



WILLARD SPUR STEERING COMMITTEE KICKOFF MEETING

Date: January 20, 2011
Time 1:00 – 3:00pm
Location UDEQ Board Room, main floor, 195 N. 1950 West

MEETING AGENDA

1. Introductions
2. Review agenda and meeting objectives
3. Review project background
4. Review proposed approach and schedule (see attachment)
5. Discuss draft Steering Committee charter (see attachment)
6. Discuss draft Science Panel charter (see attachment)
7. Discuss Science Panel nominations and membership
8. Review action items

ATTACHMENTS

Steering Committee Members

Lessons Learned from Development of a Selenium Standard for the Open Waters of Great Salt Lake

Project Background

Site Map

Organizational Chart

Process Summary

Comparison of Two Approaches (Schedule)

Proposed Schedule

Steering Committee Charter

Science Panel Charter

Science Panel Nominations

Possible Candidates for Science Panel

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Member	Alternate	Representing
Walter Baker, Chair Director, Utah Division of Water Quality 801.536.4312 wbaker@utah.gov	Leah Ann Lamb Assistant Director, Utah Division of Water Quality 801.536.4318 llamb@utah.gov	Utah Division of Water Quality Utah Water Quality Board
Ryan Nesbitt Sovereign Lands Program Manager 801.538.5504 ryannesbitt@utah.gov	Laura Ault Forestry Program Coordinator 801.538.5540 lauraault@utah.gov	Utah Division of Forestry, Fire and State Lands
Pam Kramer Habitat Biologist, Northern Region 801.476.2775 pamkramer@utah.gov	Kent Sorenson Wildlife Biologist, Northern Region 801.476.2775 kentsorenson@utah.gov	Utah Division of Wildlife Resources
Bob Barrett Bear River Migratory Bird Refuge Manager 435.734.6451 bob_barrett@fws.gov	John Isanhart, Ph.D. Ecologist, U.S. Fish and Wildlife Service 801.975.3330 ext. 144 john_isanhart@fws.gov	U.S. Fish and Wildlife Service
Karen Hamilton Chief, Water Quality Unit, EPA Region 8 303.312.6236 Hamilton.Karen@epamail.epa.gov	Lareina Guenzel Water Quality Unit, EPA Region 8 303.312.6610 Guenzel.Lareina@epamail.epa.gov	U.S. Environmental Protection Agency
Jerry Nelson Mayor, Perry City 435.723.6461 jerry.nelson@perrycity.org	Bruce Howard Perry/Willard Wastewater Treatment Facility Board 435.723.8347 brucerhoward@hotmail.com	Perry and Willard Cities
Ryan Tingy GSLAC Member representing counties Commissioner, Box Elder County 435.734.3347 iflyrealow@gmail.com	Leland Myers Chairman, GSLAC General Manager, Central Davis Sewer District 801.451.2190 lmyers@cdsewer.org	Great Salt Lake Advisory Council (GSLAC)
Dick West 801.467.4242 richardwest@qwestoffice.net	Bruce Wadell 801.523.2274 bruce-kathy@att.net	Duck Clubs West Side Associated Duck Clubs
Chris Montague Director of Conservation Programs 801.531.0999 Ext. 2333 cmontague@tnc.org	Joan Degiorgio Northern Mountains Regional Director jdegiorgio@tnc.org	Conservation Interest The Nature Conservancy
Rob Dubuc Staff Attorney, Western Resource Advocates (o) 801.487.9911 (c) 801.529.3964 rdubuc@westernresources.org	R. Jeffery Hicks President, Utah Airboat Association 801.540.9225 rjefree@msn.com	Conservation Interest FRIENDS of Great Salt Lake
Dal Wayment General Manager, South Davis Sewer District 801.295.3469 dwayment@sdsd.us	Reed Fischer General Manager, Central Valley Water Reclamation Facility 801.973.9100 fisher@cvwrf.org	Regulated Publicly Owned Wastewater Treatment Community (POTW)
Hal Lee Environmental Engineer (o) 801.732.3191 (c) 801.725.8352 leeh@compassminerals.com	Todd Robinson Environmental, Health, Safety & Security Manager (o) 801.732.3251 (c) 801.389.5092 robinson@compassminerals.com	Regulated Industrial Community: Great Salt Lake Minerals
Don Leonard President 801.560.1900 don@gsla.us	Thomas Bosteels General Manager 801.622.111 Thomas@gsla.us	Regulated Extractive Industry Great Salt Lake Brine Shrimp Cooperative, Inc.

