboratory by contributing their priority questions and issues for consideration during updates to the Long-Term Plan.

4.0 SCIENCE AND ADAPTIVE MANAGEMENT INFORMATION SYSTEM (SAMIS)

The SAMIS is a high-level tool for both tracking and guiding adaptive management actions within the context of the Collaborative Program. The information system includes a relational database, two user interfaces, a cloud server, authentication software, database managers, and end users.

The SAMIS integrates previously developed tools (e.g., conceptual ecological models) and recommendations (e.g., from independent science panels) with current scientific findings and priority questions, and links them in meaningful ways with proposed and ongoing signatory

activities. In other words, the SAMIS has been designed to measure both the incremental value of individual activities and the accrued value of multiple activities over time in support of the goals of the Collaborative Program.

The SAMIS utilizes a hub and spoke framework centered on a Project Bank (Figure 1; Section 4.1). The SAMIS includes guidance via strategic planning (Figure 1, orange pathway), recommended actions from Independent Science Panels (blue pathway), and critical uncertainties identified from Conceptual Ecological Models (green pathway). The project findings, management recommendations and opportunities for adaptive management depicted in the purple pathway are SAMIS outputs that document the programmatic value of a project once it is completed. In this way, the SAMIS tracks a project from start to finish, ensuring that all relevant findings are exploited for adaptive learning.

4.1 The Project Bank

The cornerstone of the SAMIS is the Project Bank: a list of past, current, and proposed activities in the MRG. Items in the Project Bank (both in-progress and proposed) are linked to critical scientific uncertainties, recommended actions, and Collaborative Program planning objectives to enable prioritization of research efforts that support decision-making, as presented in the Long-Term Plan and S&.

This regularly maintained list of projects contains technical, logistical, and administrative details needed to categorize and sort projects to create customized summary reports for managers. These details also allow for the generation of metadata through linkages to other information in the SAMIS, which is helpful for evaluating the Collaborative Program's progress in adaptive management. These linkages also enable the organization of proposed activities based on scientific impact, timeliness, and relevance to Collaborative Program planning priorities.

Science & Adaptive Management Information System

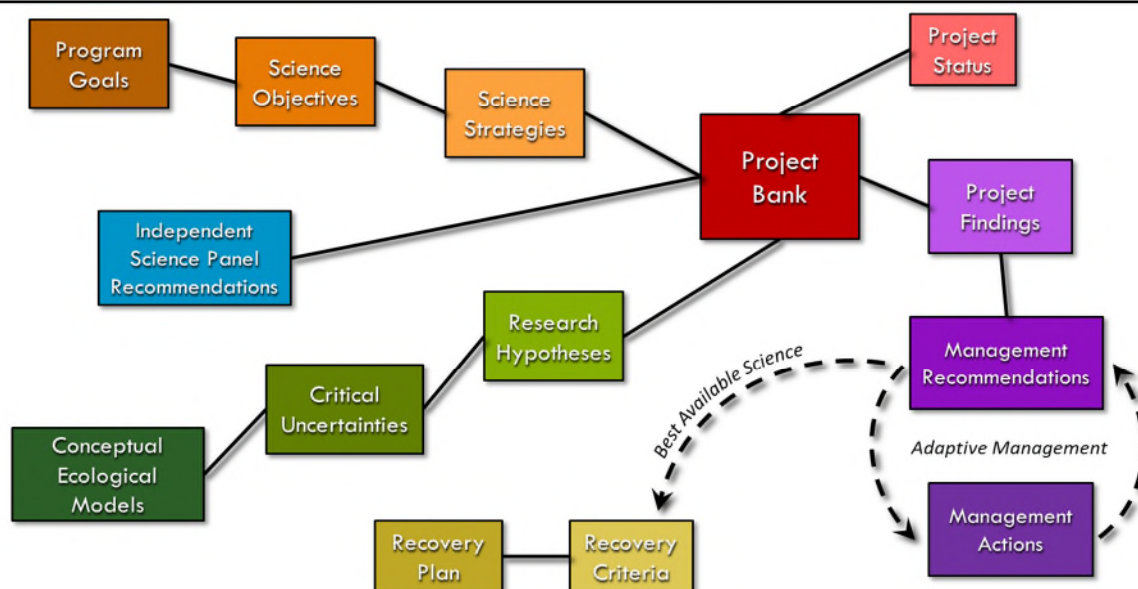


Figure 3. Conceptual diagram depicting the information inputs (orange, blue, and green pathways) to the Project Bank (red hub) and the outputs (purple pathway) of the SAMIS.

4.2 Using the SAMIS

Figure 3 above depicts the pathways between the Project Bank and other AM building blocks, such as critical uncertainties, conceptual ecological models, and management recommendations. These relationships will enable users of the SAMIS to sort, filter and export (aka query) subsets of projects with the characteristics (aka fields) they select. Example queries might include:

- List of ongoing projects that address critical uncertainties about a species of interest;
- List of completed projects funded by a particular agency within a specified time frame; or
- List of all Collaborative Program objectives, strategies, recommendations and uncertainties addressed by a specified project.

In addition to customized searches and summaries, the SAMIS provides a platform for impartial prioritization of research efforts. By comparing the number and relative importance of connections to each project, for example, a user might rank a set of projects based on criteria selected to meet their agency's needs. This process can also be applied broadly to organize projects and other activities along a timeline for long-term planning purposes. Sorting studies by species, river reach, year, or type of activity facilitates collaboration among researchers and promotes leveraging of resources, such as data and personnel. Summarizing the estimated costs and feasibility of a set of projects, as well as their collective value to a recovery plan or biological opinion, could help to

justify research funds. On a larger scale, simple summary statistics could be calculated to examine the allocation of resources across the different listed species or across the geographic reaches for different fiscal years. These types of comparisons help the Collaborative Program track its progress and realign planned activities to its goals in the short and long term.

5.0 ADMINISTRATIVE SCHEDULE

Integrating an administrative schedule into the Collaborative Program's science and AM framework is a critical component for providing timely recommendations of priority scientific activities to signatories and others working in the MRG. This section provides details for tasks that should occur every year, but is not an exhaustive list. Additional tasks that are not mentioned may include external funding deadlines related to grants, Collaborative Program efforts related to specific requests or recommendations, or other activities that are not bounded by an annual schedule.

5.1 Committee Tasks and Coordination

Table 2 lists the annual tasks needed to carry out Collaborative Program operations, including committee meetings. The schedule does not exclude other activities or meetings, it is meant to provide a framework for activities that directly inform each other throughout the year, based on the responsibilities of each Collaborative Program committee.

Executive Committee Tasks and Coordination

The EC is responsible for ensuring that the Collaborative Program's administrative and governance activities are carried out, determining the Collaborative Program's direction and structure, and that work plans and schedules are met.

The EC directs an AAH or the PST to carry out the annual Collaborative Program evaluation. By performing regular Collaborative Program-wide reviews of activities, the decision-makers (including EC members, Congressional and State representatives, and others) can be assured that Collaborative Program actions are accomplishing the Collaborative Program's mission and benefitting the listed species. Additionally, this effort provides evidence that federal and non-federal expenditures and efforts are producing tangible benefits for the listed species and their habitats.

Each year, the EC will either direct an AAH Group or the PST to draft the Collaborative Program's Annual Work Plan, which the EC will approve in December of that year. This Annual Work Plan is informed by the activities carried out in the previous year, the scientific priorities set by the SAMC and EC, and the operational needs of the Collaborative Program. Drafting the Work Plan includes working with each committee to include their administrative tasks, deadlines, and reporting periods, as well as the tasks of the EC. The Annual Work Plan includes the activities to be carried out and the responsible Collaborative Program group(s).

Science and Adaptive Management Committee Tasks and Coordination

The SAMC appointments include up to eight positions that hold two-year staggered terms. Each year, the Collaborative Program's Science Coordinator works with the EC to administer a new member search.

The SAMC will update the conceptual ecological models (CEMs) annually based on the new scientific findings from completed signatory projects, new published literature, and information shared at the Science Symposium or the Collaboratory. The SAMC is also responsible forming and overseeing S&T Ad Hoc Groups. The SAMC may form S&T Ad Hoc Groups to develop project ideas to build off of scientific findings or to respond to new management questions. These project ideas are then entered into the Project Bank and used to update the Long-Term Plan. The SAMC carries out the biennial Science Evaluation, from which it recommends to the EC any updates to the science objectives, strategies, and the Long-Term Plan.

The SAMC will also work with the PST to hold workshops on a topic of timely relevance to the Collaborative Program. The SAMC decides on the topic based on scientific need, and coordinates with the PST to develop the agenda and determine desired outcomes. The Collaborative Program will host a topical workshop every fall, and may plan for more if there is a particular need.

Fiscal Planning Committee Tasks and Coordination

The FPC plays the central role of helping signatories coordinate the necessary resources (e.g., funding, staff, land access, laboratory space, etc.) to plan and implement projects that are relevant to the Collaborative Program. These projects do not necessarily have to be in the Long-Term Plan, but should pertain to the Collaborative Program's guiding principles. Part of the coordination should be working on developing appropriate monitoring plans to collect data on species response.

The FPC communicates to the SAMC on what recommended science activities in the Long-Term Plan are being implemented. Additionally, the FPC works with signatories to ensure signatory contributions are entered into SAMIS, activity statuses are updated, and findings from scientific activities are presented to the Collaborative Program.

