

US EPA ARCHIVE DOCUMENT



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION IX  
75 Hawthorne Street  
San Francisco, CA 94105

September 25, 2012

Amy Lueders  
Nevada State Director  
Bureau of Land Management  
P.O. Box 12000  
Reno, Nevada 89520

Subject: Final Environmental Impact Statement (FEIS) for Clark, Lincoln, and White Pine Counties Groundwater Development Project, Nevada (CEQ# 20120254)

Dear Ms. Lueders:

The U.S. Environmental Protection Agency (EPA) has reviewed the above-referenced document pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act.

In the subject FEIS, BLM has created a new alternative (Alternative F), which does not include a right-of-way (ROW) in Snake Valley, and designated it as the Preferred Alternative. The FEIS states that this alternative would be limited to the amount of groundwater pumping identified in the Nevada State Engineer's (NSE's) March 2012 rulings. EPA strongly supports BLM's decision to not include groundwater pumping in Snake Valley as a part of its Preferred Alternative; however, we are concerned that the impacts of Alternative F, as described in the FEIS, would be more severe within the remaining valleys, especially Spring Valley<sup>1</sup>, than would some of the Snake Valley alternatives. EPA recommends that BLM condition its right-of-way approval for Alternative F on intermittent pumping, based on drought and availability of Colorado River supplies, and include this in its Record of Decision, along with more specific resource management objectives to guide mitigation.

Specifically, according to the FEIS, Alternative F could result in:

- Significant impacts to water dependent resources (wetlands, springs), including the possibility that water sources for aquatic habitat could dry up, with the likely outcome that these communities would not recover and vegetation community composition would change to upland species (p. 3.5-78);
- Likely loss of wetland vegetation for 3,096 acres of wetlands after 75 years, and 5,519 acres after 200 years.
- Moderate to high risk to 4,949 acres of hydric soils after 75 years, and 8,403 acres after 200 years,

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<sup>1</sup> We note that, in an attempt to address uncertainty in the groundwater model, the Nevada State Engineer conditioned his decision for water rights in Spring Valley on a 3-staged development plan whereby he would evaluate updated modeling results after an initial phase of pumping before allowing the pumping of subsequent phases. This is in order to assure the water pumped does not conflict with existing water rights. The NSE's decision supports a staged and gradual lowering of the water table so there would be a gradual transition in species composition.

such that they may be morphologically altered by drawdown and no longer support wetland vegetation.

- Approximately 242 square miles of surface subsidence greater than 5 feet after 200 years (p. 3.2-54). The effects of subsidence could be permanent even if pumping ceases.

The FEIS indicates that, since the NSE ruling would allow pumping approximately 26 percent less than the volume that BLM evaluated under Alternative F, the overall impacts of the project, implemented in accordance with the NSE's ruling, are expected to be somewhat less than those presented in the FEIS for Alternative F. In the absence of any analysis based on the pumping that would be allowed by the NSE's ruling, however, the extent to which those impacts would be less significant is unknown.

The FEIS acknowledges BLM's flexibility to select a subset or compilation of alternatives/options in its decision (p. 1-8). According to BLM<sup>2</sup>, an intermittent pumping scenario was included in the alternatives evaluated (specifically Alternative C) because Southern Nevada Water Authority (SNWA) has indicated that, in practice, it anticipates using the groundwater project intermittently, as needed, based on the availability of Colorado River supplies. Conditioning BLM's ROW approval with an intermittent pumping scenario would represent an appropriate and more balanced approach that would meet these water needs while better protecting the environment. While valley-specific groundwater pumping impacts will be analyzed further in future tiered NEPA documents, we believe it would be prudent to include groundwater pumping controls at this decision point.

Conditioning ROW approval on intermittent pumping at this Tier 1 stage would also help address our concerns regarding the uncertainties surrounding the mitigation and adaptive management strategy, as explained in the attached detailed comments. According to the FEIS, the mitigation effectiveness assessments are deferred to future NEPA analyses and to the monitoring program, in general. We believe the Record of Decision for this FEIS should identify more specific resource management objectives that BLM will use to guide the development of triggers or "early warning thresholds" that will be used to avoid adverse impacts from groundwater withdrawals.

