

30 August 2015

Cindy Ledbetter, Environmental Coordinator
Bureau of Land Management
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35 East 500 North
Fillmore, UT 84631

Dear Ms. Ledbetter¹,
Sent via e-mail: blmutfmcomments@blmgov

SUBJECT: Sevier Playa Project Environmental Impact Statement Scoping
Comments

These comments are made on behalf of the The Audubon Council of Utah including the four Audubon chapters in Utah - Bridgerland Audubon Society, Wasatch Audubon Society, Great Salt Lake Audubon Society and Red Cliffs Audubon Society; National Audubon Society; FRIENDS of Great Salt Lake; the Utah Waterfowl Association; Breathe Utah; Utah Moms for Clean Air; the Wasatch Clean Air Coalition; Utah Physicians for a Healthy Environment, and Hobson Calhoun. We have identified the following issues that need to be addressed in the Environmental Impact Statement (EIS) for the Sevier Playa Project. Because there is limited, and sometimes contradictory information regarding this project our comments are based on the information presented in the Sevier Lake Competitive Potash Leasing Proposal Environmental Assessment (EA) DOI-BLM-UT-W020-2010-014-EA (BLM, 2011) and the Intent to Approve: Approval Order for Sevier Lake Playa Evaporation Ponds and Trench Construction for Sulfate of Potash Plant Project Number N14429-0002.

Our review of the EA found it vague, overly general, and deficient in a number of areas. In addition, a mining plan was not prepared as part of, or provided under separate cover to the EA; therefore, it was impossible to assess the environmental implications of the project. The EIS will need to address this deficiency and the specific issues listed below.

Hydrology

There is limited hydrologic information for the area to be impacted by the proposed potash mine. A thorough assessment of hydrology as described on pages 23/24 of the EA needs to be completed as part of the EIS process based on the following:

- It is not established whether or not the Sevier Lake basin is connected to the Snake Valley Basin to the west of Sevier Lake (EA, pg. 54). Conservation groups, agricultural interests and the State of Utah have been very concerned that the Southern Nevada Water Authority could draw water down in the Snake Valley. Allowing leases for a proposal in Utah that could have some negative impact on the water level in the Snake Valley basin should not proceed until a determination is made as to whether these two basins are connected.
- The EA estimated that the annual recharge of the Sevier Lake basin is 42,000 acre-feet per year (afy) (p. 52). There is considerable uncertainty with this estimate due to few studies having been conducted and the impacts on recharge of climate change. Regardless, 42,000 afy is insufficient for the potash mining purposes contemplated in preferred Alternative A. Emerald Minerals has filed for 421,000 afy in water rights, and the projected consumptive water usage is 120,000 afy. It is hard to believe that using (evaporating) this amount of water – if it exists – can be considered insignificant. A water balance evaluation needs to be performed as part of the EIS that includes recharge rates based on current trends that factor in the impact of climate change. Discharge rates need to also be included in this evaluation. The EIS needs to present water balance data in relation to expected groundwater withdrawal rates.
- Little is known about groundwater flows from the Snake Valley to the east to the Tule Valley and from there to the Sevier Lake basin. Carbonate aquifer flows from basins to the southwest and south are also inadequately characterized.
- The EIS should also determine if there is any groundwater connectivity between the Pine and Wah Wah Valleys to the Sevier Lake basin, and between the Sevier Lake basin groundwater and the Tule Valley/Fish Springs system.
- The loss of groundwater could impact the water levels at Clear Lake Waterfowl Management Area, which is located roughly 25 miles to the east of Sevier Lake.
- Possible impacts on groundwater in the Snake Valley area could affect Fish Springs National Wildlife Refuge.

