



**WESTERN RESOURCE**  
**ADVOCATES**

March 31, 2011

**Laura Ault, Program Coordinator**

Division of Forestry, Fire and State Lands  
1594 West North Temple, Suite 3520  
PO Box 145703  
Salt Lake City, UT 84114-5703  
[gsl@utah.gov](mailto:gsl@utah.gov)

**Laura Burch Vernon, AICP**

SWCA Environmental Consultants  
257 East 200 South, Suite 200  
Salt Lake City, UT 84111  
[lvernon@swca.com](mailto:lvernon@swca.com)

Dear Laura Ault and Laura Burch Vernon,

SUBJECT: Comments and Requests regarding the Mineral Leasing Plan

FRIENDS of Great Salt Lake, Bridgerland Audubon Society, Wasatch Audubon Society, National Audubon Society, Great Salt Lake Yacht Club, League of Women Voters of Salt Lake, League of Women Voters of Utah, Utah Wetlands Foundation, Utah Airboat Association, Utah Physicians for a Healthy Environment, Utah Waterfowl Association, and Western Wildlife Conservancy, (collectively FRIENDS) provide the following comments regarding the update of the Mineral Leasing Plan (MLP). These comments provide additional details beyond the comments that were made by FRIENDS on April 16, 2010 and National Audubon Society on Sept. 30, 2010, which endorsed the FRIENDS comments of April 16 on the Comprehensive Management Plan (CMP).

**Summary of Friends April 16, 2010 Letter**

The April 16 letter by FRIENDS, which is attached, provided the following comments related to or on the MLP (on page 1 and 2).

Protection of Public Trust Resources: The CMP must clearly define how the Division's management of the Lake will conserve the Lake's Public Trust resources and prevent uses of the Lake from interfering with these trust values. The CMP must make clear that protection of Trust resources takes priority over all other uses of the Lake, including development. Ultimately, the goal of the CMP must be to establish guidance for management of the Lake in keeping with the Public Trust obligations of, not only the Division, but every agency and arm of the State of Utah.

- All indications are that the extensive development of Great Salt Lake sovereign lands

that currently exist – including the North Arm, Bear River Bay and Stansbury Bay mineral extraction reservoirs, as well as the causeways and the development that the Division has already approved but has not been constructed – is not sustainable and is having a cumulative, detrimental effect on Great Salt Lake Trust resources. Unless and until the Division can establish with credible evidence that Trust resources are not being interfered with by existing development, the CMP must close all areas of the Lake to future development. Moreover, unless and until the Division can establish that any new development will not interfere with – either individually or cumulatively – Public Trust resources, the CMP should recommend precluding any additional development on the Lake.

Mineral Leasing Plan: Because the CMP will incorporate the MLP, it is imperative that the Division of Forestry, Fire & State Lands (Division) review and revise the MLP in conjunction with this effort to revise the CMP. This is especially important given that the Division committed to FRIENDS that it would undertake a revision of the MLP, something the Division has yet to accomplish.

- As part of the MLP, the Division should account for and analyze the impacts of all known, proposed and reasonably foreseeable mineral leasing projects on Public Trust resources. For instance, Great Salt Lake Minerals proposed expansion must clearly be factored into the MLP. Additionally, other proposals, such as oil and gas mining in the North Arm, should also be considered, since it is reasonably foreseeable that such proposals may occur.

### **Comments Regarding MLP Update**

The rest of this letter gives additional details about the request that the Division demonstrate, through an update of the current MLP, how mineral leasing on the Lake can be administered in such a way that any new leases will provide adequate protection for Public Trust resources. Unless the Division can demonstrate that an adequate level of protection can be achieved, there should be no additional mineral or oil and gas leases allowed on Great Salt Lake.

### **General Background Regarding the Mineral Leasing Plan**

The Mineral Leasing Plan of 1996 included a general overview of mineral and oil and gas leases on the Great Salt Lake (GSL). This plan was incorporated into the 2000 GSL Comprehensive Management Plan. The Mineral Leasing Plan provided many directions on how the mineral leases should be administered, including where mineral and oil and gas leases would be allowed on the GSL.

### **Status of Mineral and Oil and Gas Leasing on GSL**

Mineral leasing on Great Salt Lake occupies significant portions of Great Salt Lake. Currently, there are six companies conducting mineral operations on the Lake, with a total of 171,644 acres under lease. *See* CMP at 103; MLP at 20; *see also* MLP at

13, (Map IV depicts the thousands of acres of ponds currently under lease). Furthermore, there is a proposal by Great Salt Lake Minerals for an additional 91,000 acres of ponds, approximately 80,000 of which would be contained within the bed of the Lake.

