

SUMMARY OF THE GREAT SALT LAKE ADVISORY COUNCIL MEETING

September 30, 2008

Department of Environmental Quality, Room 101

GREAT SALT LAKE ADVISORY COUNCIL MEMBERS PRESENT

Dan Eastman, Chairman	State Senator
Lynn de Freitas	Friends of Great Salt Lake
Leland Myers	Central Davis Sewer District
David Livermore	The Nature Conservancy
Don Leonard	Utah Artemia Association
Neka Roundy	Mayor of Kaysville
Bonnie Baxter	Westminster College
Bill Fenimore	Wild Bird Center of Layton
Corey Milne	Great Salt Lake Minerals Corporation

OTHERS PRESENT

Richard Sprott	Department of Environmental Quality (DEQ)
John Whitehead	DEQ/ Division of Water Quality
Leah Ann Lamb	DEQ/ Division of Water Quality
Jodi Gardberg	DEQ/ Division of Water Quality
Walt Baker (by phone)	DEQ/ Division of Water Quality
Mike Styler	Department of Natural Resources (DNR)
Dave Grierson	DNR/Division of Forestry, Fire & State Lands
Chris Montague	The Nature Conservancy
Mike Mower	Governor's Office of Planning and Budget
Jeff Richards	Utah Waterfowl Association
Craig Miller	DNR/Division of Water Resources
Eric Klotz	DNR/Division of Water Resources
Robyn Pearson	Department of Natural Resources (DNR)
Nathan Darnall	US Fish and Wildlife Service
Gil Hunt	DNR/Division of Oil, Gas and Mining
Paula Dupin/Zahn	DNR/Division of Oil, Gas and Mining
Wally Gwenn	DNR/Utah Geological Survey
Rob Baskin	US Geological Survey
Susan Zarekarizi	DNR/Division of Parks and Recreation
R. Jefre Hicks	Utah Airboat Association

1. Call to Order:

The Chairman, Senator Dan Eastman called the meeting to order and welcomed all in attendance. Suggested Ground Rules for the Council were presented for discussion and approval. The chairman added that the council is not bound by Roberts Rules of order but

thought that the meetings would be better organized if the council has a motion on an item and approves it. In addition, summaries of the meetings will be provided and the council will review and approve them at subsequent meetings. Jodi Gardberg will make the ground rules available to the council before the next meeting. A motion was passed to adopt the ground rules.

2. Rob Baskin, US Geological Survey

Rob Baskin gave a presentation titled "Hydrology of Great Salt Lake". The presentation is posted at this web address: <http://www.GSLcouncil.utah.gov/>

Comments/Questions from the Council:

Lynne de Freitas, Friends of Great Salt Lake inquired about the Water Balance Model and asked how it would be used for water management of the lake

Rob Baskin, USGS replied that it would be very useful for management and provides the building blocks to understand the ecosystem and hydrodynamics of the lake.

Dave Livermore, The Nature Conservancy asked what bathymetry means.

Rob Baskin, USGS explained it is the bottom of the lake and elevation of the contours at the bottom of the lake. It is measured as the depth from the water surface.

Bill Fenimore, Wild Bird Center of Layton remarked on the railroad causeway and its effect on the salinity of the lake. He asked if there were Brine Shrimp in the North Arm and have there been studies of creating more breaches.

Rob Baskin, USGS said there were many engineering studies conducted on additional breaches but added from a USGS perspective it is more a political issue than scientific issue.

Corey Milne, Great Salt Lake Minerals said that the Union Pacific Railway has been involved with the studies and in the past when discussions of additional breaches occurred the railway asked the state to indemnify them against interruption of business if additional breaches were made.

Lynn de Freitas, Friend of Great Salt Lake asked if there was a relationship between the amount of runoff that comes into the lake and minerals.

Rob Baskin, USGS said that it is estimated. Total Dissolved Solids and Discharge is measured and a load is calculated but not every stream is measured.

3. State Agencies to address the Great Salt Lake Advisory Council

Chairman Senator Dan Eastman reviewed the Governor's Executive Order 2(b) and 2(c) and the questions that state and federal agencies were asked to answer for the Council. The following agencies presented to the council and the agency summaries are posted at this web address: <http://www.GSLcouncil.utah.gov/>

State Agencies that addressed the Great Salt Lake Advisory Council:

Department of Natural Resources: Executive Director, Mike Styler

Mike Styler introduced the 7 divisions of the Department of Natural Resources and commented that each division has some involvement with Great Salt Lake.

Rick Allis, Director of the Utah Geological Survey said the Division has no specific regulatory responsibilities but indirectly the code says that they monitor the mineral industry both on land and in water.

