

**Utah Lake Water Quality Study
Science Panel Call #5
Summary
October 22, 2018**

This document includes a list of future meetings, action items, and a brief summary of the discussions. Please review the action item list for tasks assigned to you and/or the Steering Committee in general. A list of attendees can be found at the end of the document.

Upcoming Meeting/Call	When & Where	Suggested Agenda Items
ULWQS Informational Call	<i>Wednesday, October 31 1:00 – 1:30 p.m. MST</i>	○ DWQ description of proposed changes to the Science Panel Operating Principles
ULWQS Science Panel Call #6	<i>December 5, 2018 12:00 – 2:00 p.m. MST</i>	○ Engage with the technical consultant

I. Action Items

Meeting Summaries	Who	Due Date	Date Completed
1. Share draft Meeting Summary	Facilitation Team	November 19	November 19
2. Review and share comments on summary	SP	November 26	November 26
3. Finalize summary and post to Dropbox	Facilitation Team	November 27	November 27
Data and Information Sharing	Who	Due Date	Date Completed
4. Draft and share a modeling memo to the U of U modeling team with the SP	Facilitation Team	October 24	October 24
5. Send an update on modeled headwaters nutrient criteria in the Utah Lake watershed in follow-up from the presentation during SP Call #5	DWQ	October 24	October 24
6. Share the final version of the Limnotech literature summary	DWQ/Facilitation Team	October 25	October 25
7. Review and comment on modeling memo to the U of U modeling team	SP	November 16	
8. Share the Phase 1 Report	DWQ/Facilitation Team	November 16	

9. Draft and share memo summarizing results of the headwaters criteria development specific to the Utah Lake watershed	DWQ	November 16	
10. Provide an update on when WFWQC data will be available	DWQ	December 5	
11. Share a summary of the SP Chair nominations results with the SP	Facilitation Team	December 11	

II. Meeting Recording

A recording of the meeting (also available on the DWQ website in the near future) can be found at the following link: <http://resolv.adobeconnect.com/pbkxa31c5xfv/>. Please use the video scroll bar along the bottom of the recording window to find the appropriate time in the webinar recording for the session you would like to watch. There are bookmarks in the 'Events Index' on the left side of the screen identifying each session.

III. Key Points of Discussion

Welcome and Agenda Review

Meeting Facilitator Paul De Morgan, RESOLVE, welcomed everyone to the call. He went over the list of members of the Science Panel participating on the call and stated that because several members ended up with schedule conflicts, there was not a quorum present (per the Operating Principles) and the call was not an official meeting of the ULWQS Science Panel. However, because four of the five independent members of the Science Panel were present, the group was able to make decisions as a body.

Science Panel Chair

Mr. De Morgan explained the concept of a SP Chair and that the Chair's role would be to work with the Facilitation Team and Scott Daly (DWQ) as needed, provide input on meeting agendas, and coordinate as needed with the technical consultant. He explained that the intention is for the Chair to be a rotating position and that three different individuals would serve one-year terms with the general focus as follows:

- Year 1: managing technical consultant SOW and setting up studies
- Year 2: managing studies
- Year 3: developing recommendations/building on the studies

Mr. De Morgan explained that via email both Mike Brett and Mitch Hogsett had been nominated to serve as the Chair. James Martin and Hans Paerl had both stated that they were not interested in serving as the Chair. One member of the Science Panel suggested that Mitch Hogsett serve as the chair in year 1, Mike Brett serve as the chair in year 2, and Ryan King serve as the chair in year 3. All members of the Science Panel on the call expressed their support for this arrangement. Mr. De Morgan stated that the Facilitation Team would work with Mitch Hogsett to go over what is envisioned for the role of the Chair. He also indicated they would reach out to Ryan King to confirm his willingness to play the role.

Working Content Document

Mr. De Morgan went over the history of how the Working Content document was drafted and the structure of how information was incorporated from the discussions of the Science Panel during previous meetings. Mr. Daly explained that the document structure may serve as a first cut for the Data Gaps Analysis that the technical consultant will be asked to prepare. Mr. De Morgan asked the Science Panel whether this document will be useful and at least four members of the Science Panel indicated they felt it will be a useful starting point.

Modeling Efforts

Mr. Daly provided an overview of the earlier Science Panel comments related to perceived/potential shortcomings of the University of Utah modeling effort as it relates to the ULWQS coming from earlier conversations. He explained that Nick Von Stakelberg (DWQ) and Juhn Yuan Su (University of Utah) are working to draft calibration goals and to amend a modeling Quality Assurance Project Plan (QAPP) they have already created to spell out calibration performance parameters to help meet the specific needs of the ULWQS. In response to several comments from members of the Science Panel suggesting specific components to be included the modeling effort, a discussion ensued regarding the perceived shortcomings of the current modeling effort and the responses from the modeling team. Mr. Daly suggested that a future meeting focus on these items and come up with a plan for how to move forward with each of them. Mr. De Morgan suggested that the Science Panel draft and send a memo to the University of Utah modeling team addressing the perceived shortcomings of the modeling effort. The Science Panel expressed support for this idea and Mr. De Morgan suggested that the content for the memo could largely be taken from the Working Content document. The memo would be drafted and sent out to the Science Panel in 1-2 days for comment.