The current mineral operations have already significantly impacted Great Salt Lake. These industries use a great deal of salt and fresh water. To begin with, a complete understanding of just how much water is currently being used, in combination with how much water has either been approved or applied for, is an essential component to any mineral leasing plan. This is especially critical given the low amounts of precipitation in the last few years and possible continued low precipitation in the future. As noted by Craig Miller, Utah Division of Water Resources, consideration should be given to viewing the average Great Salt Lake water level at approximately 4,195 feet instead of the 4,200 feet average used in the past. (Miller, FRIENDS of Great Salt Lake Issues Forum, April 30, 2010.)

The current mineral operations take a great amount of salt out of Great Salt Lake, estimated at 28 million tons. MLP at 8. The input of salts into Great Salt Lake is approximately 2 million tons annually. *Id.* In other words, the mineral companies are already taking more salts out of the Great Salt Lake than are going in, and this gap would become larger if the proposed GSL Mineral pond expansion were to move forward. For this reason, there needs to be a full understanding of the salt balance in the Lake and what impact these extractions are having on this dynamic system. This documentation should include:

- the distribution of salinities throughout the Lake;
- quantitative changes in the salt deposits through both natural and mining activities;
- the accumulation of salts in the mineral company salt ponds that do not get flushed back into the Lake; and,
- the impacts the changing salt balances have on the biological resources of the Lake.

In Feb. 2010, Kidd Waddell, formerly with USGS, completed a report focused on the potential of the proposed GSL Mineral pond expansion to change salt and water balances in the Lake. Exhibit B, attached. This report should be carefully considered when updating the MLP. As noted on page 6 of the report:

Because of the dynamic equilibrium between the interconnected north and south parts of lake, it is necessary to account for all the interrelated dynamics in order to predict the results of making changes to the hydraulic properties of the causeway and/or modifying the amount of inflow or evaporation on the water and salt balance of the lake. This was recognized by previous investigators concerned with the migration of the salt to the north part of the lake (Waddell and Bolke, 1973).

The USGS or similarly designed model would be a useful tool for evaluating the effects of the proposed GSLM project. The USGS model integrates all the

components of water and salt balance and conveyance properties of the causeway. The model was updated by Wold, Thomas and Waddell (1997) and by Loving, Waddell, and Miller (2000).

The 2010 report by Kidd Waddell also shows losses of Potassium and Magnesium loads in the Great Salt Lake since 1965. Exhibit B, Figures 4 & 5. Regarding Potassium, the report states that “[t]hese computations suggest that, irrespective of the historically recorded inflow and associated quantity of potassium, the losses from mining, whether from product sold and or that sequestered in the evaporation ponds, far exceeds the amount of inflowing minerals when inflow is near average.” Id. at 8.

Regarding oil and gas leases, to the best of our knowledge there are no active oil and gas operations on the Lake. However, through the end of 2005, the Division had issued, proposed to issue, or was offering for sale leases of 177,813 acres of lands in the bed of Great Salt Lake, concentrated in the northwest section of the lake.

### **Specific Requests**

In general, FRIENDS’ comments on the update to the MLP focus on three main requirements that must be in place before any additional mineral leasing is granted on Great Salt Lake: 1) a review of how well administration of the previous MLP was accomplished; 2) the need for an understanding of the impact of past and current mineral leasing on the Lake; and, 3) a comprehensive regulatory framework that both protects the Public Trust resources of the Lake and allows for meaningful public participation in the leasing process.

#### How the Mineral Leasing Plan Has Been Administered.

The updated MLP must first provide a thorough review of how the previous plan was administered. Such a review is necessary as a backdrop for administration of the new plan. This would include a list of all of the current leases, dates they were issued, their terms and stipulations, what the readjustment dates are and when the leases end or need to be readjusted or approved.

The following questions should also be addressed as part of the MLP update:

1. Has a protocol or review process been created for the Utah Division of Forestry, Fire and State Lands to administer the Mineral Leasing Plan with the goal of incorporating Public Trust principles using the existing mineral leasing plan? For example, see goal number one on page 6 of MLP.
2. Have the following been accomplished in conjunction with mineral leasing:
  - a. Standard lease stipulations and creation of rules as provided on MLP? *See* MLP at 42-45, bullets 3-5.
  - b. Memoranda of understanding with sister agencies and advance notice to DWR before leasing on upstream water diversions?
  - c. Monitoring activities in cooperation with lessees and other agencies?