Water Consumption

We have major concerns regarding water availability and usage, which need to be addressed in the EIS, as follows:

- The EA correctly notes that development of any potash lease would require water mining, but the extent and impact of such mining was not addressed. This EIS will need to address this issue.
- Based on the information in the EA the amount of water required for this project cannot readily be determined. Page 25 states that the water supply is estimated to include 120,000 acre-feet of brine (39 billion gallons) with some of the water supplied from on-lease deep brine wells. We assume that the “per year” after 120,000 acre-feet is missing. (For reference page 60 states “per year.”) This needs to be clarified in the EIS.
- The EIS needs to be transparent regarding water usage. In the EA, the preferred alternative would use 120,000 acre-feet of brine water per year for 6.5 years for a total of 780,000 acre-feet of water. The EA assumes that this would have a marginal impact on Sevier Lake and states that stipulations would be in place to ensure that the resource is managed appropriately. But there are no assurances that the groundwater at Sevier Lake will remain at levels near the surface. In addition, given the on-going impacts of climate change it is most likely that recharge rates will continue to decrease. If 780,000 acre feet of water are used it would likely decrease the surface water at Sevier Lake, so that when water does enter Sevier Lake it would not be as readily available on the surface in the future. This could be true regardless of where the water comes from in the basin, including groundwater as the EA states on page 51 that “The basin fill and bedrock aquifers are thought to be hydraulically connected (Wilberg1996).”
- Furthermore, this loss of water could accelerate the loss of water in the entire system as well as at or near the surface of Sevier Lake. This is because much of the water that could be evaporated may be near the surface of the lake and would have a high saline content. But as the Great Salt Lake Comprehensive Management Plan, Planning Document of May 1, 1999 states, “Conversely when the lake level drops, the surface area diminishes and the salinity increases, reducing the total annual evaporation. The lake, therefore, has a natural mechanism to prevent drying up and has a tendency to slow its own rate of rise.” (Prepared by the Great Salt Lake Planning Team, Utah Department of Natural Resources, Page 16.) The impacts of groundwater mining need to be fully addressed in the EIS.
- Stipulation 8 in Section 2.2.2, Page 22, provides that the “Lessee at his expense, will be responsible to replace any water resources (that contain in a baseline analysis of <10,000 mg/l Total Dissolved Solids (TDS)), that are lost or adversely affected (quality or quantity) by their mining operations.” We strongly assert that this stipulation is faulty to the

extreme. All water lost to the system, not just water with a low TDS, should be replaced and addressed in the EIS. Additionally, we do not see how 780,000 acre-feet of water could easily be replaced to the system.

- The EA notes that there are potential conflicts with BLM water rights applications (p. 12), but does not make clear how those conflicts can be avoided or mitigated. This will need to be addressed in the EIS.

Climate Change

Climate change is one of the most significant threats to the environment and American security. As part of the EIS, the contribution of this project to climate change needs to be fully assessed and the true environmental cost reported. In addition, projections for groundwater recharge, evaporation rates, water use, etc. need to be discussed in relation to current and future climate projections that consider information from current climate change models. Reliance upon historical data is insufficient for this evaluation, as climate change may be the “new normal”.

Leasing Tracts

The leasing tracts appear to be artificial and arbitrary and designed to get around legal limitations (2.1, p. 15-16). Alternatives A and C exceed the maximum potash lease size of 2,560 acres imposed by 43 CFR Part 3500, and the Proposed Action (A), exceeds the 96,000 acre limit of 43 CFR 3503.37. There is no reason to believe that the lease parcels would in any way conform to the specific uses in the mining development plan. A mining plan that details the mining process and acres impacted needs to be included in the EIS.

Lease Stipulations

Based on the information presented in the EA, which relied upon lease stipulations to assure that impacts are not significant, it is not possible to evaluate the thoroughness and potential effectiveness of lease stipulations. Nor is it possible to evaluate the adequacy of restoration stipulations. The EIS needs to include the mining plan and needs to specify the additional environmental analyses required of the lessee prior to development.