Signatory Contributions

Signatory contributions are, as defined by the EC, signatory-implemented or –funded activities that either support the Collaborative Program administratively, or provide scientific findings and results that contribute to the Collaborative Program's understanding of the listed species and their habitats. Signatory contributions are tracked in SAMIS. Findings, data, and final reports are provided to the Collaborative Program for inclusion in science and adaptive management tools (e.g., CEMs, SAMIS, geospatial mapper). Collectively, the results of signatory contributions will inform recommendations on future science activities (via updates to the Long-Term Plan) and management activities.

Signatory contributions fall into the following categories:

- *Program Management and Administration* – Non-research support of the MRGESCP's guiding principles through administrative assistance, funding coordination, planning, coordination, and staffing of MRGESCP activities. Examples include the Program and Science Support contract, the Program Portal, and public outreach initiatives.
- *Species Management and Recovery* – Non-research activities with influence on or relevance to recovery of one or more listed species within the Middle Rio Grande (MRG). Examples include rescue operations, support of captive propagation facilities, and control of invasive species.
- *Population Monitoring and Modeling* – Descriptive empirical and/or mathematical investigations of population data for one or more listed species within the MRG. Examples include estimation of population size and trends over time, estimation of vital rates, and population viability forecasts.
- *Habitat Assessments and Modeling* – Descriptive empirical and/or mathematical investigations of physical environmental features at various spatial scales (e.g., site, reach, landscape) with influence on one or more listed species or the ecosystem of the MRG. Examples include hydrology and hydraulic modeling, mapping and geographic information systems, geomorphic studies, water quality studies, and climate change studies.
- *Field and Laboratory Experiments* – Any study designed to test a hypothesis about a listed species or other biotic response to a manipulation in a field or laboratory setting. Examples include habitat manipulations of flows or vegetation, before-after control-impact restoration designs, and laboratory studies of physiological responses.

The PST will work with the FPC to prepare a yearly report of each signatory's contributions based on information in SAMIS.

5.2 Collaborative Program Administrative Schedule

The schedule in Table 2 ensures the timely completion of annual and biennial administrative Collaborative Program activities supporting operations benefitting the listed species in the MRG.

Table 2. Collaborative Program Biennial Administrative Schedule

	MEETINGS	EVERY YEAR		YEAR A	YEAR B
January	SAMC	Annual Program Evaluation			Science Evaluation
February ^N	FPC	SAMC new membership SAMC search Admin Ad Hoc	Draft Annual Report		Develop proposed projects from Collaboratory Update Long-Term Plan
March	EC	Signatory Contributions report Results from Program evaluation • Updates to charters, S&AM Plan* • Form By-Laws Admin Ad Hoc*	Appoint new SAMC members Approve Annual Report Relate MAT/ hydrology forecast to Collaborative Program activities		Approve updated Science Objectives Approve updated Long-Term Plan
April ^N	SAMC	Updates to CEMs By-Laws Admin Ad Hoc* Ensure data on Portal is up-to-date		S&T Ad Hoc to work with contractor to update RioRestore	
May	FPC				
June ^N	EC	Updates and recs from SAMC Work Plan update	Update By-Laws*		
July	SAMC				
August ^N	FPC				Funding check: Rio Restore, Program Portal, Program Support
September	EC	Updates and recs from SAMC	Work Plan update		
October ^N		Topical Workshop	Draft Annual Report		
November	FPC				

December ^N	EC	Hydrology and species summary SAMC summary Next year's work plan Determine next year's SAMC membership needs	Collaboratory Science Symposium
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* = If needed; ^N = Newsletter; MAT = Minnow Action Team; RioRestore is the geospatial data of habitat restoration sites in the MRG.

Activities that are in colored font denote agenda topics for the corresponding committee meeting (e.g., blue for EC, purple for SAMC, orange-red for FPC).

Not all Collaborative Program activities are included in the biennial schedule. Some, such as drafting a new Memorandum of Agreement, has a timeframe longer than two years. Others are not beholden to any set schedule and may occur any time and as appropriate. These include:

- Science-based management recommendations from the EC
- Propose activity ideas for the Project Bank
- Public outreach and education
- Internal or external peer review
- Additional Administrative or Science & Technical Ad Hoc Groups
- Emergency or special EC meetings
- Holding seminars
- Holding additional topical workshops

The biennial schedule is subject to change based on Collaborative Program need, priorities, activities, direction, and any future changes to the Program structure.

6.0 COLLABORATIVE PROGRAM RECOMMENDED ACTIVITIES

In addition to the administrative tasks listed in Section 5, the recommended activities for this Long-Term Plan are also listed below (Table 3). These activities fall into the same categories used to define signatory contributions (Section 5.1):

- *Program Management and Administration*
- *Species Management and Recovery*
- *Population Monitoring and Modeling*
- *Habitat Assessments and Modeling*
- *Field and Laboratory Experiments*

Table 3 lists the Collaborative Program recommended activities populated from the SAMIS Project Bank. It notes the Collaborative Program objective(s) it would address, the project category, and the species of interest. It also indicates the project status, as follows:

- *Outlined*: A proposed project idea has been outlined, but lacks details needed for a scope of work
- *Scoped*: A scope of work has been developed, which includes the research question/objective, the study design considerations, estimated budget, and timeline.
- *Approved*: A funding agency has agreed to fund the project, but work has not commenced.
- *In-Progress*: Project work is underway.

The associated spreadsheet of Collaborative Program recommended activities is the full report-out from the SAMIS Project Bank, and allows for individual signatories to create filters, queries, and pivot tables to aid in their own planning processes.

One of the tasks for the 2022 Work Plan is the SAMC developing a robust scoring rubric which will include three components:

1. The *linkage* score, which appraises the intrinsic value of the project to the Collaborative Program by indicating the relevance of the proposed activities to the guiding principles, signatories' planning priorities, and scientific uncertainties;
2. A *SMART* (Specific, Measurable, Achievable, Realistic, and Timely) score, which appraises the comprehensibility of a project's scope of work, and;
3. A *resiliency* score, which appraises the value of the project to planning and adaptive management.

Future Long-Term Plan updates will incorporate all three scores into the Recommended Activities list.

Table 3. Recommended Activities Sorted by Project Name

Project Name	Program Objective	Project Status	Project Category	Focus/Species
Assess the Persistence of Stocked Silvery Minnow	Science Objective A-6.2	Outlined	Population Monitoring and Modeling	RGSM
Assessing temporal and spatial continuous water quality trends in the Angostura, Isleta, and San Acacia reaches of the Middle Rio Grande	Science Objective A-2, A-3, A-4	Approved	Habitat Assessments and Modeling	MRG Ecosystem
Assessing temporal and spatial continuous water quality trends in the Isleta and San Acacia reaches of the Middle Rio Grande	Science Objective A-3, G-1	Outlined	Habitat Assessments and Modeling	Other
Assessment and Monitoring of Rio Grande Silvery Minnow Genetics	NA	In-Progress	Population Monitoring and Modeling	RGSM
Assessment of Native and Non-native Fish Species in the Middle Rio Grande and their relation to Rio Grande Silvery Minnow	Science Objective A-2	Outlined	Field and Laboratory Experiments	RGSM
Bosque and Riverine Restoration Project and Fish Passage at Isleta Diversion Dam	NA	In-Progress	Field and Laboratory Experiments	RGSM
Candelaria Nature Preserve Risk Management Plan	NA	In-Progress	Program Management and Administration	MRG Ecosystem
Characterize the relationship between the annual CPUE index and true Rio Grande Silvery Minnow population size	Science Objective A-1	Outlined	Field and Laboratory Experiments	RGSM
Compare and contrast Yellow-billed Cuckoo and Southwestern Willow Flycatcher breeding habitat requirements within the Middle Rio Grande	Science Objective B-3.1, C-1.3	Outlined	Field and Laboratory Experiments	YBCU
Compare invasive survey methods (trapping, telemetry) to noninvasive methods (e.g., models, remote cameras, track plates) for risk, effectiveness and reliability regarding study of New Mexico meadow jumping mouse	Science Objective D-1.2	Outlined	Field and Laboratory Experiments	NMMJM
Comparison of Environmental Conditions Experienced by Rio Grande Silvery Minnow in Hatchery Facilities to those Experienced in the Middle Rio Grande	Science Objective A-2	Outlined	Field and Laboratory Experiments	RGSM

