

**May 2, 2008 SUMMARY
JOINT MEETING OF THE
GREAT SALT LAKE STEERING COMMITTEE AND
SCIENCE PANEL**

Cannon Health Building, Room 125
288 North 1460 West
Salt Lake City, Utah 84116

GREAT SALT LAKE STEERING COMMITTEE MEMBERS PRESENT

Walter L. Baker, Chairman	Department of Environmental Quality
Dave Grierson	DNR/ Forestry Fire & State Lands
Clay Perschon	DNR/ Division of Wildlife Resources
Karen Hamilton	U.S. Environmental Protection Agency
Nathan Darnall	U.S. Fish & Wildlife Service/ Utah Field Office
David Naftz	U.S. Geological Survey
Don Leonard	Utah Artemia Association
Jim Huizingh	Morton Salt
Kelly Payne	Kennecott Utah Copper
Richard Bay	Jordan Valley Water Conservancy District
Leland Myers	Central Davis Sewer District
Maunsel Pearce	Great Salt Lake Alliance
Richard West	West Side Associated Duck Clubs
Chris Montague	The Nature Conservancy of Utah
Delane McGarvey	Davis County Health Department

GREAT SALT LAKE SCIENCE PANEL MEMBERS PRESENT

William Moellmer, Chairman	Department of Environmental Quality
Theron Miller, Co-Chairman	Department of Environmental Quality
Anne Fairbrother	U.S. Environmental Protection Agency
Don Hayes	University of Utah, Dept of Civil Engineering
Therresa Presser	U.S. Geological Survey
Joseph Skorupa	U.S. Fish & Wildlife Services
William Wuerthele	U.S. Environmental Protection Agency

GREAT SALT LAKE STEERING COMMITTEE MEMBERS ABSENT

Richard Sprott

Department of Environmental Quality

GREAT SALT LAKE SCIENCE PANEL MEMBER ABSENT

Brad Marden

Parliament Fisheries, L.L.C.

William J. Adams

Rio Tinto (Kennecott)

OTHERS PRESENT

Reed Bodell

Kennecott Utah Copper (Alternate)

Bruce Waddell

Great Salt Lake Alliance (Alternate)

Florence Reynolds

Salt Lake City Public Utilities (Alternate)

Mark Atencio

Jordan Valley Water Conservancy District (Alternate)

John Whitehead

DEQ/ Division of Water Quality

Leah Ann Lamb

DEQ/ Division of Water Quality

Jodi Gardberg

DEQ/ Division of Water Quality

Lynn de Freitas

Friends of Great Salt Lake

Joy Emory

Friends of Great Salt Lake

Doug Bacon

DEQ/ DERR

John Isanhart

U.S. Fish & Wildlife Service

Bassani Usta

Morton Salt

Mike Conover

Utah State University

Wayne Wurtsbaugh

Utah State University

Jeff Salt

Great Salt Lake Gatekeeper

Jeff DenBleyker

CH2M Hill

Harry Ohlendorf

CH2M Hill

1. Call to Order, Roll Call of Steering Committee and Science Panel, Audience

Introductions:

Walt Baker of DEQ Division of Water Quality (DWQ) called the meeting to order and welcomed all in attendance. Roll Call of the Selenium Steering Committee and Science Panel were taken and the audience introduced.

2. Approval of the February 22, 2008 Meeting Summary:

Walt Baker, DWQ asked if there were questions or comments concerning the February 22, 2008 Meeting Summary. Nathan Darnall, USFWS requested the words “too protective” be changed to “protective”.

3. Financial Report of GSL Selenium Studies:

Walt Baker, DWQ reviewed the Great Salt Lake Selenium Disbursements Journal.

4. Status of Principal Investigations:

Jeff DenBleyker, CH2MHill gave a presentation titled Status of Principle Investigations. The presentation included the program objectives and questions, the status of principal investigations

and models, key observations and results. The presentation is posted at this web address:
http://www.deq.utah.gov/Issues/GSL_WQSC/docs/Status_of_Principle_Investigations_050208.pdf

5. Science Panel Recommendation for the Selenium Water Quality Standard

Jeff DenBleyker, CH2MHill gave a presentation titled Science Panel Recommendation for the Selenium Water Quality Standard. The presentation included the science panel recommendations for a selenium standard and future research recommendations. The presentation is posted at this web address:
http://www.deq.utah.gov/Issues/GSL_WQSC/docs/Science_Panel_Recommendation_for_the_Selenium_Water_Quality_Standard_050208.pdf

Comments from the Committee and Panel:

Mansuel Pearce, Great Salt Lake Alliance commented that the recommendation of a standard for egg hatchability lies within a range of values from no effect to the highest level and that the Steering Committee will have to make a choice and should be aware of the worst case scenario.