Wildlife Including Aquatic Birds

In the EIS, Sevier Lake should be put into an overall context of other saline lakes and closed basins within the Intermountain West. There are 45 terminal lakes in the Great Basin. Many of these closed basins have, or had large lakes within them. Terminal lakes provide a critical resource for aquatic birds (as well as various fish species) over time. And while numerous saline lakes still provide

that resource, their ability to do so is much more limited now than prior to the Early Settlement periods.

The EIS should also address the following:

- Sevier Lake is roughly 130 miles south of Great Salt Lake. It should therefore be considered a key component of one of the most important aquatic bird resources in the Western Hemisphere. When thinking about Sevier Lake and Great Salt Lake, it is important to note that many of the birds that migrate through Great Salt Lake fly over Sevier Lake. Between three and eight million waterfowl feed and nest at the Great Salt Lake and its associated wetlands annually. This is approximately thirty percent of the Pacific Flyway population. Also, Great Salt Lake supports roughly 1.4 million shorebirds annually, including a single day count of Wilson's Phalaropes exceeding 500,000², which is why this area is one of seventeen sites of Hemispheric Importance in the Western Hemispheric Shorebird Reserve Network (WHSRN). These numbers also qualify the lake as a Globally Important Bird Area (GIBA).
- Sevier Lake was high in the 1980's. In fact, in 1987 it was Utah's third largest water body (EA, page 49.) Although bird surveys for this area were not performed during the 1980's, we do know that there was extensive aquatic bird use of this area when there was water in Sevier Lake. It is fairly certain that the usage of Sevier Lake was important because much of Great Salt Lake was also in flood stage. For the Great Salt Lake this meant that much of the shoreline was not available for aquatic birds and much of the water was much fresher than is useful for some birds. An evaluation of bird use at Sevier Lake needs to be included in the EIS.
- There is some indication of the bird use that could be present in the area from the following. The 1998 EA on rights of way for Salada's ponds, ditches, dikes, roads, and power lines gives some sense of this when it says "The list of wildlife species known to frequent the surrounding area at that time included several migratory birds: prairie falcon, rough-legged hawk, horned lark, killdeer, avocet, eared grebe, and a variety of shorebirds (BLM 1998)." The EIS needs to include bird survey data.
- The EA mentioned that "Brine flies and brine shrimp were present in and about the flooded playa surface at the time of this study (Salada 1997)." Brine flies and brine shrimp are major resources for some aquatic birds such as Eared Grebes, Wilson's Phalaropes and others. Very likely Sevier Lake served as a major alternative to Great Salt Lake for many aquatic birds during the high water years at Great Salt Lake and brine

shrimp and brine flies were a major food source. This needs to be researched and included in the EIS.

- Given that Sevier Lake is a major part of the flyway for aquatic birds, we are concerned that any new water sources in the region/flyway will be a significant attractant to birds. We are therefore very concerned about the possible mortalities of birds landing in the proposed salt ponds. The EIS needs to address this issue.
- Sevier Lake has the capacity to serve as a major part of the flyway in the future. This could have a number of beneficial consequences, including attracting migratory bird populations. The EIS needs to address what those benefits might be or how they might be managed.
- The ability to preserve the brine fly and brine shrimp resource was not addressed in the EA. What the impacts to these species would be due to harvesting of the salts is unknown. This issue needs to be addressed in the EIS.
- The EIS needs to assess the impacts upon brine shrimp of watering and de-watering the lakebed when the lease expires, or the impact of the process of extracting minerals upon brine shrimp.
- Stipulation 9 on Page 22 states that a wildlife inventory will address among other things invertebrates. While brine shrimp and brine flies were mentioned in the EA, there is no mention of beetles, which are an important food source in dry, harsh environments. In addition, soil moisture is a key determinant of invertebrate health. Both beetles and soil moisture in relation to habitat health need to be addressed in the EIS.
- Disturbance to more upland wildlife could be great. Both access roads to the lake and traffic will increase. Road mortality from increased traffic could be significant to wildlife species including kit fox and burrowing owls. The EIS needs to address how roads and traffic will impact wildlife corridors.