Project Name	Program Objective	Project Status	Project Category	Focus/Species
Conduct Rio Grande Silvery Minnow Monitoring at 10(j) Reintroduction Sites to Evaluate Stocked Populations	Science Objective A-1	In-Progress	Field and Laboratory Experiments	RGSM
Continue to Support the Development of Population Viability Analysis Models	Science Objective A-3	Outlined	Habitat Assessments and Modeling	RGSM
Data Collection and 2D Modeling of High-flow Channels	Science Objective A-3, A-4, A-5.1	Outlined	Habitat Assessments and Modeling	MRG Ecosystem
Decision Tree of Hydrologic Conditions	Science Objective A-3, A-4	Outlined	Program Management and Administration	Other
Describe metapopulation structure, dynamics and connectivity of Southwestern Willow Flycatcher populations in the Middle Rio Grande	Science Objective B-3.3	Outlined	Population Monitoring and Modeling	SWFL
Describe population dynamics of New Mexico meadow jumping mouse in the Middle Rio Grande	Science Objective D-1.1	Outlined	Field and Laboratory Experiments	NMMJM
Describe the impacts of the tamarisk beetle on Southwestern Willow Flycatchers and their breeding habitats in the Middle Rio Grande	Science Objective B-3.1, B-3.2	Outlined	Field and Laboratory Experiments	SWFL
Determine the amount of genetic variation within and between populations of New Mexico meadow jumping mouse	Science Objective D-1.1	Outlined	Field and Laboratory Experiments	NMMJM
Determine the rate of development and hatching success under various environmental conditions for Rio Grande Silvery Minnow	Science Objective A-2, A-3	Outlined	Field and Laboratory Experiments	RGSM
Determine the survival rates and estimate their natural (process) variability for different age classes of Rio Grande Silvery Minnow	Science Objective A-3	Outlined	Population Monitoring and Modeling	RGSM
Determine which site selection and prioritization procedures contribute to the successful restoration of Southwestern Willow Flycatcher breeding habitats along the Middle Rio Grande.	Science Objective B-3.1, B-3.2	Outlined	Field and Laboratory Experiments	SWFL
Develop and Utilize a Decision Tool to Test the Feasibility of Re-establishing Rio Grande Silvery	Science Objective A-3, A-4	Outlined	Field and Laboratory Experiments	RGSM

Project Name	Program Objective	Project Status	Project Category	Focus/Species
Minnow Populations at Potential Reintroduction Locations				
eDNA marker development for Rio Grande Silvery Minnow (<i>Hybognathus amarus</i>)	Science Objective A-1, A-2	Approved	Population Monitoring and Modeling	RGSM
Effects of Sediment Management to River Habitats	Science Objective A-2, A-4	Outlined	Habitat Assessments and Modeling	MRG Ecosystem ; RGSM
Effects of Temperature Degree Days and Photoperiod on Rio Grande Silvery Minnow Spawning	Science Objective A-2	Approved	Field and Laboratory Experiments	RGSM
Efficacy of RGSM Egg Collection over Varying Temporal and Spatial Scales	Science Objective A-6.2	Outlined	Population Monitoring and Modeling	RGSM
Estimate the fecundity of Rio Grande Silvery Minnow and its variability with age or size	Science Objective A-2, A-3	Outlined	Population Monitoring and Modeling	RGSM
Evaluate and quantify in channel habitat diversity and utilization for all life stages of Rio Grande Silvery Minnow	Science Objective A-1, A-2, A-3, A-4, A-5.1	Scoped	Habitat Assessments and Modeling	RGSM
Evaluate the sizes, distributions, and status of Southwestern Willow Flycatcher populations along the Angostura Reach	Science Objective B-1	Outlined	Population Monitoring and Modeling	SWFL
Evaluate Water Quality in the Middle Rio Grande in Relation to the Rio Grande Silvery Minnow	Science Objective A-2, A-4, A-5.1	Outlined	Field and Laboratory Experiments	RGSM
Evaluation of Paired Spawning and Communal Spawning for Rio Grande Silvery Minnow	NA	Scoped	Field and Laboratory Experiments	RGSM
Evaluation of Rio Grande Silvery Minnow Population Model Alternatives	Science Objective A-3	In-Progress	Field and Laboratory Experiments	RGSM
Evaluation of Yellow-billed Cuckoo (Yellow-billed Cuckoo) Prey Base and Associated Host Plants	Science Objective C-1.3	Scoped	Population Monitoring and Modeling	YBCU
Fish Movement Study at the Constructed San Acacia Diversion Dam Fish Passage	Science Objective A-4	Outlined	Population Monitoring and Modeling	RGSM

Project Name	Program Objective	Project Status	Project Category	Focus/Species
Flow Frequency Analysis for Albuquerque South to Belen	Science Objective A-3, A-4	Approved	Habitat Assessments and Modeling	MRG Ecosystem ; RGSM; SWFL; YBCU
Genetic Comparison of Rio Grande Silvery Minnow Eggs/Larvae Collected on the Floodplain to those Collected in the Main Channel	Science Objective A-2	Outlined	Field and Laboratory Experiments	RGSM
Genetically-Based Techniques to Measure Physiological Response to Drying in RGSM	Science Objective A-2	Outlined	Population Monitoring and Modeling	RGSM
Habitat Restoration Planning and Design	NA	Outlined	Field and Laboratory Experiments	Other
Habitat Restoration Projects Assessment	Science Objective F-1, G-1	Outlined	Field and Laboratory Experiments	MRG Ecosystem
Habitat Restoration Revegetation Techniques	Science Objective A-5.2, B-3.1, B-3.2, F-2	Outlined	Field and Laboratory Experiments	MRG Ecosystem
Hink and Ohmart Vegetation Mapping	Science Objective B-2, B-3.1, B-3.2, C-1.1, F-2	Approved	Habitat Assessments and Modeling	MRG Ecosystem
Historical evaluation of alluvial channel crossings	Science Objective A-4	Approved	Habitat Assessments and Modeling	MRG Ecosystem
Identification and Evaluation of Potential Sites for RGSM 10(j) Reintroduction	Science Objective A-3	Outlined	Habitat Assessments and Modeling	RGSM
Identify and Assess Habitat Needs, Management Activities, and Any Major Hurdles to Rio Grande Silvery Minnow Reintroduction into Upper and Lower Rio Grande and Pecos River Reaches	Science Objective A-2, A-3	Outlined	Field and Laboratory Experiments	RGSM
Identify Spatial Behavior Patterns and Drivers of Those Behaviors Within and Among Years for Yellow-billed Cuckoos that Breed in the Middle Rio Grande	Science Objective C-1.3	Outlined	Field and Laboratory Experiments	YBCU
Identify the abiotic and biotic variables that predict suitable Yellow-billed Cuckoo breeding habitats in the Middle Rio Grande across multiple spatial and temporal scales	Science Objective C-1.3	Outlined	Field and Laboratory Experiments	YBCU

Project Name	Program Objective	Project Status	Project Category	Focus/Species
Identify the key life-history sensitivities of Rio Grande Silvery Minnow and which age-specific survival and fecundity rates most affect the rate of population change	Science Objective A-2	Outlined	Population Monitoring and Modeling	RGSM
Identify the Yellow-billed Cuckoo breeding population sizes, distributions, and trends in the Middle Rio Grande	Science Objective C-1.3	Outlined	Field and Laboratory Experiments	YBCU
Impacts of Climate Change on Middle Rio Grande Water and Species Management	Science Objective A-3, A-4, G-1	Outlined	Habitat Assessments and Modeling	MRG Ecosystem
Implement the Strategy for Maintenance and Construction of Southwestern Willow Flycatcher Habitat	Science Objective B-3.3	Outlined	Field and Laboratory Experiments	SWFL
Improving Southwestern Willow Flycatcher and Yellow-billed Cuckoo Habitat Restoration Site Selection	Science Objective B-1, B-3.1, B-3.2, C-1.1, C-1.3	Scoped	Habitat Assessments and Modeling	SWFL; YBCU
Investigate the ways in which key Rio Grande Silvery Minnow vital rates vary as a function of hydrologic factors, abiotic environmental factors, and biotic factors	Science Objective A-2	Outlined	Field and Laboratory Experiments	RGSM
Locate potential Middle Rio Grande populations of New Mexico meadow jumping mouse	Science Objective D-1.1	Outlined	Field and Laboratory Experiments	NMMJM
Maximizing Success for Habitat Restoration Projects by Optimizing Alternatives for Active Re-vegetation, Supplemental Watering, and Other Management Activities	Science Objective F-2	Outlined	Field and Laboratory Experiments	MRG Ecosystem
Middle Rio Grande Habitat Restoration Fisheries Monitoring	Science Objective A-5.1, A-5.2	Outlined	Population Monitoring and Modeling	RGSM
Minimize the Adverse Effects to Rio Grande Silvery Minnow from Levee Project Construction and In-situ Monitoring	Science Objective A-2, A-3	Approved	Field and Laboratory Experiments	RGSM
Modeling of the future bosque ecosystem vegetative community under climate change	Science Objective F-2	Outlined	Habitat Assessments and Modeling	MRG Ecosystem ; RGSM; SWFL;

Project Name	Program Objective	Project Status	Project Category	Focus/Species
				YBCU; PESU; NMMJM; Other
Monitor and Evaluate Southwestern Willow Flycatcher Habitat Restoration	Science Objective B-1, B-3.1	Outlined	Field and Laboratory Experiments	SWFL
Monitor Habitat Restoration Projects for Effectiveness	Science Objective B-3.1, C-1.1, F-1	Outlined	Field and Laboratory Experiments	MRG Ecosystem
MRG restoration sites WIFL/YBCU annual surveys	Science Objective B-1, B-3.2, C-1.3	Approved	Population Monitoring and Modeling	YBCU
Optimize Survivorship of Rio Grande Silvery Minnow During Transportation and Stocking For Post-Release Retention At Reintroduction and Augmentation Site	Science Objective A-6.2	Outlined	Field and Laboratory Experiments	RGSM
PIT Tagging and Genetic Characterization of Broodstock	NA	In-Progress	Population Monitoring and Modeling	RGSM
Portable bubble barrier development and testing	NA	Approved	Field and Laboratory Experiments	RGSM
Program and Science Support	Administrative Objective Admin-1	In-Progress	Program Management and Administration	Other
Program Portal	Administrative Objective Admin-1	In-Progress	Program Management and Administration	Other
Qualitative Assessment of the MRG from the perspective of geomorphology, hydraulics, and hydrology	Science Objective A-3, A-4, A 5.1	Approved	Habitat Assessments and Modeling	MRG Ecosystem
Quantify Middle Rio Grande Channel Habitat Diversity Analysis	Science Objective A-3, A-4	Approved	Habitat Assessments and Modeling	MRG Ecosystem ; RGSM; SWFL; YBCU
Quantify Piscine Predators and Competitors	Science Objective A-2, F-1	Outlined	Field and Laboratory Experiments	RGSM
Raptor Nest Monitoring	NA	Approved	Population Monitoring and Modeling	Other

