

# **SUMMARY OF THE GREAT SALT LAKE ADVISORY COUNCIL MEETING**

**October 29, 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
Chris Montague (alternate)	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
Ben Ferry	State House Representative
Wilford Sommerkorn	Salt Lake City Planning Department

## **OTHERS PRESENT**

Leah Ann Lamb	DEQ/ Division of Water Quality
Jodi Gardberg	DEQ/ Division of Water Quality
Mike Styler	Department of Natural Resources (DNR)
Mike Roberts	The Nature Conservancy
Mike Mower	Governor's Office of Planning and Budget
Jeff Richards	Utah Waterfowl Association
David Turner	Utah Airboat Association
Katie Sonnenborn	Dia Art Foundation
Laura Rakovich	Dia Art Foundation
Kelly Payne	Kennecott Utah Copper
Jill Houston	Central Davis Sewer District
Rock Simpson	Great Salt Lake Yacht Club
Don Paul	Avian West, Inc.

### **1. Call to Order:**

The Chairman, Senator Dan Eastman called the meeting to order and welcomed all in attendance. A motion was passed to approve the September 30, 2008 summary of the meeting. All were in favor with no opposition.

### **2. Don Paul, Avian West, Inc.**

Don Paul gave a presentation titled "Avian Importance, Great Salt Lake Ecosystem". The presentation is posted at this web address: <http://www.GSLcouncil.utah.gov/>

Comments/Questions from the Council:

Bill Fenimore, Wild Bird Center of Layton remarked that he had recently flown over the Great Salt Lake with John Luft, Great Salt Lake Ecosystem Program and asked to explain the dramatic differences between the lake. He saw that north of the Causeway, the lake was a deep red with no birds as opposed to south of the causeway that was blue and had lots of birds.

Don Paul, Avian West, Inc. replied that occasionally the birds reside in the north part of the lake and that this depends on the elevation. Over the long term 50 year period the lake elevation has ranged from 4198 to 4206 feet. During the high elevations in the 1980's Gunnison Bay became less saline, 17% by volume and in Gilbert Bay, the brine shrimp and brine flies became non existent so the birds moved up to Gunnison Bay. Every year the American White Pelicans and the California Gulls use Gunnison Island for nesting

Bonnie Baxter, Westminster College commented that her research is the study of the microbes of Great Salt Lake. She has found that the pelicans on Gunnison Island like to be isolated and fly 200 miles per day to find fish. There is good habitat and a population of owls and white faced ibis on the lake shore at Spiral Jetty and promontory point.

Don Paul, Avian West, Inc. replied that the shoreline is important habitat in the North Arm, especially at Locomotive Springs. There is a large population of Snowy Plovers.

**3. Users of Great Salt Lake to address the Great Salt Lake Advisory Council**

Chairman Senator Dan Eastman reviewed the Governor's Executive Order 2(c) and the questions that users of Great Salt Lake were asked to answer for the Council. The following entities presented to the council and written summaries are posted at this web address:

<http://www.GSLcouncil.utah.gov/>

Users of Great Salt Lake that addressed the Great Salt Lake Advisory Council:

**Dischargers – Leland Myers, Central Davis Sewer District and Kelly Payne, Kennecott Utah Copper**

Leland Myers, Central Davis Sewer District gave a presentation titled "Dischargers, Municipal and Industrial". The presentation is posted at this web address: <http://www.GSLcouncil.utah.gov/>

Kelly Payne, Kennecott Utah Copper gave a presentation titled "Kennecott Utah Copper's Industrial Discharge to Great Salt Lake". The presentation is posted at this web address:

<http://www.GSLcouncil.utah.gov/>

Comments/Questions from the Council:

Ben Ferry, State House Representative commented that of the total amount of water that enters the Lake, some could be reused as in California and asked what standard the dischargers need to meet for recycled water.

Leland Myers, Central Davis Sewer District replied that for reused water, some of the waste water treatment facilities would need to upgrade their systems to increase filtration in order to meet

standards and others would not. There are numeric water quality standards for fecal coliforms, Total Suspended Solids and Turbidity. Snyderville Basin is currently meeting these standards.

Senator Dan Eastman, Chairman asked if the reuse water meets standards for agriculture and irrigation for golf courses.

Leland Myers, Central Davis Sewer District replied that if the water that is discharged from the Central Davis Sewer District that has an activated sludge oxidation ditch treatment reuse standards could be met with a small amount of filtration. Discharge from a plant with trickling filter technology would require extra facilities in addition to filtration.

Chris Montague, The Nature Conservancy asked if the upgrade costs are a one time cost and if they are just for the facilities that drain to the lake.

Leland Myers, Central Davis Sewer District replied that those represent upgrade costs without operation and maintenance costs for facilities that drain to the lake. The assumption is that it costs \$2 million dollars to get to a higher level of nutrient removal per million gallons of treatment. The \$6 million dollars per million gallons of treatment represents removal of most nutrients, \$8 million if removal includes pharmaceuticals and \$15 million to remove everything. The Great Salt Lake has site specific standards and one numeric standard for the metals and the facilities meet secondary standard treatments. The cost will go up and the volume will go down with increased treatment.

