**Science and Adaptive Management Committee (SAMC)**

**Draft Meeting Minutes**

**May 30, 2023; 9:00 AM – 1:00 PM**

**Location:** *Zoom*

**Decisions:**

* Approval of the May 30, 2023 SAMC meeting agenda
* Approval of the February 22, 2023 SAMC meeting minutes

**Action Items:**

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| **WHO** | **ACTION ITEM** | **BY WHEN** |
| Program Support Team (PST) | Reach out to contacts with Sustainable Rivers Program regarding a potential seminar | 5/30/2023 |
| PST | Draft a memo to the Executive Committee (EC) regarding discontinuation of updates of the RiverEyes data on the Program Portal and recommendation to provide a link to the GSA RiverEyes mapping tool | 6/8/2023 |
| PST  | Revise the charge for the *Information & Data Quality Standards Hybrid Ad Hoc Group* for SAMC review via Client Cloud | 6/8/2023 |
| PST | Send a survey to SAMC to gauge interest in types of SAMC activities between quarterly meetings | 6/9/2023 |
| Ondrea Hummel, Ara Winter, Ari Posner, and Aubrey Harris | Send reports/links and metadata to PST re: findings and data relating to recommendations from vegetated islands/bars memo to the EC | 6/9/2023 |
| PST | Organize materials on the Client Cloud for re-run of pilot exercise on *LTP Project Evaluation Criteria* | 6/9/2023 |
| PST | Find out if SAMC members can upload documents to the Client Cloud | 6/9/2023 |
| PST  | Revise the charges for the *SER Recovery Wheel S&T Ad Hoc Group* and *Restoration Compendium S&T Ad Hoc Group* for SAMC review via Client Cloud | 6/9/2023 |
| SAMC | Review and provide edits (via Client Cloud) to memo to EC re: RiverEyes data on Program Portal | 6/15/2023 |
| SAMC | Review the revised charge for the *Information & Data Quality Hybrid Ad Hoc Group* | 6/15/2023 |
| SAMC | Respond to survey about additional SAMC activities between quarterly meetings | 6/16/2023 |
| SAMC | Review the revised charges for the *SER Recovery Wheel S&T Ad Hoc Group* and *Restoration Compendium S&T Ad Hoc Group* | 6/16/2023 |
| SAMC | Review *DRAFT MRGESCP 2023 Multi-Year Plan*, flag items that need further review, and provide additional references/resources, where appropriate | 6/21/2023 |
| PST | Draft memo to EC regarding proposed revisions to SAMC Charter (SAMC roster expansion; decision consensus documentation) | 6/22/2023 |
| SAMC | Independently review and complete pilot exercise on *LTP Project Evaluation Criteria* | 6/23/2023 |
| PST | Compile SAMC feedback on *DRAFT MRGESCP 2023 Multi-Year Plan* and organize the Science Review activity for the SAMC | August SAMC meeting |
| PST | Continue background work and drafts for recommendations (in order) from the vegetated islands/bars memo to the EC | August SAMC meeting |

**Next Meeting:** August 2023

**Meeting Minutes**

***Meeting Objectives:***

* *Virtual meet and greet and orientation with new SAMC members*
* *Hear updates from the December Executive Committee (EC) meeting*
* *Hear update on action items from memo on management of vegetated islands and bank-attached bars*
* *Review results of pilot run using the Long-Term Plan (LTP) Project Evaluation Criteria*
* *Hear updates on Program Portal data sets and Science & Adaptive Management Information System (SAMIS)*
* *Hear updates on current and proposed Science & Technical (S&T) and Hybrid Ad Hoc Groups*
* *Review and discuss updates for October 2023 Climate Futures Planning Workshop*
* *Discuss plans for December 2023 MRGESCP Science Symposium*

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| 9:00 – 9:10 | **Welcome, Guest Introductions, Agenda Review*** **Decision**: Approval of May 30, 2023 Agenda
 | *Catherine Murphy, Program Support Team (PST)* |
| The May 30, 2023 agenda was approved by the attending SAMC members. |
| 9:10 – 9:15 | **February Meeting Minutes and Action Item Review*** **Decision**: Approval of February 22, 2023 SAMC meeting minutes
 | *Catherine Murphy, PST* |
| The Draft February 22, 2023 SAMC Meeting Minutes were approved. |
| 9:15 – 9:45 | **New SAMC Membership and Orientation*** New member introductions
* Review SAMC purpose, operations and modes of engagement
* Client Cloud instructions
* **Decision**: Does the SAMC propose any modifications to SAMC Charter?
* **Action Item**: PST will draft memo to EC regarding proposed revisions to SAMC Charter, if needed