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DEVELOPMENT OF A SELENIUM STANDARD FOR THE OPEN WATERS OF GREAT SALT LAKE

WHAT WORKED WELL

1. Steering Committee and Science Panel
 - a. Membership of two groups did not overlap
 - b. Diverse viewpoints/interests were represented
 - c. Science Panel included national experts on the topic of selenium and local experts on Great Salt Lake ecosystem
 - d. Adequate time for all members to learn/discuss the issues and formulate the approach
2. Partnering and communication
 - a. Steering Committee worked together to identify concerns, process, and Science Panel members
 - b. Experts on Science Panel were responsible for directing science and for making technically sound recommendations
 - c. Groups openly discussed and addressed concerns and questions as they came up
 - d. Good communication and transparency among all groups
3. The science that formed the basis for the water quality standard was not questioned in the end
 - a. Acceptance of conceptual model describing food web led to consensus on studies to be completed
 - b. Completed round robin of laboratory analytical methods prior to any field work to confirm how samples would be analyzed
 - c. Acceptance of questions to be answered and Data Quality Objectives (DQOs) clearly defined what the work would accomplish and identified potential changes and contingencies before work began
 - d. Acceptance of Standard Operating Procedures (SOPs) and Quality Assurance Plan (QAP) before work started
 - e. Acceptance of Study Workplans (i.e., scope of work, budget, DQOs, SOPs) before work started
 - f. All laboratory data validated per QAP prior to any evaluation/analysis
 - g. Quality control completed in successive steps; 1) by Principal Investigator, 2) by Task Leaders, 3) by Science Panel
 - h. Oversight by Task Leaders helped identify and address risks/changes early and kept projects moving forward together, focused on answering only pertinent questions, and addressing project objectives
4. Identification of decision points before any data were generated
 - a. Science Panel agreed upon most sensitive endpoints for selenium (based upon experience and literature)
 - b. Science Panel agreed upon a range of numeric values that would include the final water quality standard
 - c. These decision points (i.e., working hypothesis) helped keep the work and discussions at the end focused
5. Solid and defensible science was the goal
 - a. While cost and schedule were not unlimited, they were not fixed constraints
 - b. Work was dictated by DQOs and contingencies that were identified at the beginning
 - c. The focus was on making sure science was objective and unbiased; ideology was largely kept out of Science Panel discussions until the very end when recommendations were requested

WHAT COULD BE IMPROVED

1. Make it clear at the beginning that all Science Panel and Steering Committee members will need to provide individual written opinions
2. Science Panel members should not also be completing the research studies
3. Provide an additional, independent review of final reports by experts outside of Utah

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DEVELOPMENT OF WATER QUALITY STANDARDS FOR WILLARD SPUR

Perry and Willard cities recently completed construction of \$28 million in various sewer improvements including a regional wastewater treatment facility to be managed jointly by the two cities through an interlocal agreement. In May 2010, as construction of the Perry/Willard Regional Wastewater Treatment Plant neared completion, DWQ public-noticed the UPDES permit for the discharge of treated effluent from the plant into the Willard Spur of Great Salt Lake. In response to this solicitation, the Utah Waterfowl Association petitioned the Water Quality Board (WQB) to prohibit all wastewater discharges to Willard Spur or to alternatively reclassify Willard Spur to protect the wetlands and current uses of the water, resulting in DWQ temporarily withholding the UPDES discharge permit.

The WQB denied the petition but directed DWQ staff to develop a study design to establish defensible protections (i.e., site-specific numeric criteria, antidegradation protection classes, beneficial use changes) for the waterbody. In addition, DWQ was directed to work with stakeholders to identify a path forward to allow the Perry/Willard Regional Wastewater Treatment Plant to operate while the studies are underway, with reasonable assurances that the effluent will not harm the ecosystem.