Bill Fenimore, Wild Bird Center of Layton asked if there is capacity and new technologies for treatment as the population increases.

Leland Myers, Central Davis Sewer District replied that continuous upgrades are being made. North Davis Sewer District just completed an \$80 million dollar upgrade and increased its level of treatment. Central Weber is looking at a \$100 million dollar upgrade but none of these new facilities considered reuse. Reuse is more complicated by water rights than water quality.

Senator Dan Eastman, Chairman asked if the water discharged from the facilities is upheld to water quality standards.

Leland Myers, Central Davis Sewer District answered yes.

Bonnie Baxter, Westminster College asked Kelly Payne, Kennecott Utah Copper if there has been studies of airborne heavy metals from the salt playa or tailings pond when the lake recedes.

Kelly Payne, Kennecott Utah Copper commented that the heavy metals are known to be sequestered in the reducing conditions of the deep brine layer so that if those areas were exposed that would be the area of attenuation. He wasn't sure of the playa.

Bonnie Baxter, Westminster College mentioned that airborne arsenic is a problem on the Salton Sea another terminal lake with similar conditions.

Leland Myers, Central Davis Sewer District replied that it depends on the metals and site specific conditions. For selenium, it becomes more aerosol in aerobic conditions whereas mercury is

methyated under anaerobic conditions so the physical condition and specific metals determine airborne problem. Most metals remain in particulate forms.

Kelly Payne, Kennecott Utah Copper commented that the discharge is so small compared to the lake in terms of mass balance.

Lynn de Freitas, Friends of Great Salt Lake commented that in respect to the discharge being small compared to the lake, the population is increasing and discharge will probably increase and added that there are many unknowns regarding lake chemistry and quantity.

**Mineral Extraction – Corey Milne, Great Salt Lake Minerals**

Corey Milne, Great Salt Lake Minerals gave a presentation titled “Mineral Extraction on Great Salt Lake”. The presentation is posted at this web address: <http://www.GSLcouncil.utah.gov/>

Comments/Questions from the Council:

Lynn de Freitas, Friends of Great Salt Lake asked how much water is used collectively by the mineral extraction industries and the total amount of acreage occupied by dikes and ponds.

Corey Milne, Great Salt Lake Minerals did not know how much water is used and he said that roughly 100 thousand acres is used by the industry.

Bonnie Baxter, Westminster College mentioned that in Croatia where they pull water off the Adriatic into the solar salt ponds rather than in lake asked why the facilities don’t do this here. She also asked about the Barren Trench that takes water from the North Arm

Corey Milne, Great Salt Lake Minerals said that the in lake ponds are at a lower gradient and made of clay which is less permeable. The Barren Trench slopes from West to East and has a natural gradient.

Chris Montague, The Nature Conservancy asked if contaminants are a factor in their operation.

Corey Milne, Great Salt Lake Minerals said that GSL minerals is concerned because they produce fertilizers. He thought that US Magnesium would probably not be concerned. For the salt operations, the salt is used for animals so he thought they would be concerned.

**Brine Shrimp – Don Leonard, Utah Artemia Association**

Don Leonard, Utah Artemia Association gave a presentation titled “Brine Shrimp Industry on Great Salt Lake”.

Comments/Questions from the Council:

Lynn de Freitas, Friends of Great Salt asked if the brine shrimp industry thought of creating shares of the harvest so that the pressures and catch will be equally distributed

Don Leonard, Utah Artemia Association replied that the industry harvests according to the outcome of cyst studies conducted by the Utah Division of Wildlife Resources, Great Salt Lake Ecosystem

Program. DWR tells the industry when they can harvest and for how long. The industry also has a cooperative. All but 2 companies are part of the cooperative and there are talks to incorporate them. When all companies are part of the cooperative, the harvest will be split equally 79 ways.

### **Duck Clubs – Jeff Richards, Utah Waterfowl Association**

Jeff Richards, Utah Waterfowl Association gave a presentation titled “Waterfowl Hunting in Utah”. The presentation is posted at this web address: <http://www.GSLcouncil.utah.gov/>

Comments/Questions from the Council:

Jodi Gardberg, Division of Water Quality commented that there is an extensive ecosystem assessment of Mercury in Great Salt Lake that is being conducted by the Utah Division of Water Quality, Utah Division of Wildlife Resources, US Fish and Wildlife Service, US Geological Survey and Utah State University. Sites and the result of the lab analysis are posted on the USGS NWIS system

Bill Fenimore, Wild Bird Center of Layton asked if the waterfowl advisories are still in effect and if the source of Mercury is Great Salt Lake.

Jodi Gardberg, Division of Water Quality replied that part of the study is to determine if the Mercury is obtained at Great Salt Lake. Scientists are testing the Mercury concentrations in Brine shrimp cysts, nauplii and adults, in the eggs and muscle and liver tissues of Cinnamon Teal, in the liver and breast muscle tissue in Northern Shovelers, brine flies, seston, wetland sediments, loading to the lake, and in sediment cores.