Read-Ahead:* SAMC Charter
* Client Cloud Instructions
 | *Group discussion* |
| New SAMC members introduced themselves and shared highlights about their expertise and experience.Members sit on the SAMC, not as representatives of their respective organizations, but as subject matter experts. SAMC members need to speak candidly about science and science-related issues. For the sake of transparency, if you have to speak on behalf of your organization, please acknowledge that at the time so that it can be documented properly in the administrative record.The SAMC Charter states that the SAMC is a non-decision-making body, but the committee does need to make decisions regarding its science and adaptive management efforts, review of deliverables, recommendations and protocols. The SAMC Charter needs to be amended to reflect that decisions required for the SAMC meeting agenda will be recorded as consensus or non-consensus, and that the SAMC member limit will be increased to 8-10 members. All members in attendance agreed to these changes. No additional amendments to the SAMC Charter were proposed by attending members.Regarding use of the Client Cloud, this platform was selected to allow SAMC members to access each others’ comments for group reviews. The Client Cloud will be used heavily, particularly for ad hoc group charges and deliverables. Please let the PST know if you have any problems accessing it. The PST can provide files via email, if needed. Thus far, no SAMC members in attendance have experienced Client Cloud access issues.The attendees discussed shortening the duration of SAMC quarterly meetings by introducing different types of engagement between formal meetings, such as one-on-one’s with Catherine M., brief check-in meetings with other SAMC members, coffee get-togethers, and/or forming sub-committees. Catherine M. pointed out that there is a general limit of 15 hours per month that SAMC members can be asked to work. Dave M. estimated that his time commitment thusfar has not exceeded 10 hours per month. He also emphasized the importance for all SAMC members to attend the meetings. Catherine M. asked about the value of in-person versus virtual meetings. Due to previous COVID restrictions and committee members who work out-of-state, the SAMC has only ever met virtually. Perhaps hybrid meetings could be a compromise and potential step towards improving group dynamic. |
| 9:45 – 10:05 | **Updates from March 2023 EC meeting*** Changes to By-Laws Section 7.1, re: SAMC Membership
* Science review of 2023 Multi-Year Plan
* **Decision**: How would the SAMC like to proceed with the science review of the 2023 Multi-Year Plan?
* **Action Item**: PST will prepare materials for the science review by the SAMC

Read-Ahead:* REVISED By-Laws Section 7.1
* DRAFT MRGESCP 2023 Multi-Year Plan
 | *Debbie Lee, PST* |
| Debbie L. asked the SAMC to provide input for the upcoming EC meeting agenda. She covered the purpose of this section of the agenda, and gave some background on the rather ambitious “Multi-Year Plan.” This plan was derived from the compiled outcomes of the Collaboratory and is not prescriptive, but is meant to provide a suite of options. Once the list has been reviewed and reconciled with current and planned science efforts within the Collaborative Program, it can be incorporated into the Long-Term Plan for Science and Adaptive Management. Catherine M. opened the floor for discussion and suggestions on how to conduct this science review.The attending members discussed potential options within a science review, such as suggestions for ad hoc groups, proposal of project ideas; review of the feasibility and timing of line items, etc. Debbie L. went over the five priority focus areas from the Multi-Year Plan. Aubrey H. asked if we are coming up with strategies to execute this plan.Ari P. asked why the Rio Grande silvery minnow was the only species called out for priority focus. Catherine M. and Debbie L. offered that, although other species are not explicitly called out, they are covered (to some extent) by the other focus areas. The members in attendance suggested to flag this for the EC meeting. Also, regarding the section on water operations, have we been able to describe the role of the Collaborative Program? Is it to explore the available science to justify changes to water operations? Ari P. proposed that the science behind recommendations should be all that the SAMC needs to provide. Aubrey H. noted that the U.S. Army Corps of Engineers (USACE) Sustainable Rivers Program (SRP) conducts workshops on this topic and might be able to provide a seminar. Suggested speakers included Andrew Hautzinger (Valencia County Soil and Water Conservation District Director) and/or Brian Zettle (Senior Biologist/Tribal Liaison at USACE Tribal Nations Technical Center of Expertise). USACE has also developed some related role-playing exercises at the Institute of Water Resources (IWR). Aubrey offered to provide an email introduction to Brian Zettle.Catherine M. encouraged feedback from SAMC members on the scientific validity of the ideas presented in the Multi-Year Plan. Mick P. suggested the need for a retrospective on habitat restoration projects to include lessons learned, etc. Catherine M. responded that this is being accomplished via the Restoration Compendium, currently under development.Catherine M. pointed out that, unfortunately, there is not enough time during the quarterly SAMC meetings to discuss in-depth the topics presented in the Multi-Year Plan. So the SAMC is being asked to review the plan, flag potentially problematic items, and suggest resources for any items with which they are familiar.Debbie L. shared that the EC had agreed to add an education and outreach objective for the program. |
| 10:05 – 10:25 | **Management of Vegetated Islands and Bank-Attached Bars** * Review recommendations from memo
* Hear updates and discuss next steps on action items
* **Decision**: Which recommendation(s) would the SAMC like to prioritize?
* **Action Item**: PST will follow-up on priority recommendation(s)

