

Great Salt Lake Advisory Council

3rd Annual Report to the Utah State Legislature
Natural Resources Appropriations Subcommittee
February 2013



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“The Great Salt Lake Advisory Council is playing a vital role in helping to balance the many important uses of the Great Salt Lake. Now is the time to ensure this valuable natural treasure is protected for future generations.”

– Governor Gary Herbert



Great Salt Lake Advisory Council

BACKGROUND

The Great Salt Lake Advisory Council (“Council”) was established by House Bill 343 in the 2010 session of the Utah State Legislature. Council members were appointed by Governor Herbert, with consent of the Utah Senate. Governor Herbert kicked off the initial Council meeting on June 30, 2010.



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A valuable resource for industry, recreation, conservation and water treatment, The Great Salt Lake adds \$1.3 billion annually to Utah’s economy.

Duties of the Great Salt Lake Advisory Council

Legislation creating the Great Salt Lake Advisory Council identifies five specific “duties” of the Council:

1) ADVISE the governor, the Department of Natural Resources (“DNR”), and the Department of Environmental Quality (“DEQ”) *“on the sustainable use, protection, and development of the Great Salt Lake” (“GSL”) “in terms of balancing: (i) sustainable use; (ii) environmental health; and (iii) reasonable access for existing and future development.”*

2) ASSIST the Division of Forestry, Fire and State Lands (“FFSL”) in its statutory responsibilities for the Great Salt Lake (i.e. to prepare and implement a comprehensive management plan, initiate and publish studies of the lake, coordinate activities of DNR divisions with respect to the lake).

3) RECOMMEND appointments to the GSL technical team and utilize technical support from that team.

4) ASSIST DNR and DEQ and their boards in their responsibilities for the Great Salt Lake.

5) REPORT *“annually”* to the Natural Resources Appropriations Subcommittee *“on the council’s activities.”*

2012 Tasks and Activities of the Great Salt Lake Advisory Council

During 2012, the Great Salt Lake Advisory Council addressed all five of its primary work plan tasks and objectives, as follows:

- 1)** The Council prepared and presented its 2nd Annual Report to the Utah State Legislature Natural Resources, Agriculture, and Environmental Quality Appropriations Subcommittee. It also briefed the Executive branch, including meetings with Lt. Governor Greg Bell and with Department and Agency Directors.
- 2)** The Council published its comprehensive economic benefit report on Great Salt Lake, entitled “Evaluation of the Economic Impacts of Great Salt Lake on the State of Utah” and its initial report on lake health, entitled “Definition and Assessment of Great Salt Lake Health.”
- 3)** The Council developed a master list of GSL research priorities – “Great Salt Lake Research Topics Database” – identifying and prioritizing necessary GSL research by topic, title, purpose, description, projected cost, and urgency.
- 4)** The Council conducted an inquiry into the occurrence of non-native *Phragmites* in the Great Salt Lake ecosystem, developed a briefing paper and overview, considered options for eradication, and presented its recommendations.
- 5)** The Council investigated water supplies, prepared a briefing paper on “Integrated Water Resources Management for Great Salt Lake,” and recommended funding for a GSL Integrated Water Resources Management (“IWRM”) model.

The Council further fulfilled its statutory responsibilities to advise, assist, recommend and report by holding eight formal meetings and one field tour in 2012, with briefings, updates, reports, discussions and counsel on topics including water quality standards for Great Salt Lake, GSL Comprehensive Management Plan, and other GSL-related topics. The three major 2012 Council papers (on GSL Research, Phragmites, and Integrated Water Resources Management) are summarized, below.

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Removal of phragmites, an exotic species which compromises wetlands and industry, is a top priority of the Great Salt Lake Advisory Council.

Report: “Great Salt Lake Research Topics Database” *

In 2011 the Great Salt Lake Advisory Council (“Council”) sponsored two significant studies of Great Salt Lake: 1) on the economic contributions of GSL (“Economic Significance of the Great Salt Lake to the State of Utah”) and 2) defining health for the unique GSL ecologies (“Definition and Assessment of Great Salt Lake Health”). These significant reports were summarized in our February 2012 Annual Report.

Development of these reports and participation in other GSL-related issues and activities, led the Council to conclude that there remains insufficient data regarding both lake-related economic activity/opportunity and lake ecology/health. Consequently, the Council determined in 2012 to assemble a master list of research priorities. The priority list developed includes thirty-nine (39) research topics in eight (8) categories. Key criteria for making the priority list included: 1) research would help to answer critical questions related to permitting activities around GSL; 2) research would answer primary scientific questions about fundamental lake processes or characteristics; and 3) research would directly influence and or improve lake management and planning.