Project Name	Program Objective	Project Status	Project Category	Focus/Species
RGSM Larval Gut Analysis	Science Objective A-2	Outlined	Field and Laboratory Experiments	RGSM
Rio Grande Silvery Minnow Ecological Studies Evaluating Habitat Use and Recruitment	Science Objective A-2, A-3	Outlined	Field and Laboratory Experiments	RGSM
Rio Grande Silvery Minnow Genetics over Time in Hatchery Facilities	NA	Scoped	Field and Laboratory Experiments	RGSM
Rio Grande Silvery Minnow Population Estimation	Science Objective A-1, A-3	Outlined	Population Monitoring and Modeling	RGSM
Rio Grande Silvery Minnow Spawning and Recruitment Study at the Los Lunas Silvery Minnow Refugium	Science Objective A-4, A-5.2	Outlined	Field and Laboratory Experiments	RGSM
Sediment analysis for Middle Rio Grande	Science Objective A-3, A-4, A-5.1	Approved	Habitat Assessments and Modeling	MRG Ecosystem ; RGSM
Short-Interval Assessment of Whole-Stream Rio Grande Metabolism	Science Objective A-3, F-1, G-1	Outlined	Habitat Assessments and Modeling	MRG Ecosystem
Size-Related PIT Tagging Mortality and Surgical Methods to Minimize Mortality in RGSM	Science Objective A-6.2	Outlined	Field and Laboratory Experiments	RGSM
Soil Moisture Holding Capacity Study	Science Objective B-3.2	Scoped	Field and Laboratory Experiments	MRG Ecosystem
Thermal and Dissolved Oxygen Tolerance of Rio Grande Silvery Minnow	Science Objective A-2, A-5.1	Scoped	Field and Laboratory Experiments	RGSM
Thermal Limits of RGSM Survivability	Science Objective A-2	Outlined	Field and Laboratory Experiments	RGSM
Use modeling tools (e.g., FLO-2D and HEC-RAS) to estimate frequency and extent of overbank inundation and in-channel habitat in the Middle Rio Grande	Science Objective A-3, A-5.1, B-3.3	Outlined	Field and Laboratory Experiments	RGSM; SWFL
USGS Groundwater/Surface Water Interaction	Science Objective A-4, A-5.1, B-3.3, G-1	Outlined	Habitat Assessments and Modeling	Other
Using URGWOM to Evaluate Future Water Management Strategies	Science Objective A-4, A-5.1, G-1	Outlined	Habitat Assessments and Modeling	MRG Ecosystem ; RGSM; SWFL;

Project Name	Program Objective	Project Status	Project Category	Focus/Species
				YBCU; PESU; NMMJM
Water Requirements for Southwestern Willow Flycatcher and Yellow-billed Cuckoo Habitat and Nesting	Science Objective B-1, B-3.1, B-3.2, B-3.3, C-1.1	Outlined	Field and Laboratory Experiments	SWFL; YBCU
Yellow-billed Cuckoo Genetics/Genomics	Science Objective C-1.3	Scoped	Field and Laboratory Experiments	YBCU
Ground Water - Surface Water Interactions in the Riparian Zone	Science Objective B-3.3	Outlined	Habitat Assessments and Modeling	MRG Ecosystem

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[Link to full Meeting Materials List](#)

Executive Committee Meeting December 7, 2021

See the following meeting material on the page below:

Draft Peer Review Admin Ad Hoc Group Charge [read-ahead, draft]

**Middle Rio Grande Endangered Species Collaborative Program (MRGESCP)
Peer Review Administrative Ad Hoc Group
Charge**

Approved by the Executive Committee (EC) on *DATE*.

Parent Committee

The Peer Review Administrative Ad Hoc Group is formed by and reports to the EC.

Ad Hoc Group Charge

The Peer Review Administrative Ad Hoc Group is tasked with reviewing the MRGESCP draft peer review process and providing recommendations to ensure the final peer review process is consistent with internal signatory peer review policies and procedures.

Membership

A. Criteria for membership

- An understanding of scientific peer review
- An understanding of individual signatory peer review policies and procedures
- Familiarity with the MRGESCP

B. Member List (proposed)

- Thomas Archdeacon, U.S. Fish & Wildlife Service
- TBD, U.S. Department of the Interior
- Tom Turner or Megan Osborne, University of New Mexico
- Trevor Stevens, U.S. Army Corps of Engineers
- Ara Winter, Bosque Ecosystem Monitoring Program
- Rich Valdez, SWCA
- TBD, MRGCD
- Others?

Tasks and Deliverables

Task One Name

Review the draft MRGESCP peer review process and individual signatory peer review policies, and identify areas of potential inconsistency. Recommend revisions to the MRGESCP peer review process to be consistent with and add value to individual signatory peer review policies and procedures.

Objective of Task One

Provide a common basis for understanding the different peer review processes and policies, and identify areas for further group discussion. Develop a draft revised MRGESCP peer review process that meets both the needs of the MRGESCP and individual signatories.

Deliverable(s):

Draft revised MRGESCP peer review process.

Timeline and Reporting Scheduling

Task	Subtask	Deliverable	To Be Completed By
Revise MRGESCP peer review process	Review MRGESCP peer review process and individual signatory peer review policies and procedures	List of potential areas in the draft MRGESCP peer review process for revision to better align with individual signatory peer review policies	February 15, 2022
	Recommend revisions to the MRGESCP peer review process	Draft revised MRGESCP peer review process for SAMC review	March 30, 2022
		Finalize revised MRGESCP peer review process to address SAMC comments for EC review and approval	May 15, 2022

[Link to full Meeting Materials List](#)

Executive Committee Meeting December 7, 2021

See the following meeting material on the page below:

Draft Annual MRGESCP Evaluation Matrix [read-ahead, draft]

Middle Rio Grande Endangered Species Collaborative Program (Program)
Draft 2021 Annual Program Evaluation Matrix

The following evaluation form is prepared for Executive Committee (EC) review and approval at the December 7, 2021 meeting. Once approved, the Program Support Team (PST) will coordinate completion of the evaluation with each Program signatory and committee.

#	Evaluation Topic	YES	NO	Detailed Explanation	Recommended Action(s)
PROGRAM GUIDING PRINCIPLES					
Evaluation of the following: <ul style="list-style-type: none"> • Mission • Goals • Science Objectives 					
1.a	Does the MISSION continue to be relevant?				a. Draft a charge to task an Administrative Ad Hoc Group with revising the mission b. Solicit reviews and comments from individual signatories c. Update the following guiding document/tool: XXXX d. <i>Describe another action, in detail</i>
1.b	Do the GOALS continue to support the Program's mission?				a. Request reviews and recommendations from the Science and Adaptive Management Committee b. Solicit reviews and comments from individual signatories c. Update the following guiding document/tool: XXXX d. <i>Describe another action, in detail</i>
1.c	Are the SCIENCE OBJECTIVES relevant to the goals of the Program?				a. Request reviews and recommendations from the Science and Adaptive Management Committee b. Solicit reviews and comments from individual signatories c. Update the following guiding document/tool: XXXX d. <i>Describe another action, in detail</i>
1.d	Other issues to raise regarding the Program guiding principles?				a. <i>Describe action, in detail</i>
PROGRAM ADMINISTRATION					
Evaluation of the following: <ul style="list-style-type: none"> • Individual signatory evaluations • Program Portal 					
2.a	Do the Program's governance and planning documents				a. Update the Program By-laws b. Update the Science & Adaptive Management Plan

	need to be updated based on evaluation of the guiding principles?				c. Update the Long-Term Plan d. Update the Annual Work Plan e. Update another document
2.b	Does the Program Portal continue to meet the needs of the Program?				a. <i>Describe action, in detail</i>
2.c	Is the Program Portal contract funded through the following year?				a. Plan a discussion with the Fiscal Planning Committee b. Contact individual signatories c. <i>Describe another action, in detail</i>
2.d	Other issues to raise regarding Program administration?				a. <i>Describe action, in detail</i>
PROGRAM GROUP FUNCTION					
Executive Committee (EC) Evaluation of the following: <ul style="list-style-type: none"> • Annual Work Plan tasks • Documents associated with signatory participation • Signatory meeting attendance and engagement 					
3.a	Are all of the signatories actively engaged in the EC?				a. Program Manager and EC Co-chairs discuss engagement with the appropriate signatories b. Appropriate signatories evaluate their engagement and actions to undertake c. <i>Describe another action, in detail</i>
3.b	Do the individual signatories have letters on file that indicate representation on the EC?				a. Solicit missing information from individual signatory(ies) b. <i>Describe another action, in detail</i>
3.c	Are the EC's Annual Work Plan tasks on track to be completed?				a. PST and EC Co-chairs discuss revisions to the work plan b. <i>Describe another action, in detail</i>
3.d	Other issues to raise regarding the EC?				a. <i>Describe action, in detail</i>
Administrative Ad Hoc Groups An evaluation should be completed for each active Administrative Ad Hoc Group of the following: <ul style="list-style-type: none"> • Annual Work Plan tasks • Group charge 					
4.a	Are the group members actively engaged?				a. Appoint new member(s) b. <i>Describe another action, in detail</i>
4.b	Is the group on target to meet the deadline(s) in the charge?				a. Request revision(s) to the charge by the EC b. <i>Describe another action, in detail</i>