Air Quality

The EA stated that air quality may be improved due to the preferred alternative, “Air Quality has the potential to be improved by the implementation of leasing and development, once the ponds are in place to limit available wind-borne dust. Therefore, No Action would not provide this benefit.” While this may be true for the limited time that the operation is in place, it clearly does not address what will happen after the project ends; it does not address indirect impacts later in time. We believe the lake will become drier due to the use of 780,000 acre-feet of water in the basin (preferred alternative). We believe it could get much worse at

the conclusion of the project due to climate change. Current and future air quality must be fully addressed in the EIS. The EIS needs to include a fugitive dust control plan, and to present the procedures that will be followed for air monitoring in relation to prevailing winds and high population centers. The failure to address air quality issues on Sevier Lake could lead to significant expense, similar to the environmental issues associated with the major dust storms at Owens Lake, California.

The Discarded Alternative and Alternative C

The EA states, “An alternative to lease 65,000 acres was proposed but eliminated from analysis as it would not provide a large enough area to economically develop and provide maximum recovery of the resource under currently-known technologies.” However, no documentation was provided to demonstrate this conclusion. Given the negative consequences of the proposed mineral operation, we request that a full fact-based discussion of this alternative be provided in the EIS, along with the no-action alternative.

While we think the lease proposal should be withdrawn or that the no-action alternative is preferred, we also think it is important to point out that Alternative C should have been the preferred alternative for BLM and should be carried forward in the EIS. We provide the following reasons:

- Alternative C would use 15,000 acre-feet of water for 26 years. This is a total of 390,000 acre-feet of water, which is 390,000 acre-feet of water less than the preferred alternative’s of 780,000 acre-feet (120,000 acre-feet of water for 6 and 1/2 years.)
- Alternative C uses 100 miles of ditch compared to 300 miles of ditch for the preferred alternative and it would use 10,000 acres of solar ponds compared to 47,000 acres of solar ponds for Alternative A. In other words Alternative C would have 200 fewer miles of ditches and 37,000 fewer acres of mineral ponds. This would have much less impact on the lake and would allow for much easier reclamation.
- There would be fewer cultural and visual resources impacted by Alternative C as compared to Alternative A.
- Alternative C would extend for 26 years as compared to 6.5 years for Alternative A. This would allow much more time to assess impacts on resources and prevent them from occurring or stop the operations altogether if negative impacts are shown.
- Alternative C would spread the economic value of the project over time, rather than providing a boom and bust cycle for this project.

Other Considerations

- Socio-economic Impacts - The analysis of socio-economic impacts should be extended to include potential impacts on Garrison, Eskdale, and Baker, NV.
- Cumulative Impacts –The EIS needs to evaluate project impacts to other industrial operations in the area, the cosmic ray collection project near the northern edges of the lakebed, other current or planned minerals mining operations in the area, potential wind power development, and the proposed Southern Nevada Water Authority and Central Iron County Water Conservancy District interbasin groundwater transfers.

A Better Vision or at Least Some Kind of Vision for an Important Resource

As discussed previously, terminal lakes in the Great Basin are in trouble, even though those that continue to function are a critical wildlife resource. Sevier Lake at present provides a valuable resource for aquatic birds during flood years. Sevier Lake also was frequently a valuable resource for aquatic birds over the past thousands of years, and not just during flood years. While the highly over-appropriation of Sevier River water would make it difficult to restore water to Sevier Lake during normal water years, it makes sense to view Sevier Lake as a current, valuable resource during high water years. Furthermore, if Sevier Lake was to become drier and dust storms more frequent, it might become necessary to put water into Sevier Lake to improve air quality issues. Ideally, there would be some kind of vision to restore water to Sevier Lake, not just for air quality issues that exist today and could be worse in the future, but also to provide additional habitat for aquatic birds and other wildlife.

Thank you for the opportunity to comment

Sincerely,

Steve Erickson, Policy Advocate

Audubon Council of Utah

Cc: Jack Bellmon, President, Audubon Council of Utah
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