Division of Forestry Fire and State Lands – Dave Grierson

The Division of Forestry Fire and State Lands (FFSL) has the primary responsibility for the management of the lake which includes 1.4 million acres of sovereign lands and 450 miles of shoreline to the boundary at the meander line. The meander line is at an elevation that fluctuates between 4202 feet and 4208' feet. The lake bed is sovereign lands, those lands beneath navigable bodies of water at statehood. The state is the trustee of those lands and the beneficiary is the public. As trustee, FFSL has 3 major functions, planning, administrative and maintenance. Plans are designed to protect and support the trust resources and provide for reasonable beneficial uses of those resources. The plans are based on long term protection and conservation. Administrative duties include regulating the use of lands according to the plan. There are currently 43 active surface leases, 70 brine shrimp right of entry, 20 active mineral leases from 7 different companies 28 inactive oil and gas leases and 49 oil and gas leases on hold. Maintenance duties include taking care of the lands. For examples, navigational hazards, fencing, invasive species control etc. A Great Salt Lake Technical Team meets quarterly and oversees grants and monitoring, data delivery critical lands and open space and an interchange of information.

Comments/Questions from the Council:

Lynn de Freitas, Friends of Great Salt Lake asked if FFSL is limited in jurisdiction to the meander line and asked where the meander line is and does everyone understand its location

Dave Grierson, FFSL replied that there is a GIS layer that can be downloaded from the Utah AGRC and that corrections have been made to the original survey.

Dave Livermore, The Nature Conservancy asked if there was a limiting capacity to the number of leases that are given

Dave Grierson, FFSL replied that the comprehensive plan guides the division decisions.

Bill Fenimore, Wild Bird Center of Layton asked if the meander line for the Bird River Refuge had been established and is there still a controversy between US Fish and Wildlife Service and the State of Utah.

Dave Grierson, FFSL said the meander line was never closed and that there is a gap at the Bear River Migratory refuge at Bear River Bay and is yet to be resolved.

Bill Fenimore, Wild Bird Center of Layton asked if the railroad pays a royalty for the causeway and provide maintenance.

Dave Grierson, FFSL replied that no they do no pay a royalty and they do maintain the causeway. They have an easement which was a one time charge back in the late 1950's.

Don Leonard, Utah Artemia Association asked if the causeway is sinking

Dave Grierson, FFSL replied that yes it is sinking a mile from pump station 1 and they are beyond their easement by providing support for the ballast.

Division of Wildlife Resources - Clay Perschon

The Division of Wildlife Resources has 2 significant programs to cover Great Salt Lake, the Great Salt Lake Ecosystem Program and Waterfowl Management Areas. The Division manages 8 Waterfowl Management Areas that covers 95,000 acres and 2 islands (Hat and Gunnison) with nesting colonies. The Great Salt Lake Ecosystem Program began in 1996 as there was an increase in aquaculture. The goal of the program is to manage the brine shrimp population (such as brine shrimp cyst harvesting and egg quantity), bird population and conduct research.

Comments/Questions from the Council:

Lynn de Freitas, Friend of Great Salt asked what the dynamic between FFSL and the divisions management roles.

Clay Perschon, Division of Wildlife Resources explained that it works at different levels. FFSL is the trustee and the Division of Wildlife Resources oversees the wildlife. The Divisions frequently work together. FFSL provides funds for research and access to the lake. The Division of Wildlife Resources provides advice for mineral lease applications.

Bill Fenimore, Wild Bird Center of Layton praised the high level of science the Division has brought to the Great Salt Lake. It has been named as an important bird area by the National Audubon Society.

Senator Dan Eastman asked where else are there brine shrimp and is this a prime shrimp area.

Clay Perschon, Division of Wildlife Resources said that there are brine shrimp found somewhere on all the continents on the steppes of China and shallow playa lakes. Consumers have a high confidence in Great Salt Lake brine shrimp because the state of Utah applies good management, the industry is technologically advanced and the state and the industry are interested in a long term healthy system

Dave Livermore, The Nature Conservancy asked if the Division has developed metrics for ecological health.

Clay Perschon, Division of Wildlife Resources explained that the division strives to better understand the bird populations. They have been building a databases for 8 years. They still need data at different elevations of the lake. They have established some known metrics based on

gathered data. For example they know eared grebes need to eat between 9,000-10,000 brine shrimp per day.

Lynn de Freitas, Friends of Great Salt Lake asked what proportion of eggs can be left over for the next year's population and what can be harvested.

Clay Perschon, Division of Wildlife Resource explained that the quantity left over is based on shrimp needs and bird needs. According to the management model, when brine shrimp are done producing there needs to be 21 brine shrimp cysts per liter of lake water.

