

Utah Lake Water Quality Study

Topics to Establish a Common Base of Understanding Around ULWQS Efforts [for a joint Steering Committee and Science Panel Meeting]

Building on the “Why We’re Here” presentations from the Utah Lake Water Quality Study (ULWQS) Steering Committee (SC) Meeting #1, the SC members were asked what additional information (from UDWQ or others) they would find useful in building the common platform of understanding and moving forward with efforts to achieve the overall objectives of the ULWQS. The SC generated a list of presentation topics that might be beneficial to both the SC and the Science Panel (SP) to expand the knowledge base around Utah Lake and the ULWQS. Table 1 summarizes the list of potential presentation topics that the SC may pursue to be included in the agendas of future meetings or to fill the agenda of a special meeting designated for these presentations. The SC will work to identify and contact individuals who would be qualified and willing to give presentations (or submit materials), although suggestions for some of the topics are included in Table 1.

Table 1. Presentation Topics (in order) to Establish a Common Platform of Understanding.

Presentation Topic	Topics Suggested by:	Possible Presenters:
1. <u>Utah Lake Social and Cultural History</u> – Overview of the history of Utah Lake and human impacts on the Lake	Scott Daly	D. Robert Carter <i>[topic may not be a top priority given time constraints]</i>
2. <u>Utah Lake Ecological History and What it Could Potentially Become</u> – Explanation of the natural features of the lake and what it might become with changes to watershed management including limitations – Description of benthic sediments and lake depth over time; evidence from research using sediment cores	Gerard Yates	Steven Nelson <i>[or alternatively circulate presentation from Utah Lake Summit]</i>
3. <u>Shallow Lake Ecology</u> – Shallow lake limnology, how shallow lakes are unique – The role of nutrients in shallow lake ecology – Water clarity/turbidity – The value of shallow lakes: ecologically, economically? – Understanding (quantifying?) in-lake sediments and relationship with current and future lake depth – How reservoirs behave differently from lakes and how Utah Lake may have changed due to the regulation of the outflow to the Jordan River	Chris Keleher/Jay Olsen/Gerard Yates	Soren Brothers (USU); David Richards (Oreo Helix); Steve Thurin (HDR); Wayne Wurtsbaugh (USU)

<p>4. <u>Establishing Nutrient Criteria in Lakes: Associated Vocabulary and Concepts</u></p> <ul style="list-style-type: none"> – Present the vocabulary, terminology, and concepts associated with lake ecology and the development of nutrient criteria – Overview of site-specific criteria process 	Neal Winterton	US EPA
<p>5. <u>Management Implications/Limitations of Utah Lake</u></p> <ul style="list-style-type: none"> – Utah water law and Utah Lake senior water rights – Water rights-driven limitations of surface water elevations – Demands and expectations of downstream users (quantity and quality) 	Gerard Yates	Joint presentation from Mike Rau (CUWCD) and Jesse Stewart (SLCDPU)
<p>6. <u>Wastewater Treatment, Existing Process (and Facilities), and Potential Upgrades [Possible Tour/Meeting on Site]</u></p> <ul style="list-style-type: none"> – Details of how wastewater is treated, the discharge and assimilation of discharge into surface waters [possibly incorporate a DWQ presentation on discharge permit development and compliance efforts] – Details of system upgrades, how they treat wastewater, estimated costs and challenges to implementation 	Chris Cline	Jon Adams (TSSD); David Barlow (TSSD); DWQ
<p>7. <u>Harmful Algal Blooms (HABs)</u></p> <ul style="list-style-type: none"> – An overview of efforts to resolve HABs in other states/countries and what we can learn from them – What is known about potential links between carp removal efforts and HABs in Utah Lake? – Understanding the relationship between temperature and HABs in Utah Lake 	Gary Calder/ Jason Garrett/ Gerard Yates	Jennifer Graham (USGS – Kansas); Keith Lofton (USGS – Kansas); Mike Mills (June Sucker Recovery Program); Hans Paerl (NC State); Mike Rau (CUWCD)
<p>8. <u>Public Health Issues Related to Utah Lake</u></p> <ul style="list-style-type: none"> – How <i>E. coli</i> outbreaks and HABs are related to nutrient concentrations – Human health concerns associated with <i>E. coli</i> and HABs – The process of engaging the public while and after public health issues exist 	Multiple	Jason Garrett (Utah County Health Dept.); Nathan LaCross (Utah State Health Dept.)

The Steering Committee will work together to refine the list of topics cataloged in Table 1 and will work with the Facilitation Team to schedule a joint meeting with the Science Panel for the presentations to take place. It has been suggested that each presenter be asked to conclude their presentation with key uncertainties and/or questions they think would be useful for the ULWQS process to address in striving to achieve its objectives.

Based on group discussions, the SC may decide to prioritize certain presentation topics ahead of others, given time limitations. For presentation topics of lower priority, one option would be to ask presenters to participate on a recorded webinar that could be broadcast live and/or made available for viewing at each Steering Committee/Science Panel's convenience. Another option would be to circulate Power Point presentations given at the Utah Lake Summit (or other versions) that address the topics listed in Table 1.

It should be noted that two possible presentations, one on the *Current State of Knowledge on Utah Lake* and another on *Public Perceptions of Utah Lake*, were not included in Table 1 as these topics will either be covered in the list of key papers to be provided to the Steering Committee by the Utah Division of Water Quality or will be pursued in the future as a part of the ULWQS. In the interim a Steering Committee suggested that the *Potential for Impacts Related to Population Growth around Utah Lake* be added as a topic for the Steering Committee/Science Panel to consider. The large addition of additional people to the watershed in coming years would undoubtedly effect the factors that influence water quality in Utah Lake. While this topic was not added to Table 1, the Steering Committee may want to consider this additional topic either in the short-term or at a later time.