- d. Tracking removal or movement of salts?
- e. Establish indicators of change for re-evaluation of on-going practices?
- 3. Does the Division use royalties to promote research and other activities on GSL?
- 4. Did Division follow lease nomination and leasing procedures called for in the MLP? The following provides specific examples:
  - a. Both oil and gas and mineral salt leases were to be offered by competitive bidding after being nominated by a lessee rather than over-the-counter lease applications. Did this occur? *See MLP at 47.*
  - b. All leases conducted as part of the competitive bidding process were to have stipulations for the Great Salt Lake environment as provided by Division of Oil Gas and Mining and Division rules and were to include items specified in the MLP. Did this occur?
  - c. What are the terms and stipulations of leases issued since the mineral leasing plan was put into place? Do they include provisions for navigability, submission of plan of operations, bonding and reclamation requirements, readjustment clauses, etc.? *See MLP at 42-45; Utah Admin. Code R652-20-2200(3), R652-20-3200(6).* Do they reference current state laws and regulations?
  - d. Were strict primary terms (defined as the time the lease can be held without production) included in the leases granted since the 1996?
  - e. Both mineral and oil and gas leases were to have special stipulations developed with Division sister agencies in categories such as no surface occupancy (e.g., significant parts of Gunnison Bay for oil and gas leases) or special stipulations (e.g., for areas around Dolphin Island). Did this occur? *See MLP at 42.*
- 5. Are existing leases and royalty agreements actively managed? The following provides two examples:
  - a. Is there a regular review process and ensuring of compliance of terms and stipulations in existing leases?
  - b. Has Division pursued readjustments or appropriate termination of leases/royalty agreements on schedule?
- 6. What specific recommendations in the updated MLP would ensure the following:
  - a. Assessment of cumulative impacts of mineral leases.
  - b. Assessment of impacts of new leases in open areas on more sensitive areas like Bear River Bay.
  - c. Reporting of data by lessees that could shed light on long-term impacts of mineral and oil and gas development.
  - d. Where does Division view the public review process working within the context of individual leases?
  - e. How do you write conditional terms in leases which are fair to lessee and to public trust resources?

#### Impacts of Past and Present Mineral Leasing on the Lake

1. The revised MLP should include full accounting of the current leases that are operational as well as those leases that are not operational on Great Salt Lake, for minerals as well as oil and gas. Such an accounting would include the number and

acreage of leases (both operational and non-operational) from 1996 to the present.

2. The revised MLP should include a study of the fresh and salt water requirements and water rights of all mineral operations on the Lake, including water rights or water rights applications associated with leases already granted by the Division but not yet operational.

3. In association with #2, the revised MLP should include a study to document at which Lake level mineral companies are currently allowed or requesting to be allowed to withdraw water for their mineral ponds. This study should include the impact that these withdrawals would have on Great Salt Lake. For example, Great Salt Lake Minerals is currently requesting an 8,000 foot extension of their canal in Gunnison Bay.

4. The revised MLP should include an update of the USGS water and salt balance model to evaluate the effects of current and proposed mineral operations on Great Salt Lake.

5. A better understanding of the Lake's salt balance is needed to properly evaluate the potential of any new leases to harm the overall salt balance and biological resources of Great Salt Lake.

6. The revised MLP should include a study predicting how long extraction of magnesium, sulfates, potassium and other ions from the Lake are viable.

7. The revised MLP should include an analysis of how brine shrimp operations on the Great Salt Lake are managed and how they could be impacted by salt mineral operations in the attempt to ensure sustainable harvests of brine shrimp.

8. The revised MLP should include a full analysis of current oil and gas leases. This analysis should look at what the potential is for oil and gas extraction within the bed of Great Salt Lake and should examine whether any additional oil and gas exploration on Great Salt Lake could possibly occur without undue harm to the Public Trust resources.

#### Needed Revisions to the Regulatory Framework

1. If additional leases on the Lake are to be considered, there needs to be a regulatory framework in place that ensures that the public can have both an opportunity for meaningful public input, as well as the ability to participate in a thorough administrative review process of any leasing decision that impacts Great Salt Lake Public Trust resources.

2. Further, all leases must include stipulations in both new and existing leases that disallow extraction of Lake water for mineral processing once Lake levels go below the level necessary to protect the public trust values of the Great Salt Lake.

#### **Summary**

The current Mineral Leasing Plan provided a framework for future leases, but needs to be thoroughly reviewed. Furthermore, the on-going viable operation of current mineral extractions is not at all certain because of both decreasing Lake levels and continued losses of Lake minerals due to harvesting. Leases that have been granted since the Mineral Leasing Plan was approved in 1996 added to the potential rates of extraction without consideration of the relationships among resources in the dynamic Great Salt

Lake system. In drafting an update to the MLP, the Division must therefore demonstrate that the MLP can be administrated in a way that does not allow any new leases absent the ability to provide for protection of Public Trust resources. Until (or unless) this can be demonstrated, Friends request that no additional mineral or oil and gas leases on Great Salt Lake be considered.

Thank you for the opportunity to comment on the scope of the revised Mineral Leasing Plan for Great Salt Lake. We would welcome further discussion of these comments.

Yours,

A handwritten signature in black ink, appearing to read "Rob Dubuc". The signature is fluid and cursive, with a large initial "R" and "D".

ROB DUBUC  
JORO WALKER  
Attorneys for FRIENDS