Because the preferred alternative has the potential to result in significant degradation to waters of the U.S., as defined under the Clean Water Act Section 404(b)(1) Guidelines, we commend BLM and the project proponent for stating their intention to seek an Individual Section 404 permit (FEIS Appendix H, p. 10), rather than a nation-wide permit. We look forward to working with the U.S. Army Corps of Engineers and the Southern Nevada Water Authority to seek compliance with the Clean Water Act Section 404(b)(1) Guidelines (40 CFR 230.10) during the review of future Clean Water Act Section 404 permit applications associated with work in the ROW.

The FEIS indicates that Native American tribes view water sources in the project area as sacred. An additional benefit of intermittent pumping is that it may reduce impacts to streams, springs, and other water sources that are integral to the culture of tribes in the Great Basin.

The FEIS indicates that future NEPA documents tiered to this EIS will more thoroughly address groundwater pumping impacts for each valley. Based on the analyses presented in the FEIS, the impacts of valley-specific groundwater pumping are likely to be significant, especially considering the cumulative impacts on the larger landscape that this programmatic analysis predicts; therefore, we recommend that future actions be fully evaluated in EISs.

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<sup>2</sup> BLM's responses to EPA's Questions for BLM, October 28, 2011

When the ROD for this FEIS is available, please send one copy to the above address, mail code CED-2. If you have any questions, please call me at (415) 974-3843 or have your staff contact Karen Vitulano, lead reviewer for this project, at (415) 947-4178 or [vitulano.karen@epa.gov](mailto:vitulano.karen@epa.gov).

Sincerely,

/s/

Enrique Manzanilla, Director  
Communities and Ecosystems Division

Enclosures: EPA Detailed Comments

cc: Penny Woods, BLM Nevada State Office  
Rosey Thomas, BLM Ely District Office  
Phil Rhinehart, BLM Southern Nevada District  
Verlin Smith, BLM Utah State Office  
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Damian K. Higgins, FWS Nevada Fish and Wildlife Office  
Michael Jewell, US Corps of Engineers, Sacramento District  
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Amy Defreese, FWS Utah Ecological Services Office  
Boyde Clayton, Deputy State Engineer, Utah Division of Water Rights  
Andy Ferguson, Superintendent, Great Basin National Park  
David Nawi, Department of Interior  
Patricia Mulroy, Southern Nevada Water Authority  
Jason King, Nevada State Engineer  
Ed Naranjo, Confederated Tribes of the Goshute Reservation  
Alvin Marques, Ely Shoshone Tribe  
Virginia Sanchez, Duckwater Shoshone Tribe

### **Significant impacts to Spring Valley warrant conservative approach**

Although Alternative F would avoid pumping in Snake Valley, its impacts would be much more severe within the remaining valleys, especially Spring Valley. The condition imposed by the Nevada State Engineer for staged groundwater development in Spring Valley is helpful in that it will allow for collection of pumping stress data to calibrate the groundwater flow model, providing updated predictive modeling results. However, the NSE's decision on water rights assumes vegetation succession; therefore, staged groundwater development alone does not assure protection of water resources. To improve the environmental protections for the preferred alternative, EPA recommends intermittent pumping to further slow the predicted lowering of the groundwater table. This approach would be more appropriate in light of the potentially irreversible nature of predicted impacts acknowledged in the FEIS<sup>3</sup>, and the long timeframes required to see results of groundwater pumping cessation. Since intermittent pumping was evaluated in the Draft and Final EIS in the assessment of Alternative C, the impacts of an intermittent pumping scenario for the preferred alternative would be within the scope of the impacts already assessed.

*Recommendation:* We recommend that BLM include, in the terms and conditions of its approval of the ROW and in the ROD, a restriction to intermittent pumping in response to drought and availability of Colorado River water, and/or include intermittent pumping as a mitigation measure, applicable until replaced by more specific measures from future NEPA analyses.