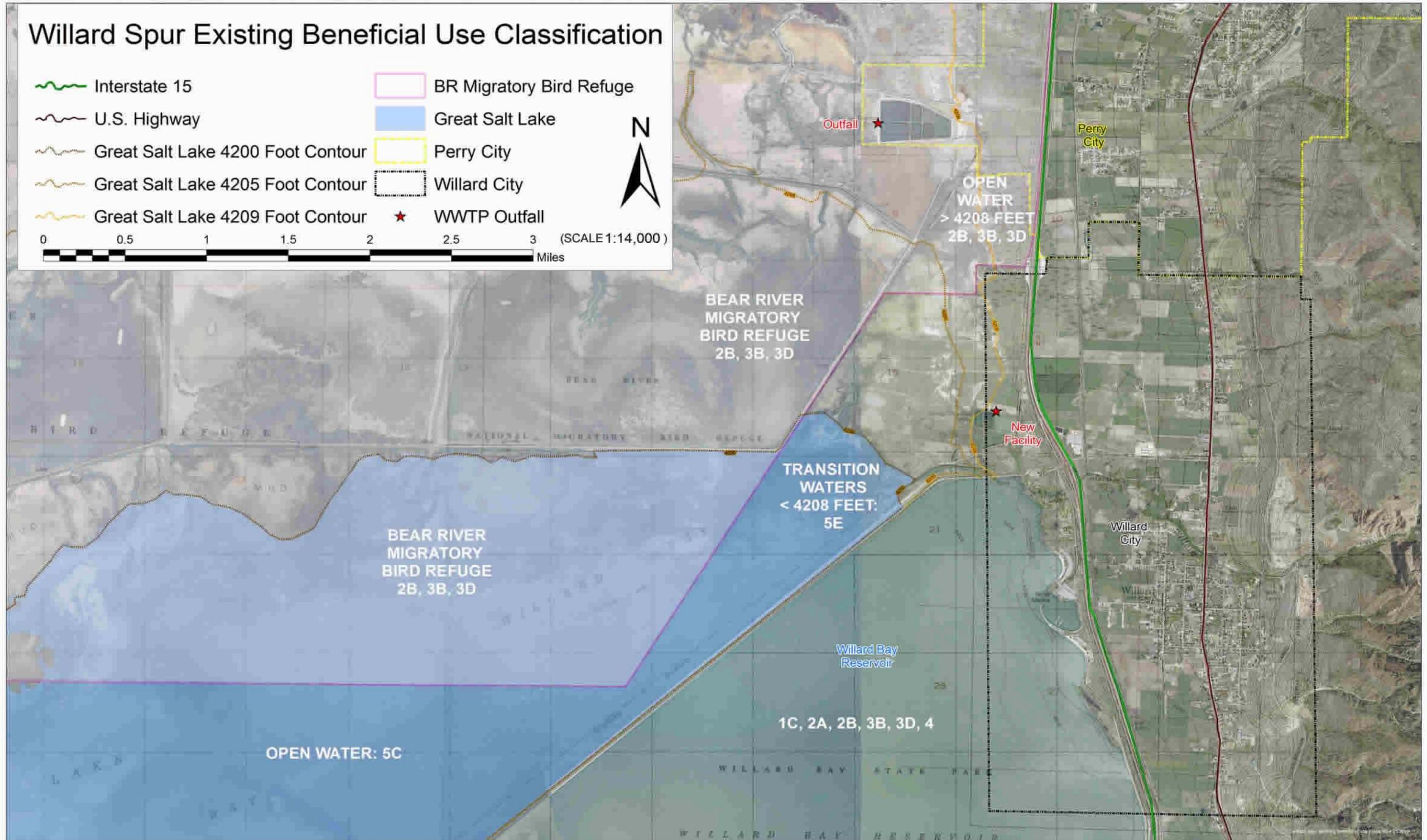
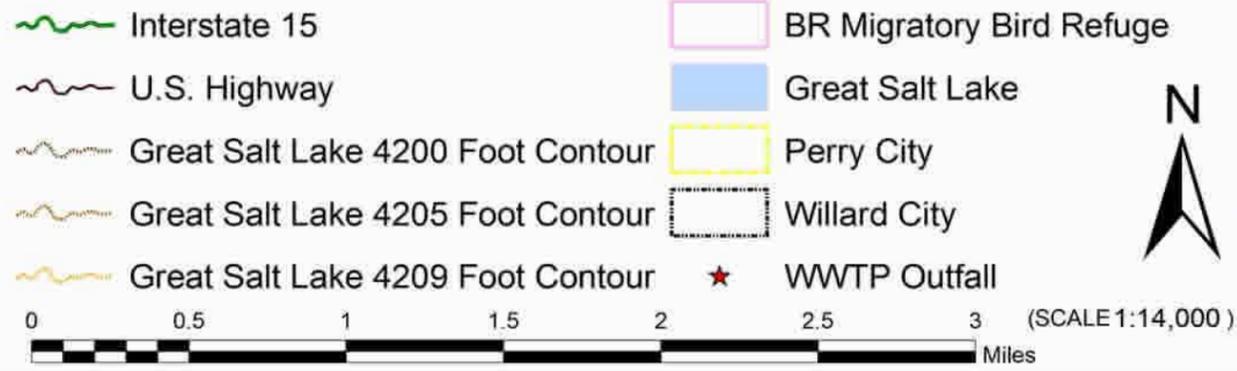
DWQ subsequently used existing and available data to evaluate the risk of the discharge under several nutrient increase scenarios. Numerous assumptions were necessary to estimate future risk, due to limited data availability and time constraints. Nevertheless, these analyses suggested that nutrient concentrations had the potential to reach levels similar to other Great Salt Lake wetlands where nuisance algae blooms and deleterious effects on submerged aquatic vegetation have been observed. However, these studies also suggest that deleterious effects are unlikely over the first few years of plant operations, provided that phosphorous reductions are implemented.