Read-Ahead:* SAMC Memo to EC – Recs for Mgmt of Vegetated Islands Bars
 | *Facilitated discussion* |
| The March 2023 memo to the EC on Management of Vegetated Islands and Bank-Attached Bars provided useful outcomes and next steps from the October 2022 workshop. Catherine M. recapped the critical question from the memo, as well as the SAMC recommendations, which need to be prioritized. Recommendations seem to be logical and the first two bullets are foundational for the rest. Ari P. and Mick P. think the order they are listed matches the order of priorities. Aubrey H. thinks that these recommendations will inform each other, so they are not necessarily a “sequence.” The recommended conceptual model is likely to evolve into an ecosystem-level model for the Middle Rio Grande. Beginning this effort with a more specific application (i.e., vegetated islands) will help increase the viability of the conceptual model.SAMC members suggested resources to address the second recommendation in the memo regarding the identification of data sets and data gaps:* Mick P. asked about the AgDat data;
* Ondrea H. - Heritage Program has evaluated some of the islands and bars;
	+ Also, what about the geospatial and other data sets on our Program Portal?
* Ara W. - NMISC conducted projects approximately 20 years ago on the islands;
	+ BEMP conducted several projects last year, and are planning more to study island vegetation and fuel load
* Mick P. - With a catalogue of available LiDAR, we may be able to do some spatial analyses with long enough datasets
	+ Ari P. - Report by Nathan [Schroeder] included LiDAR, identified Habitat Restoration (HR) sites, and looked at changes in HR sites.
	+ Reclamation’s geomorphic reach reports accounted for island changes
* Aubrey H. - Revision suggestion for third memo recommendation: Acknowledge that we’re already making management decisions contributing to the creation of bars.
* Catherine M. will compile a list based on this feedback, but the PST will need more assistance from the SAMC to address this recommendation. Please provide links or reports for these resources.

The first recommendation (i.e., glossary of relevant technical terms) is in progress and will be posted to the Client Cloud for SAMC review. This glossary will likely be rolled into a general glossary of technical terms for the program. |
| 10:25 – 10:40 | **Long-Term Plan (LTP) Project Evaluation Criteria** * Review results from pilot run on candidate projects
* Discuss feasibility of applying LTP project evaluation criteria
* **Decision**: What changes would the SAMC like to make regarding how the criteria are applied?
* **Action Item**: PST will prepare materials for application of the criteria to projects in the LTP