Updated: Data Analysis and Other Information

Jim Harris (DWQ) provided an update on the joint effort between the Wasatch Front Water Quality (WFWQC) Council and DWQ to add data collected by the WFWQC to the DWQ database. He noted one of the main challenges was to align the geographic information from the WFWQC collection sites with the DWQ collection sites. Now they are working to upload the data (e.g., water chemistry profiles, phytoplankton, zooplankton, macroinvertebrate, tributary data) and Mr. Harris indicated progress is being made but did not provide an update on the anticipated timeline for completion. Mr. De Morgan suggested that it would make sense to incorporate this data collection effort in the Working Content document to give a sense of what data will be made available.

Mr. Daly provided an update on the timeline for completion for the updates to the ULWQS Phase 1 Report. He explained that DWQ had been considering the list of additional analyses suggested by the Science Panel and evaluating which items should be completed by DWQ staff and which should be done by the (to be hired) technical consultant. He explained that some of the additional analyses have already been completed with enhancements to the Utah Lake Data Explorer tool and the addition of phytoplankton biovolumes to the database. He suggested that the final version of the report should be available by November 16.

Jeff Ostermiller (DWQ) provided an overview of the DWQ effort to identify nutrient criteria for headwaters areas in Utah. Mr. Ostermiller described the various methodologies utilized to document and model nutrient concentrations in the headwaters areas of watersheds within the state of Utah. He

explained that the report that DWQ has developed is lengthy and covers the whole state of Utah. Mr. Ostermiller offered to develop a memo that focuses on the findings of background nutrient concentrations in the headwaters areas of the Utah Lake watershed. Members of the Science Panel expressed that they would be very interested in receiving the suggested memo. There was a question regarding the magnitude of the background nutrient concentrations for the two main modeling methods and Mr. Ostermiller committed to reviewing the question and sending a response to the Science Panel.

Mr. Daly explained that DWQ is working with Dr. Sam Rushforth on compiling phytoplankton data for Utah Lake. He explained that this is an ongoing effort and he will report back to the Science Panel when he receives information from Dr. Rushforth. Mr. Daly clarified that the data is largely for water column samples but may include some data from sediment cores.

Finally, Mr. Daly gave an update on the literature review completed by Limnotech. He explained that given available resources and Limnotech's interpretation of what information is available, DWQ decided not to pursue additional work related to updating the report. He explained that there is a minor change to the report related to the formatting of a table and some notes on lacking information. This final report is ready for distribution now and will be sent to the Panel following the call.

Project Schedule

Mr. Daly provided an update on the schedule related to the technical consultant that DWQ will hire to support the Science Panel. He explained that a scope of work was developed, put out to bid in mid-September, and proposal responses are due on October 24. DWQ will work with the independent members of the Science Panel to evaluate proposals and select the contractor. There will be a call on October 23 with the independent members of the Science Panel to go over the approach for evaluation of proposals and then a call on November 6 to discuss the proposals that would have been evaluated. An additional call on November 13 would take place if needed to continue the discussion of the proposals.

Mr. De Morgan explained that there is not a definitive schedule for the Science Panel moving forward. The Facilitation Team is hoping to schedule a Steering Committee call in November, but it is not clear whether that will happen. He explained that once the technical consultant has been hired, it would be useful to schedule a call with the full Science Panel in December to discuss priorities and how the two groups might work together. Then the Facilitation Team will work on scheduling activities for 2019, which will depend in part on the technical consultant's projected timeline. Once enough information is available, the Facilitation Team will send out a Doodle poll to the members of the Science Panel to schedule a call.

LaVere Merritt Letter

Mr. De Morgan explained that an email containing a letter and report was sent by Dr. LaVere Merritt to some of the members of the ULWQS Steering Committee and Science Panel. Members of the Science Panel expressed the opinion that no response needs to be made to Dr. Merritt given that the letter did not bring up any new points that were not included in the letter he had sent to the group previously. Erica Gaddis (DWQ, ULWQS Steering Committee Co-Chair) explained that DWQ does not have any plans to respond to the letter.

IV. Public Comments

Juhn-Yuan Su: Please keep me posted regarding future presentations planned by the University of Utah over the Utah Lake Modeling Efforts to the Science Panel (such as the one back on August 8, 2018).

Dr David Richards: Comment/Question: Important that DWQ determines why Spatially Explicit Models for headwater TP were an order of magnitude less than headwater Frequency Distribution Models. FYI: I am well aware of the difference between micrograms and milligrams but this difference caused me to question the values. I graduated grade school.

V. Participation

Meeting Participants (Name, Organization)

Members of the Science Panel:

- Janice Brahney - Utah State University
- Mike Brett - University of Washington
- Jereme Gaeta - Utah State University
- Mitch Hogsett - Forsgren Associates
- James Martin - Mississippi State University
- Hans Paerl - University of North Carolina

Members of the Public:

- Eric Ellis, Utah Lake Commission; Co-Chair
- Mark Illum
- Julie Kinsey
- Renn Lambert
- David Richards
- Juhn Yuan Su

Utah Division of Water Quality Staff Present:

- Scott Daly
- Erica Gaddis, Utah Lake Commission; Co-Chair
- James Harris
- Jeff Ostermiller

Facilitation Team:

- Paul De Morgan, RESOLVE
- Dave Epstein, SWCA