As previously directed by the Board, DWQ is moving forward with a precautionary approach and has worked with the cities to implement phosphorus reductions within six months of operation of the plant. The UPDES permit has been modified to reflect this change and is currently out for public comment.

This approach will allow DWQ to avoid further delays in plant operations, provided that further legal challenges to the UPDES permit can be avoided. As a result, DWQ also has entered into a Memorandum of Understanding with the Bear River Migratory Bird Refuge, wherein DWQ agrees to conduct whatever studies are necessary to ensure the long-term protection of Willard Spur's designated uses. This MOU, coupled with securing the necessary funds to conduct these investigations, provides the Refuge and WRA with concrete assurances that monitoring is sufficient to identify unanticipated problems, and that DWQ is working with stakeholders to determine appropriate long-term protections for the Willard Spur ecosystem.

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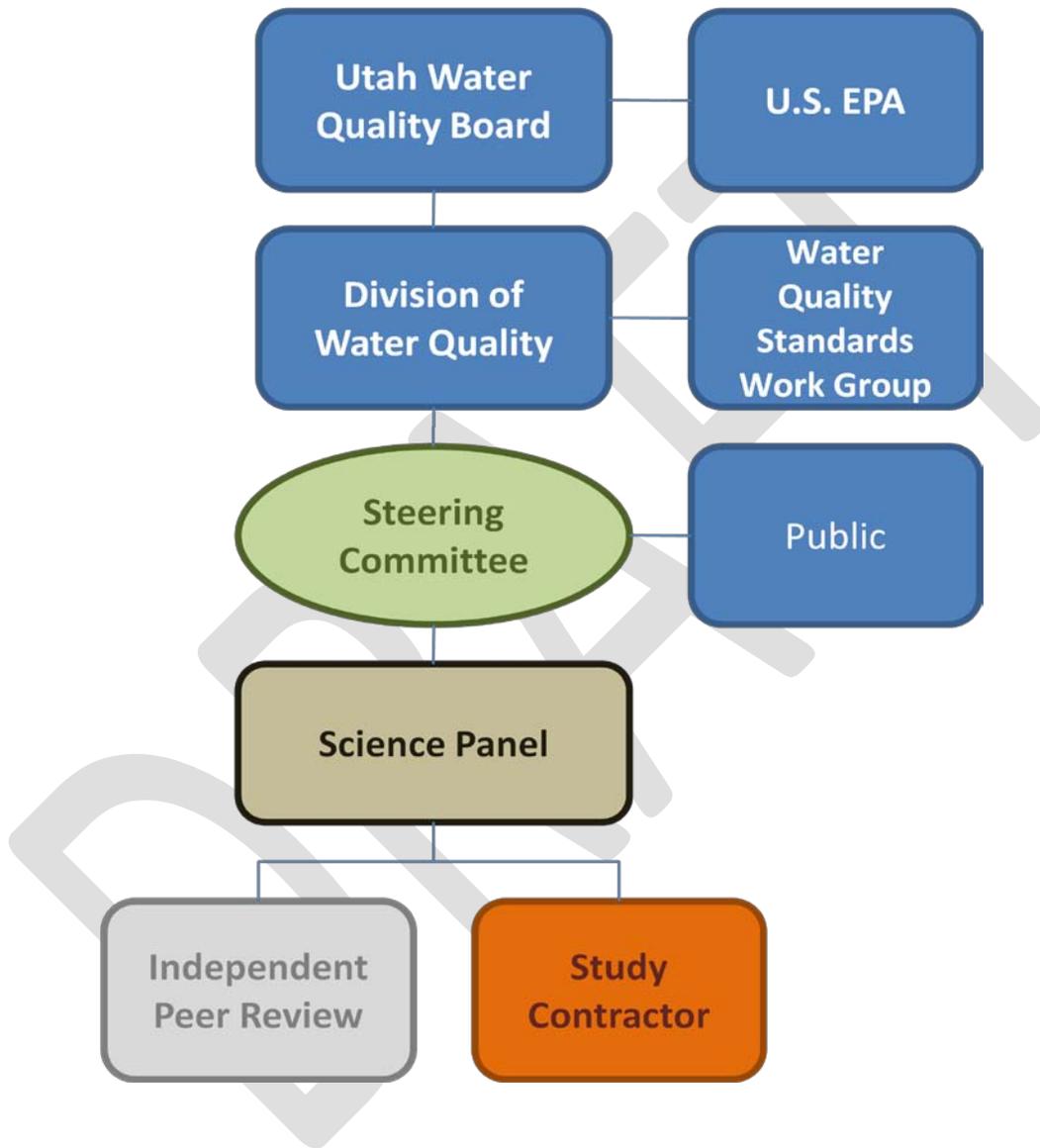
Willard Spur Existing Beneficial Use Classification