### **Adaptive Management Proposal**

We have concerns regarding the effectiveness of the adaptive management proposal because ecosystem and water resource management objectives have not been identified, and the time lags associated with monitoring impacts to groundwater present substantial challenges to the effectiveness of adaptive actions.

#### ***Ecosystem and water resource management objectives have not been identified***

The FEIS does not identify the level of impact that would be allowed to occur. In addition, the FEIS indicates that it may not be feasible to effectively mitigate all impacts, that adequate mitigation for long-term reductions of groundwater may not be available for all locations, and that specific adaptive management measures may not successfully mitigate impacts (p. 3.3-130, as referenced from p. 3.3-188.) Without specific resource management objectives identified, the extent of water resource impacts is unclear.

#### ***Time lags for monitoring effects of groundwater adaptive management actions***

The effectiveness of adaptive management monitoring depends on a variety of factors, including the ability to demonstrate the effects within an appropriate timeframe after the adaptive action is taken. The FEIS identifies a substantial time lag between cessation of pumping and recovery of groundwater levels. For example, Appendix F3-3.5 states that “*residual drawdown is predicted to persist over most of the original drawdown area in southern Spring Valley and in Cave, Dry Lake, and Delamar valleys even after 125 years of recovery*”, noting that residual drawdown

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<sup>3</sup> The FEIS acknowledges that the groundwater drawdown could cause spring-fed aquatic vegetation to lose flows, and if these water sources dried up over 5 years or more, it is likely these communities would not recover (p. 3.5-78). It also states that hydric soils can be morphologically altered such that they would no longer support wetland vegetation (p. 3.4-31).

areas are expected to persist for decades or longer, even if pumping is stopped (p. F3.3.5-1). With this projected time lag, it is not clear to what extent monitoring will provide the timely feedback needed to avoid impacts to groundwater resources.

*Recommendation:* EPA recommends including in the ROD clear, specific, and measurable resource management objectives, including a definition of what would represent “unreasonable adverse effects to federal resources” (FEIS p. 3.20-3). Because of the uncertainty regarding the ability of the monitoring program to provide timely feedback to adaptively manage resources, EPA recommends that BLM take a conservative approach when setting early warning thresholds to account for the long lag time needed between cessation of pumping and recovery of groundwater levels.

### **Wetlands**

Alternative F's potential impacts/risk to springs and the percent reduction in groundwater discharge to evapotranspiration are significant. The FEIS predicts moderate to high risk for thousands of acres of wetlands. We recommend that BLM incorporate appropriate pumping controls into both the Tier 1 and Tier 2 phases of its decision making to ensure that these resources are protected, to the extent practicable, once pumping has begun.

### **Air Quality**

In our DEIS comments, EPA raised concerns regarding the estimated releases of wind-blown particulate matter projected for the 5,000 square mile 10-foot + drawdown area and its impacts on the attainment of air quality standards in Nevada and Utah. We recommended that air quality modeling be performed for the FEIS. We appreciate that BLM has performed air quality modeling for the preferred alternative and included additional metrics for visibility impacts to Great Basin National Park (GBNP) in the FEIS.

#### *Recommendations:*

EPA recommends that BLM consider whether refined modeling may be needed for some or all of the future tiered NEPA analyses, e.g., to include analysis of impacts on the GBNP for all Air Quality Related Values, including visibility impairment, deposition, and acid neutralizing capacity on sensitive lakes. We suggest that the COM Plan identify what actions could be taken to mitigate the dust emissions if future modeling predicts a downwind violation of the National Ambient Air Quality Standards (NAAQS).

### **Conformance with Resource Management Plans**

We recommend that the ROD indicate whether BLM would need to amend its Resource Management Plans (RMP) to address project nonconformances. The FEIS cites a number of examples in which potential future effects on resources may not conform to management actions contained in the Ely District RMP, including groundwater pumping that may not comply with the management prescriptions to protect the identified sensitive vegetation and other biotic communities, potential riparian vegetation changes occurring within some wilderness areas (e.g., Fortification Range, Highland Ridge, and Mount Grafton), and groundwater pumping that may raise concerns regarding the Wilderness Act and its requirements to protect the vegetation and other biotic communities found within the wilderness areas (p. 2-14).