



PURPOSE

The purpose of the Willard Spur Science Panel (Science Panel) is to advise the Utah Department of Environmental Quality, Division of Water Quality (DWQ) and the Willard Spur Steering Committee (Steering Committee) regarding regulatory and technical considerations related to the development of water quality standards for Willard Spur.

OBJECTIVES

1. Identify gaps in scientific understanding of the Willard Spur ecosystem
2. Review and provide recommendation as to the nature and objectives of scientific studies that will be required to fill these gaps
3. Prioritize studies and recommend project timing to address issues of concern
4. Finalize and approve a detailed workplan to complete scientific studies
5. Recommend a process for outside, independent peer review of scientific studies
6. Recommend science-based numeric water quality standards, or other regulatory changes that are needed to ensure long-term protection of Willard Spur's beneficial uses

DUTIES

1. The Science Panel shall immediately:
 - a. Review project background, goals, objectives, decision making procedures, and this Science Panel charge and recommend adjustments.
 - b. Review membership to identify additional expertise if needed.
 - c. Review and advise DWQ and the Steering Committee on the proposed research program and workplan; provide recommendations on required modification to and prioritization of work elements and timeline
2. The Science Panel shall assist DWQ and the Steering Committee in developing a strategic research program that:
 - a. Addresses appropriate monitoring, modeling, analytical methods, data management, and research required to meet stated program objectives
3. The Science Panel shall, on an ongoing basis, review and report and provide recommendations to the Steering Committee on the following:
 - a. Progress of monitoring, modeling, and research efforts and deliverables toward achieving stated program objectives
 - b. Proposals for additional research and funding
 - c. Significant findings and results from technical documents, reports, and other deliverables from the research program
4. The Science Panel shall interpret results of literature and research program and provide management recommendations (i.e., changes to water quality standards, permit modifications, etc.) to the Steering Committee
5. Periodically review membership and recommend adjustments or additional expertise needed.
6. The Science Panel should collaborate with other scientific groups and consult other scientists in conducting its work, including similar efforts in other states.
7. To the maximum extent possible, the Science Panel should seek to integrate this research program with other Great Salt Lake wetlands research efforts to
 - b. Reviews and incorporates existing literature on unique features of Great Salt Lake ecosystem, including human influences
 - c. Identifies and addresses gaps in scientific understanding that may impede the development of water quality standards for Willard Spur
 - d. Incorporates a watershed and ecosystem-wide perspective
 - e. Strategically prioritizes monitoring, modeling, and research efforts
 - f. Implements an appropriate process for outside, independent peer review of monitoring, modeling, and research conducted as part of the research program
 - g. Defines data collection and management methods that facilitate easy access and use of data by all participating agencies and the public
 - h. Proactively integrates and addresses regulatory considerations and requirements
 - i. Provides quality and scientifically defensible approaches, data sets, conclusions, and recommendations

work towards an integrated research agenda for Great Salt Lake. For example, the Science Panel should oversee the proposed research program keeping DWQ's development of a Great Salt Lake wetlands assessment protocol in mind provided such activities do not interfere with the development of Willard Spur water quality standards.

COMPOSITION

DWQ will request the Steering Committee to nominate a five to seven member Science Panel that will provide independent, non-representational scientific advice to the Steering Committee in meeting program objectives. Nominees should reflect the full range of scientific disciplines required to complete the proposed research program. Candidates may be from the public or private sector. All nominees shall disclose any potential conflicts of interest, any financial relationship or contracts with members of the Steering Committee or DWQ or relating to Great Salt Lake or the Perry-Willard wastewater treatment plant. DWQ will work with the Steering Committee to make final selections meeting the requirements herein. No member on the Science Panel should be a member of the Steering Committee or a research contractor working on this project.

Jeff Ostermiller from DWQ will serve as Science Panel chairman. Panel members will serve a minimum of three years. The Steering Committee will select replacements or additional members as needed to meet needs recommended by the Science Panel. DWQ will provide administrative support for the Science Panel.

Anticipated disciplines that should be represented on the Science Panel include: wetlands hydrology, hydrodynamic modeling, wetlands modeling, biological assessments, aquatic ecology, limnology, biogeochemistry, wetlands ecology, regulatory process, and experience in developing water quality standards for similar wetlands and/or estuarine ecosystems.

MEETINGS

Meetings will generally be held at the Utah Department of Environmental Quality building at 195 North 1050 West, Salt Lake City, Utah. Meetings will be held no less frequently than four times per year. Meetings may initially be held monthly as the research program is developed. See Attachment 1 for a preliminary schedule and objectives for each meeting. At least twenty working days notice of each meeting will be provided to Science Panel members. Meetings will be open to the public for observation. Input from the public will be facilitated by

the Science Panel chairman. Meeting agendas and minutes will be maintained by DWQ and posted to a project website.

DECISIONS

The goal is to work toward consensus in making decisions. In order to forward a recommendation to the Steering Committee, a supermajority is required. A supermajority is defined as at least $\frac{3}{4}$ of all the members of the committee are supportive of any management recommendations or scientific interpretations. A minority opinion may also be forwarded. If a supermajority is not possible, then position papers from each Science Panel member will be forwarded for consideration by the Steering Committee.

A quorum is defined as $\frac{2}{3}$ of the members of the panel. Procedural issues require the support of $\frac{2}{3}$ of the members present in a meeting.