Division of Parks and Recreation – Susan Zarekarizi

The Division of Parks and Recreation has recreational authorities and manages the Great Salt Lake Marina (non commercial only), Willard Bay and Antelope island (commercial and recreation marina). The Utah Boating Act authorizes the Division to manage the statewide baiting program that includes water related public safety enforcement and search and rescue. The Division manages a 1 mile buffer around Antelope Island, visitor contact at Salt Air, and control and patrol ATV access for brine shrimp industry.

Comments/Questions from the Council:

Bill Fenimore, Wild Bird Center of Layton asked how Antelope Island ranks with visitation

Susan Zarekarizi, Division of Parks and Recreation said that it ranks 4th in the state. Last year they received 280,000 visitors and 250,000 visitors at the marina

Lynn de Freitas, Friends of Great Salt Lake asked who oversees if marina has to be dredged

Susan Zarekarizi, Division of Parks and Recreation replied that the Division and the US Army Corps of Engineers would if it is the Antelope Island Marina. Otherwise FFSL and the US Army Corps of Engineers

Division of Water Rights – Jerry Olds

Within the statute of the Division of Water Rights there is one provision that directly relates to the GSL. If anyone wants to appropriate water to remove salts or other minerals, they need to file a copy of the contract for payment of royalties as part of the water rights application process. Currently there are 20 water rights that divert directly from the lake.

Comments/Questions from the Council:

Bill Fenimore, Wild Bird Center of Layton asked if there is a conservation pool for GSL.

Jerry Olds, Division of Water Rights said there was not and FFSL would set the limits.

Leland Meyers, Central Davis Sewer District inquired that for closed watersheds which are fully appropriated does that mean in theory none of the water will reach the lake from those tributaries.

Jerry Olds, Division of Water Rights said yes.

Dave Livermore, The Nature Conservancy asked if there is a possibility that communities on the Wasatch Front will need transbasin diversions from Bear River

Jerry Olds, Division of Water Rights said yes, the Division of Water Resources is conducting a study on bringing Bear River water to the Wasatch front

Lynn de Freitas, Friends of Great Salt Lake asked how flows are measured as part of water rights.

Jerry Olds, Division of Water Rights said a number of agencies measure the flow and do the accounting which include the Utah Geologic Survey and the US Geologic Survey. As part of the Water Use program flows are provided by industry but are not public information

Division of Oil, Gas and Mining (DOGM) – Gil Hunt

DOGM has 2 regulatory programs; the Oil and Gas program that regulates the drilling and production of oil and gas wells throughout the lake and the Mining program that regulates the extraction of minerals within, under or near the lake. There are currently 6 minerals extraction permits.

Comments/Questions from the Council:

Senator Dan Eastman asked if there is a reliable and good source of oil and gas production from the lake

Gil Hunt, DOGM replied that there is a know source of oil under the lake at Roswell point and that it is economically feasible. There is interest and some active leases. It is a heavy and high content sulfur oil.

Dave Livermore, The Nature Conservancy asked if in the permitting process there are other things taken into account besides the viability of the extraction of oil and what DOGM's interaction with the other agencies

Gil Hunt, DOGM replied that the Division is a member of the Resource DC Council and all applications go to them for comment. DOGM would not force other agency statues and try to cooperate through the permitting process.

Bonnie Baxter, Westminster College asked if there is an Environmental Impact Statement in the application process.

Gil Hunt, DOGM replied no.

Lynn de Freitas, Friends of Great Salt Lake asked what an expedited application is.

Gil Hunt, DOGM said there is no formal definition. Expedited applications apply in an existing field with existing equipment.

Dave Livermore, The Nature Conservancy asked if an application is permitted with no EIS who would make decisions in cases of disagreement.

Gil Hunt, DOGM said that within DNR, Mike Styler would decide.

Division of Water Resources – Eric Klotz

Water Resources is involved with water planning, development and resource evaluation. The Division has no regulatory authority on the lake. The Division has conducted computer modeling of lake elevations and volumes, constructed the pumping plant, and are involved in developing water upstream

Comments/Questions from the Council:

Leland Meyers, Central Davis Sewer District inquired about the computer modeling of elevation and asked about the Bear River appropriation.

Eric Klotz, Division of Water Resources said that it is the States authority to develop 220,000 acre feet of Bear River water and that the effect to the elevation of the lake would be less than 6 inches at 4200 feet.

Craig Miller, Division of Water Resources said the results depend on the types of development in the Bear River Basin and that projections are difficult as the Basin moved from agricultural to urban land use. Urban land uses would have more return flow and there is additional return flow to GSL from the Central Utah Project that brings water from the Colorado River to the lake.

Bill Fenimore, Wild Bird Center of Layton wanted to know what the impact would be to the Bear River Refuge if water is transferred elsewhere.