4.c	Other issues to raise regarding administrative ad hoc groups?				a. <i>Describe action, in detail</i>
Fiscal Planning Committee (FPC): Evaluation of the following: <ul style="list-style-type: none"> • FPC Charter • Annual Work Plan tasks • Long-Term Plan 					
5.a	Is the FPC functioning as originally intended?				a. Recommend charter amendments b. <i>Describe another action, in detail</i>
5.b	Are the FPC co-chairs engaged?				a. Recommend election of new co-chairs b. <i>Describe another action, in detail</i>
5.c	Is the FPC on track to complete the tasks in the Annual Work Plan?				a. PST and FPC Co-chairs discuss potential revisions to the Annual Work Plan for EC review and approval b. <i>Describe another action, in detail:</i>
5.d	Other issues to raise regarding the FPC??				a. <i>Describe action, in detail</i>
Science and Adaptive Management Committee (SAMC) Evaluation of the following: <ul style="list-style-type: none"> • SAMC Charter • SAMC Application • Annual Work Plan tasks • Science & Adaptive Management Plan • Long-Term Plan 					
6.a	Are all of the SAMC members actively engaged?				a. Science Coordinator discuss engagement with the appropriate members b. Appropriate members evaluate their engagement and actions to undertake c. <i>Describe another action, in detail</i>
6.b	Are all SAMC members attending meetings and responding to requests for reviews and comments within the specified deadlines?				a. Science Coordinator discuss meeting attendance and deadlines with the appropriate signatories b. Appropriate signatories evaluate their engagement and appropriate actions to undertake c. <i>Describe another action, in detail</i>
6.c	Are the SAMC's Annual Work Plan tasks on track to be completed?				a. PST and SAMC discuss potential revisions to the Annual Work Plan for EC review and approval b. <i>Describe another action, in detail</i>
6.d	Have the results of the Science Symposium/ Collaboratory been incorporated into the science and adaptive management tools?				a. SAMC charge S&T Ad Hoc Group(s) to update tools b. <i>Describe another action, in detail</i>

6.e	Did the SAMC's activities match the charter?				a. Recommend charter amendments b. <i>Describe another action, in detail</i>
6.f	Are the standing subject matter expert areas of expertise still relevant to the Program's needs now and into the near future?				a. Recommend changes to the SAMC charter b. <i>Describe another action, in detail</i>
6.g	Are any subject matter expert areas of expertise missing from the current membership that are relevant to the Program's needs?				a. Recommend technical areas of expertise b. Amend the charter and application c. <i>Describe another action, in detail</i>
6.h	Which SAMC members are not able to continue for another year?	n/a	n/a		a. Begin the process to find new members b. Determine the need for new technical areas of expertise c. <i>Describe another action, in detail</i>
6.i	Is the EC's <i>ex officio</i> member able to continue for another year?				a. The EC appoint a new <i>ex officio</i> member at the next EC b. <i>Describe another action, in detail</i>
6.j	Does meeting frequency, timing, and length appreciate to accomplish the SAMC plans and Ad Hoc Group charges?				a. Science Coordinator and SAMC discuss an appropriate meeting schedule b. <i>Describe another action, in detail</i>
6.k	Is the term of SAMC membership still appropriate?				a. Recommend membership term changes to the EC b. Revise the charter and application c. <i>Describe another action, in detail</i>
6.l	Is the format and content of SAMC memos to the EC appropriate and sufficient?				a. Science Coordinator, Program Manager, and EC Co-chairs discuss SAMC memo formats b. <i>Describe another action, in detail</i>
6.m	Other issues to raise regarding the SAMC?				a. <i>Describe action, in detail</i>
Science & Technical (S&T) Ad Hoc Groups An evaluation should be completed for each active S&T Ad Hoc Group of the following: <ul style="list-style-type: none"> • Annual Work Plan tasks • Group Charge 					
7.a	Are the group members actively engaged?				a. Appoint new member(s) b. <i>Describe another action, in detail</i>

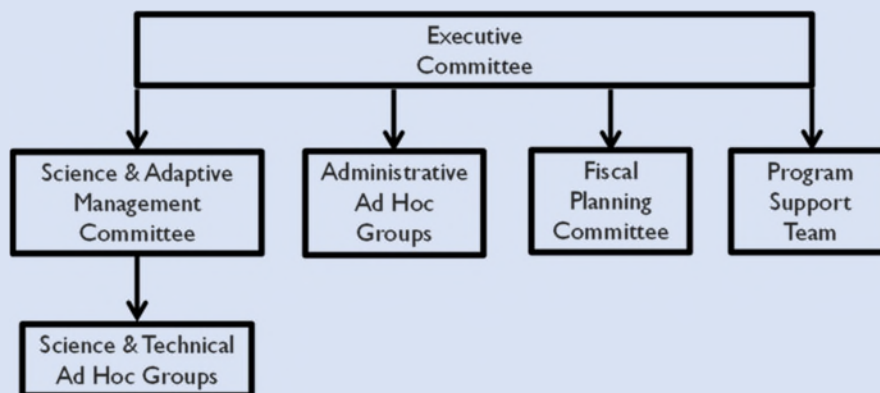
7.b	Is the group lead communicating to the PST about progress and support needs?				a. Science Coordinator and group lead discuss communication, and progress and support needs b. <i>Describe another action, in detail</i>
7.c	Is the group on target to meet the deadline(s) in the charge?				a. Request revision(s) to the charge by the SAMC b. <i>Describe another action, in detail</i>
7.d	Is the S&T Ad Hoc Group task added to the Project Bank as a line item?				a. PST update Project Bank to include S&T Ad Hoc Group task b. <i>Describe another action, in detail</i>
7.e	Has the SAMC determined whether the S&T Ad Hoc Group's deliverables will be subject to internal peer review?				a. SAMC discuss whether the S&T Ad Hoc Group's deliverables will be subject to internal peer review, and, as appropriate, draft charge for an internal peer review ad hoc b. <i>Describe another action, in detail</i>
7.g	Have outputs from completed S&T Ad Hoc groups been added to the SAMIS?				a. PST update SAMIS to include findings from S&T Ad Hoc Group task b. <i>Describe another action, in detail</i>
7.h	Other issues to raise regarding S&T Ad Hoc Groups?				a. <i>Describe action, in detail</i>

PROGRAM ORGANIZATIONAL STRUCTURE AND OPERATIONS

Committee & Group Structure

Evaluation of the following:

- Lines of direction
- Group level
- Appropriateness of the group based on above evaluation



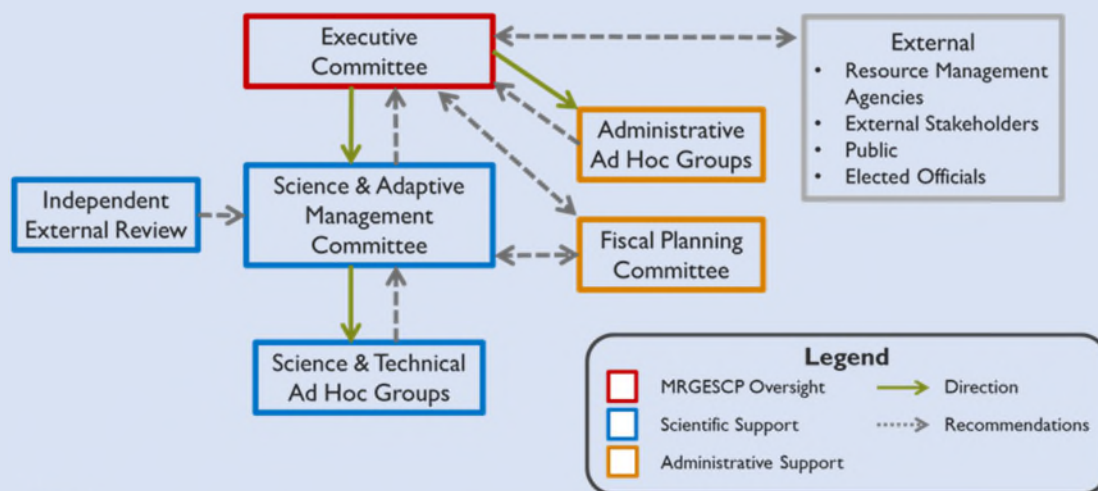
8.a	Do the lines of direction continue to be appropriate?				a. Draft a new Administrative Ad Hoc Group charge to provide recommendations for changes to Program structure b. <i>Describe another action, in detail</i>
8.b	Are the group levels/placement appropriate?				a. EC discuss group levels/placement b. <i>Describe action, in detail</i>

8.c	Are any groups missing?				a. Draft a new committee charter b. Draft a new ad hoc group charge c. Describe another action, in detail
8.d	Other issues to raise regarding Program structure?				a. <i>Describe action, in detail</i>

Program Operations

Evaluation of the following:

- Lines of communication
- Communication structure
- Breakdowns in communication



Note:

The **Program Support Team (PST)** coordinates the overall MRGESCP operations, including providing administrative, science and technical support, and facilitation of the meetings and the lines of direction and recommendations. The PST has not been added to this directional process structure.

