



**United States Department of the Interior**  
**BUREAU OF LAND MANAGEMENT**

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Mr. Oscar Biondi  
State Water Resources Control Board  
Division of Water Rights  
P.O. Box 2000  
Sacramento, CA 95812-2000  
[obiondi@waterboards.ca.gov](mailto:obiondi@waterboards.ca.gov)

**RE: BLM COMMENTS ON THE DRAFT FINAL WATER QUALITY CERTIFICATION FOR THE EAGLE MOUNTAIN PUMPED STORAGE PROJECT, FEDERAL ENERGY REGULATORY COMMISSION PROJECT NO. 13123, SUBMITTED TO THE BOARD ON APRIL 10, 2013**

Dear Mr. Biondi,

The Bureau of Land Management (BLM) submitted comments to the State Water Resources Control Board (Board) last week on the draft final water quality certificate on FERC hydropower project 13123. The intended purpose of that letter was to: 1) inform the Board of new groundwater studies undertaken by the BLM and partners in the Chuckwalla Basin; 2) illustrate that these studies will produce over time information that informs and contributes to our collective understanding of the groundwater system; 3) express the need that as new information becomes available, it may require re-evaluation of project operation thresholds identified in the certificate; 4) identify potential impacts of the project's groundwater consumption on other existing or proposed BLM groundwater-consuming activities in the basin; and finally 5) to agree (with minor modification), to the Board's identified adaptive management framework for monitoring project impacts and corresponding control measures. In our haste to meet the 12:00 pm 10 April 2013 comment submission deadline, our letter missed that mark and contained many of the previously submitted BLM comments already addressed by the Board and the FERC in your response to comments. In addition, there was an unfortunate choice of words used to convey concerns regarding the use of specific methods calculating basin recharge (page 7 "This may appear to be arbitrary, capricious and unwarranted"); and on the characterization of potential risk to users of Colorado River water and on the overall development of renewable energy resources in the Chuckwalla Valley (page 11 second paragraph). For this I apologize, and request that this letter be included in your record to clarify the BLM position on resource issues.

As my previous letter pointed out, the BLM will be processing a Right of Way (ROW) application addressing the hydropower project's use and occupation of BLM managed lands. To reduce redundancy

in analysis of potential environmental impacts, the BLM will tier our analysis to existing related analyses and, where appropriate, utilize or incorporate information by reference from those sources. In review and processing of the ROW, the BLM must consider the direct, indirect and cumulative impacts of the proposed action and will draw upon all available information sources to meet that requirement. As we know, the knowledge of groundwater systems is not static and is constantly improving with new information. BLM sponsored investigations and the new information that will emerge from those and other investigations will help inform our understanding of the basin and will be useful for ultimately reducing uncertainties on projected impacts. However, BLM cannot defer a decision until all uncertainty is eliminated, and must make a decision on the ROW with information at hand. The BLM views the Board as the expert water agency for the state, and the governmental entity with authority to ultimately regulate the amount of water consumed in the basin. Therefore our analysis of groundwater impacts will rely heavily on your work and will consider new information as required in the National Environmental Policy Act (NEPA).

When new information informs current understanding of systems, it can challenge existing views and result in competing perspectives amongst agencies and stakeholders. Competing perspectives therefore creates greater uncertainty. As new information is proven and embraced by the scientific community (i.e., peer reviewed and validated), it reduces the difference between those perspectives. Until that time, uncertainty exists, and decisions must be made. The Board's innovative use of a required adaptive management framework with project operation triggers can mitigate some uncertainty and permit new, validated information to be used to reduce environmental impacts. The BLM will rely upon that framework as part of any conditioning of the ROW.

#### BLM and Other Studies

The Chuckwalla Basin includes BLM lands identified suitable for renewable energy development in the Riverside East Solar Energy Zone, as determined in the Solar Programmatic Final EIS. To better understand the impacts that groundwater-using projects may have on groundwater resources located within this area, BLM has initiated several investigations with research partners. These investigations are aimed at reducing the potential uncertainty associated with the issues of recharge and consumptive groundwater use. As data are collected, analyzed and reviewed, new information generated from these investigations will be used in future environmental analyses of proposed projects.

Two specific investigations are underway: 1) a pilot monitoring project using landscape scale indicators of resource condition. As part of this study, Argonne National Laboratory has conducted preliminary modeling to better understand water resources in the Chuckwalla Basin. And 2) an assessment of renewable energy project impacts on groundwater with Lawrence Berkeley National Laboratory (Lawrence Berkeley) as the primary investigator. Other partners including Pennsylvania State University (Penn State), the U.S. Geological Survey (USGS), and the National Resource Conservation Service (NRCS) are contributing instrumentation, analysis and oversight. The objectives of this investigation include developing baseline water level data, refining quantification of the perennial yield of the basin, and identifying water level trends and defining any potential hydrologic impacts. This work is ongoing and results are preliminary.