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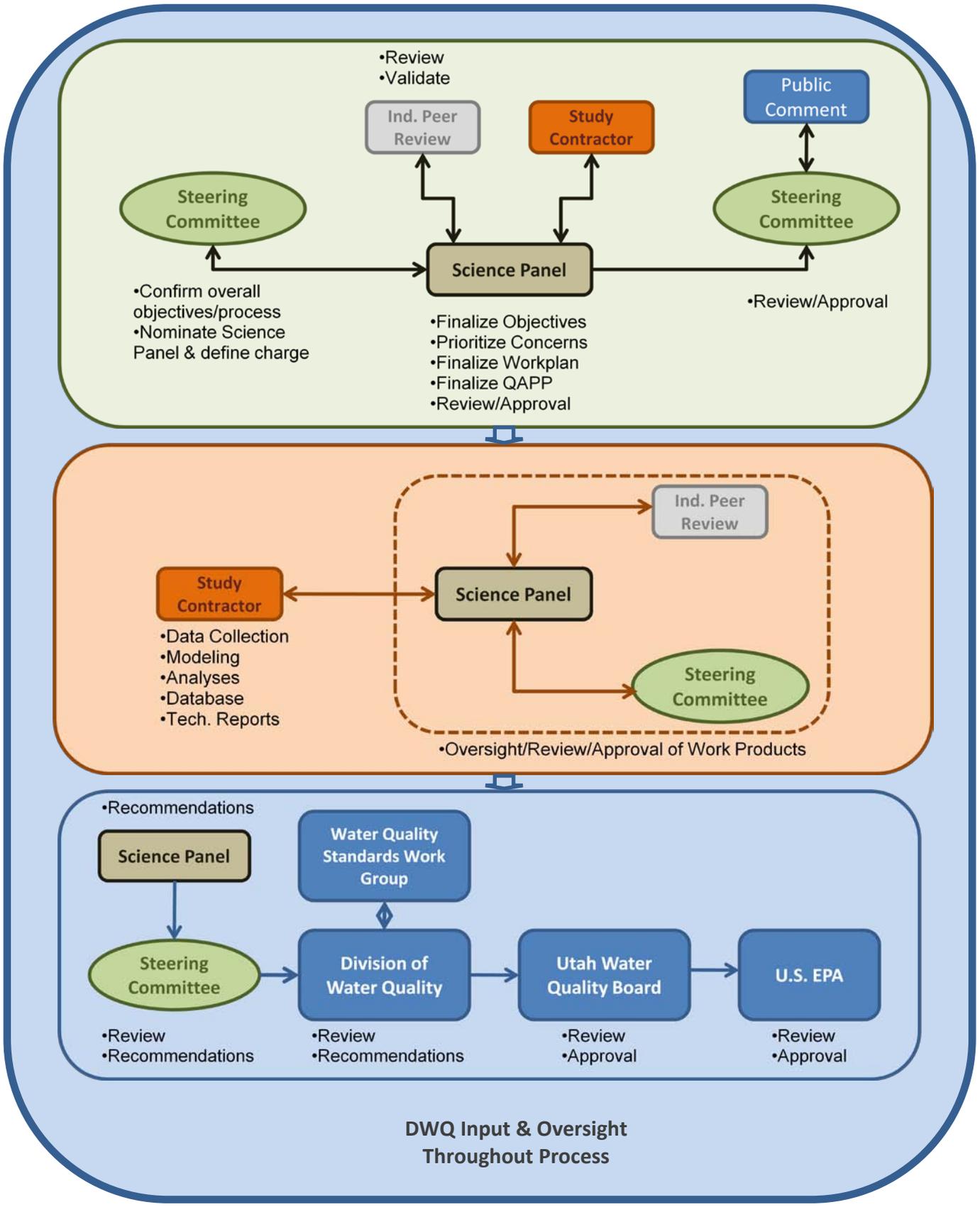