9.a	Is the process for communication between the EC and the SAMC efficient and effective?				a. Science Coordinator, Program Manager, and EC Co-chairs discuss process for communication b. <i>Describe another action, in detail</i>
9.b	Is the process for communication between the EC and the FPC efficient and effective?				a. Program Manager, EC Co-chairs, and FPC Co-chairs discuss process for communication b. <i>Describe another action, in detail</i>
9.c	Is the process for communication between the SAMC and the FPC efficient and effective?				a. Science Coordinator, Program Manager, and FPC Co-chairs discuss process for communication b. <i>Describe another action, in detail</i>
9.d	Are the boxes adequately representative of Program operations?				a. Recommend changes to the Program operational structure to better represent the work/communication flow b. <i>Describe another action, in detail</i>

[Link to full Meeting Materials List](#)

Executive Committee Meeting December 7, 2021

See the following meeting material on the page below:

2021 SAMC Accomplishments and LTP Update [presentation]



2021 Science & Adaptive Management Committee Accomplishments

Catherine Murphy, Science Coordinator
Executive Committee Meeting
7 December 2021

SAMC Year 1 Focus Areas

- Science and Technical (S&T) Ad Hoc Groups
- Program-wide Workshops
- Collaborative Program Planning Tools
- Peer Review Process
- Science Communication: Seminars

SAMC Year 1 Accomplishments

➤ **Formed S&T Ad Hoc Groups:**

○ **Population Monitoring Work Group (PMWG) Summary Report Ad Hoc Group**

- **CHARGE:** Summarize the work of the PMWG
 - ✓ Identified key findings and recommendations, incorporated and archived peer review comments
 - ✓ Developed a memo to the EC with SAMC-recommended next steps
- **FOLLOW-UP:** Next Ad Hoc group will evaluate questions and develop research hypotheses for Rio Grande Silvery Minnow (RGSM)

SAMC Year 1 Accomplishments

➤ **Formed S&T Ad Hoc Groups:**

○ **RGSM Integrated Population Model Ad Hoc Group**

- **CHARGE:** Complete the expert elicitation exercise started by the small group
 - ✓ **Compiled and incorporated group input into the model**
 - ✓ **Drafting a manuscript on the model for publication (Yackulic et al. TBD)**
- **FOLLOW-UP:** Presenting seminar on the model to the Collaborative Program in Spring 2022

SAMC Year 1 Accomplishments

➤ **Formed S&T Ad Hoc Groups:**

○ **RGSM Genetics/Conceptual Ecological Model (CEM) Refinement Ad Hoc Group**

- **CHARGE:** Refine the RGSM CEM by adding genetic, propagation, and augmentation components
 - ✓ Added new components and modified model schematic to represent river and hatchery demography
 - ✓ Defining pairwise relationships among new and existing components
- **FOLLOW-UP:** Once modifications are complete, a separate Ad Hoc group will be formed to provide critical peer review

SAMC Year 1 Accomplishments

➤ **Formed S&T Ad Hoc Groups:**

○ **Avian CEM Refinement Ad Hoc Group**

- **CHARGE:** Characterize scientific uncertainties in the Southwestern willow flycatcher and Yellow-billed cuckoo CEMs
 - ✓ **Characterized level of uncertainty for each pairwise relationship within the CEMs**
- **FOLLOW-UP:** Uncertainty levels for each CEM will be updated in the Science and Adaptive Management Information System (SAMIS)

SAMC Year 1 Accomplishments

➤ Hosted Program-wide workshops:

○ Science Objectives Workshop

- **PURPOSE:** Refine the draft Science Objectives and compile strategies for each
- **FOLLOW-UP:** Science Objectives were approved by the EC and used to categorize projects for the Long-Term Plan

○ Habitat Restoration Workshop

- **PURPOSE:** Discuss how to define and measure restoration success
- **FOLLOW-UP:** Forming S&T Ad Hoc Groups to provide guidance for species-specific habitat restoration and monitoring

SAMC Year 1 Accomplishments

➤ **Developing Collaborative Program Planning Tools:**

- Using the SAMIS to generate research questions from CEM uncertainties
- Incorporating climate change and resiliency considerations into project development process

➤ **Drafted a Peer Review Process for the MRGESCP:**

- Defines types and levels of peer review for Collaborative Program products
- Improves transparency and supports management decisions

SAMC Year 1 Accomplishments

➤ MRGESCP Collaborative Seminars:

- August 24, 2021: Rob Dudley (ASIR) on RGSM Population Monitoring
- December 2, 2021: Matt Wunder (NMDGF) on Conservation Planning Tools
- January 12, 2022: Katey Driscoll (USFS) on Habitat Restoration and Ecosystem Function
- TBD 2022: Charles Yackulic (USGS) on RGSM Integrated Population Model





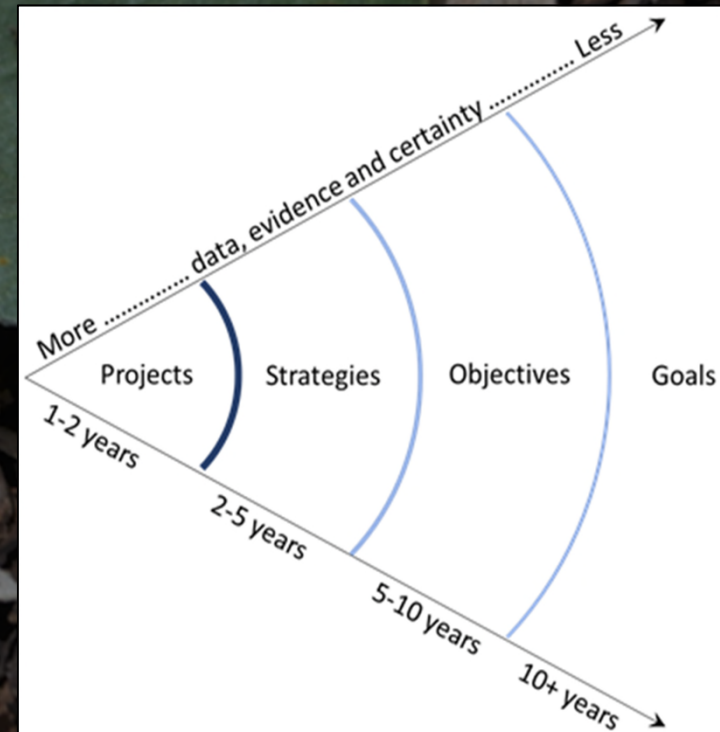
MRGESCP Long-Term Plan Update

Catherine Murphy, Science Coordinator
Executive Committee Meeting
7 December 2021



Long-Term Plan (LTP) Purpose

“The Long-Term Plan is an evolving communication and planning tool that serves to orient the Collaborative Program’s long-term scientific efforts under the S&AM Plan.”



LTP Update Process

Science Symposium

- Assess and incorporate new information
- Update Conceptual Ecological Models

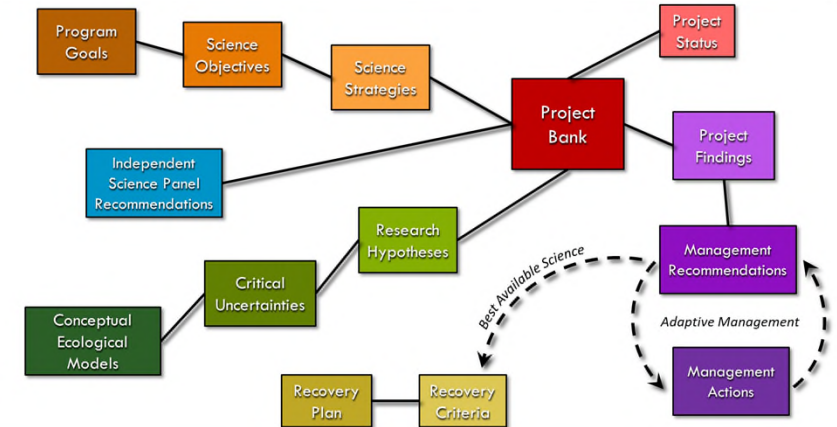
Collaboratory

- Assess relevance to management priorities
- Update Science Objectives and Strategies

Signatory Contributions

- Categorize and link proposed projects
- Update recommended activities

Science & Adaptive Management Information System



The screenshot shows the SAMIS Data Viewer interface. At the top, there's a header with the SAMIS logo and a search bar. Below the header, there's a sidebar with 'Welcome' and 'Project Search' links. The main content area has a 'Project Search Options' section with filters for 'Status' (Outlined, Scoped), 'Lead Organization', and 'Category'. Below this is a 'Project Bank Search Results' table.