### **Spiral Jetty - Laura Rakovich, Dia Art Foundation**

Laura Rakovich, Dia Art Foundation gave a slide show and explained the history of the Spiral Jetty and the role of the Dia Art Foundation. A summary is posted at this web address: <http://www.GSLcouncil.utah.gov/>

Comments/Questions from the Council:

Lynn de Freitas, Friends of Great Salt Lake asked if it is know how many visitors there are to the Spiral Jetty.

Laura Rakovich, Dia Art Foundation replied that this is difficult to determine because there is no one out there to record the information.

Bonnie Baxter, Westminster College asked how the Spiral Jetty would be effected by the proposed oil lease and drilling.

Laura Rakovich, Dia Art Foundation replied that the art work is embedded in the landscape. The artist, Robert Smithson was inspired by the whole environment. The Dia Art Foundation is concerned that there will be visual impacts and geophysical effects to the sculpture and the environmental impacts to the ecosystem.

Lynn de Freitas, Friends of Great Salt Lake commented that view shed is part of the FFSL Comprehensive Management Plan for Great Salt Lake and should be considered by the Division of Oil, Gas and Mining.

Ben Ferry, House Representative asked how far away from the Spiral Jetty is the proposed drilling.

Laura Rakovich, Dia Art Foundation replied that it is about 5 miles.

Ben Ferry, House Representative commented that at that distance it is unlikely that the drill rig will be seen and that after drilling all that will be left is a pump structure. As far as view shed if it were 500 yards instead of 5 miles then maybe there would be a concern.

Laura Rakovich, Dia Art Foundation replied that it is a broader issue than this one permit and raising the awareness of the sculpture and create a reasonable buffer zone around the Jetty. FFSL is discussing a view shed analysis.

Ben Ferry, House Representative asked if they considered a conservation easement.

Laura Rakovich, Dia Art Foundation replied that yes it has been considered and that the foundation has recently purchased 6,000 acres around the lightning field in partnership with the State of New Mexico.

### **Recreation – David Turner, Utah Airboat Association and Rock Simpson, Great Salt Lake Yacht Club**

David Turner, Utah Airboat Association explained that in addition to duck hunting, the association created an education center in partnership with Davis County and they participate in clean up projects and phragmites removal. A summary is posted at this web address:  
<http://www.GSLcouncil.utah.gov/>

Rock Simpson, Great Salt Lake Yacht Club gave a history of the yacht Club and spoke about the importance of lake level to the sport and marinas. The club provides sailing seminars, holds races and cruises, and have a junior and woman's program. A summary is posted at this web address:  
<http://www.GSLcouncil.utah.gov/>

Comments/Questions from the Council:

Don Leonard, Utah Artemia Association asked if the Antelope Island is currently used by the marina.

Rock Simpson, Great Salt Lake Yacht Club replied that it cannot be used due to the low lake elevation. There are 2 slips used by DNR for their search and rescue boats but they need less water to operate roughly 18 inches of water. Most sail boats need 2 feet. In the late 1980's the marina on the south shore could not be used due to high lake elevation. He is concerned that lake elevation will continue to recede.

Lynn de Freitas, Friends of Great Salt Lake asked who gives the club permission to dredge.

Rock Simpson, Great Salt Lake Yacht Club replied that DNR does that permits are necessary

Lynn de Freitas, Friends of Great Salt Lake asked why the Island Serenade, a cruise vessel has left the lake

Rock Simpson, Great Salt Lake Yacht Club replied that they left partly due to financial reasons but right now at the low lake elevation they would be landlocked.

**Water Users Association – Tage Flint, Weber Basin Water Conservancy District**

Tage Flint, Weber Basin Water Conservancy District gave a presentation titled “Weber Basin Water Conservancy District”. The presentation is posted at this web address:

<http://www.GSLcouncil.utah.gov/>

Comments/Questions from the Council:

Senator Dan Eastman commented that the secondary water that property owners receive could possibly be used for other necessary operations instead of lawns.

Tage Flint, Weber Basin Water Conservancy District replied that right now water users pay once a year for secondary water. The District plans in the next year to meter usage and in Layton the District completed a demonstration garden that has plants that use one-third of the water of plants that are now planted.

Ben Ferry, House Representative asked if most of the water that flows to the Great Salt Lake is held by municipal entities who have a 40 year hold before it has to be put to beneficial use. Once they put it to beneficial use less water will flow to the lake according to prior appropriation.

Tage Flint, Weber Basin Water Conservancy District replied that is an accurate view of water rights.

Ben Ferry, House Representative said there is a bill before the legislature that would make water available to lease from municipalities. There is pressure to appropriate and use water in the tributary systems.

Bill Fenimore, Wild Bird Center of Layton suggested that the council spend more time issue of population growth and extra demands on water supply versus resources in the lake that require flow to the lake. There is a balance that needs to be determined.

**4. Meeting Frequency, Location and Dates:**

The council reviewed the purpose of the November 20, 2008 meeting. A facilitated meeting to discuss what has been heard so far and strategic direction for 2009 is scheduled for December 9, 2008 from 10:00 AM to 2:00 PM.