ORGANIZATIONAL CHART



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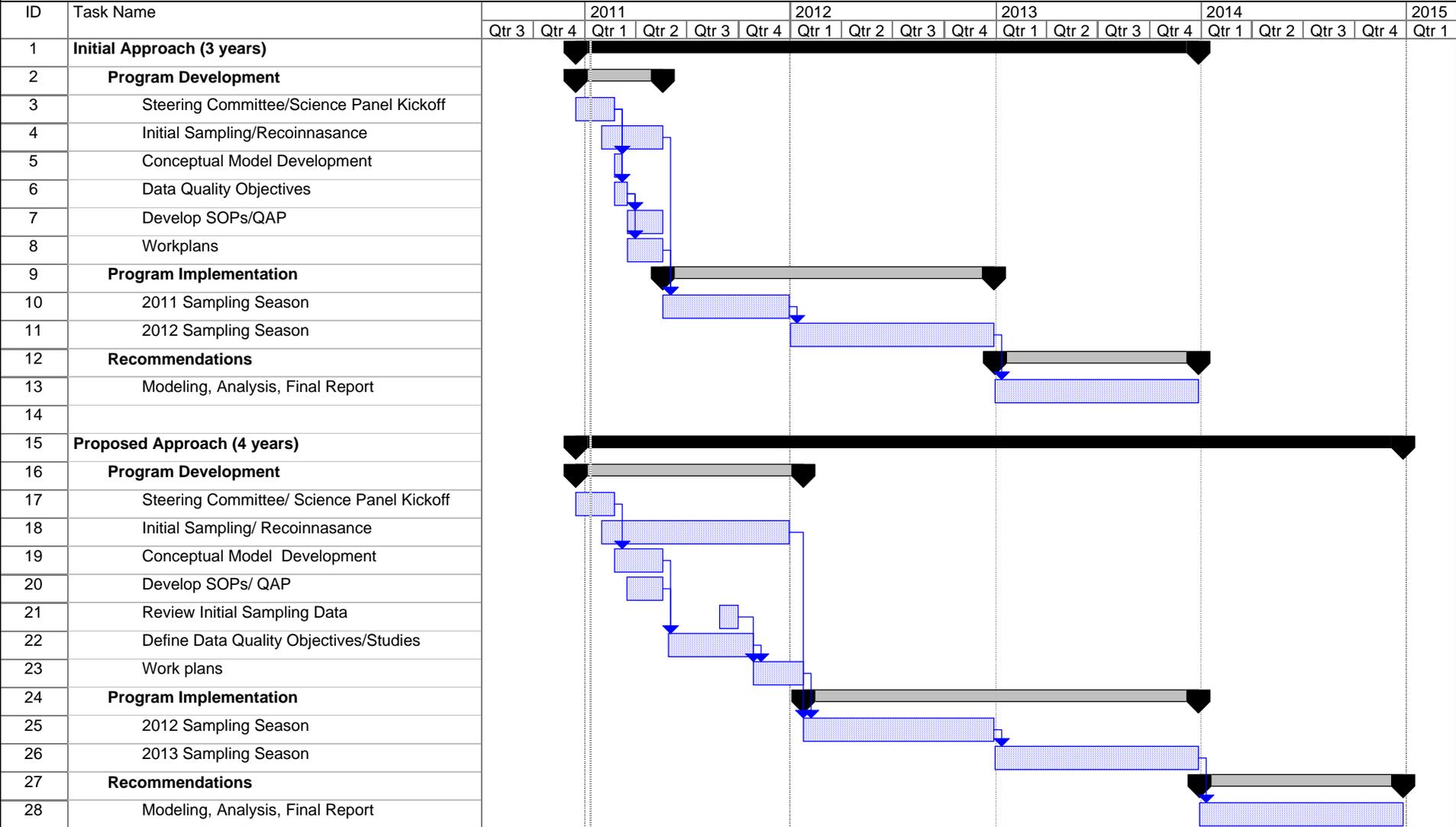


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Comparison of Two Approaches