Read-Ahead:* Results of SAMC Pilot Run of LTP Project Evaluation Criteria
* DRAFT MRGESCP LTP Project Evaluation Criteria – Feb2023
 | *Facilitated discussion* |
| Catherine M. gave an overview of the LTP project evaluation criteria and assignment for the SAMC from last meeting (to provide context for new members). This exercise was not based on fully-scoped projects, only limited information was available. There were only two responses to the pilot exercise. If no more responses are received, the SAMC needs to decide to move the criteria forward or go another direction. Attending members were not opposed to providing additional responses.Debbie L. stressed the importance of these evaluation criteria. All projects in the Science and Adaptive Management Information System (SAMIS) project bank will need to be evaluated. How will the SAMC proceed? We understand this request is a heavy lift, but it has the potential to make the LTP much more useful to signatories with funds to spend. Materials will be posted on the Client Cloud. |
| 10:40 – 11:00 | **Program Portal Data and SAMIS Updates*** Review list of data sets to be updated
	+ Discuss new GeoSystems Analysis, Inc. (GSA) RiverEyes mapper
* Protocols for updating Portal data and interactive map
* SAMIS developments and relevance to SAMC
* **Decision**: Which data sets does the SAMC recommend for the interactive map on the Program Portal?
* **Action Item**: PST will continue working with USGS to update data sets and map layers

Read-Ahead:* List of Program Portal Data Sets 2023
* GSA RiverEyes Mapper (visit at https://reyes.gsanalysis.com/)
 | *Catherine Murphy and Angela Medina-Garcia, PST* |
| Catherine M. and Angela M. gave an overview of available data sets served on the Program Portal. SAMC discussion raised the following questions for consideration:* Which data sets (if georeferenced) need to be included on the Portal’s Interactive Mapper?
* Which ones might we be able to remove?
	+ Re: RiverEyes – Given the new and improved GSA map tool for RiverEyes data, should the Collaborative Program remove the RiverEyes layer from our mapper?
	+ Mick suggested to provide a link to the GSA tool and stop updating the Portal data.

Catherine M. asked the SAMC to share their personal experiences with the Portal data sets. She noted that USGS will be able to track web traffic on the Portal pages, which could inform these decisions.* Re: Vegetation data
	+ Debbie L. - we need to find out how frequently the Hink and Ohmart data are updated.
	+ Ondrea H. mentioned a related project – PST needs more information to follow up
	+ Reclamation conducted a 2022 update of vegetation data
* Mick shared his experiences with the Portal data updates that he has been part of
	+ Updating the RioRestore will be very useful
	+ He suggests identifying high priorities for management and combining in the mapper
	+ Relate to vegetated islands and bars efforts via RioRestore
* Question: As develop the vegetated islands/bars conceptual model, are there any spatial data that would be useful to add to the Portal’s Interactive Mapper?
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| 11:00 – 11:10 **BREAK**  |
| 11:10 – 11:50 | **Hybrid and Science & Technical (S&T) Ad Hoc Groups*** Hybrid Ad Hoc group
	+ Information & Data Quality Standards Ad Hoc
* S&T Ad Hoc groups
	+ RGSM CEM Development Ad Hoc
	+ RGSM Hypothesis Development Ad Hoc
	+ Strategic Planning for River Drying Ad Hoc
	+ ***Revised***: Society for Ecological Restoration (SER) Recovery Wheel Ad Hoc
	+ ***Proposed***: Restoration Compendium Ad Hoc
* **Decision**: Does the SAMC approve the proposed conceptual approach regarding the SER Recovery Wheel and Restoration Compendium Ad Hocs?
* **Action Item**: SAMC will review charges for these two groups
* **Action Item**: PST will revise charges, finalize, and convene groups

Read-Ahead:* REVISED SER Recovery Wheel Ad Hoc Charge
* DRAFT Restoration Compendium Ad Hoc Charge
 | *Catherine Murphy and Angela Medina-Garcia, PST* |
| Update on Information & Data Quality Standards Hybrid Ad Hoc Group* Debbie L. – There has been a shift in this group’s charge, in part due to lack of engagement, but also because of a determination that the primary task was not feasible.
	+ Rather than develop data standards for the Collaborative Program, the group will develop a form template to be attached to each project that summarizes Quality Assurance and Quality Control (QA/QC) protocols, as well as basic information about the analyses performed.
	+ An updated charge will be provided soon.
* SAMC feedback:
	+ Need to specify, under the task and deliverables, the fields, definitions and justifications
	+ Mick P. – Focus on data integrity is leaving out an important concept - shift in interpretation
		- Ara W. shared: <https://www.whitehouse.gov/wp-content/uploads/2023/01/01-2023-Framework-for-Federal-Scientific-Integrity-Policy-and-Practice.pdf>
		- Ari P. – There is an important distinction between these two issues: data and interpretation of data. We have some say over the first, the second is more difficult to manage.
	+ Ari P. - What will be the purpose of the template?
		- Debbie L. – One purpose is to help the PST to update the SAMIS. The template will provide a quick snapshot of data protocols that are being applied to projects.
		- Ara W. – It helps summarize information quality standards for organizations.