Name	Description	Status	Lead Organization	Category	Include in Report
Data Collection and 2D Modeling of High/Flow Channels 17	Collection of geomorphic and hydrodynamic data, focusing on high-flow channels, and modeling of specific project features.	Outlined		Habitat Assessments and Modeling	<input checked="" type="checkbox"/>
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 turbidity at four locations within the Isleta and San Acacia reaches.	Outlined		Habitat Assessments and Modeling	<input checked="" type="checkbox"/>
Evaluation of Paired Spawning and Communal Spawning for Rio Grande Silvery Minnow	Initiate paired spawning pilot studies and compare to communal spawning methods.	Scoped		Field and Laboratory Experiments	<input checked="" type="checkbox"/>
Ground Water? Surface Water Interactions in the Riparian Zone	Define the ground water-surface water interactions along a selected stretch of the Rio Grande in order to establish baseline quality of surface and ground water.	Outlined	USACE	Habitat Assessments and Modeling	<input checked="" type="checkbox"/>
Habitat Restoration Projects Assessment	Conduct a watershed-level assessment of completed restoration projects within the Program area.	Outlined		Field and Laboratory Experiments	<input checked="" type="checkbox"/>

LTP Features and Functions

Links to Objectives

- Program relevance

Project Status

- Development of idea

Project Category

- Type of activity

Focus/Species

...more to come!

Table 3. Recommended Activities Sorted by Project Name

Project Name	Program Objective	Project Status	Project Category	Focus/Species
Assess the Persistence of Stocked Silvery Minnow	Science Objective A-6.2	Outlined	Population Monitoring and Modeling	RGSM
Assessing temporal and spatial continuous water quality trends in the Angostura, Isleta, and San Acacia reaches of the Middle Rio Grande	Science Objective A-2, A-3, A-4	Approved	Habitat Assessments and Modeling	MRG Ecosystem
Assessing temporal and spatial continuous water quality trends in the Isleta and San Acacia reaches of the Middle Rio Grande	Science Objective A-3, G-1	Outlined	Habitat Assessments and Modeling	Other
Assessment and Monitoring of Rio Grande Silvery Minnow Genetics	NA	In-Progress	Population Monitoring and Modeling	RGSM
Assessment of Native and Non-native Fish Species in the Middle Rio Grande and their relation to Rio Grande Silvery Minnow	Science Objective A-2	Outlined	Field and Laboratory Experiments	RGSM
Bosque and Riverine Restoration Project and Fish Passage at Isleta Diversion Dam	NA	In-Progress	Field and Laboratory Experiments	RGSM
Candelaria Nature Preserve Risk Management Plan	NA	In-Progress	Program Management and Administration	MRG Ecosystem
Characterize the relationship between the annual CPUE index and true Rio Grande Silvery Minnow population size	Science Objective A-1	Outlined	Field and Laboratory Experiments	RGSM
Compare and contrast Yellow-billed Cuckoo and Southwestern Willow Flycatcher breeding habitat requirements within the Middle Rio Grande	Science Objective B-3.1, C-1.3	Outlined	Field and Laboratory Experiments	YBCU
Compare invasive survey methods (trapping, telemetry) to noninvasive methods (e.g., models, remote cameras, track plates) for risk, effectiveness and reliability regarding study of New Mexico meadow jumping mouse	Science Objective D-1.2	Outlined	Field and Laboratory Experiments	NMMJM
Comparison of Environmental Conditions Experienced by Rio Grande Silvery Minnow in Hatchery Facilities to those Experienced in the Middle Rio Grande	Science Objective A-2	Outlined	Field and Laboratory Experiments	RGSM

SAMC Recommendations

1. Complete project descriptions and metadata in the SAMIS to improve linkages to strategies, uncertainties and recommendations.
2. Develop a scoring rubric to help prioritize recommended activities according to signatory needs
 - a. SAMIS Linkage Score – appraises value of project to CP
 - b. S.M.A.R.T. Score – appraises clarity of scope of work
 - c. Resiliency Score – appraises value to planning and A.M.
3. Based on current needs, add at least one Science Objective related to RGSM genetics.

[Link to full Meeting Materials List](#)

Executive Committee Meeting December 7, 2021

See the following meeting material on the page below:

Annual Program Evaluation [presentation]



Annual Collaborative Program Evaluation

Executive Committee

December 7, 2021



Objectives

- Administrative evaluation of Collaborative Program operations and functions
- Assess the continued relevance of the guiding principles of the Collaborative Program
- Inform updates to Collaborative Program plans, tools, and processes
- Identify areas for improvement regarding operational efficiency and signatory engagement



Potential outcomes

- Changes to guiding principles (mission, goals, objectives)
- Changes to By-Laws
- Updates to planning documents (S&AM Plan, LTP, etc.)
- Update to committee charters
- Creation/changes to Ad Hoc Group charges
- Changes in committee or ad hoc group membership



Guiding Principles

- Does the mission continue to be relevant?
- Do the goals continue to support the Program's mission?
- Are the objectives relevant to the goals of the Program?

MRGESCP Administration

- Do the Program's governance and planning documents need updates based on evaluation of the guiding principles?
- Does the Program Portal continue to meet the needs of the Program?
- Is the Program Portal contract funded through the following year?



Executive Committee


- Are all of the signatories actively engaged in the EC?
- Do the individual signatories have letters on file that indicate representation on the EC?
- Are the EC's annual work plan tasks on track to be completed?

Administrative Ad Hoc Groups

- Are the group members actively engaged?
- Is the group on target to meet the deadline(s) in the charge?



Fiscal Planning Committee

- Is the FPC functioning as originally intended?
 - Are the FPC co-chairs engaged?
 - Is the FPC on track to complete the tasks in the annual work plan?
- 



Science and Adaptive Management Committee

- Are all of the SAMC members actively engaged?
- Are all SAMC members attending meetings and responding to requests for review and comment within the specified deadlines?
- Are the SAMC's annual work plan tasks on track to be completed?
- Did the SAMC's activities match the charter?
- Have the results of the Science Symposium/Collaboratory been incorporated into the science and adaptive management tools?
- Are the standing subject matter experts areas still relevant to the Program's needs now and into the future?
- Are any subject matter expert topic areas missing from the current membership?

Science and Adaptive Management Committee (con't)

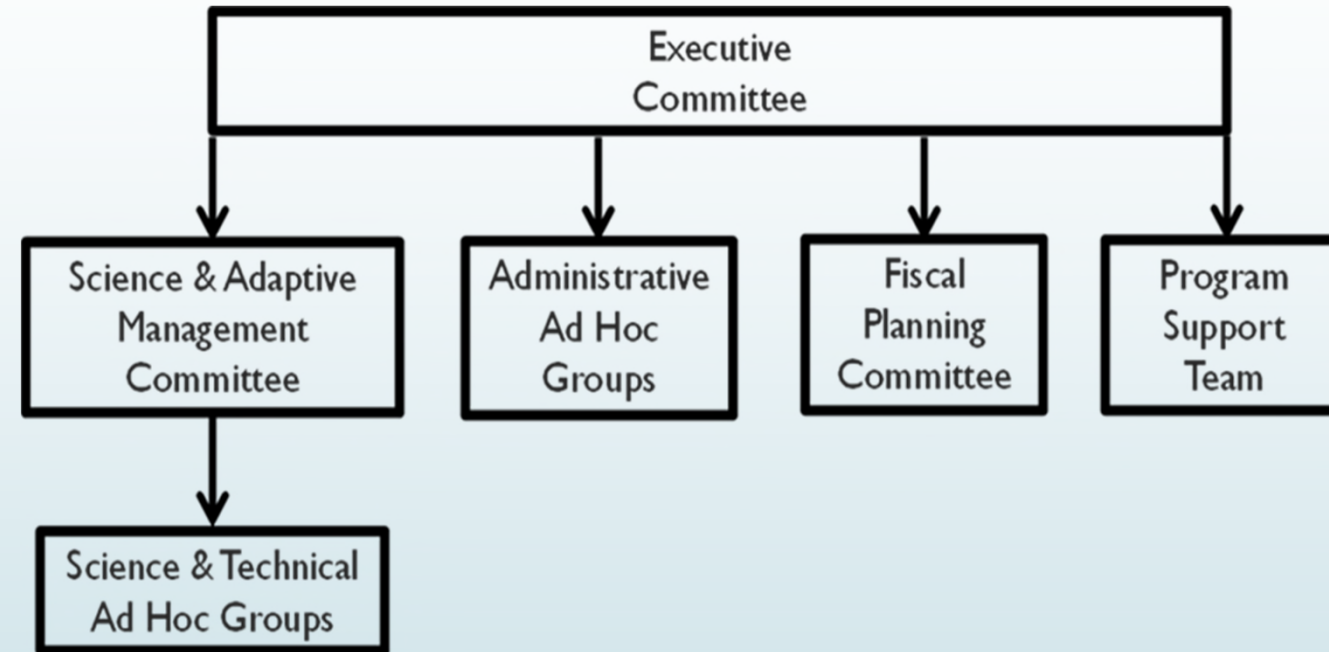
- Are the standing subject matter experts areas still relevant to the Program's needs now and into the future?
- Are any subject matter expert topic areas missing from the current membership?
- Which SAMC members are not able to continue for another year?
- Is the EC's *ex officio* member able to continue for another year?
- Does meeting frequency, timing, and length appreciate to accomplish the SAMC plans and Ad Hoc Group charges?
- Is the term of SAMC membership still appropriate?
- Is the format and the content of SAMC memos to the EC appropriate and sufficient?