Development of Water Quality Standards for Willard Spur





Date/Time/Location	Committee	Meeting Objectives
December 16, 2010		
9 a.m. – Noon DWQ – 195 N. 1050 West Red Rocks Conference Room, 3 rd Floor	Willard Spur Workgroup Meeting	<ul style="list-style-type: none"> • Inform group of new stakeholder process DWQ is instituting: (Steering Committee and Science Panel) • Objective: Assist DWQ in the development of the Willard Spur Study to develop site specific standards to ensure the long term protection of the Spur • Outline roles and responsibilities – advisory (work towards consensus but ultimately DWQ makes decisions) • Website and Listerv
January 20, 2011		
1:00 p.m. – 3:00 p.m. DEQ – 195 N. 1950 West DEQ Board Room, main floor	Steering Committee Meeting	<ul style="list-style-type: none"> • Review ground rules • Discuss nominations for Science Panel
January 31, 2011		
STEERING COMMITTEE MILESTONE		<ul style="list-style-type: none"> • Steering Committee to submit all nominees to DWQ (Jeff DenBleyker)
February 7, 2011		
DWQ MILESTONE		<ul style="list-style-type: none"> • DWQ to confirm interest of nominees and submit summary of nominations to Steering Committee
February 17, 2011		
1:00 p.m. – 3:00 p.m. DWQ - 195 N. 1950 West Great Salt Lake Conference Room, 3 rd Floor	Steering Committee Meeting	<ul style="list-style-type: none"> • Finalize Science Panel Nominations • Discuss proposed 2011 sampling plan
March 17, 2011		
8:00 a.m. – 5:00 p.m. Location to be determined	Science Panel Meeting	<ul style="list-style-type: none"> • Review background, objectives • Review proposed approach/schedule • Discuss 2011 sampling plan • Discuss development of conceptual models
NOTE: SCHEDULE CONTINUED ON NEXT PAGE		

Date/Time/Location	Committee	Meeting Objectives
April 28, 2011		
8:00 a.m. – Noon DEQ – 195 N. 1950 West DEQ Board Room, main floor	Science Panel Meeting	<ul style="list-style-type: none"> • Discuss integration with other ongoing research • Review/approve 2011 sampling plan • Review/discuss draft conceptual models
1:00 p.m. – 3:00 p.m. DEQ – 195 N. 1950 West DEQ Board Room, main floor	Steering Committee Meeting (Joint with Science Panel)	<ul style="list-style-type: none"> • Meets same day after Science Panel to hear Science Panel recommendations
May 19, 2011		
8:00 a.m. – Noon DWQ - 195 N. 1950 West Great Salt Lake Conference Room, 3rd Floor	Science Panel Meeting	<ul style="list-style-type: none"> • Review/approve final conceptual models • Discuss ongoing 2011 sampling plan • Review/approve SOPs and QAP • Discuss long term studies for research program



PURPOSE

The Willard Spur Steering Committee (Steering Committee) is charged with the responsibility to guide the process of developing and, in the end, provide recommendations to the Utah Department of Environmental Quality, Division of Water Quality (DWQ) for site specific numeric water quality standards—or other appropriate water quality regulations—for Willard Spur that are protective of its beneficial uses and sustain the natural resources of Great Salt Lake and its associated wetlands.

OBJECTIVES

1. Create a partnership among stakeholders to:
 - a. Gain broad acceptance of process and results
 - b. Provide access to expertise and experience
 - c. Provide multiple funding sources
2. Conduct a transparent public process by:
 - a. Identifying stakeholders
 - b. Receiving input
 - c. Sharing results
 - d. Seeking consensus
3. Establish and maintain a scientific advisory panel to:
 - a. Identify gaps in scientific understanding of the Willard Spur ecosystem
 - b. Advise the Steering Committee on funding applications
 - c. Prioritize issues of concern
 - d. Finalize and approve work plans for scientific studies
 - e. Recommend a process for independent peer review of scientific studies
 - f. Recommend science-based numeric standards to the Steering Committee
4. Adhere to federal and state regulations and guidelines for standards development
 - a. Coordinate with EPA Region 8 and other national EPA experts, as needed, on process for developing site specific standards
 - b. Utilize results and recommendations for scientific research to determine appropriate numeric standards

- c. Provide recommendations for numeric standards to DWQ for incorporation into the state Water Quality Administrative Rules.

DUTIES

- Review and advise on the composition and organization of Science Panel
- Review and advise on the research work plan
- Participate in up to six (6) Steering Committee meetings per year
- Review and advise DWQ and Science Panel on activities, progress, and significant findings from research program
- Review and advise on the technical products of the Research Contractor and Science Panel
- Recruit the active involvement of and encourage ongoing collaboration and communication among governmental and nongovernmental entities, the private sector, and citizens working to achieve the protection and use of Willard Spur
- Bring individual perspectives and ideas while keeping in mind the big picture, which is serving all the members of the Steering Committee as we work toward the objectives of the project
- Review and provide recommendations for water quality standards in Willard Spur to DWQ

COMPOSITION

The Willard Spur Steering Committee will include thirteen (13) representatives from federal and state regulatory and resource management agencies, other governmental entities, conservation organizations, and the regulated community. Walt Baker/DWQ will chair the committee.

The DWQ will receive input from stakeholders on membership and will interview and invite specific individuals to join the Steering Committee. It is expected that committee members will commit to a three year period and will identify one alternate to represent them in their absence. No member on the Steering Committee should be a research contractor working on this project.

