

## **BLM\_NV\_NVSO\_GWProjects**

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**From:** Mark Clemens <mark.clemens@sierraclub.org>  
**Sent:** Tuesday, October 11, 2011 6:24 PM  
**To:** BLM\_NV\_NVSO\_GWProjects  
**Subject:** Clark, Lincoln, and White Pine Counties Groundwater Development Project DEIS Comments  
**Attachments:** SNWA Groundwater Pump DEIS 101111.doc

11 October 2011  
2159 South 700 East, #210  
Salt Lake City UT 84106

Penny Woods, GWD Project Manager  
NV BLM State Office  
1340 Financial Blvd  
Reno NV 89502

*VIA EMAIL*

Re: Clark, Lincoln, and White Pine Counties Groundwater Development Project draft Environmental Impact Statement (GWD project)

Dear Manager Woods,

I thank the Bureau of Land Management (BLM) for developing this draft EIS that validates public concerns about unacceptable hydrological impacts from the GWD project and for extending the comment period 30 days. For the reasons I cite below, the BLM should not select the Proposed Action or any of the Alternatives because all cause undue and unnecessary degradation of the environment.

In general, I find the draft EIS analysis of pumping impacts to be informative. The DEIS documents water table declines, subsidence, disappearance of springs sufficiently to conclude that the proposed GWD project is a groundwater mining project.

### **CLIMATE CHANGE ANALYSIS**

Unfortunately, the climate change section of the DEIS was not written to the same standard of competence as the hydrological impacts analysis leaving the reader unable to draw conclusions about the cumulative impacts of the proposed action's or alternatives' groundwater depletion together with the likely changes in precipitation and groundwater recharge resulting from climate change.

The discussion in the DEIS of potential climate change impacts in eastern Nevada and western Utah attempts to represent what is currently known about climate change impacts, present and future. Contrary to BLM laws and regulations (and Secretarial Order 3226) on considering climate change impacts when making major decisions affecting BLM's environmental resources, the DEIS dismisses

all potential climate change impacts from its impacts analysis in chapter 3 (page 3-5): "since the current state of climate change science prevents the association of specific actions with specific climate-related effects, the BLM can neither: (a) analyze the climate-related effects of BLM actions nor (b) ascribe any significance to these potential effects." Despite difficulties and uncertainties in predicting the exact effects of climate change, these impacts should be a part of the impacts analysis for all resources, not just air and atmospheric resources.

The Humboldt-Toiyabe (H-T) National Forest Climate Change Vulnerability Report, published in April 2011, for much of the same area affected by the GWD project shows that climate change will increase temperatures and aridity and that warmer winters will cause earlier melting of snow with less water available overall. The study shows that "...higher temperatures will increase evapotranspiration and droughts..." and "...warmer wintertime temperatures and earlier melt dates will deplete this virtual reservoir, leaving much less available water for natural systems and human uses." Has BLM conducted similar climate change vulnerability studies on its public lands in eastern Nevada and western Utah?

The report can be found at: [http://www.fs.usda.gov/Internet/FSE\\_DOCUMENTS/stelprdb5294901.pdf](http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5294901.pdf)  
The H-T report and the draft EIS both agree that climate change will affect precipitation amounts, timing and locations, thus affecting evapotranspiration, infiltration and recharge and the ultimate availability of water for human and environmental uses.

Even SNWA in its Water Resources Plan (p. 11) gives more consideration to current and future significant impacts of climate change on its Colorado River supplies than the draft EIS:

"Climate change impacts on the Colorado River and the American Southwest are expected to be significant. The majority of regional climate models project a more arid climate and reductions in Colorado River runoff in the future. These reductions are expected to be in addition to natural-flow variabilities and temporary drought conditions."

The DEIS should use the H-T study and the best available science for a model analysis of reduced precipitation to assess the effects of various scenarios of recharge on future water supply availability and reliability. The DEIS model should also assess the cumulative impacts of the GWD project, especially the pumping drawdowns with, for example, a 10, 20, and 30% reduction of recharge in the study area.

#### **AIR QUALITY & ENVIRONMENTAL AFFECTS ANALYSIS**

I'm further concerned by the assertion on page 3.1-34, "It is expected that annual species would continuously bind the soil surface with living or dead root systems, even though the individual annual plants would not act as long-term barriers to wind." What basis in the literature gives BLM confidence that in an increasingly arid regime sometimes inadequately supporting even annual plant species, living and dead root systems would bind the soil surface?

On the same page, the analysis for the Wetland/Meadow vegetative cover type confidently predicts, "None of the surface area composed of this ET unit would be susceptible to wind erosion." And yet on page ES-56, BLM concedes, "...it is anticipated that groundwater drawdown of 10 feet or more would result in the drying out, and then conversion of Wetland/Meadow cover types to upland shrub-dominated areas." And further on the same page, "...Basin Shrubland would retain its dominant shrubs, but shrub densities may decline, and there is a risk of invasion by invasive annual species. The overall risk of wildland fires would increase in areas dominated by annual species." These statements suggest a strong possibility of vulnerability of current Wetland/Meadow cover types to future wind erosion under the Proposed Action or Alternatives.

It appears from page 3.1-37 that the principal or perhaps only mitigation measure foreseen by SNWA and BLM for air quality impacts resulting from wind erosion is to "conduct large-scale seeding to assist with vegetation transition from phreatophytic communities in Spring and Snake Valleys to benefit wildlife and reduce potential air resource impacts." Does BLM have any way to quantify the potential benefit of this mitigation measure? Would the seed mixture contain only native annuals?

The analysis then proceeds with a paragraph describing a Monitoring, Mitigation and Management Plan for Air Quality. The following sentence suggests a reduction or even cessation of pumping might be considered, "It is anticipated that the Plan would be effective in identifying early warning of potentially undesirable impacts to air resources and provide a substantial amount of time and flexibility to implement management measures and gage their effects." Would these management measures include reduction or suspension of groundwater pumping?

If the BLM's confidence in the conversion of the phreatophytic vegetative cover to annual plants is misplaced, how long would it take for the phreatophytic cover type to be re-established after reduction or cessation of groundwater pumping?

Finally, I must express reservations about the quality of the analysis of the impacts to air quality in Salt Lake County, Utah, from windblown dust emissions from the Proposed Action or Alternatives. On page 3.1-61, the DEIS asserts, "Most emissions in the PM<sub>10</sub> size range will decrease exponentially during downwind transport.... Only a very small fraction of wind erosion emissions from the cumulative project area are expected to be transported into Salt Lake County, Utah, which is over 50 miles from the closest area expected to be impacted by the groundwater drawdown."

Given that the total additional PM<sub>10</sub> emissions could be in excess of 30,000 tons per year, it would be helpful for the reader to know what "very small fraction" will be carried to Salt Lake County. 30 tons, 300 tons or 3,000 tons? With what frequency would PM<sub>10</sub> from the Proposed Action or Alternatives blow into Salt Lake or Tooele Counties? Is the statement on page 3.1-61 based on modeling, expert opinion or simple faith?

Very truly yours,

Mark A. Clemens

