

**Utah Lake Water Quality Study
Science Panel Meeting #5
Wednesday July 10, 2019; 9:00 a.m. – 5:00 p.m. Mountain
Thursday July 11; 9:00 a.m. – 5:00 p.m. Mountain**

Agenda

**Utah Department of Water Quality
Four Corners Conference Room (4th Floor)
195 N 1950 W
Salt Lake City, UT 84114**

Adobe Connect Link: <https://resolv.adobeconnect.com/pdemorgan/>

Meeting Objectives:

- *Listen to presentations from and interact with Utah Lake researchers;*
- *Discuss recent nutrient load analyses and determine the next steps;*
- *Discuss efforts underway to characterize atmospheric deposition of nutrients to Utah Lake;*
- *Review progress and discuss comments on Tetra Tech work elements;*
- *Receive a brief update of ongoing efforts to develop Utah Lake and watershed models;*
- *Introduce near-term research teams and discuss initial progress from each;*
- *Explore understanding of and determine appropriate time to consider High Level Charge Question #4;*
- *Determine if the established ULWQS project timeline is appropriate;*
- *Receive an overview of DWQ's nutrient removal cost study; and*
- *Provide an opportunity for members of the Steering Committee to interact with and ask questions of the Science Panel*

Day 1 – Wednesday, July 10, 2019

- 9:00 – 9:15 Welcome, Introductions, and Agenda Review
- Review the agenda and ground rules – *Paul De Morgan, RESOLVE*
- 9:15 – 10:45 Utah Lake Research Presentations
- Series of presentations on ongoing research to inform SP work [20 min. each]
 - An "omics" approach to cyanobacteria ecology in Utah Lake– *Ramesh Goel, University of Utah*
 - Utah Lake food web and ecosystem research – *Jereme Gaeta, Utah State University*
 - Phosphorus and algae growth in Utah Lake – *LaVere Merritt, Professor Emeritus, BYU*
 - Initial thoughts from the Science Panel on the relevance of each to the SP charge, conceptual model, and the strategic research plan [10 min. each]
- 10:45 – 11:00 **Break**

- 11:00 – 11:20 Utah Lake Research Presentations Q & A
- Addition discussion of research presentations
- 11:20 – 11:50 Utah Lake Loading Analysis Update
- Discuss results of recent Utah Lake loading analysis – *Michael Brett, Science Panel*
 - Receive comment and determine the next steps
- 11:50 – 1:20 **Lunch** (*Walk or drive to a nearby restaurant*)
- 1:20 – 2:50 Atmospheric Deposition of Nutrients to Utah Lake
- Estimating total and bioavailable nutrient loading to Utah Lake from the atmosphere – *Janice Brahney, Science Panel*
 - Address any questions or comments from the Science Panel
 - WFWQC proposal to measure atmospheric deposition – *Theron Miller, Science Panel*
 - Address any questions or comments from the Science Panel
- 2: 50 – 3:05 **Break**
- 3:05 – 4:25 Progress Update and Discussion on Tetra Tech Work Elements
- Nutrient criteria framework development – *Michael Paul, Tetra Tech [20 min.]*
 - Conceptual models *[20 min.]*
 - Data characterization analysis plan *[40 min.]*
- 4:25 – 4:40 Utah Lake Model Development Update
- Progress update on University of Utah model development – *Scott Daly, DWQ*
 - DWQ approach for implementation of Utah Lake models and development of watershed models
- 4:40 – 4:50 Public Involvement
- Members of the public will be given an opportunity to comment on the Utah Lake Water Quality Study efforts. The amount of time given to each individual will depend on the number of people wishing to provide comment. Additional comments can be submitted in writing to the Division of Water Quality.*
- 4:50 – 5:00 Wrap Up
- Final thoughts from the previous sessions
 - Confirm action items and assess plan for day 2
- 5:00 **Adjourn**

Day 2 – Thursday, July 11, 2019

- 9:00 – 9:15 Welcome and Agenda Review
- Review agenda for day – *Dave Epstein, SWCA*
- 9:15 – 10:15 Near-Term Research Work Plan Update
- Utah Lake-sediment water nutrient interactions – *Ramesh Goel, U of U; and Greg Carling, BYU [20 min.]*
 - Bioassays to investigate nutrient limitation of Utah Lake – *Zach Aanderud, BYU; Michelle Baker, USU; and Ben Abbott, BYU [20 min.]*
 - Paleolimnology and paleoecology of Utah Lake – *Janice Brahney, USU; Soren Brothers, USU; and Mitch Power, U of U [20 min.]*
- 10:15 – 10:55 Progress Update and Discussion on Tetra Tech Work Elements (cont.)
- Uncertainty guidance development – *Michael Paul [20 min.]*
 - Data gaps analysis *[20 min.]*
- 10:55 – 11:10 **Break**
- 11:10 – 12:00 Initial Charge High-Level Question #4
- Explore understanding of and discuss appropriate timing for the Science Panel to consider High-Level Question #4 *[30 min.]*
 - Review ULWQS Phase 2 and Phase 3 timeline *[20 min.]*
- 12:00 – 12:30 Strategic Research Plan Development
- Brainstorming session to identify next generation research needs in context of the Strategic Research Plan – *Michael Paul*
 - Address any questions or comments from the Science Panel
- 12:30 – 2:00 **Lunch** (*Walk or drive to a nearby restaurant*)
- 2:00 – 2:20 Overview of DWQ's Nutrient Removal Cost Impact Study
- Presentations of findings – *John Mackey, DWQ*
 - Address any questions or comments from the Science Panel
- 2:20 – 3:20 Q & A with Science Panel and Interested Members of the Steering Committee
- Opportunity for ULWQS Steering Committee members (in person or on phone) to raise questions and explore issues of interest with the Science Panel
- 3:20 – 3:35 **Break**
- 3:35 – 4:30 Additional Science Panel Business
- Opportunity to address or continue discussion of issues raised earlier in the meeting

4:30 – 4:40 Public Involvement
Members of the public will be given an opportunity to comment on the Utah Lake Water Quality Study efforts. The amount of time given to each individual will depend on the number of people wishing to provide comment. Additional comments can be submitted in writing to the Division of Water Quality.

4:40 – 5:00 Wrap Up

- Final thoughts from the previous sessions
- Confirm action items and schedule
- Schedule for remainder of 2019
- Closing thoughts for the day

5:00 **Adjourn**