A preliminary list of members for the Steering Committee includes the following:

Name	Entity	Representing:
Walt Baker ⁽¹⁾	Utah Div of Water Quality	Utah Div of Water Quality
Ryan Nesbitt	Utah Div of Forestry Fire & State Lands	Utah Div of Forestry Fire & State Lands
Pam Kramer	Utah Div of Wildlife Resources	Utah Div of Wildlife Resources
Bob Barrett	U.S. Fish & Wildlife Service	U.S. Fish & Wildlife Service
Karen Hamilton	U.S. EPA	U.S. EPA
Jerry Nelson	City of Perry	City's of Willard & Parry
Ryan Tingy	Commissioner, Box Elder County	Great Salt Lake Advisory Council
Dick West		Duck Clubs
Chris Montague	The Nature Conservancy	Conservation Interests
Rob Dubuc	Western Resource Advocates	Conservation Interests
Dal Wayment	South Davis Sewer District	Regulated POTW Community
Hal Lee	Compass Minerals	Regulated Industrial Community
Don Leonard	Great Salt Lake Brine Shrimp Cooperative, Inc.	Regulated Extractive Industry

⁽¹⁾ Chairman

MEETINGS

Meetings will generally be held at the Utah Department of Environmental Quality building at 195 N. 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 five working days notice of each meeting will be provided to Steering Committee members. Meetings will be open to the public for observation. Input from the public will be facilitated by the Steering Committee 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 about any changes to Utah's standards that are necessary to ensure long-term protection of Willard Spur's designated beneficial uses. In order to forward a final recommendation to DWQ, a supermajority is required. A supermajority is defined as at least ¾ of all the members of the committee are supportive. A minority opinion may also be forwarded. If a supermajority is not possible, then opinions with position papers will be forwarded for consideration by DWQ.

A quorum is defined as 2/3 of the members of the committee. Procedural issues require the support of 2/3 of the members present in a meeting.



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.

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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.

COMPOSITION OF WILLARD SPUR SCIENCE PANEL

DWQ has requested the Willard Spur 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.

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RECOMMENDED COMPOSITION OF DISCIPLINES ON PANEL

EPA scientist – national expertise with wetlands/nutrient water quality standards

Wetlands Ecologist – emphasis on biogeochemistry (water/sediment), local GSL wetlands experience, nutrients

Wetlands Ecologist – emphasis on plants/phragmites, local GSL wetlands experience, nutrients

Bioassessment methods expert

Hydrology/water quality modeling expert

NOMINATIONS MADE TO DATE

The following individuals have been nominated (through January 17, 2011) by members of the Steering Committee for consideration for the Science Panel.

Name	Affiliation	Specialty
John Cavitt, PhD	Weber State University, Department of Zoology	Birds of Great Salt Lake, experience on GSL and Bear River National Wildlife Refuge
Karin Kettinring, PhD	Utah State University, Department of Watershed Sciences	Wetlands ecologist, ecology of phragmites, experience on GSL and Bear River National Wildlife Refuge

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The following list of possible candidates is provided by DWQ only as suggestions for consideration. It is not intended to be inclusive. The Steering Committee is free to identify other possible candidates.

Name	Affiliation	Specialty	Discipline
Theron Miller, PhD	Jordan River/Farmington Bay Coalition	Great Salt Lake wetlands, GSL multi-metric index, biogeochemistry	Wetlands Ecologist - biogeochemistry
Jim Ehleringer, PhD	University of Utah, Department of Biology	Remote sensing, stable isotopes, ecological change	Wetlands Ecologist - biogeochemistry
Karin Kettinring, PhD	Utah State University, Department of Watershed Sciences	Wetlands ecologist, ecology of phragmites, experience on GSL and Bear River National Wildlife Refuge	Wetlands Ecologist – plants/phragmites
Chuck Hawkins, PhD	Utah State University, Department of Watershed Sciences	Biological assessment, applied aquatic ecology	Bioassessment Methods
Scott Miller, PhD	Utah State University, Department of Watershed Sciences Director, National Aquatic Monitoring Center	Freshwater/riparian ecology, biomonitoring	Bioassessment Methods
David Tarboton, ScD	Utah State University, Civil and Environmental Engineering	Surface water hydrology, hydrologic information systems and modeling, hydrodynamic modeling of GSL	Modeling
Joseph Wheaton, PhD	Utah State University, Department of Watershed Sciences	Addressing/modeling uncertainty in environmental policy and science	Modeling
Christine Pomeroy, PhD	University of Utah, Department of Civil and Environmental Engineering	Modeling/controls in urban watershed management	Modeling
Bonnie Baxter, PhD	Westminster College, Department of Biology Director, Great Salt Lake Institute	Microbiology of Great Salt Lake	

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