Update on development of conceptual models:* Aubrey H. can provide relevant documents and resources for ad hoc use
	+ PST - Check to make sure SAMC members can upload documents to the Client Cloud
* Aubrey H. - Do we have consensus on the driving questions for the conceptual models?
	+ Catherine M. – We would like to develop a modular model so we could zoom in on specific aspects for more detail. It would be really nice if these different efforts could inform each other.
	+ Aubrey H. volunteered to lead the conceptual ecological modeling effort.
* RGSM Genetics/CEM Refinement Ad Hoc
	+ This group finished their tasks and gave new content for Catherine M. to incorporate into the revised model. Angela M. will assist with this task. Original group will provide final revisions and then product will be ready for peer review.

Update on RGSM Hypothesis Development Ad Hoc:* Catherine M. is facilitating this group. There has been some discussion about possibly updating the integrated population model (IPM) with feedback from Collaborative Program users. Catherine M. needs to discuss with NMISC/Charles Y. and the Ad Hoc group before presenting ideas for updates and disambiguation (of the IPM and other models) to SAMC.
	+ For potential research hypotheses, this group will revisit and evaluate the previously selected focus areas. Mick P. is putting data together for a mesohabitat hypothesis.

Update on Strategic Planning for River Drying Ad Hoc:* This group drafted a summary report on current responses to river drying. The draft report was thoroughly reviewed by members of the group and by additional experts within their respective management agencies. The draft summary report was provided to the EC as an interim deliverable. No comments were received from the EC.
	+ Need to reconvene and finalize report. Specifically, review is needed of the list of preliminary recommendations, to make sure those are the ones they want to submit to the SAMC.
	+ Public outreach ad hoc will use recommendations from this group to develop potential public messaging for consideration.
	+ The PST has also worked on a decision-support tool based on group discussions and report.

Update on Restoration-related Ad Hocs:* Zoë Rossman presented a seminar on how to use the SER Recovery Wheel to help determine ecological restoration success/progress in the MRG
* Two initial ad hoc groups will be:
	+ SER Recovery Wheel – developed by and customized for the Collaborative Program
	+ Compendium of HR resources within and informative to the MRG
* SAMC discussion:
	+ Aubrey H. mentioned Engineering With Nature (ERDC Program) as a related resource.
	+ Ari P. would like to see an iterative process in the flow chart depicting how these groups inform each other and additional restoration guidance. Seems like the wheel is going to be informed by the compendium.
		- Maybe have these two groups check in with each other and the SAMC before moving to the next steps for monitoring guidance.
		- That last piece won’t happen for a while. The PST is just conceptualizing for the SAMC where these efforts are meant to lead.
	+ Mick P. - A suggestion for standardized restoration monitoring is a system wide review following high spring runoff events like this year. It would support identifying how fluvial geomorphology affects sites.
		- Need to validate ideas. Which features work better at high-flow conditions?
	+ NOTE: The SER annual conference is being held in Santa Fe this November.
	+ Ari P. – Re: SER recovery wheel – I would need to see things put together to fully appreciate the utility of the tool.
	+ Mick P. - 1-2 interim demonstrations applying the draft wheel tool to the Rio Grande would support rapid development.
	+ Development of a baseline condition “pre-wheel” is not documented in the ad hoc charge.
		- Need to be explicit about what value this adds to other related efforts.
		- Include as deliverable – provide justification.
	+ Ari P. – It would be useful to make sure that there are case studies included on how the wheel is developed and applied.
		- Catherine M. pointed out the Flatlick Stream Case Study (*see Rossman seminar*)
	+ Question: How are ad hoc members chosen?
		- PST compiles list of suggested individuals to request participation, but also puts out a call for volunteers.
	+ SAMC needs to complete these reviews as soon as possible so we can finalize the groups and get them started.
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| 11:50 – 12:35 | **October 2023 Workshop on Climate Futures Planning*** Collaboration with South Central Climate Adaptation Science Center (SC CASC)
* Review purpose, proposed approach and intended outcomes regarding workshop
* Discuss resources cited and small planning group activities
* Previous SAMC commitments to small planning group
	+ Active: Friggens, Winter, Posner
	+ Passive: Moore, Conway
* **Decision:** Does the SAMC approve the approach presented for the Climate Futures Planning Workshop
* **Action Item**: PST will organize small planning group and begin workshop preparation