Eric Klotz, Division of Water Resources said that storage in the basin will be designed to meet the needs of the Bear River Refuge.

Don Leonard, Utah Artemia Association asked what the impact would be without the offsets.

Craig Miller, Division of Water Resources said that 70,000 acre feet would be depleted. A 100,000 acre feet depletion equates into 0.7 ft.

Department of Environmental Quality: Executive Director, Rick Sprott

Rick Sprott introduced the Divisions within the Department of Environmental Quality that are involved with the lake.

The Division of Air Quality regulates air quality in the state of Utah and has authority to control sources of air pollutants. The Division also monitors and analyzes air contaminant deposition onto the lake.

The Division of Environmental and Response and Remediation regulates underground storage tanks and provides state involvement in the Superfund Program. If there is a site in either program that impacts the lake DERR could be involved. The Kennecott North and US Magnesium Superfund Sites border the lake. However, the final regulatory jurisdiction for all Superfund sites rests with EPA. The State only has an advisory/support capacity.

The Division of Solid and Hazardous Waste regulate facilities that generate, treat, store, or dispose of hazardous wastes. There are industries on the shores of the Great Salt Lake which potentially could discharge regulated hazardous wastes into the lake.

Division of Water Quality – John Whitehead

The regulatory responsibilities of the Division of Water Quality are defined in the Utah Water Quality Act that incorporates the Federal Clean Water Act. The beneficial uses for Great Salt Lake are defined by a narrative standard since the Great Salt Lake is not easy to quantify. Yet recently the Division has developed a numeric water quality standard for selenium, a 4 year multi million dollar cooperative. Every 2 years the Division submits a report to congress on the state of Utah's water quality. At this time Great Salt Lake is not listed as impaired but if it is listed, a Total Maximum Daily Load study that evaluates loadings would be done to restore the beneficial uses. The Division is involved in the permitting process. DWQ has a surface water discharge program that determines the amount of pollutant that can be discharged into the lake and still maintain its beneficial uses. In addition to surface water permits, the Division issues storm water permits, ground water permits, and operating permits for wastewater treatment facilities. DWQ is fully delegated to administer the Clean Water Act.

Comments/Questions from the Council:

Lynn de Freitas, Friends of Great Salt Lake asked if the state will have more fish advisories for Mercury

John Whitehead, Division of Water Quality said that there are 14 locations that restrict the consumption of certain fish species due to Mercury. Some of the advisories are have been updated and some are new.

Bonnie Baxter, Westminster College asked how nutrients are measured and how nutrient cycling is addressed

John Whitehead, Division of Water Quality said that Theron Miller, DWQ and Leland Myers of Central Davis Sewer District are researching nutrients in Farmington Bay.

Bill Fenimore, Wild Bird Center of Layton asked if the increase in Mercury in Great Salt Lake is from the tributaries

John Whitehead, Division of Water Quality said that Mercury loading from tributaries has been measured and he senses that most of the Mercury in the lake is not coming from new inputs

Bill Fenimore, Wild Bird Center of Layton asked if the duck advisories for Mercury are still in effect.

John Whitehead, Division of Water Quality said that they are still in effect and no change has been made. The Division is part of an ecosystem study of Mercury in the Great Salt Lake.

Bill Fenimore, Wild Bird Center of Layton asked if any remediation plans are in place if nutrients are a problem

John Whitehead, Division of Water Quality said if it is determined to be impaired, the Division will initiate a TMDL study.

Leland Meyers, Central Davis Sewer District asked if funding was an impediment to learning the lake

John Whitehead, Division of Water Quality said that we were able to get a few hundred thousand for Mercury and millions for Selenium. However the lake has unique issues and is complex and requires huge funding.

4. Federal Agencies to address the Great Salt Lake Advisory Council

US Fish and Wildlife Service – Nathan Darnall

US Fish and Wildlife Service manages the Bear River Bay Wildlife Refuge created in 1928 and is charged by key resource laws; the Endangered Species Act though there is no threatened or endangered species on Great Salt Lake, the Migratory Bird Treaty Act, and the agency evaluates the actions of other agencies (National Environmental Policy Act, Clean Water Act, etc.)

Comments/Questions from the Council:

Dave Livermore, The Nature Conservancy asked if major water diversions from the lake impact migratory bird species would the authority of the Migratory Bird Treaty Act kick in.

Nathan Darnall, US Fish and Wildlife Service said that there is a provision of the Migratory Bird Treaty Act that one cannot shoot certain species but the loss of habitat is not included in the act. If state plans resulted in significant loss of the habitat, US Fish and Wildlife Service would target and advise the state.

5. Meeting Frequency, Location and Dates:

The council had to reschedule the next meeting so they decided to meet on October 29 and November 20.