Science and Technical Ad Hoc Groups

- Are the group members actively engaged?
- Is the group lead communicating to the PST about progress and support needs?
- Is the group on target to meet the deadline(s) in the charge?
- Is the S&T Ad Hoc Group task added to the Project Bank as a line item?
- Has the SAMC determined whether the S&T Ad Hoc Group's deliverables will be subject to internal peer review?
- Have outputs from completed S&T Ad Hoc groups been added to SAMIS?

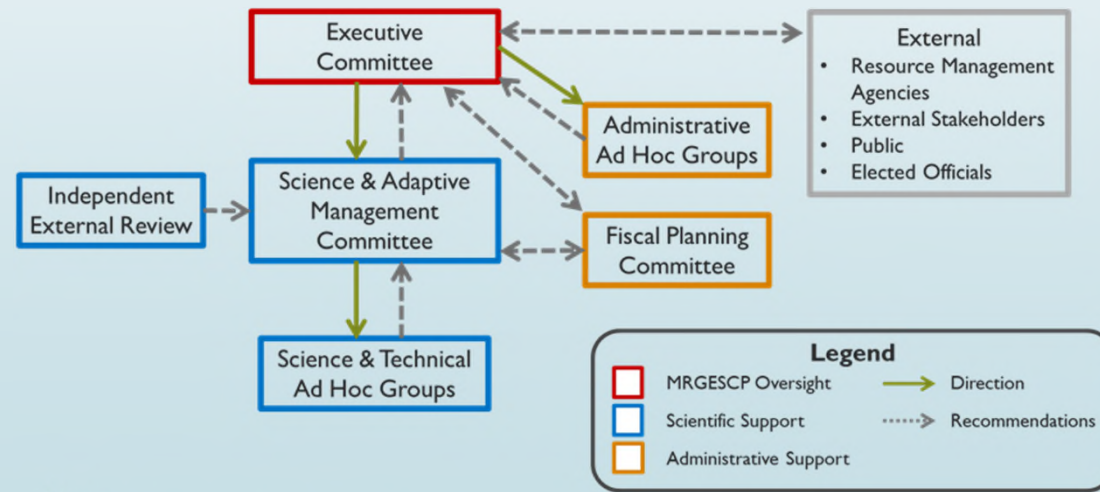
Committee & Group Structure



- Do the lines of direction continue to be appropriate?
- Are the group levels/placement in the provided diagram appropriate?
- Are any groups missing?

MRGESCP Operations

- Is the process for communication between the EC and the SAMC efficient and effective?
- Is the process for communication between the EC and the FPC efficient and effective?
- Is the process for communication between the SAMC and the FPC efficient and effective?
- Are the boxes adequately represented in the diagram provided?



Note:

The **Program Support Team (PST)** coordinates the overall MRGESCP operations, including providing administrative, science and technical support, and facilitation of the meetings and the lines of direction and recommendations. The PST has not been added to this directional process structure.



Timeline

- December: EC approves Annual Program Evaluation process & PST prepares for annual evaluation
- January: PST distributes evaluation forms to individual signatories and committee members, and holds discussions as needed
- February: PST compiles results of evaluation, notes areas of potential concern, and coordinates with the EC co-chairs on recommendations to the EC
 - Drafts revisions to charters and charges as appropriate
 - Draft revisions to S&AM Plan
- March: EC reviews results of the annual evaluation, and discusses any draft revisions to charters and charges, and determines the need for any further changes that need to be reflected in guiding principles or governance documents (e.g., By-Laws, S&AM Plan, Long-Term Plan)

[Link to full Meeting Materials List](#)

Executive Committee Meeting December 7, 2021

See the following meeting material on the page below:

Peer Review Process [presentation]

Draft Peer Review Process: Overview

Executive Committee Meeting
December 7, 2021

Categories and Types of Peer Review

Types of Peer Review

- ▶ Statistical review
- ▶ Editorial review
- ▶ Contextual review
- ▶ Legal review
- ▶ Programmatic review

Categories of Peer Review

- ▶ Internal Administrative Review
- ▶ Internal Scientific Review
- ▶ External Expert Review
- ▶ Independent Science Panel

Types of Review

REVIEW TYPE	DEFINITION
Content Review	Checking a document for completeness and accuracy of the content
Statistical Review	Evaluating study or sampling design and appropriateness of statistical methods
Editorial Review	and references
Contextual Review	management needs
Legal Review	statute, and case law
Programmatic Review	Evaluating the entirety of a program with respect to effectiveness, efficiency, and relevance

Categories of Peer Review: Internal

	BEING REVIEWED	EXAMPLES	CONSIDERATIONS
Internal Administrative Review	documents documents	Management Plan	signatories MRGESCP operations from each signatory
Internal Scientific Review	work products request for MRGESCP review	ecological models	relevant expertise delegated by the SAMC reviewers if supplementary expertise is needed forms

Categories of Peer Review: External

	BEING REVIEWED	EXAMPLES	CONSIDERATIONS
External Expert Review	product medium-to-high level of contention may be administrative or scientific	Management Plan	EC approves remotely interaction between reviewers and MRGESCP experts forms or a panel report
Independent Science Panel	consequential topics level of contention		EC approves or virtually between review panel and MRGESCP experts

Comparing Categories of Review

	INTERNAL ADMINISTRATIVE REVIEW	INTERNAL SCIENTIFIC REVIEW	EXTERNAL EXPERT REVIEW	INDEPENDENT SCIENCE PANEL
Cost	\$	\$	\$\$-\$\$\$	\$\$\$\$-\$\$\$\$\$
Time commitment	Low	Low	Medium	High
Clear charge to reviewers	X	X	X	X
Expert reviewers		X	X	X
External reviewers		If needed	X	X
SAMC recs & EC approves			X	X
Paid reviewers			X	X
Contracting needs			X	X
Panel report			If needed	X
Multi-day meeting with Program experts				X

Draft Peer Review Process

- ▶ Descriptions of each category of review
- ▶ Decision support process (to determine appropriate review category)
- ▶ Step-by-step process for carrying out each category of review, including how comments are documented
- ▶ Codes of conduct for:
 - ▶ Reviewers
 - ▶ Contracting signatory/ies
 - ▶ Third-party contractor

[Link to full Meeting Materials List](#)

Executive Committee Meeting December 7, 2021

See the following meeting material on the page below:

Revised Draft 2022 MRGESCP MOA [follow-up, draft]

MIDDLE RIO GRANDE ENDANGERED SPECIES COLLABORATIVE PROGRAM
NEW MEMORANDUM OF AGREEMENT
DRAFT

I. STATEMENT OF PURPOSE

The Middle Rio Grande Endangered Species Collaborative Program (Collaborative Program) was established by the 2003 Memorandum of Understanding, which was superseded by the 2008 Memorandum of Agreement (MOA). This new MOA supersedes both, and reaffirms the Collaborative Program as federal, state, and local government entities, Indian Tribes and Pueblos, and non-governmental organizations engaged in collaborative efforts to benefit listed species in the Middle Rio Grande. The signatories of this MOA agree to participate in and support the Collaborative Program.

II. TERMS AND CONDITIONS

- A. Effective Date and Duration. This MOA shall remain in effect for a period of 5 years from the date of its execution by the Executive Committee. The MOA shall automatically extend for an additional 5 years, unless otherwise terminated by unanimous consent of the Executive Committee.
- B. Individual Termination. During the term of this MOA, any signatory may withdraw from this MOA upon written notice to the Executive Committee. A signatory's participation in this MOA may also be terminated through termination of membership to the Collaborative Program by non-attendance at three consecutive Executive Committee meetings. Termination by individual signatories shall not terminate this MOA, which shall continue to apply with respect to the remaining signatories.
- C. Sovereignty. This MOA does not constitute a waiver or alternation of any sovereign rights and immunities.
- D. Execution in Part and Additional Signatories. This Agreement may be executed in one or more separate counterparts. All of such counterparts shall, when taken together, constitute one and the same agreement. New signatories to this MOA may be added at any time through the duration of this MOA.
- E. Under section 4(f)(2) of the ESA, 16 U.S.C. § 1533, the Secretary of the Interior is directed to develop and implement plans for the conservation of endangered species. The Secretary of the Interior may procure the services of public and private agencies, individuals, and

institutions in developing and implementing such recovery plans. Advice from such agencies, individuals, and institutions, such as that offered by signatories to this MOA, is not subject to the Federal Advisory Committee Act, 5 U.S.C. app.2. See also Bylaws, Article 6 (Executive Committee, including public notice and participation).

- F. This MOA shall not obligate any signatory to participate in, contribute to, or otherwise implement activities recommended by the Collaborative Program.
- G. This MOA is not intended to conflict with or abrogate any legal rights or responsibilities of any signatory or other party.

The signatories hereby state that they have legal authority to enter into this MOA, and have legal authority to work toward the intent of the Collaborative Program.

III. SIGNATURES

Name
Title
Organization

Date