Read-Ahead:* Lawrence et al. (2021) methods paper (*for reference* *only*)
 | *Catherine Murphy and Angela Medina-Garcia, PST* |
| Climate Futures Planning Workshop* We are coordinating with climate scientists and planners with the South Central Climate Adaptation Science Center (SC CASC), so far supportive of the approach.
* Approach found in Lawrence et al. paper (shared) for the first task of the workshop.
	+ PST placed a document on the Client Cloud outlining the approach/process for planning the workshop.
		- Selection of climate futures
		- List of tasks for small planning group to determine
		- Workshop activities and expected outcomes
	+ Set expectations at an appropriate level – The focus of this workshop is not to predict the future. Rather, we want natural resource managers and scientists to come together, share their knowledge about habitat needs of the listed species, consider how they might be affected by the climate futures, and collaborate to develop adaptive management strategies.
		- Collaborative AM is the ultimate goal.
* Angela M. presented overview slides about the workshop approach.
	+ Aubrey H. - Need to determine how much existing condition is covered the potential range captured by the climate futures.
	+ Also facing geomorphic change – disconnected floodplain, incising river channel. Are those going to be incorporated?
		- The activities at the workshop will address those because they describe ecosystem functions.
	+ Mick P. - Add workshop follow-up to future collaboratory’s agenda, so we can leverage the workshop outcomes for a successful 2024 Collaboratory.
* Debbie L. and Catherine M. discussed further the value of focusing on Whitfield Wildlife Conservation Area (for purposes of the “thought exercise” at workshop).
* SAMC members in attendance approved workshop approach.
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| 12:35 – 12:45 | **MRGESCP December 2023 Science Symposium*** Discuss planning needs for symposium and SAMC involvement
* Volunteers to participate in a small planning group
* **Action Item**: PST will coordinate Science Symposium planning
 | *Group discussion* |
| Debbie L. gave an overview of the plan for this year’s MRGESCP Science Symposium and encouraged SAMC members to participate in the small planning group. |
| 12:45 – 1:00 | **Action Items, Next Steps, and Announcements*** **Upcoming events**:
	+ Van Horn seminar: *Water Quality and Ecosystem Processing in the MRG*; June 8, 10-11am
	+ EC Meeting – June 29, 1-4 pm, (hybrid) TBD
* **Publication release**:
	+ Final Report on RGSM Population Monitoring during 2022 (Dudley et al. 2023)

**Next Meeting**: August 2023 | *PST* |
| SAMC meeting extra:* The group watched a video of the recent floodplain inundation.
	+ Ari P. sent 26 discrete videos taken from a plane over different locations.
	+ May 18 videos were shot heading north-bound; May 19 videos were taken south-bound.
	+ Videos shot 500-1,000 ft above ground level.
	+ Recommends watching these videos in their entirety. PST has been given copies to archive. Debbie L. will look into uploading to the Client Cloud. Ari P. will check if they can be publicly shared.

Announcements:* Reclamation is planning to build a fish passage at San Acacia and Isleta over next two years. Understanding what that means for the population very important.

Debbie L. recapped action items from this meeting. |
| 1:00 **ADJOURN** |

**Meeting Participants**

**SAMC Member Role**

Alison Hutson Aquatic Ecology Expert

Ara Winter Statistics/Modeling Expert

Ari Posner Geomorphology Expert

Aubrey Harris Hydrology Expert

Meaghan Conway Ecosystem Function Expert

Michael (Mick) Porter Aquatic Ecology Expert

Ondrea Hummel Watershed Resource Planning/Regulatory Expert

S. Dave Moore Terrestrial Ecology Expert

**Program Support Team Role**

Catherine Murphy SAMC Facilitator

Angela Medina-Garcia Support

Debbie Lee Support

**Guests Organization**

Lynette Giesen U.S. Bureau of Reclamation

Miranda Butler-Valverde Audubon Southwest

Stephanie Jentsch U.S. Army Corps of Engineers