Walt Baker, DWQ asked if the Science Panel was going to make recommendations for future monitoring and if more study is needed particularly the volatilization loading.

Jeff DenBleyker, CH2MHill replied that there is still a lot of uncertainty and more monitoring of dissolved Selenium is needed.

Don Hayes, Science Panel Member added that the load should be taken in context of the overall loads to the lake. There are gaps in the mass balance that need to be closed and other loads in addition to volatilization.

Theron Miller, Science Panel Member, commented that there are 2 processes that could contribute to the variability in loading 1) sediment microbial forms of selenium under steady state 2) for gas transfer, a calm lake surface is needed and transfer coefficients can vary widely under turbulent conditions.

Dave Naftz, USGS recommended that further research is needed to study the ground water component as there is evidence of upwelling.

Jeff DenBleyker, CH2MHill replied that due to funding the science panel looked at the greatest loads of selenium to the lake and groundwater was lower in priority.

Dave Naftz, USGS said at the southern end, where there is evidence of upwelling, the contaminant plume could be a potential source.

Leland Meyers, Central Davis Sewer District added that there has to be a significant continued effort and that the loads to lake need future evaluations.

Kelly Payne, Kennecott Utah Copper asked if the model numbers are as robust as the egg and diet values.

A discussion was held between the Science Panel and the Steering Committee discussing the transfer factors used in the models

6. Individual Science Panel Member's Recommendation for the Selenium Water Quality Standard (Please see Appendix M in the Final Report for each Science Panel member's recommendation position paper, http://www.deq.utah.gov/Issues/GSL_WQSC/docs/GLS_Selenium_Standards/index.htm)

1. Bill Moellmer – The geometric mean of the selenium concentration in the eggs of aquatic-dependent birds using the open waters of the Great Salt Lake shall not exceed 12.5 mg Se/kg dry weight total selenium.
2. Anne Fairbrother - The geometric mean of the selenium concentration in the eggs of aquatic-dependent birds using the open waters of the Great Salt Lake shall not exceed 12.5 mg Se/kg dry weight total selenium.
3. Bill Wuerthele - The geometric mean of the selenium concentration in the eggs of aquatic-dependent birds using the open waters of the Great Salt Lake shall not exceed 12 mg Se/kg dry weight total selenium.
4. Don Hayes The geometric mean of the selenium concentration in the eggs of aquatic-dependent birds using the open waters of the Great Salt Lake shall not exceed 13 mg Se/kg dry weight total selenium.
5. Theron Miller: The geometric mean of the selenium concentration in the eggs of aquatic-dependent birds using the open waters of the Great Salt Lake shall not exceed 12 mg Se/kg dry weight total selenium.
6. Joe Scorupa: A No Effect Concentration (NEC) for avian eggs (measured as a sample mean) of 5 ug/g, precautionary enough to account for the fact that mallards are not the most sensitive species of bird to selenium toxicity.
7. Bill Adams: The geometric mean of the selenium concentration in the eggs of aquatic-dependent birds using the open waters of the Great Salt Lake shall not exceed 12.5 mg Se/kg dry weight total selenium.
8. Theresa Presser (USGS): Abstained from making an individual recommendation. Presented a site specific model for the Great Salt Lake forecasting selenium concentrations.

All Science Panel members added that the assessment framework and tiered implementation were tied to their recommendations.

Comments from the Committee and Panel:

Walt Baker, DWQ asked if Brad Marden would submit an individual recommendation.

Jeff DenBleyker, CH2MHill replied that Brad was out of the country and wasn't sure if he would submit a recommendation

The Steering Committee asked questions of the Science Panel regarding their individual recommendations.

7. Assessment Methodology William Moellmer, DWQ gave a presentation titled Assessment Framework. The presentation included the goals for the assessment framework, sampling assessment and management for each level and scenarios for trigger levels. The presentation is posted at this web address:

http://www.deq.utah.gov/Issues/GSL_WQSC/docs/Assessment_Strategy_050208.pdf

Comments from the Committee and Panel:

Chris Montague, The Nature Conservancy asked if the actions of anti-degradation are part of the permit renewal or invoked at any time and wanted to know more information regarding the management implications of the trigger levels.

Don Hayes, Science Panel commented that the Steering Committee needs to propose the trigger numbers.

Walt Baker, DWQ replied that there is group consensus for an assessment methodology but a standard is needed to set the trigger levels.

Richard Bay, JVVCD said that increased monitoring and funding will become an important part of the standard