The nine (9) highest ranked topics include: map wetland types, management units, and surface water inputs to GSL wetlands; develop hydrologic model of GSL basin; identify toxic pollutants for specific aquatic and aquatic-dependant GSL species based upon salinity classes; understand nutrient sources, loading, cycling and influence on GSL ecology; control of Phragmites invasion around GSL; understand deep brine layer dynamics; develop GSL hydrodynamic model; update and understand mineral/salt balance of GSL and development of planning horizon for mineral extraction; and further assess economic values.

(* Prepared for the Council by SWCA Environmental Consultants, an environmental planning, compliance and resource management firm.)

Paper: “Phragmites – Impairing the Great Salt Lake Ecosystem”

The occurrence of non-native *Phragmites* in the Great Salt Lake ecosystem has increased rapidly and currently dominates approximately one-third of wetlands surrounding the lake.

Phragmites reduces native wetlands and associated species, limits use by native wildlife, excludes favorable forage and nesting plant species, traps sediments, and limits lake access for recreation, research and search and rescue.

The Council’s conclusions regarding *Phragmites* are incorporated into a paper that addresses recent research and identifies future treatment opportunities. The Council supports the Utah Division of Forestry, Fire and State Lands in its request for funding to treat *Phragmites*.

Paper: “Integrated Water Resources Management for Great Salt Lake”

Understanding changes in future water supply and its relationship to GSL lake level is central to sustainable economic benefits from the lake and is important to sustain critical habitat and a healthy ecosystem. Accordingly, the Council recommends development of an Integrated Water Resources Management (“IWRM”) model for GSL.

This recommendation is summarized in a paper that provides an overview of the topic, summarizes research objectives, recommends IWRM as a research priority, identifies possible research partners, and estimates the cost and time-frame to develop such a model.



A key way station on the Pacific Flyway, the Lake’s wetlands support millions of shorebirds and waterfowl. ©TNC photo

Great Salt Lake Advisory Council Summary of 2012 Council Meetings

January 4, 2012 — Department of Natural Resources

- Work on Draft Great Salt Lake (“GSL”) Health Report
- Update on Draft GSL Economic Impact Analysis

January 26, 2012 — Department of Natural Resources

- Approve Council’s 2nd Annual Report
- Approve Council Report on “Definition and Assessment of Great Salt Lake Health”
- Approve Council Report on “Economic Significance of the Great Salt Lake to the State of Utah”

March 21, 2012 — Multi Agency State Office Building

- Briefing on non-native *Phragmites* by Utah State University
- Approve Plan to Develop GSL Research List
- Discuss Council’s Future Work Plan

May 2, 2012 — Department of Natural Resources

- Briefing on GSL Water Quality Strategy from Division of Water Quality
- Discuss Preliminary Research List Priorities

June 6, 2012 — Utah State Fairpark Administration Building

- Presentation of Draft Research List by SWCA Environmental Consultants
- Update 2012 Advisory Council Work Plan

August 1, 2012 — Central Weber Sewer District

- Review Draft Paper on *Phragmites*
- Discuss Draft Paper on Integrated Water Resources Management
- Briefing on GSL Comprehensive Management Plan by Division of Forestry, Fire and State Lands

September 5, 2012 — Multi Agency State Office Building

- Approve Paper on “*Phragmites*: Impairing the Great Salt Lake Ecosystem”
- Approve Paper on “Integrated Water Resources Management for Great Salt Lake”
- Plan Legislative Field Tour of Duck Club and *Phragmites* Control

September 20, 2012 — North Point Duck Club

- Discussion of *Phragmites* Control Efforts
- Briefing on *Phragmites* Research by Utah State University (“USU”)
- Presentation on *Phragmites* as a Bio-fuel by USU
- Demonstration of Truxor Equipment to Control *Phragmites*



The Nature Conservancy offers youth programs on wetlands ecology at its 4,400 acre Great Salt Lake Shorelands Preserve. ©Stuart Ruckman

November 7, 2012 — Department of Natural Resources

- Recap of September Field Tour
- Approve “Great Salt Lake Research Topics Database”
- Discuss Council’s 2012 Annual Report

Great Salt Lake Advisory Council

Chair: Leland Myers

Box Elder County
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Ryan Tingey

Davis County
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Salt Lake County
Julie Peck-Dabling

Tooele County
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