Additional information is coming from the USGS Groundwater Ambient Monitoring and Assessment (GAMA) study suggesting that the groundwater in the Chuckwalla Basin and surrounding study area basins is relatively old. Based on the USGS's preliminary results for all of the basins in the GAMA study area, the average uncorrected carbon-14 age for groundwater in these basins (a total of 26) is about 11,000 years old. Given an understanding of groundwater recharge processes in these desert regions (mountain front recharge, tributary inflow, etc.) and the location and depth of the wells in which these data are collected, this is not a surprise and confirms understanding of the groundwater system.

### Update of Existing Knowledge

Results from these investigations, as they are verified and reviewed by the scientific community, will help to improve our understanding of the water balance for the basin; and subsequently refine our projection of potential impacts. With the forecasted increase in demand for groundwater in this basin, it will be critical that this information is integrated into the analysis of proposed actions so that individual and cumulative impacts from groundwater withdrawal are better forecasted. BLM plans to continue its support in these investigations to further reduce uncertainty in its decision-making processes.

As the record demonstrates for this and other projects, there has been and continues to be considerable debate between agency staff, the proponent and various stakeholder groups regarding the “correct number” to assign to groundwater recharge for the basin. Here again is where the BLM will defer ultimately to the experience of the Board, as it is a stated goal of the Board to maintain the long-term sustainability of the groundwater resource; and issuance of a water quality certificate that would potentially place the basin into overdraft conditions would be contradictory to the Board’s legislative mandate.

### Project Operation Thresholds

Given this recorded debate, BLM requests the Board to carefully track, through implementation of Condition 5, water table drawdown created by the project, particularly as it relates to the threshold values defined in the Board’s certificate (i.e., project pumping is maintained at or below the range of historic pumping). And that if new confirmed information indicates that this standard is insufficient from causing an overdraft condition, that changes to the pumping operation be implemented to slow or reverse this condition.

### Other BLM Authorized Projects in the Basin

BLM managed lands constitute about 80% of the land within the Chuckwalla Valley and have been identified as high priority lands for renewable energy development. There are presently two utility scale renewable energy projects being constructed within the Chuckwalla Basin and seven additional authorized and/or proposed projects are currently being evaluated by the BLM. Collectively these nine projects are anticipated to provide about 3144 megawatts of renewable resource electrical energy. Because of the increasing concerns of groundwater availability in this arid region of the country, BLM is promoting adoption and use of low water use solar energy technologies. If overdraft conditions were to occur, this potentially impacts the sustainability and operational viability these projects.

### Adaptive Management Framework

As I indicated earlier in this letter, we commend the Board in adoption of an adaptive management framework that imposes modification of project operations in the event resource impacts exceed those identified in the environmental review process. This approach can help address the uncertainty generated during the environmental review and comment period. We encourage the Board to consider our recommendations below and to incorporate them into the certificate. This will allow us to work together in addressing and responding to uncertainty, minimize decision risk, and will create greater consistency in our approaches in managing environmental risk.

1. The BLM recommends that the Board work with the proponent, BLM and other entities in updating and revising groundwater recharge and perennial yield estimates in the Chuckwalla Basin as new information is collected, analyzed and reported.

2. The BLM recommends that the Board require coordination of monitoring well placement with the BLM to the extent project-specific wells intended to measure groundwater level and water quality can complement a comprehensive monitoring well network for the Chuckwalla basin. Information from this network will be used to validate predictions, and to build a better understanding of the groundwater system.

3. The BLM recommends that the Board consider making the following changes (in red and bold) to Condition 5. GROUNDWATER SUPPLY, from the Draft Final Water Quality Certification:

*Confirm that Project pumping is maintained at levels that are at or below the range of historic pumping as presented in the Groundwater Supply Pumping Effects technical memorandum (GEI, 2009a). **As new information is generated through the basin monitoring network, a re-evaluation of the use of this historic pumping threshold will occur and changes to the pumping schedule shall be instituted consistent with the conditions outlined in Table 3.3-9 in the FEIR.** The Licensee shall track the pumping rate and duration associated with the Project supply wells and report the amount of water extracted **and water levels of all proponent operated monitoring wells** quarterly. The groundwater monitoring network shall consist of both existing and new wells to assess changes in groundwater levels at: the Project supply wells; beneath the CRA in the upper Chuckwalla Valley Groundwater Basin and Orocopia Valley; at the mouth of Pinto Basin; and in areas east of the Project supply wells. Wells shall be monitored quarterly for groundwater level, water quality, and the amount of water extracted. **All well monitoring data will be shared cooperatively with authorizing agencies, including the Board, the FERC and the BLM.***

If there are any questions regarding these comments, please contact Frank McMenimen, Project Manager, at 760-833-7150 or by email at [fmcmenimen@blm.gov](mailto:fmcmenimen@blm.gov).

Sincerely,



Teresa A. Raml  
District Manager

cc:

Federal Energy Regulatory Commission  
Eagle Crest Energy Company  
John Kalish, Field Manager, BLM Palm Springs/South Coast Field Office